



REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD GENERAL NOTES NO. 49	10/29/16
2	REMOVED SWALK SECTION & OWNER AND DEVELOPER	7/27/17

Approved: Department of Planning and Zoning  
*Karl S. Shulman* 8-3-16  
 Chief, Division of Land Development Date

Approved: Howard County Department of Public Works  
*M. Munnie* 7/27/2016  
 Chief, Bureau of Highways Date

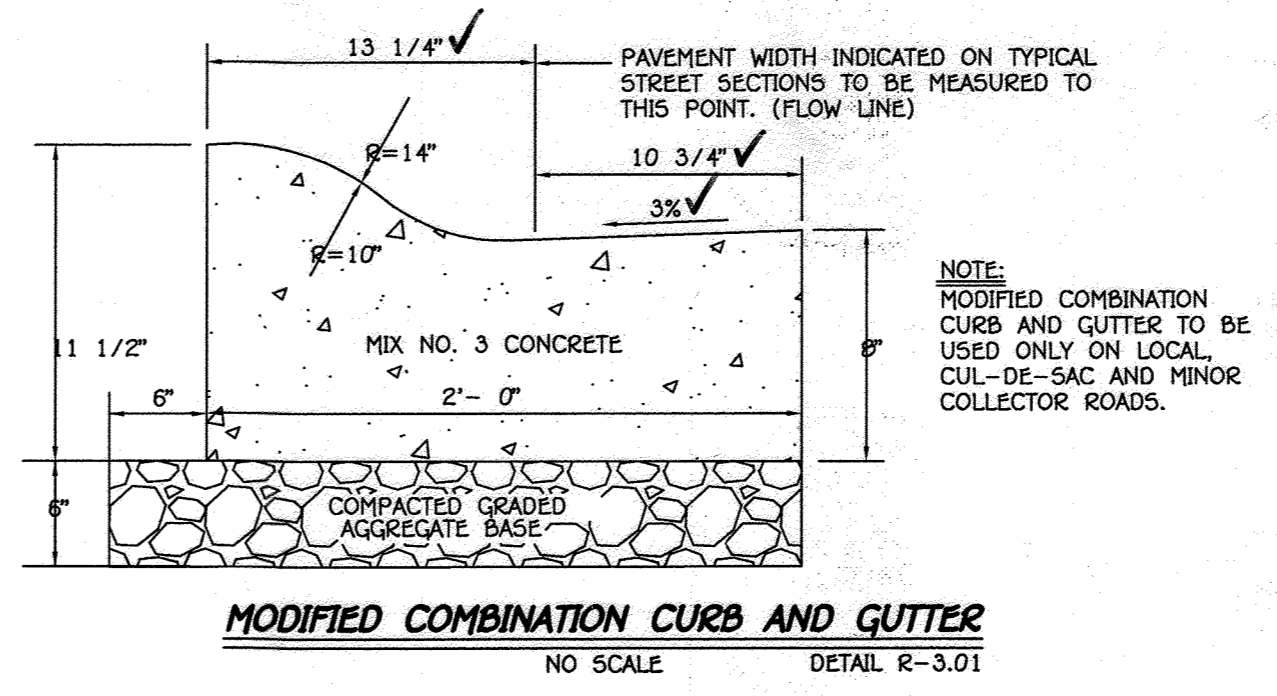
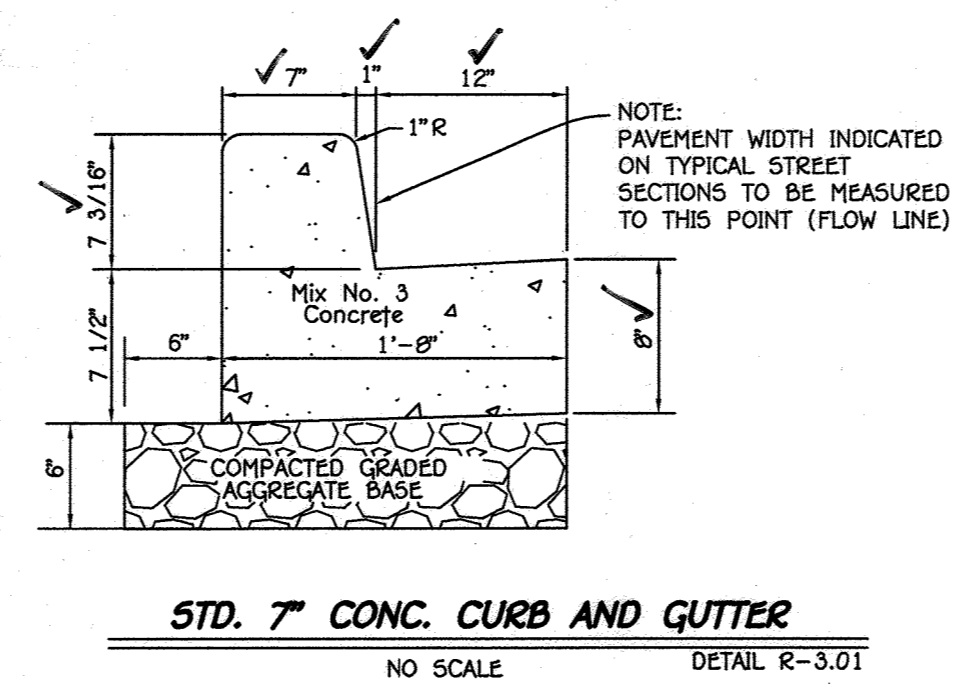
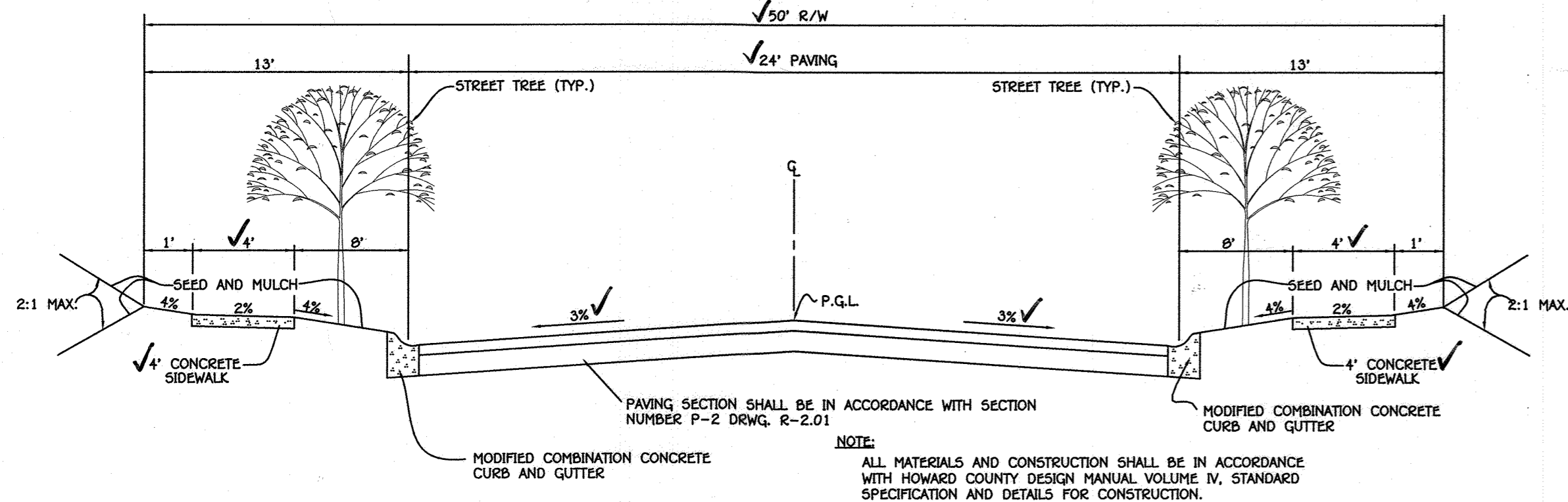
**AS-BUILT CERTIFICATION**

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

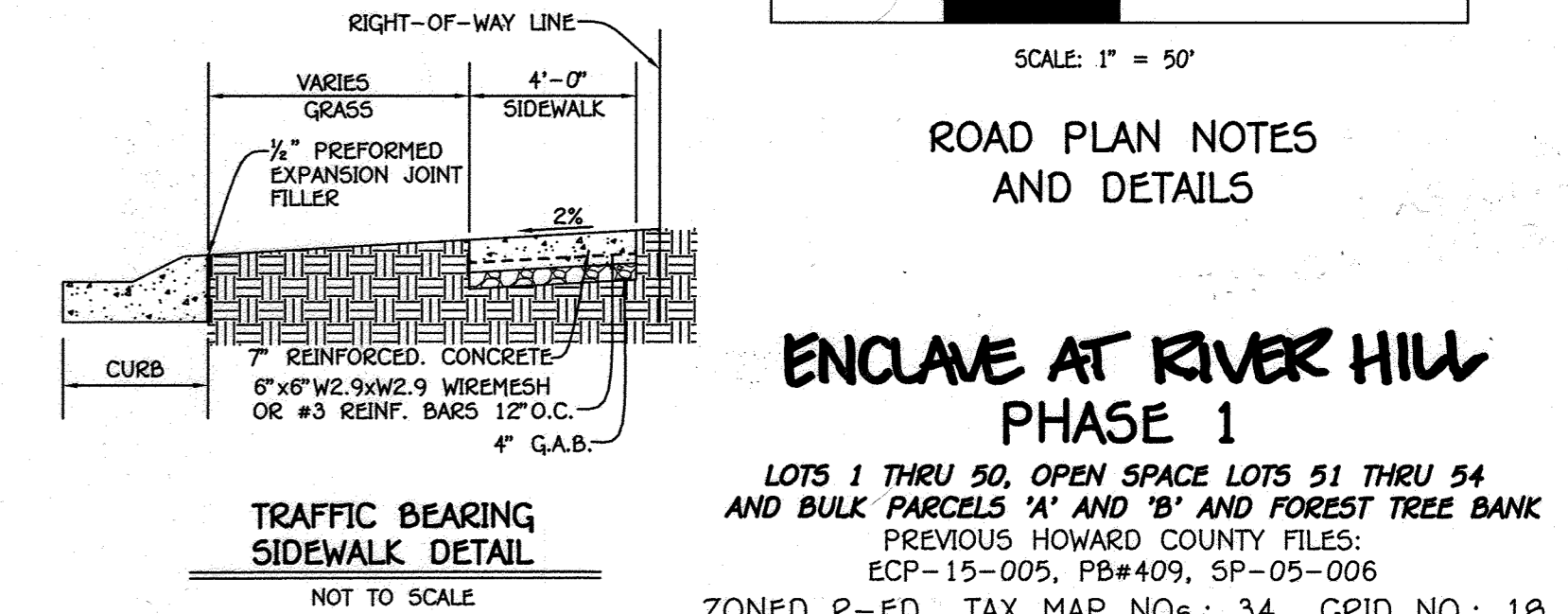
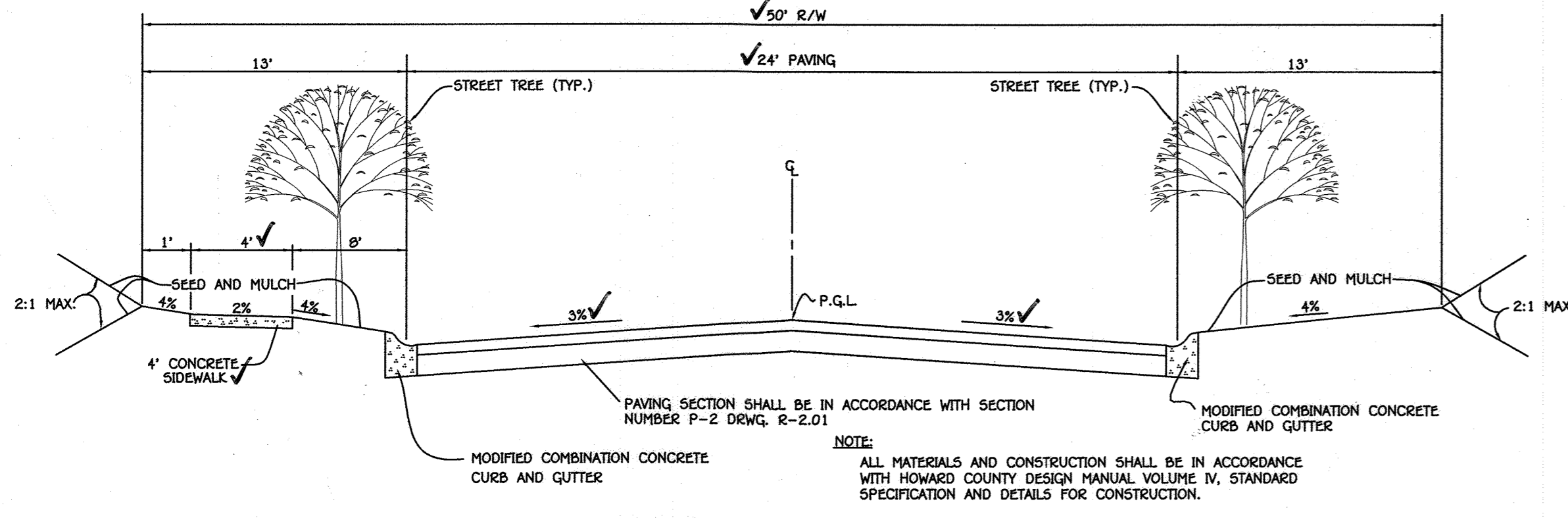
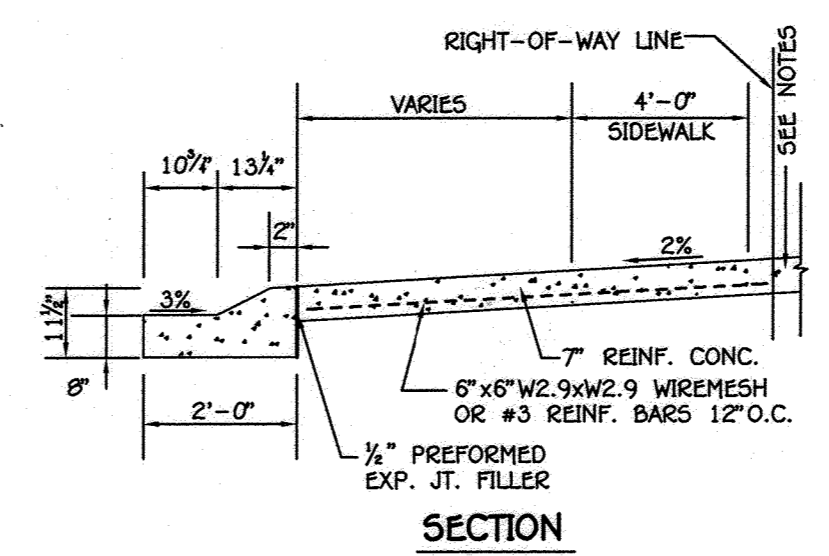
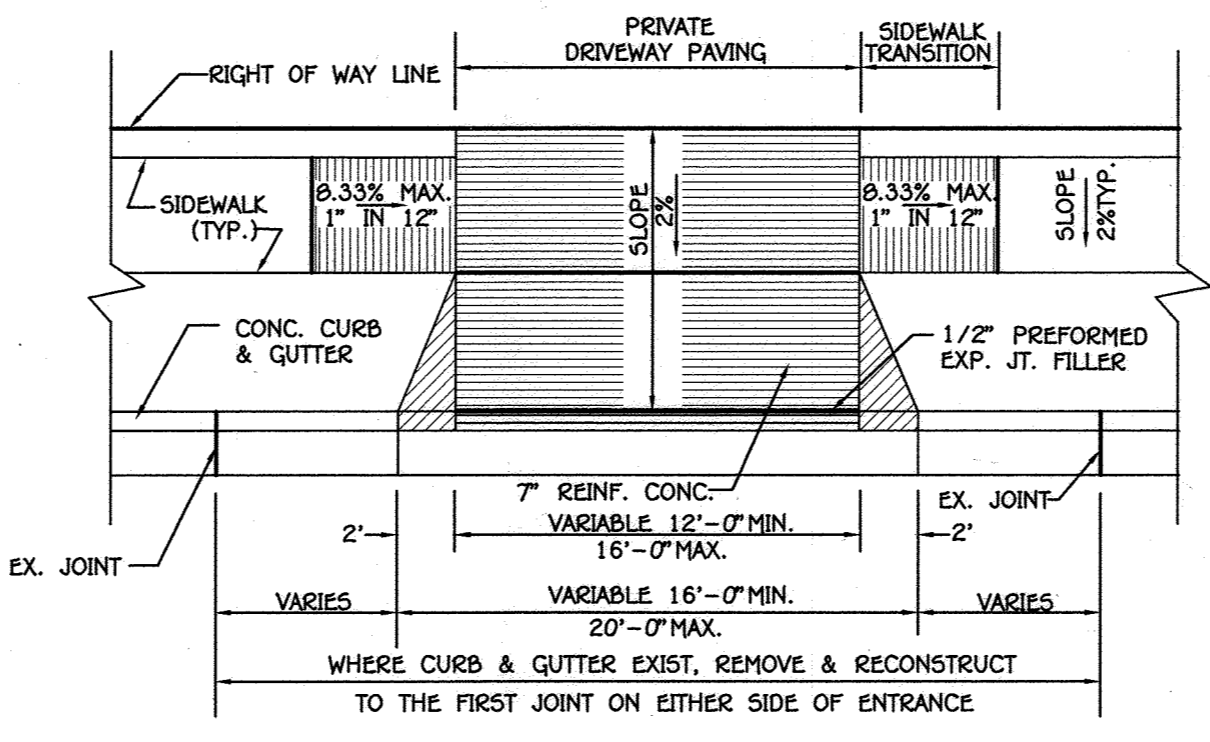
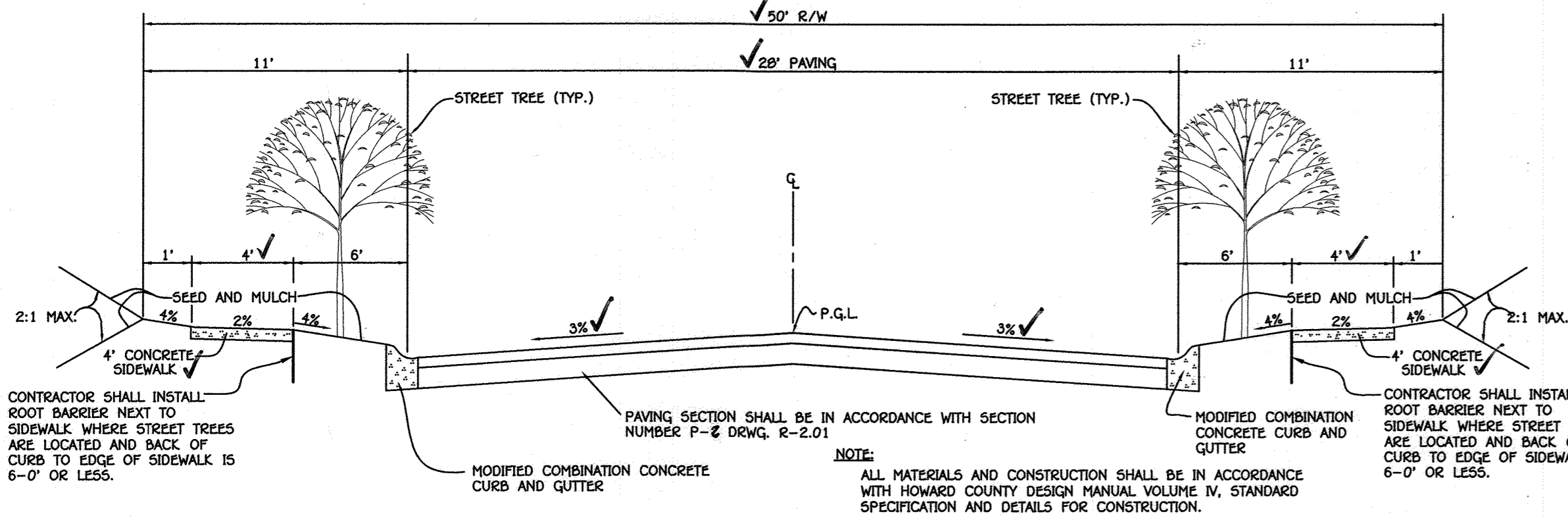


01/23/22  
 Aldo Michael Vitucci #20748  
 Date

ROADWAY INFORMATION CHART						
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	PAVING SECTION	TYPICAL ROADWAY SECTION
VINCENTS WAY-PHASE 1	PUBLIC ACCESS STREET	25 M.P.H.	R-ED	0+00 TO 15+29	P-2	1
FUTURE VINCENTS WAY-PHASE 2	PUBLIC ACCESS STREET	25 M.P.H.	R-ED	15+29 TO 25+07	P-2	1
FLUTE LANE-PHASE 1	PUBLIC ACCESS STREET	25 M.P.H.	R-ED	0+00 TO 6+31	P-2	3
FUTURE FLUTE LANE-PHASE 3	PUBLIC ACCESS STREET	25 M.P.H.	R-ED	6+31 TO 17+48.57	P-2	3
FUTURE NORTHOPE WAY-PHASE 2	PUBLIC ACCESS STREET	25 M.P.H.	R-ED	0+00 TO 2+02	P-2	3
FUTURE LILY GARDEN COURT-PHASE 2	PUBLIC ACCESS STREET	25 M.P.H.	R-ED	0+00 TO 3+89	P-2	3



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	MIN HMA WITH GAB				HMA WITH CONSTANT GAB			
			3 TO <5	5 TO <7	≥7	3 TO <5	5 TO <7	≥7		
P-2	PARKING DRIVE ASILES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SACS: RESIDENTIAL	PAVEMENT MATERIAL (INCHES) HMA SUPERPAVE FINIAL SURFACE 9.5 MM. PG 64-22, LEVEL 1 (ESAL) HMA SUPERPAVE BASE 19.0 MM. PG 64-22, LEVEL 1 (ESAL) GRADED AGGREGATE BASE (GAB)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
			3.0	3.0	3.0	4.5	3.0	3.0		
			8.0	4.0	3.0	4.0	4.0	4.0		
			DETAIL R-2.01							



**ENCLAVE AT RIVER HILL PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK PREVIOUS HOWARD COUNTY FILES.  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 2 OF 58 F-15-110

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 10272 BALTIMORE NATIONAL PARK  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2895



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.  
*Frank Mahanlian II*  
 Date

**OWNERS**  
 TIBRELY FARMS-CLARKVILLE, LP  
 24151 VENTURE BOULEVARD  
 OLABASKO, CALIFORNIA 91302  
 (818)-369-3697

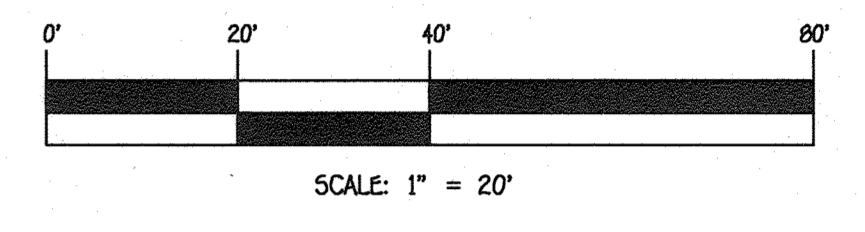
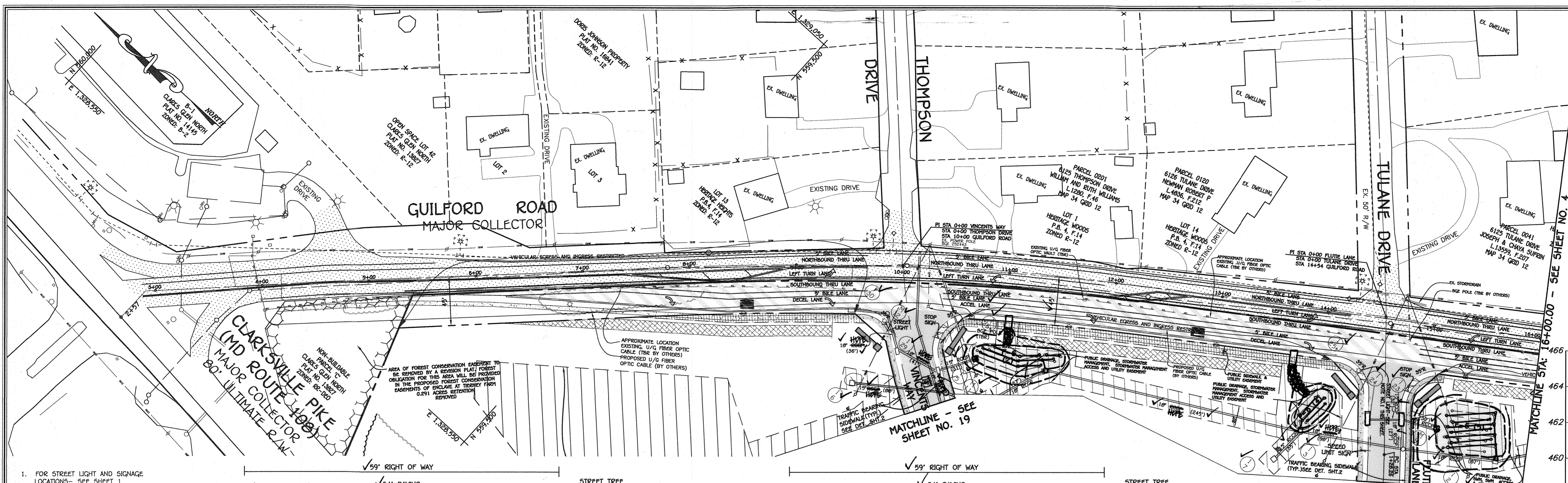
**DEVELOPER**  
 BEAZER HOMES, LLC  
 8969 GUILFORD ROAD - SUITE 890  
 COLUMBIA, MARYLAND 21046  
 (767)-894-0182

"AS-BUILT"

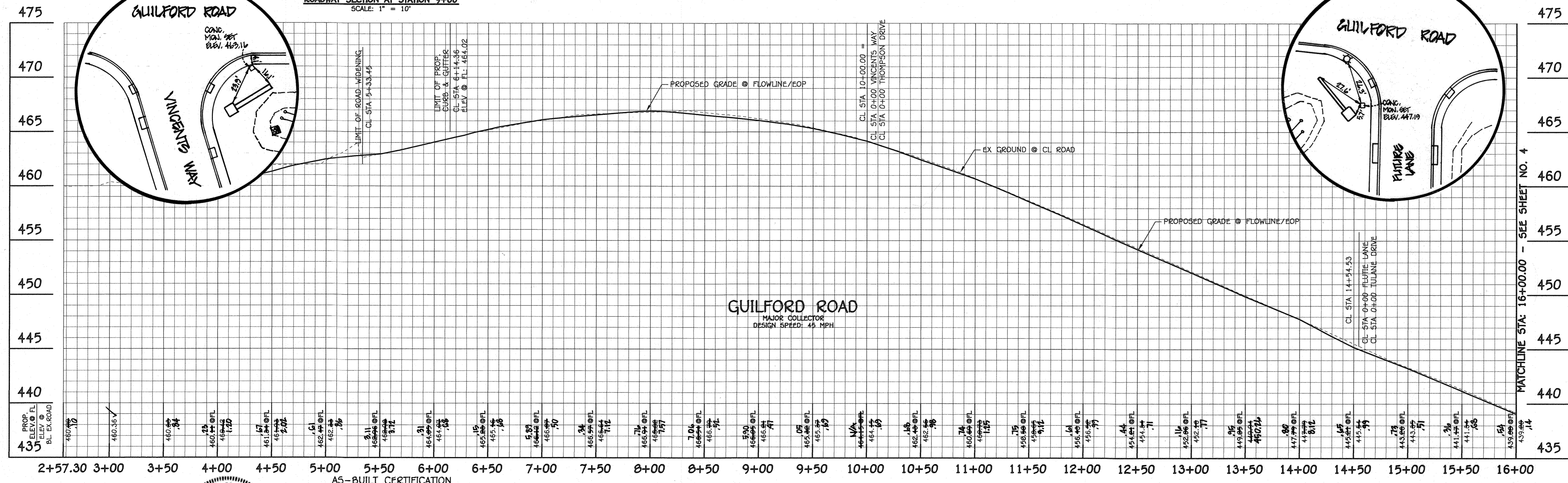
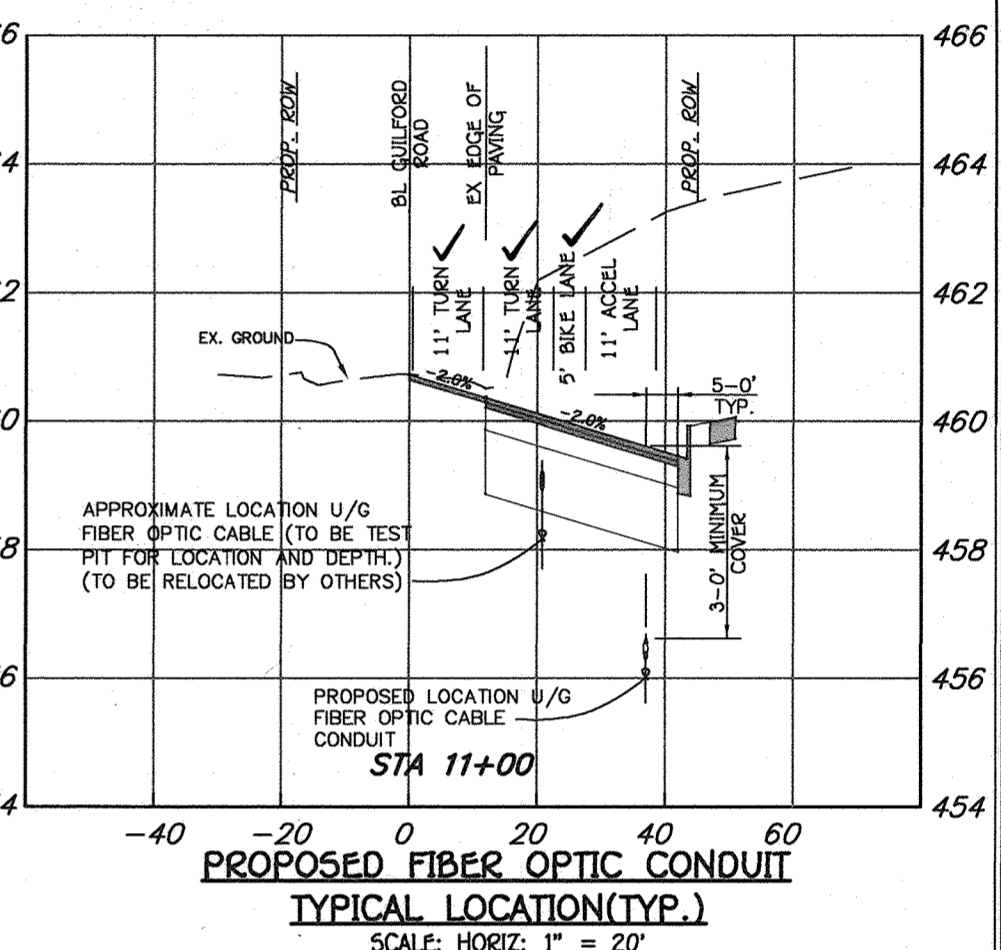
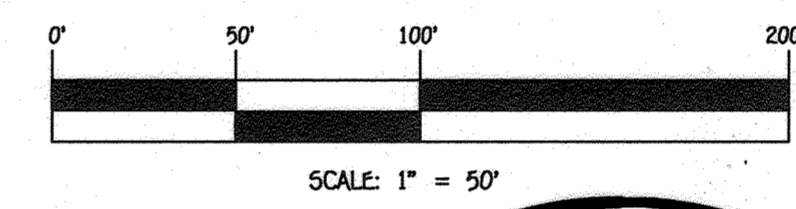
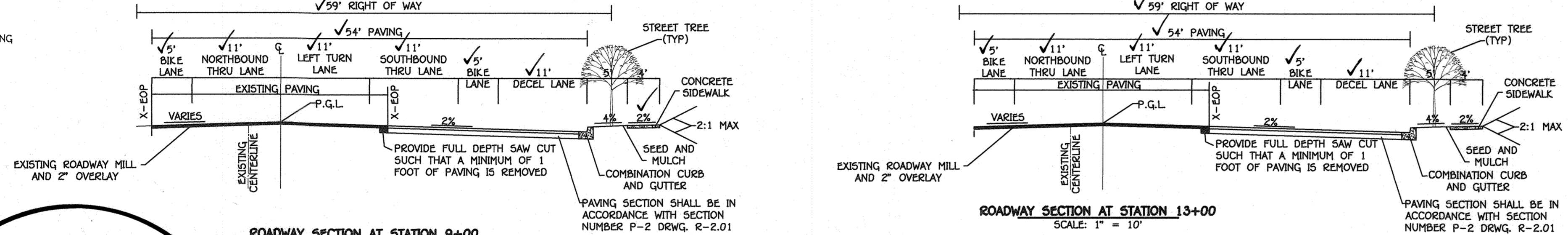
REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC URNANCE AND STORMWATER MANAGEMENT EASEMENTS	10/3/16
2	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17

Approved: Department Of Planning And Zoning  
*T. Mark F. Ks* 8-10-17  
 Chief, Division Of Land Development Date

Approved: Howard County Department Of Public Works  
*Howard S. Hill* 7/27/17  
 Chief, Bureau Of Highways Date



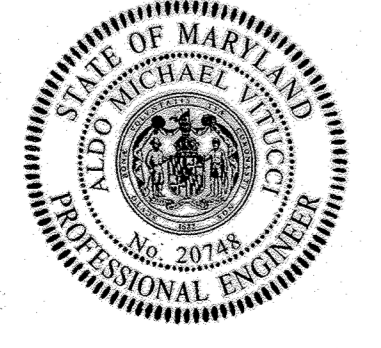
- FOR STREET LIGHT AND SIGNAGE LOCATIONS - SEE SHEET 1
- FOR SIGNAGE AND PAVEMENT MARKING PLAN - SEE SHEET NO. 17



LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
X 3/8\"	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED SEWER
---	PROPOSED WATER
---	PROPOSED ROAD WEARING SURFACE
---	NON-CREDIT OPEN SPACE
---	LIMIT OF DISTURBANCE
---	SURFACE SLOPE
---	15-24% SLOPED
---	25% OR GREATER SLOPED
---	SOILS
---	ERODIBLE SOILS
---	WETLANDS
---	100 YEAR FLOODPLAIN
---	STREAM BUFFER
---	DRAINAGE DITCH
---	NON-ROOFTOP DISCONNECTION (N-2)
---	DRINKING WATER TYPICAL
---	BIO RETENTION FACILITY (F-6) OR (M-6)
---	AS NOTED
---	SPECIEN TREE (TO BE REMOVED)
---	PUBLIC WATER, SEWER & UTILITY EASEMENT
---	RECREATIONAL OPEN SPACE
---	USE IN COMMON ACCESS EASEMENT
---	EXISTING SEWER EASEMENT (L-1500, F-477)
---	FOREST CONSERVATION EASEMENT
---	RETENTION AREA OUTSIDE T.P.
---	FOREST CONSERVATION EASEMENT PLANTING AREA
---	FOREST CONSERVATION EASEMENT PLANTING AREA TREE BANK FOR #3 & 4
---	FOREST CONSERVATION EASEMENT NON-RETENTION AREA INSIDE T.P.
---	STREET TREES
---	ON-SITE SIGNAGE/LIMIT OF FOREST CONSERVATION EASEMENT

ROAD IMPROVEMENT PLAN AND PROFILE  
 GUILFORD ROAD  
 STA: 2+57.30 - 16+00  
 REPLACEMENT SHEET  
 ENCLAVE AT RIVER HILL  
 PHASE 1

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK PREVIOUS HOWARD COUNTY FILES: ECP-15-005, PB#409, SP-05-006 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18 PARCEL NOS.: 88 & 97 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JUNE 24, 2016 SHEET 3 OF 58 F-15-110



I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

*Aldo Michael Vitucci*  
 Aldo Michael Vitucci #20748  
 Date



PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

*Frank Manalans II*  
 Frank Manalans II  
 Date: 7/21/17

DEVELOPER  
 BEAZER HOMES, LLC  
 8955 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

OWNERS  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-365-3697

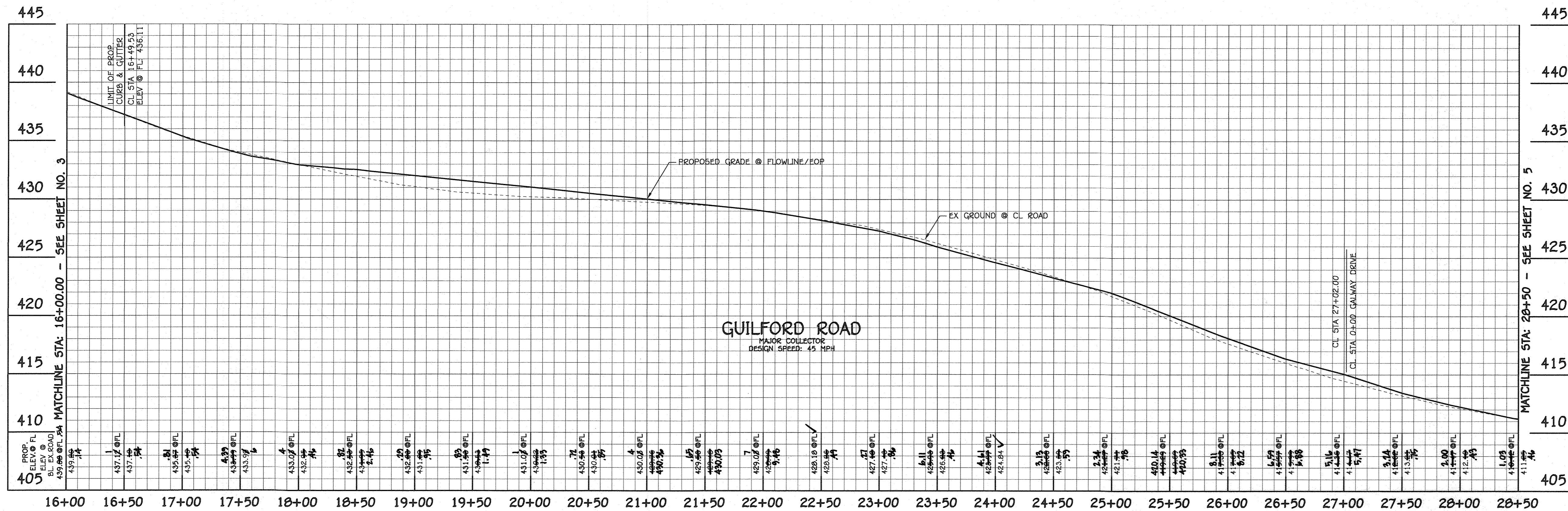
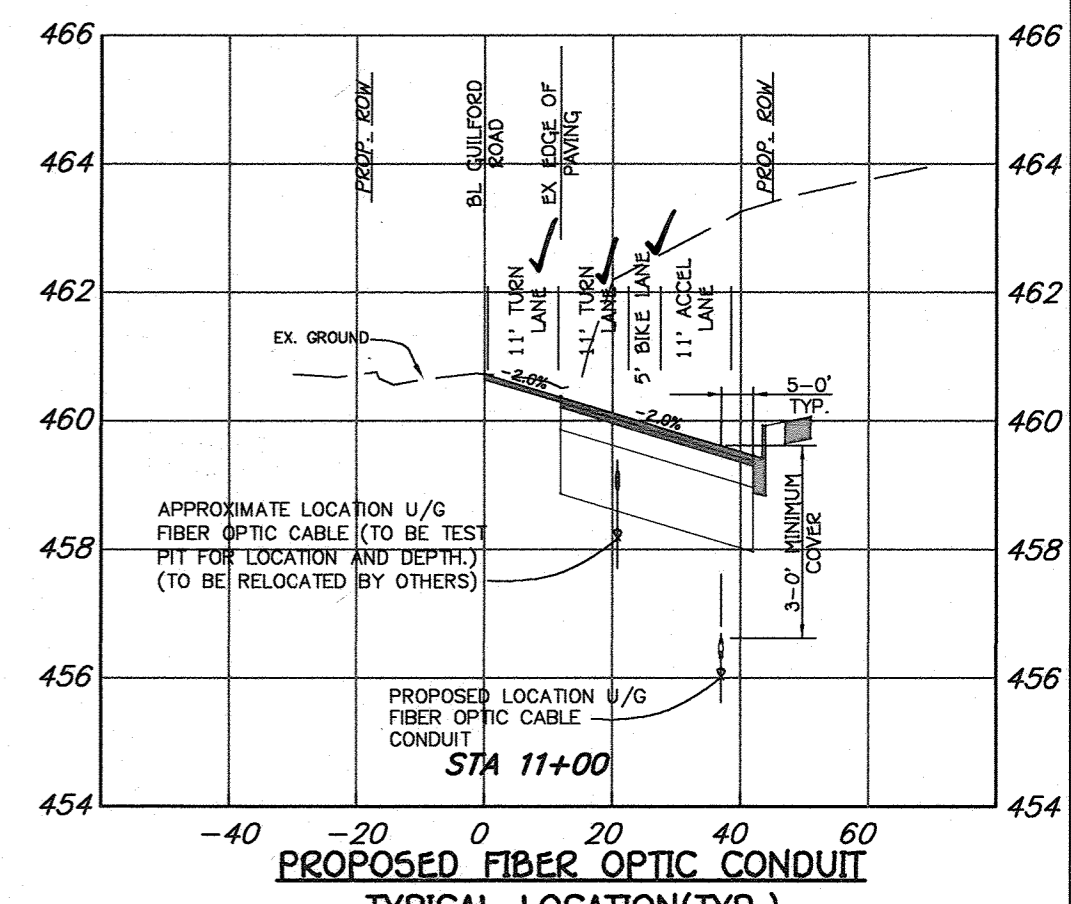
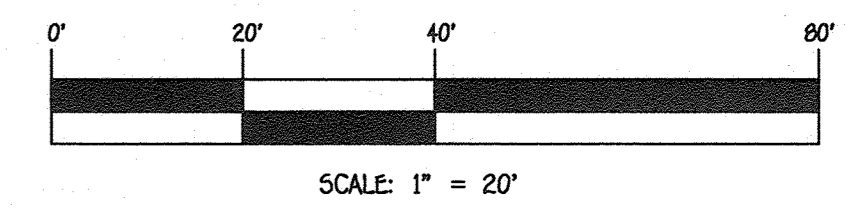
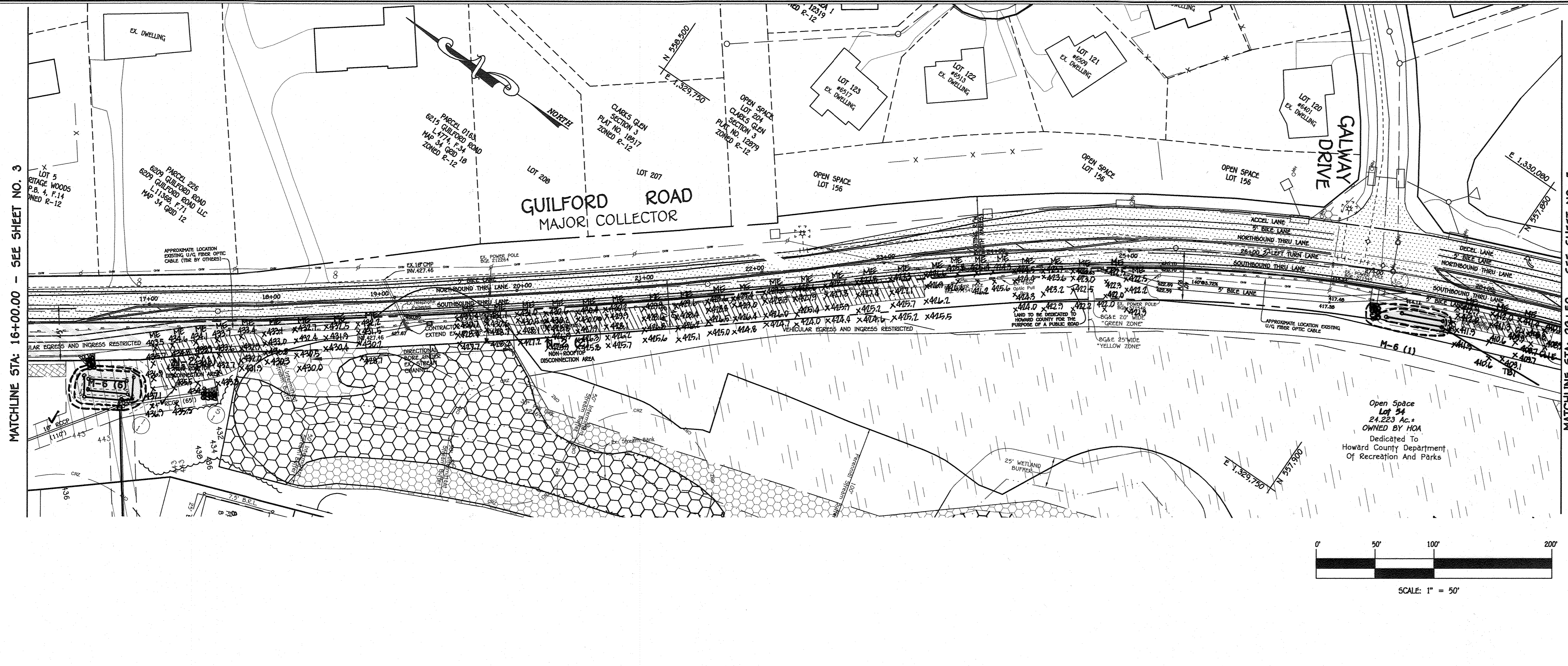
FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PLACE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-3999

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT BASINMENTS	10/3/16
2	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17

Approved: Department of Planning And Zoning  
*T. Mark F. Ks* 8-10-17  
 Chief, Division of Land Development Date

Approved: Howard County Department of Public Works  
*[Signature]* 8/1/17  
 Chief, Development Engineering Division Date

Approved: *[Signature]* 7/22/17  
 Chief, Bureau of Highways Date



LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
X 362.2	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED SEWER
---	PROPOSED WATER
---	PROPOSED ROAD WIDENING
---	NON CREDIT OPEN SPACE
---	LIMIT OF DISTURBANCE
---	SUPER SILT FENCE
---	SILT FENCE
---	15-2% SLOPES
---	2% OR GREATER SLOPES
---	3' SOILS
---	12' SOILS
---	EXPOSURE SOILS
---	WETLANDS
---	100 YEAR FLOODPLAIN
---	STREAM BUFFER
---	DRAINAGE DITCH
---	NON ROOFTOP DISCONNECTION (N-2)
---	SWALL (N-3) TYPICAL
---	BIO RETENTION FACILITY (F-6) OR (F-6)
---	AS NOTED
---	SPECIMEN TREE (TO BE REMOVED)
---	PUBLIC WATER, SEWER & UTILITY EASEMENT
---	RECREATIONAL OPEN SPACE
---	USE IN COMMON ACCESS EASEMENT
---	EXISTING SEWER EASEMENT (L.S.E.T. F.ATT)
---	FOREST CONSERVATION EASEMENT
---	FOREST CONSERVATION EASEMENT PLANTING AREA
---	FOREST CONSERVATION EASEMENT PLANTING AREA TREE BANK FOR #3 & 4
---	FOREST CONSERVATION EASEMENT NON-RETENTION AREA INSIDE E.P.
---	STREET TREES
---	ON-SITE SIGNAGE/LIMIT OF FOREST CONSERVATION EASEMENT

ROAD IMPROVEMENT PLAN AND PROFILE  
 GUILFORD ROAD  
 STA: 16+00 - 28+55  
 REPLACEMENT SHEET  
 ENCLAVE AT RIVER HILL  
 PHASE 1  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 4 OF 58 F-15-110

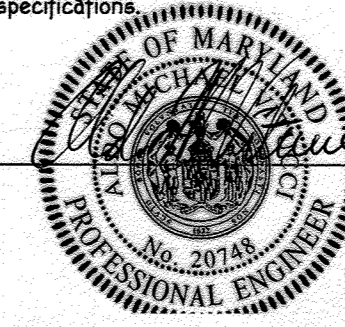
FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FILE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2899



PROFESSIONAL CERTIFICATION  
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*Frank Mawlanian*  
 7/12/17  
 Date

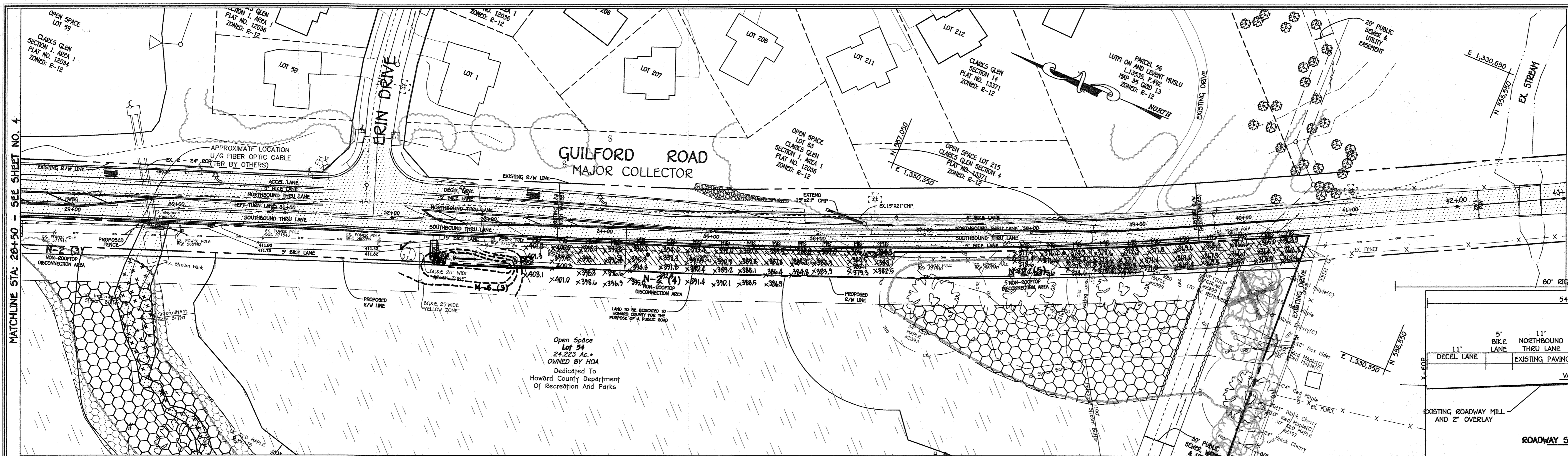
DEVELOPER  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

OWNERS  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697



I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.  
*Aldo Michael Vitucci*  
 7/12/17  
 Date

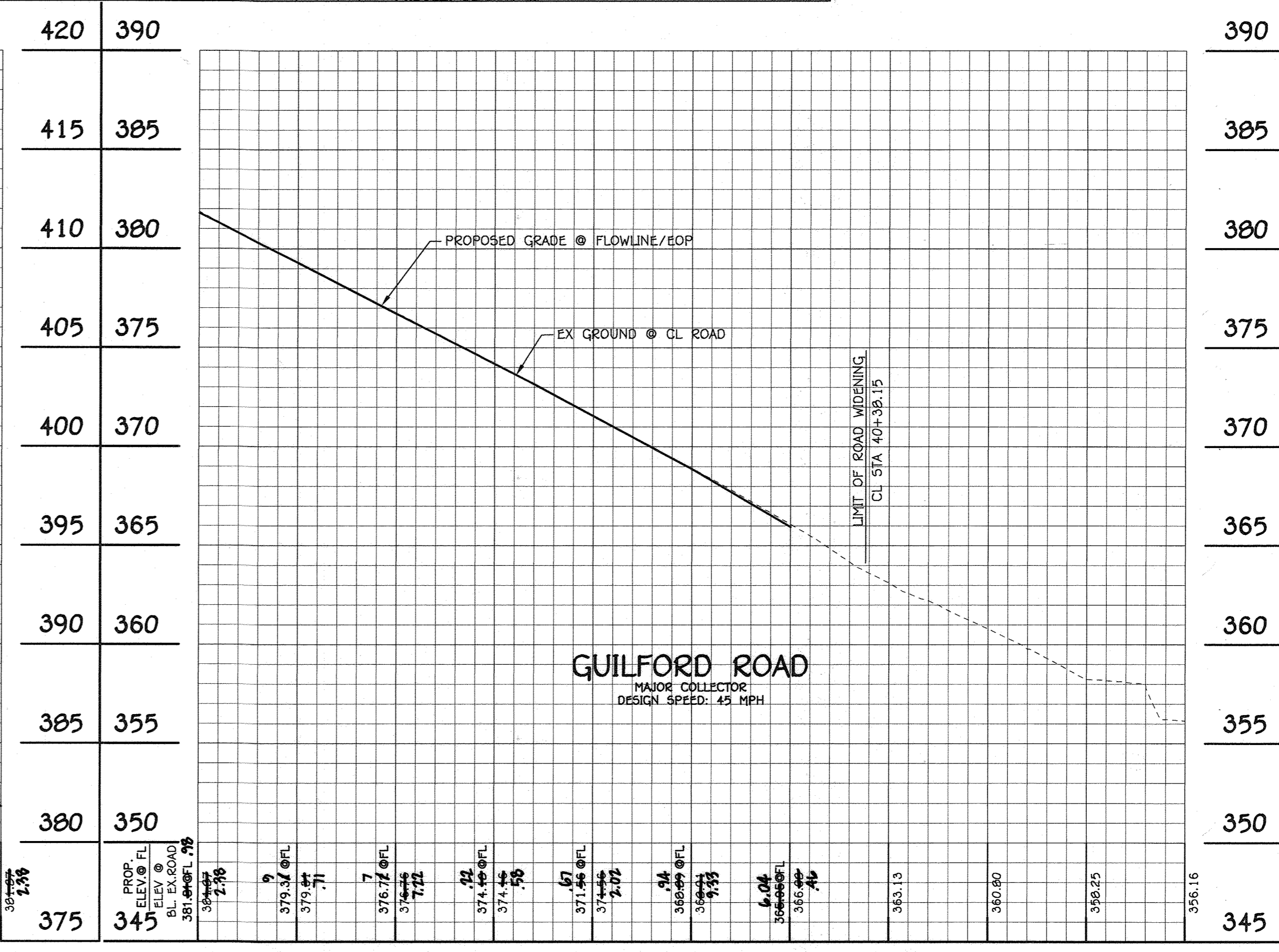
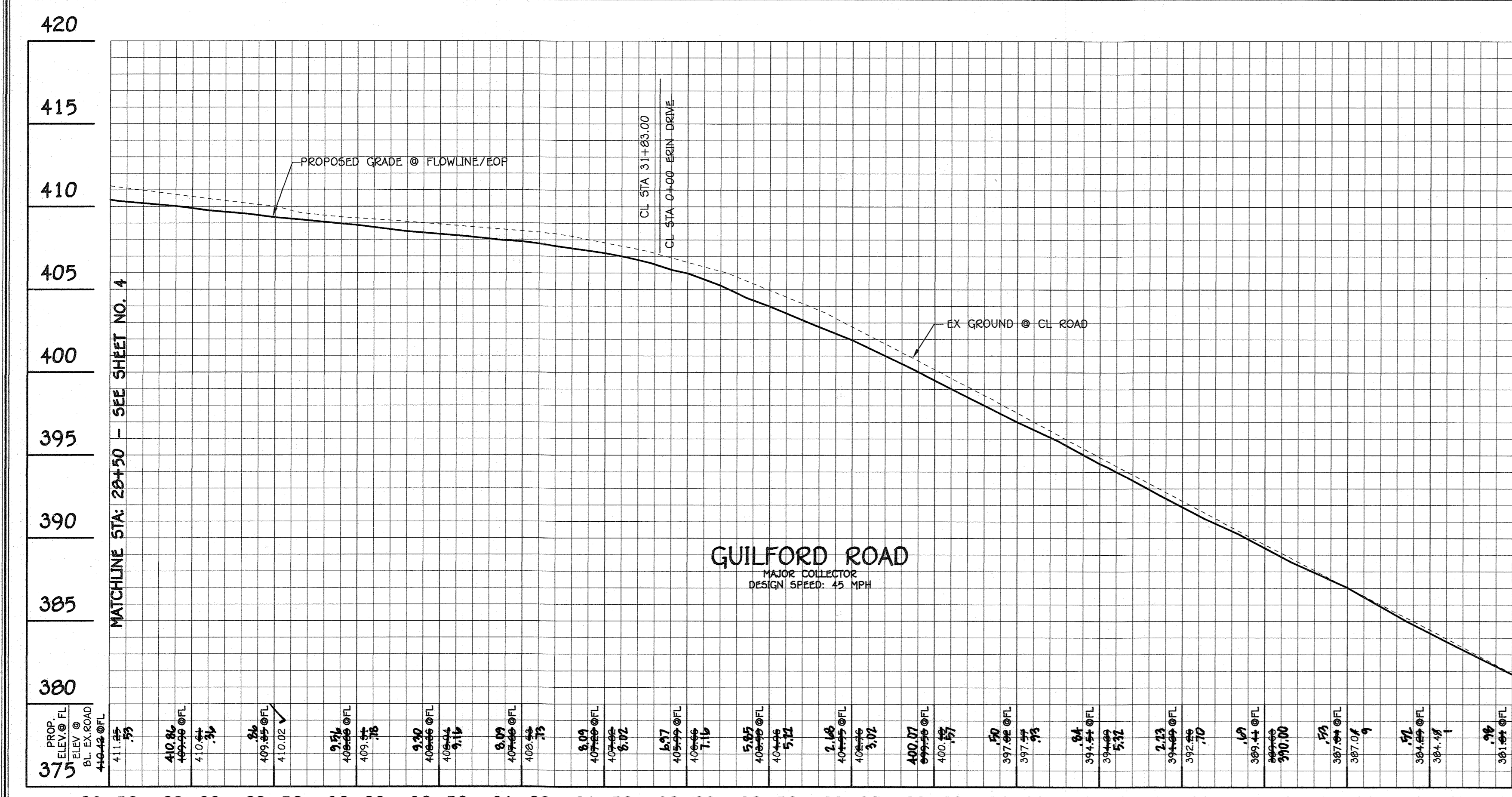
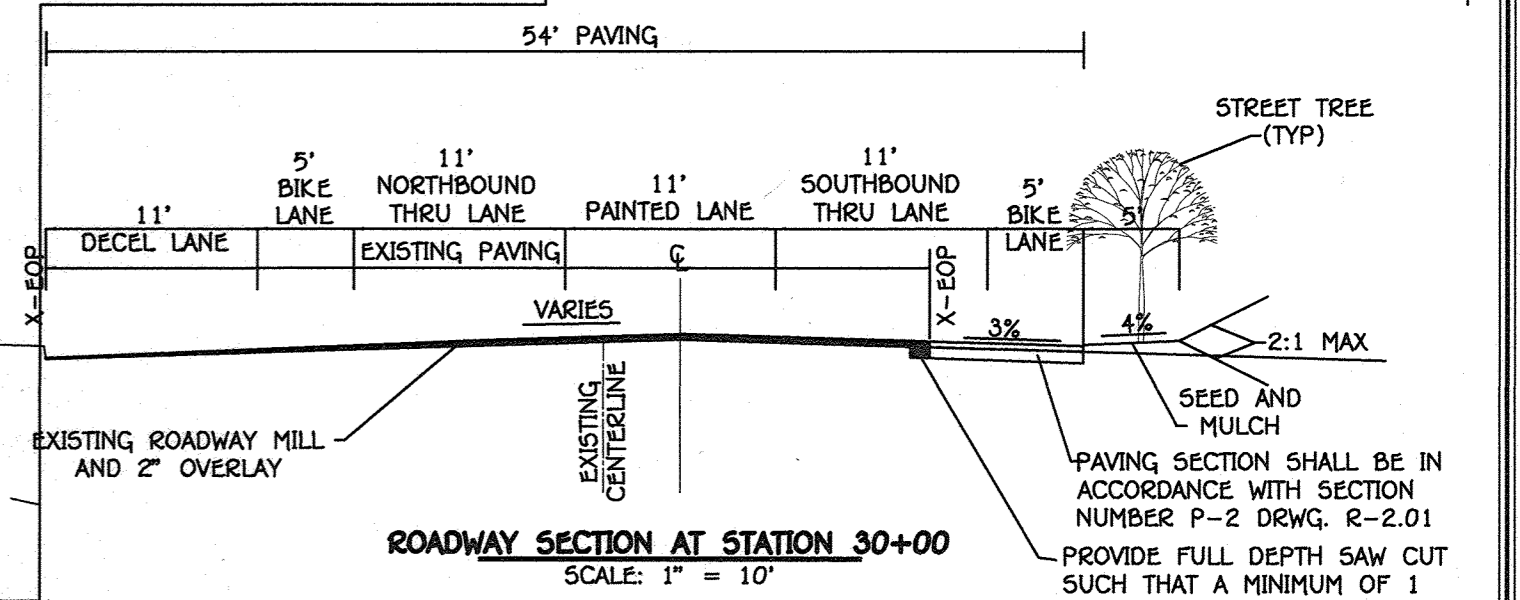
"AS-BUILT"



REVISIONS		
NO.	DESCRIPTION	DATE
1	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17

Approved: Department Of Planning And Zoning  
*T. M. ...* 9-10-17  
 Chief, Division Of Land Development  
 Date

Approved: Howard County Department Of Public Works  
*...* 9/1/17  
 Chief, Bureau Of Highways  
 Date



LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTIGUOUS 2' INTERVAL
---	EXISTING CONTIGUOUS 10' INTERVAL
---	PROPOSED CONTIGUOUS 10' INTERVAL
---	PROPOSED CONTIGUOUS 2' INTERVAL
---	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED WATER
---	PROPOSED ROAD MEDIAN
---	NON CROSSL OPEN SPACE
---	LINE OF DISTURBANCE
---	SUPER SILT FENCE
---	SILT FENCE
---	25% OR GREATER SLOPES
---	1" SOILS
---	12" SOILS
---	SHOULDER SOILS
---	WETLANDS
---	100 YEAR FLOODPLAIN
---	STREAM BUFFER
---	DRAINAGE DITCH
---	NON SCOURTOP DISCONNECTION (N-2)
---	DRYWELL (M-5)-TYPICAL
---	NO RETENTION FACILITY (F-4) OR (F-5) AS NOTED
---	SPECIMEN TREE (TO BE REMOVED)
---	PUBLIC WORKS, SENIOR & UTILITY EASEMENT
---	RECREATIONAL OPEN SPACE
---	USE IN COMMON ACCESS EASEMENT
---	EXISTING SIGAL EASEMENT (L13087, F477)
---	FOREST CONSERVATION EASEMENT
---	RESTRICTION AREA OUTSIDE 10'
---	FOREST CONSERVATION EASEMENT
---	PLANTING AREA
---	FOREST CONSERVATION EASEMENT PLANTING AREA TREE BANK (C.A. 4.4)
---	FOREST CONSERVATION EASEMENT NON-RESTRICTION AREA (C.A. 4.4)
---	STREET TREES
---	ON-SITE SIGNAGE LIMIT OF FOREST CONSERVATION EASEMENT

**A5-BUILT CERTIFICATION**

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "A5-BUILT" plan meet the approved plans and specifications.

*[Signature]*  
 ALDO MICHAEL VITUCCI #20748  
 PROFESSIONAL ENGINEER

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2899

**PROFESSIONAL CERTIFICATION**

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

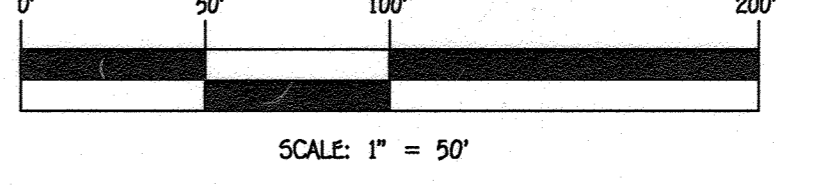
*[Signature]*  
 FRANCIS MANALANSAN II  
 PROFESSIONAL LAND SURVEYOR

**DEVELOPER**

BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**

TERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697



**ROAD IMPROVEMENT PLAN AND PROFILE**  
**GUILFORD ROAD**  
 STA: 28+50 - 42+00  
 REPLACEMENT SHEET  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 5 OF 58 **F-15-110**

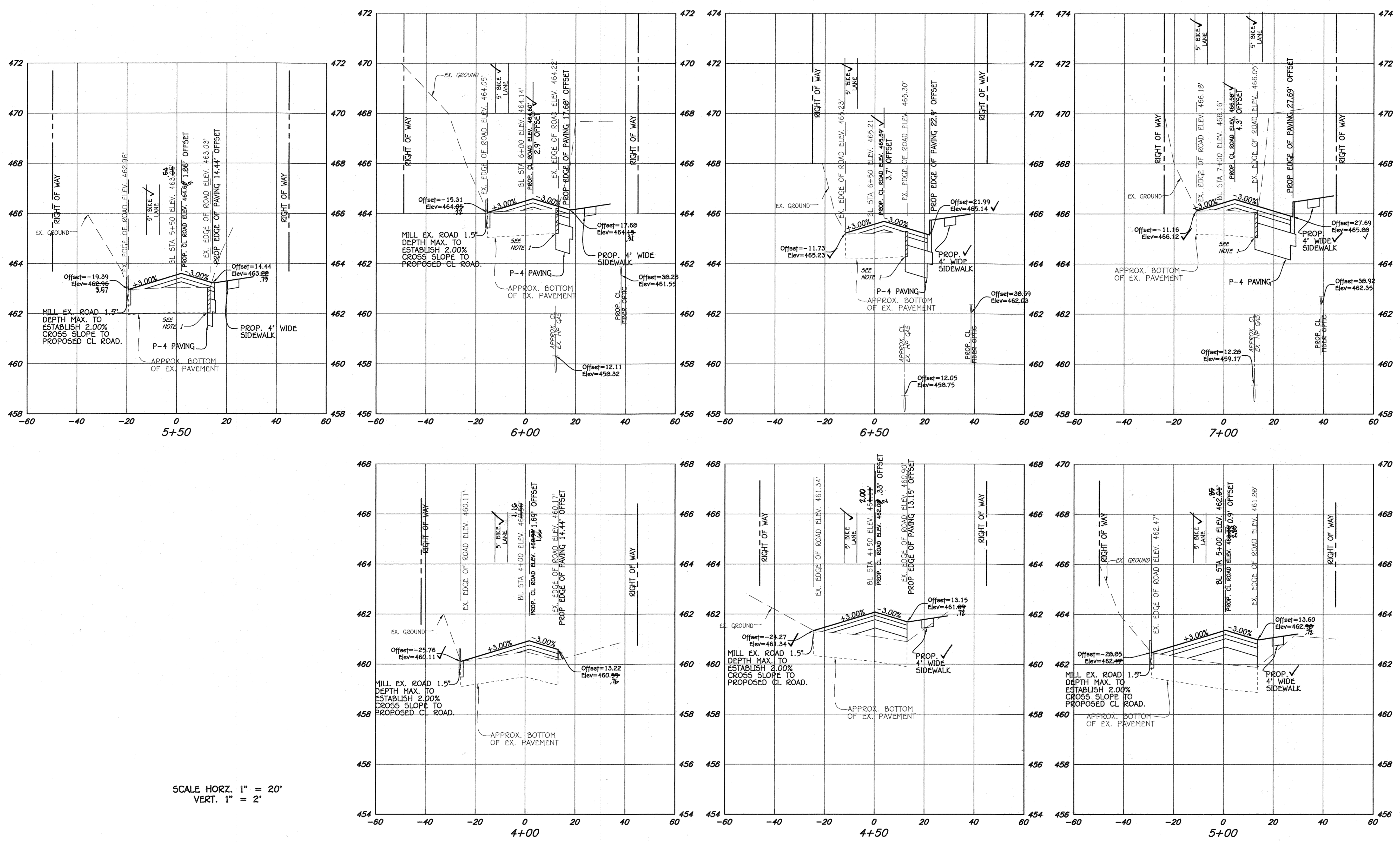
"A5-BUILT"

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17

Approved: Department Of Planning And Zoning	
<i>T. Muehl</i> for <i>KS</i>	9/10/17
Chief, Division Of Land Development	Date
<i>[Signature]</i>	8/1/17
Chief, Development Engineering Division	Date
Approved: Howard County Department Of Public Works	
<i>[Signature]</i>	7/27/17
Chief, Bureau Of Highways	Date

NOTES:  
 1) CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUT SUCH THAT A MINIMUM OF 1 FOOT FROM EXISTING EDGE OF PAVING IS REMOVED



SCALE HORIZ. 1" = 20'  
 VERT. 1" = 2'

**A5-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "A5-BUILT" plan meet the approved plans and specifications.

*[Signature]*  
 Date: 9/29/16  
 ALDO MICHAEL VITUCCI #20748  
 PROFESSIONAL ENGINEER

0' 20' 40' 80'  
 SCALE: 1" = 20'

GUILFORD ROAD CROSS-SECTIONS  
 STA. 4+00 TO STA. 7+00  
 REPLACEMENT SHEET  
**ENCLAVE AT RIVER HILL  
 PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
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 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 6 OF 58 **F-15-110**

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*[Signature]*  
 FRANK MANUANSAN II  
 7/2/17  
 Date

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
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 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-395-3697

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLETT CITY, MARYLAND 21042  
 (410) 461-2895

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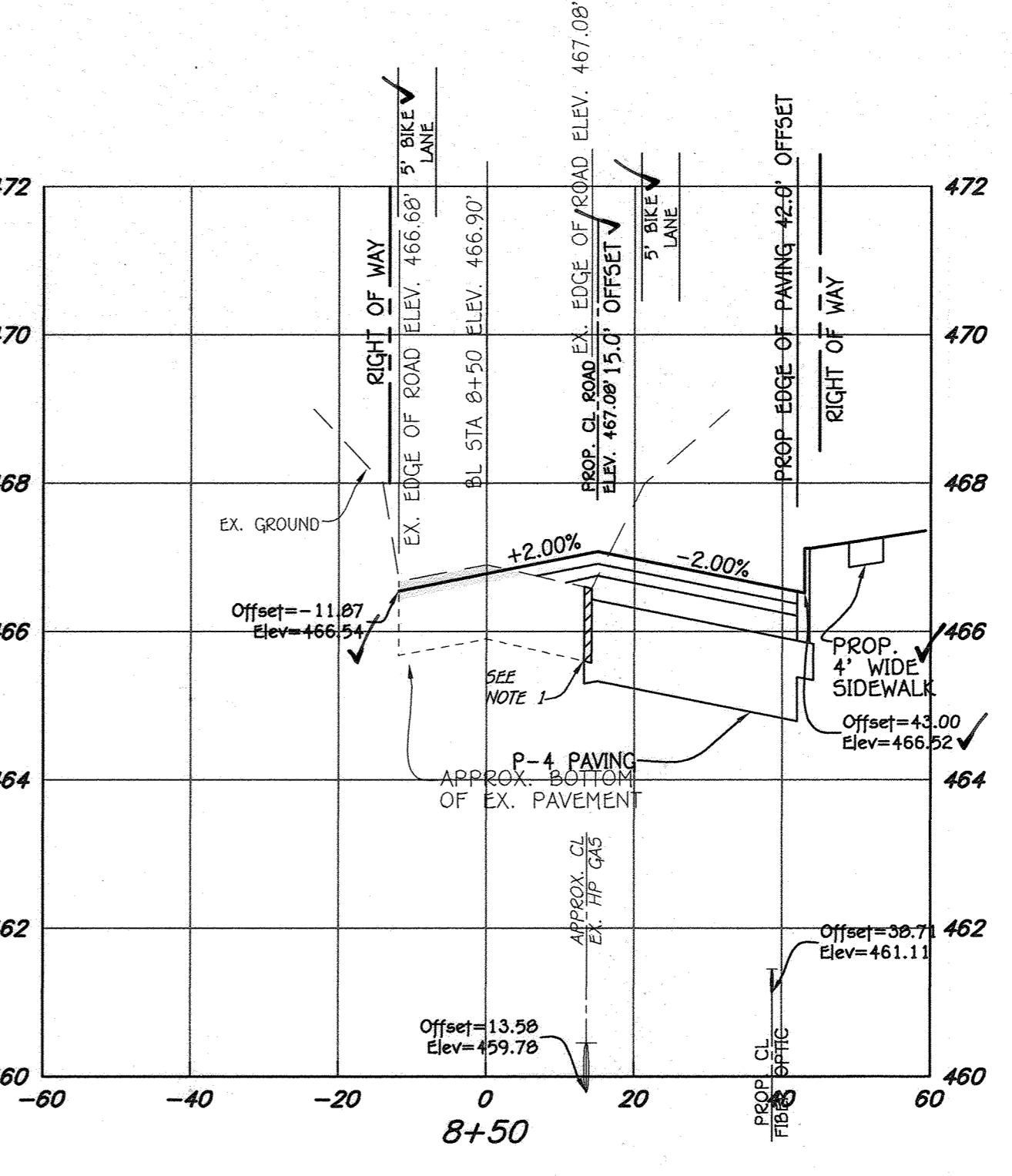
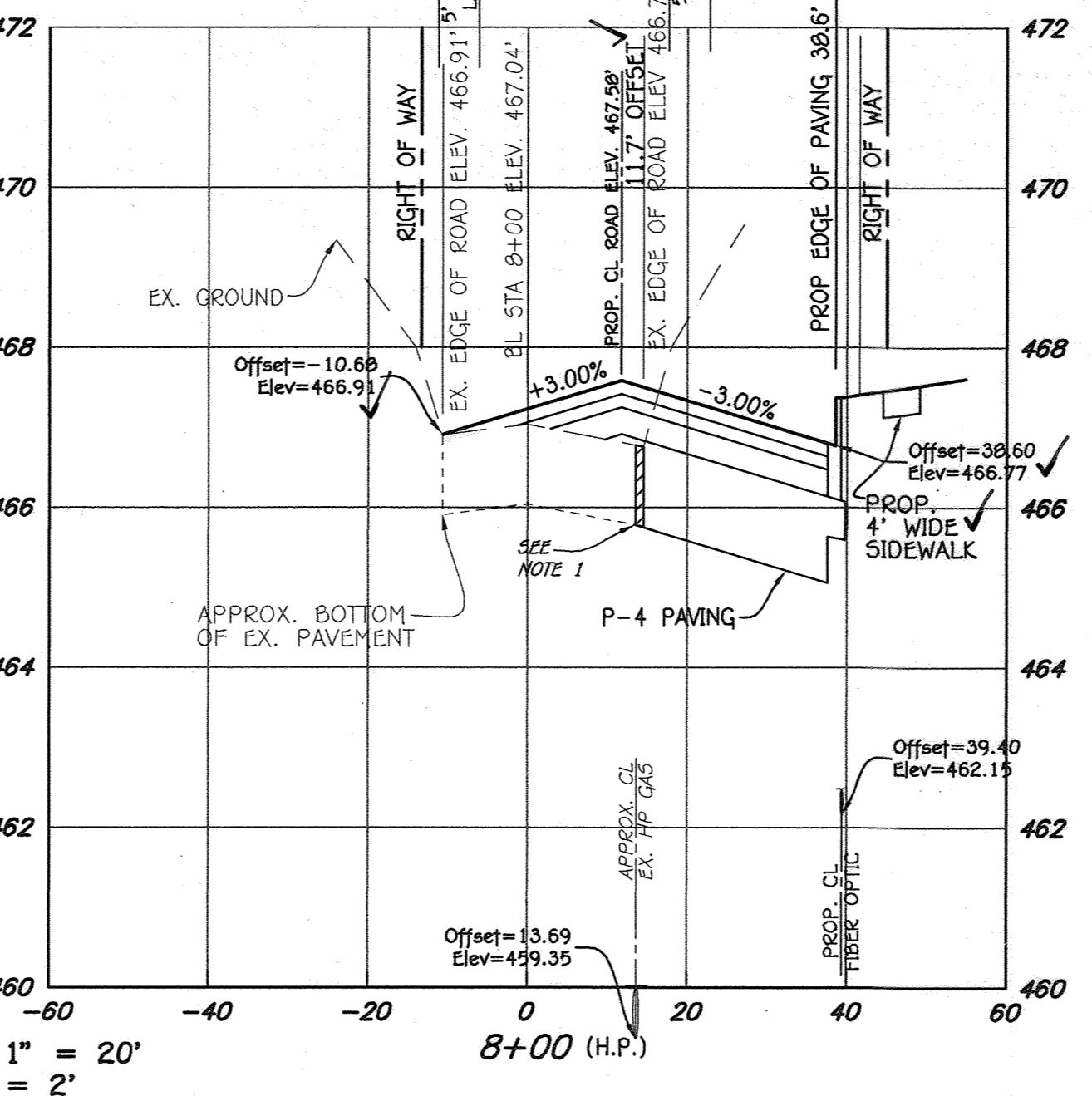
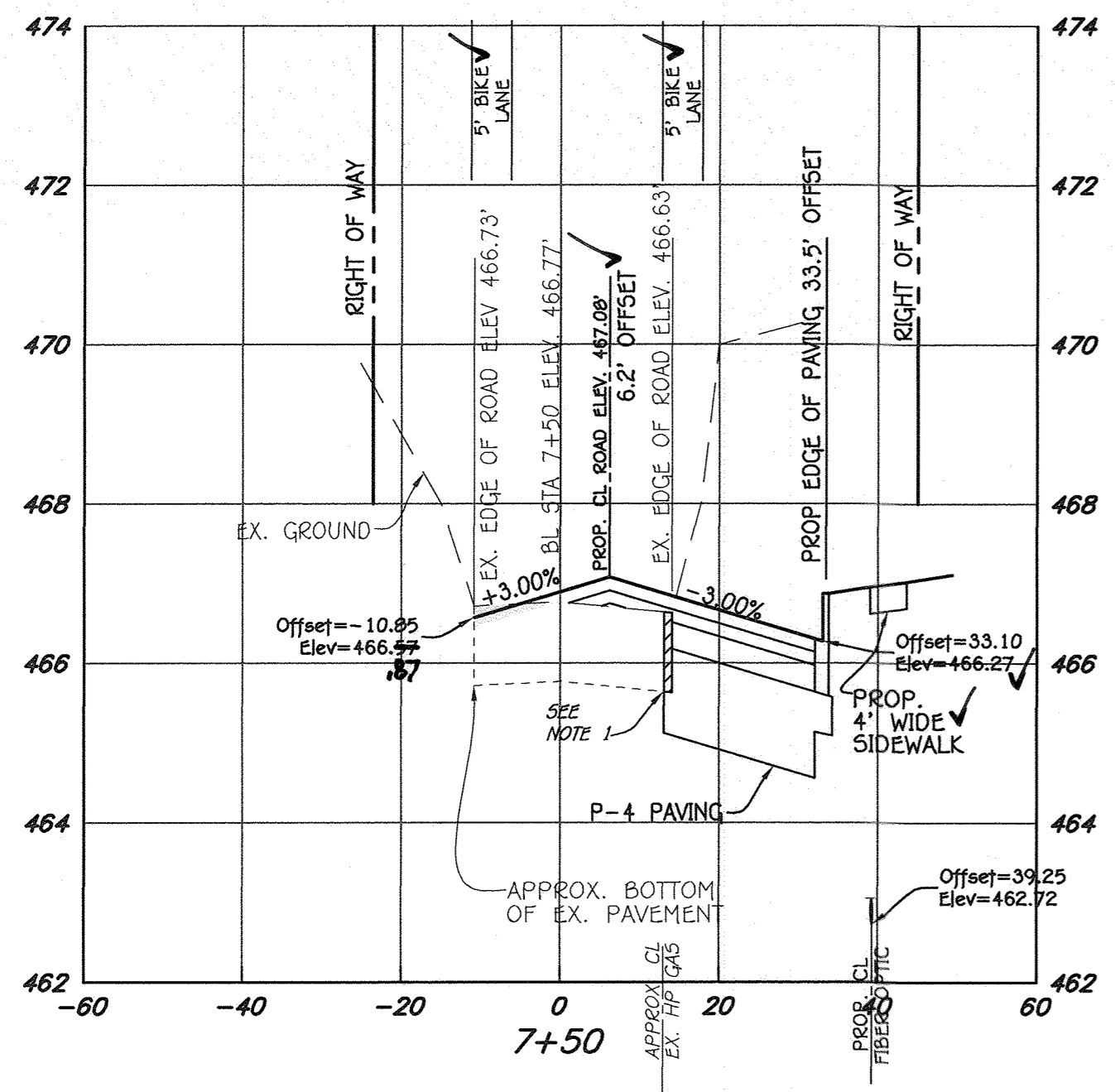
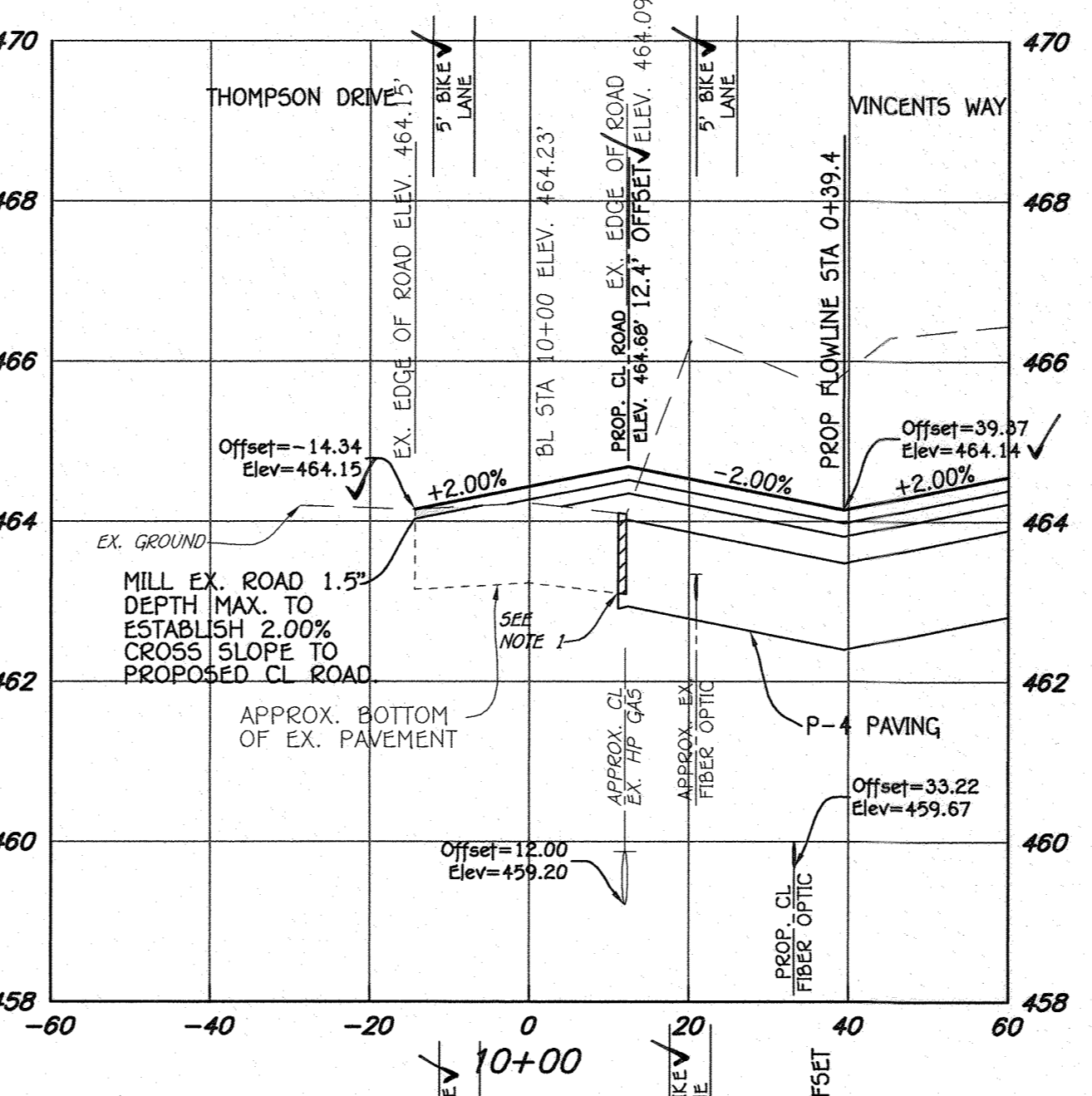
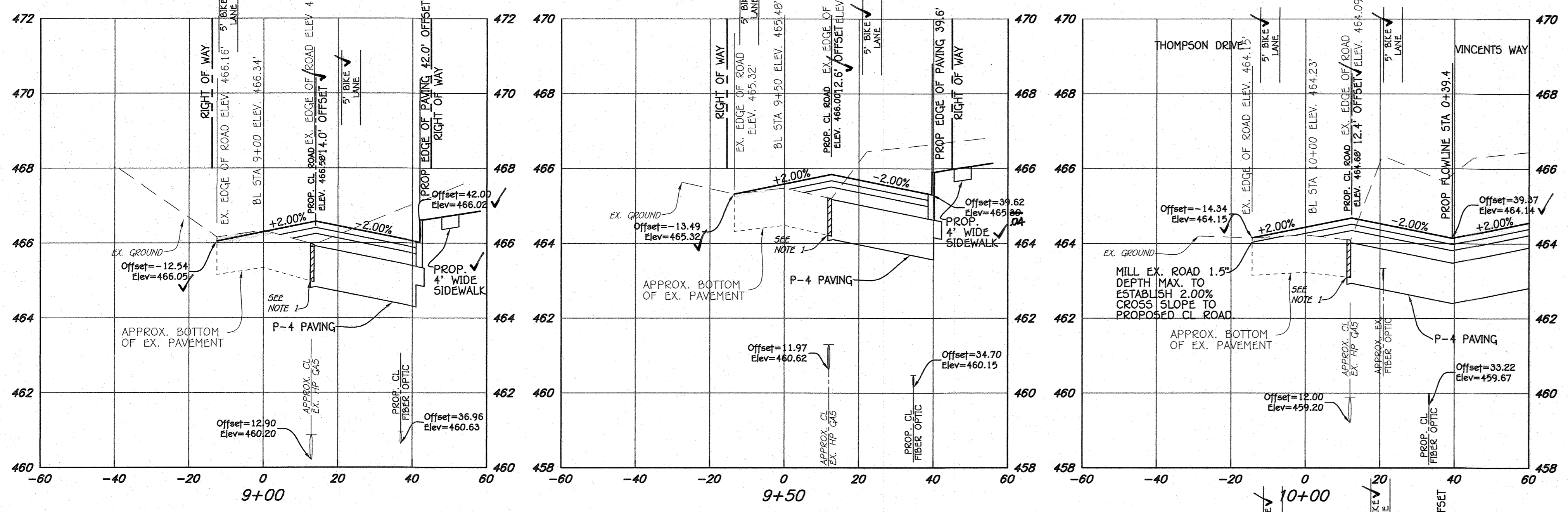
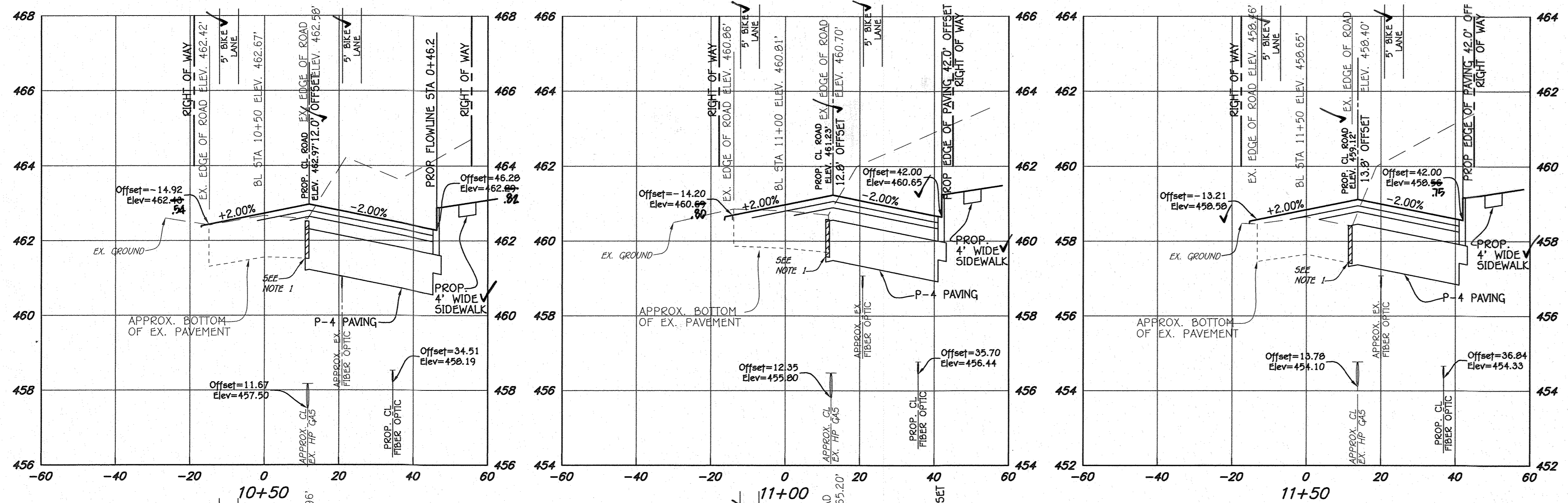
REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17

Approved: Department Of Planning And Zoning  
*T. Macaulm* *KS* 8/10/17  
 Chief, Division Of Land Development Date

Approved: Chief, Development Engineering Division  
 8/1/17  
 Date

Approved: Howard County Department Of Public Works  
*Howard* 7/27/17  
 Chief, Bureau Of Highway Date

NOTES:  
 1) CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUT SUCH THAT A MINIMUM OF 1 FOOT FROM EXISTING EDGE OF PAVING IS REMOVED

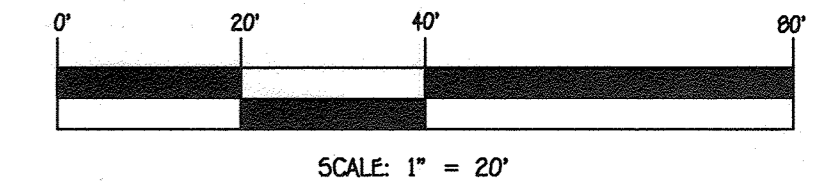


**AS-BUILT CERTIFICATION**

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

*ALDO MICHAEL VITUCCI* 6/29/22  
 Date

ALDO MICHAEL VITUCCI #20740  
 PROFESSIONAL ENGINEER



GUILFORD ROAD CROSS-SECTIONS  
 STA. 7+50 TO STA. 11+50  
 REPLACEMENT SHEET  
 ENCLAVE AT RIVER HILL  
 PHASE 1  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 7 OF 58 F-15-110

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

*Frank M. Havelansky* 7/12/17  
 Date

FRANK HAVELANSKY II  
 PROFESSIONAL LAND SURVEYOR

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3597

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CONTONAL SQUARE OFFICE PARK - 10272 BALTHORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2899

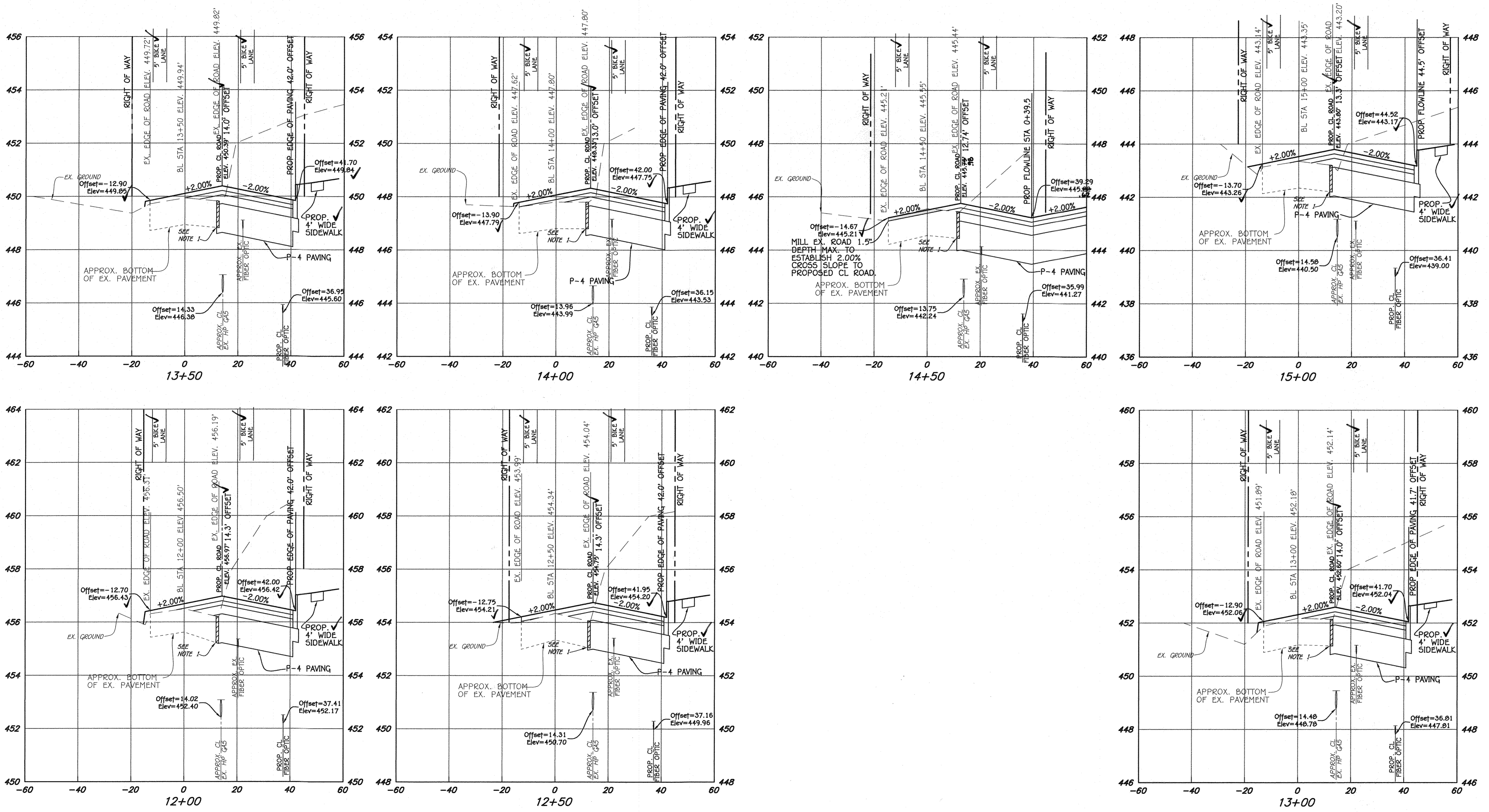
"AS-BUILT"

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17

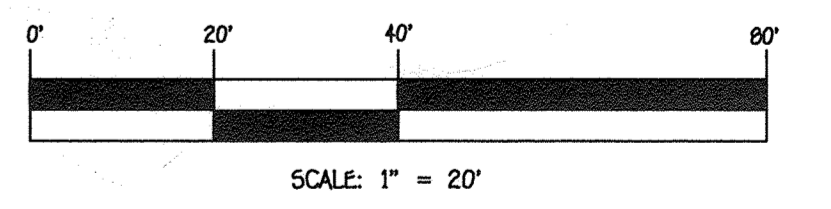
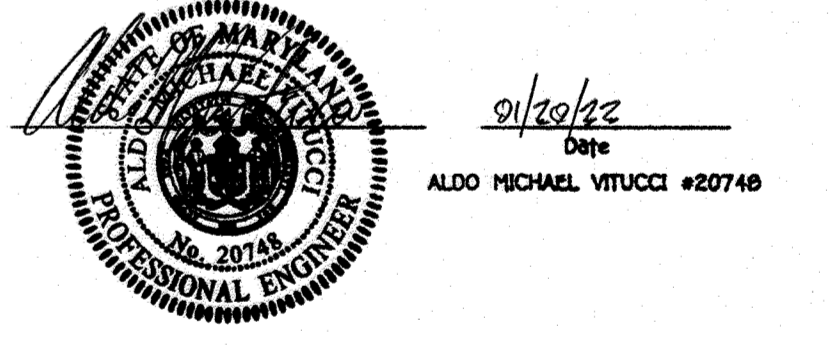
Approved: Department Of Planning And Zoning	
<i>T. Mark Hicks</i>	8/10/17
Chief, Division Of Land Development	Date
<i>[Signature]</i>	8/1/17
Chief, Development Engineering Division	Date
Approved: Howard County Department Of Public Works	
<i>[Signature]</i>	7/27/17
Chief, Bureau Of Highways	Date

NOTES:  
 1) CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUT SUCH THAT A MINIMUM OF 1 FOOT FROM EXISTING EDGE OF PAVING IS REMOVED



SCALE HORZ. 1" = 20'  
 VERT. 1" = 2'

**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



GUILFORD ROAD CROSS-SECTIONS  
 STA. 12+00 TO STA. 15+00  
 REPLACEMENT SHEET  
**ENCLAVE AT RIVER HILL  
 PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 8 OF 58 F-15-110



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-365-3697

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2895

"AS-BUILT"

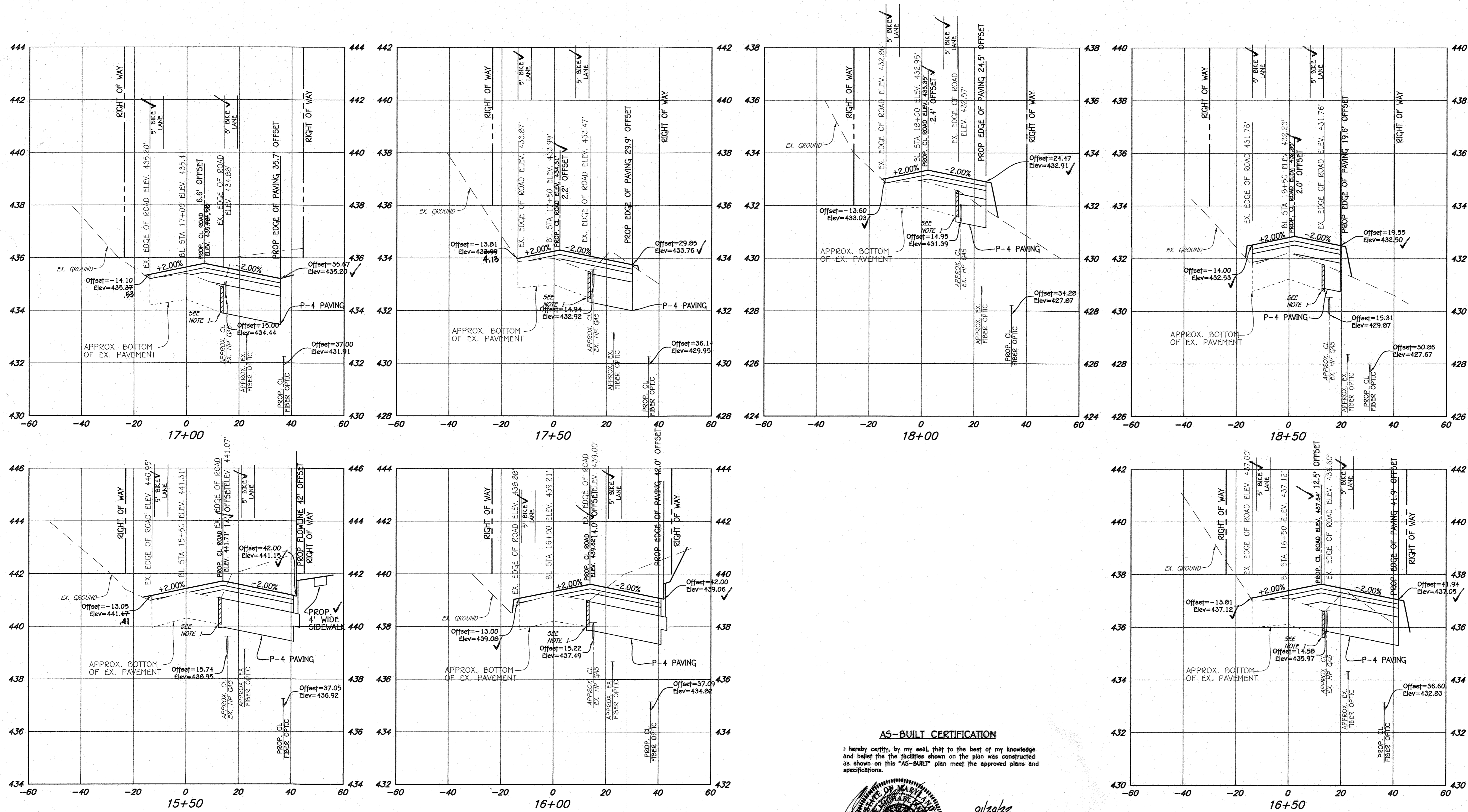


REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17

Approved: Department Of Planning And Zoning  
*T. Mauch* for KS 8/10/17  
 Chief, Division Of Land Development Date

Approved: Howard County Department Of Public Works  
*Howard* for 7/27/17  
 Chief, Bureau Of Highway Date

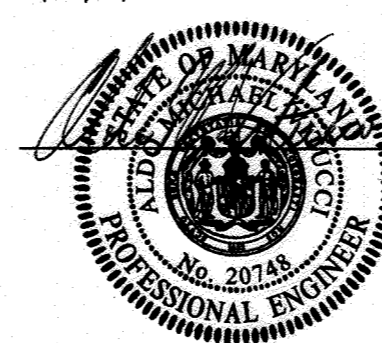
NOTES:  
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SCALE HORZ. 1" = 20'  
 VERT. 1" = 2'

**AS-BUILT CERTIFICATION**

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



*Aldo Michael Vitucci*  
 Date  
 ALDO MICHAEL VITUCCI #20748

**PROFESSIONAL CERTIFICATION**

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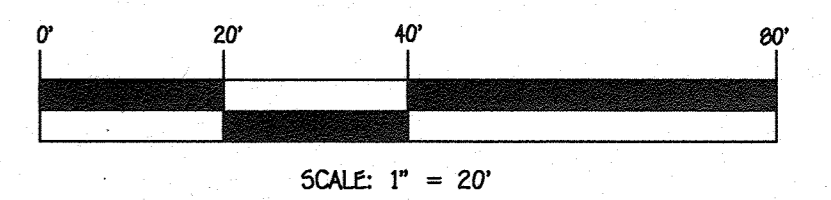
*Frank Manaligan II*  
 Date  
 FRANK MANALIGAN II

**DEVELOPER**

BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**

TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3597

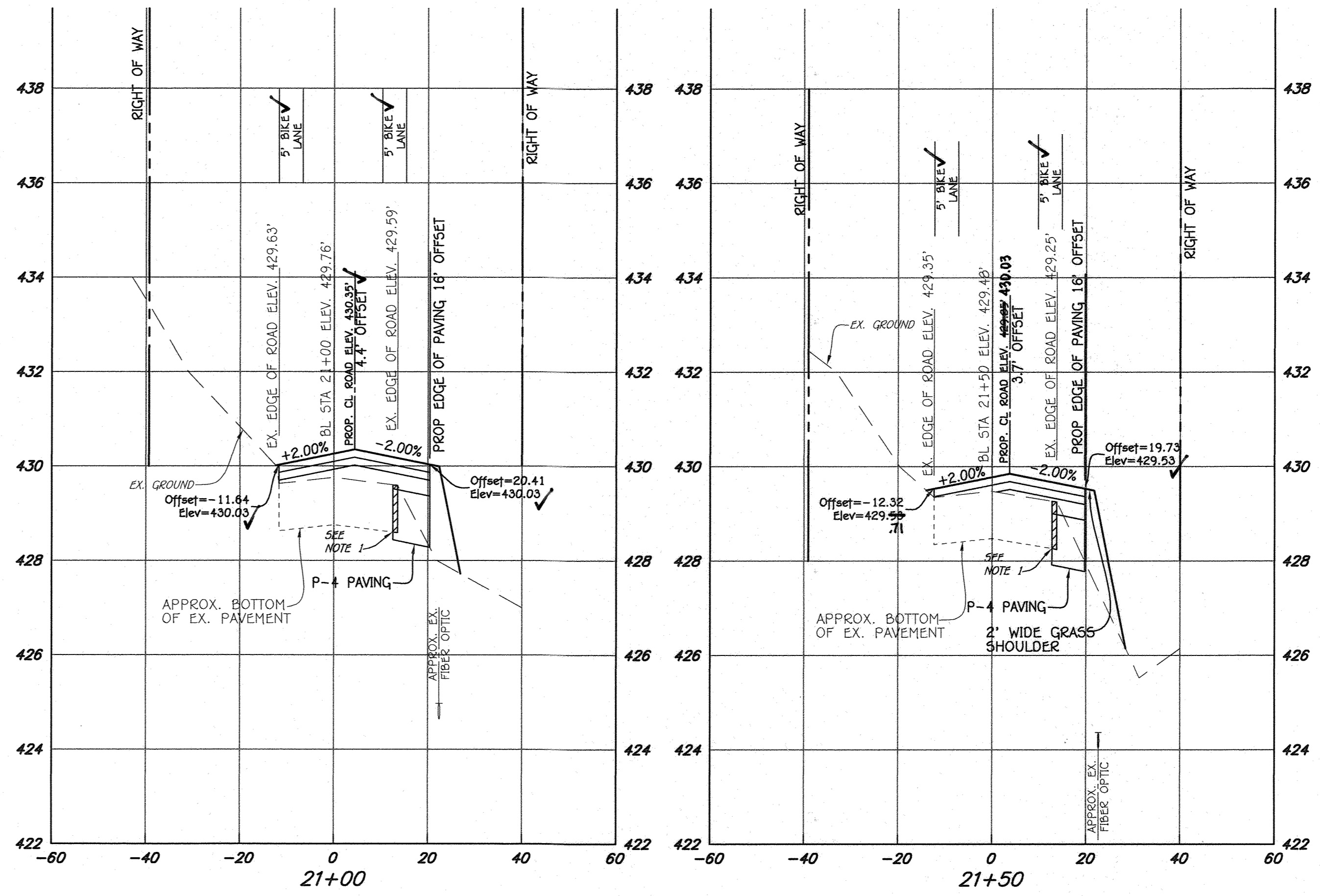
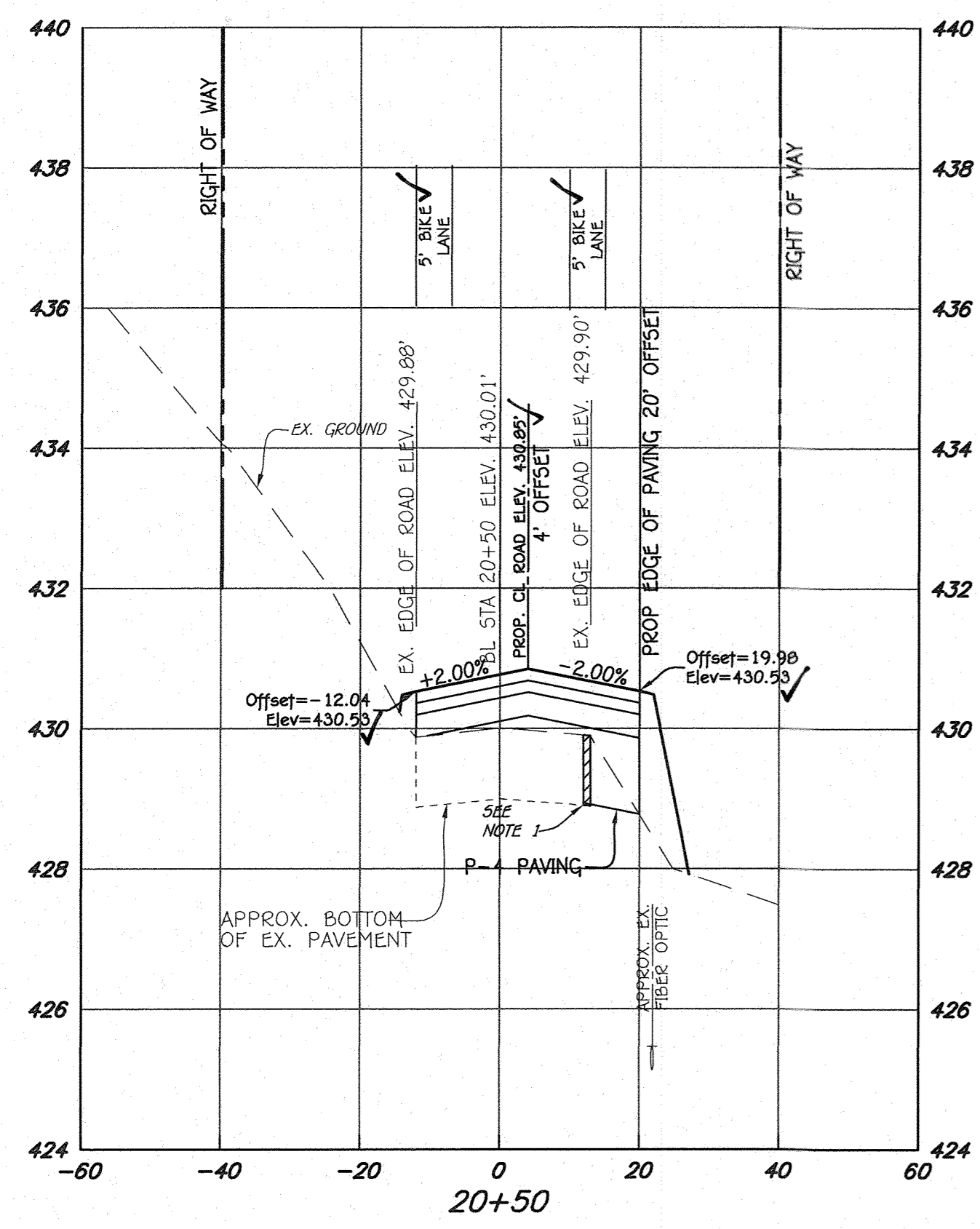


GUILFORD ROAD CROSS-SECTIONS  
 STA. 15+50 TO STA. 18+50

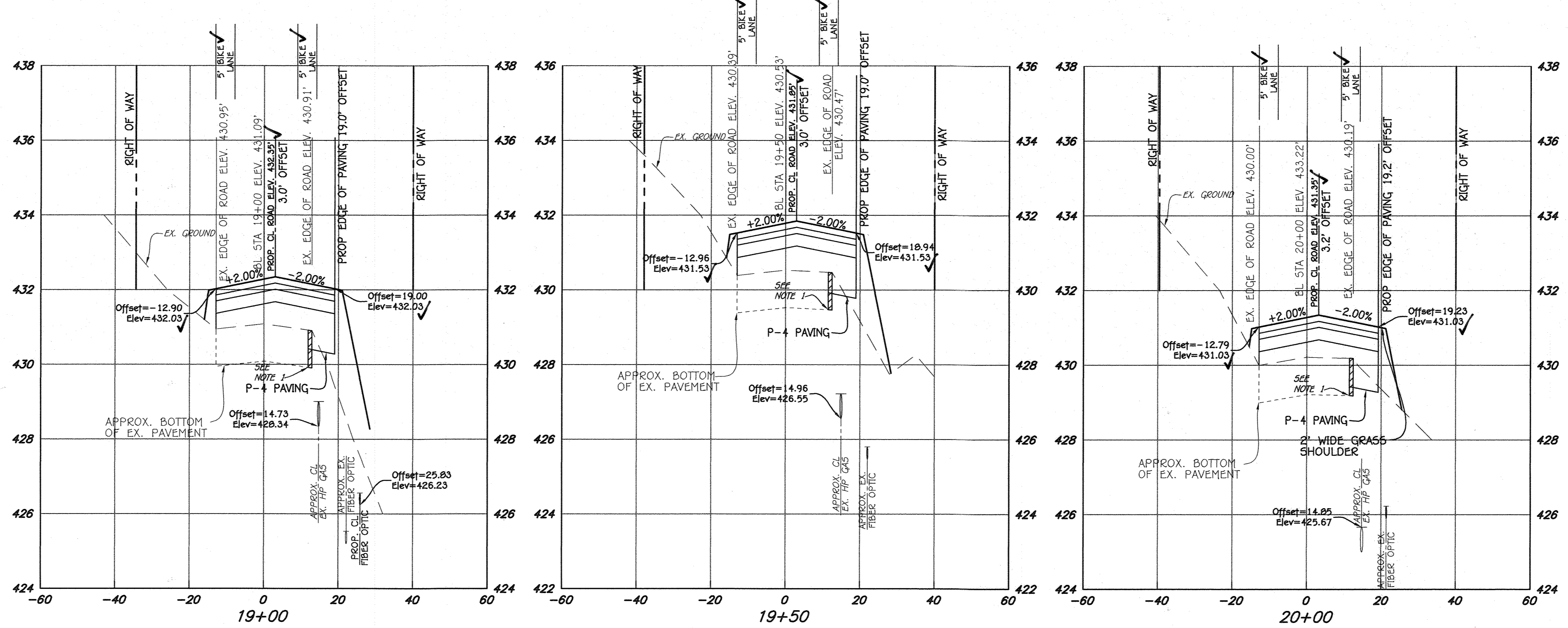
REPLACEMENT SHEET  
**ENCLAVE AT RIVER HILL  
 PHASE 1**

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOs.: 34 GRID NO.: 18  
 PARCEL NOS.: 08 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 9 OF 58 F-15-110

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17
Approved: Department Of Planning And Zoning		
<i>T. Marshall Parks</i>		8/10/17
Chief, Division Of Land Development		Date
<i>[Signature]</i>		8/1/17
Chief, Development Engineering Division		Date
Approved: Howard County Department Of Public Works		
<i>[Signature]</i>		7/29/17
Chief, Bureau Of Highways		Date

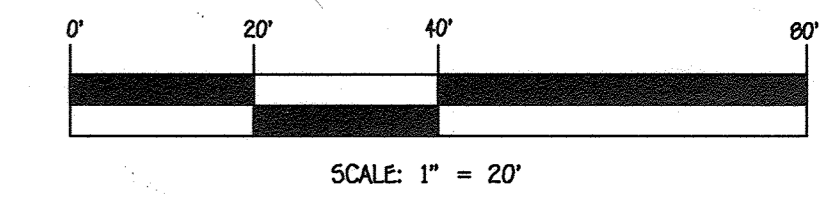
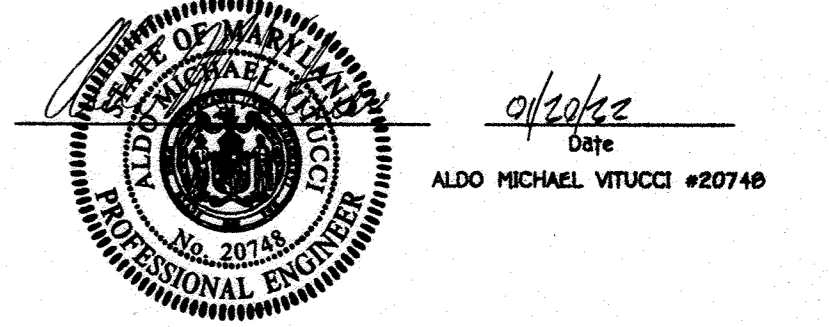


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SCALE HORIZ. 1" = 20'  
 VERT. 1" = 2'

AS-BUILT CERTIFICATION  
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GUILFORD ROAD CROSS-SECTIONS  
 STA. 19+00 TO STA. 21+50

REPLACEMENT SHEET  
 ENCLAVE AT RIVER HILL  
 PHASE 1

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 10 OF 58 F-15-110



PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

DEVELOPER  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

OWNERS  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-365-3697

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-3899

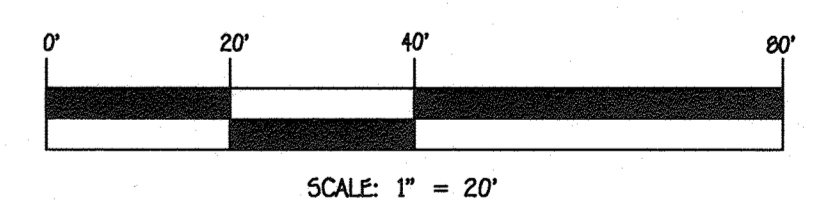
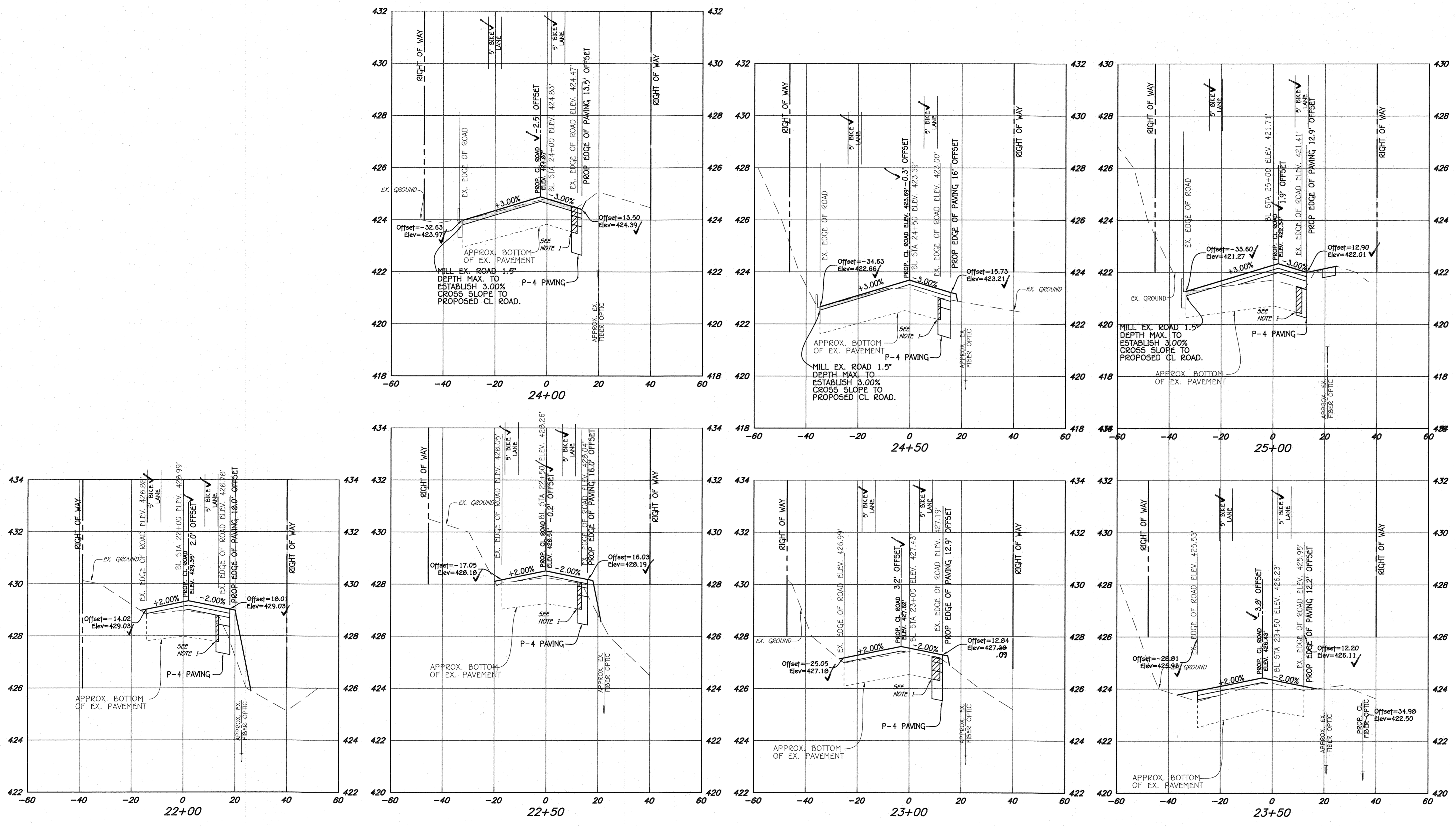
"AS-BUILT"

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17

Approved: Department Of Planning And Zoning	
<i>T. M. ...</i>	8/10/17
Chief, Division Of Land Development	Date
<i>[Signature]</i>	8/1/17
Chief, Development Engineering Division	Date
Approved: Howard County Department Of Public Works	
<i>[Signature]</i>	7/22/17
Chief, Bureau Of Highways	Date

NOTES:  
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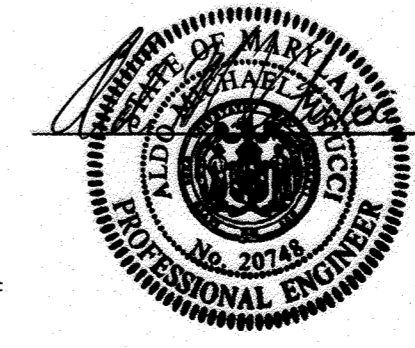
GUILFORD ROAD CROSS-SECTIONS  
 STA. 22+00 TO STA. 25+00

REPLACEMENT SHEET  
**ENCLAVE AT RIVER HILL  
 PHASE 1**

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 08 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 11 OF 58 F-15-110

**AS-BUILT CERTIFICATION**

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



8/20/22  
 ALDO MICHAEL VITUCCI #207148



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.  
 Frank Hanulansky  
 7/12/17

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

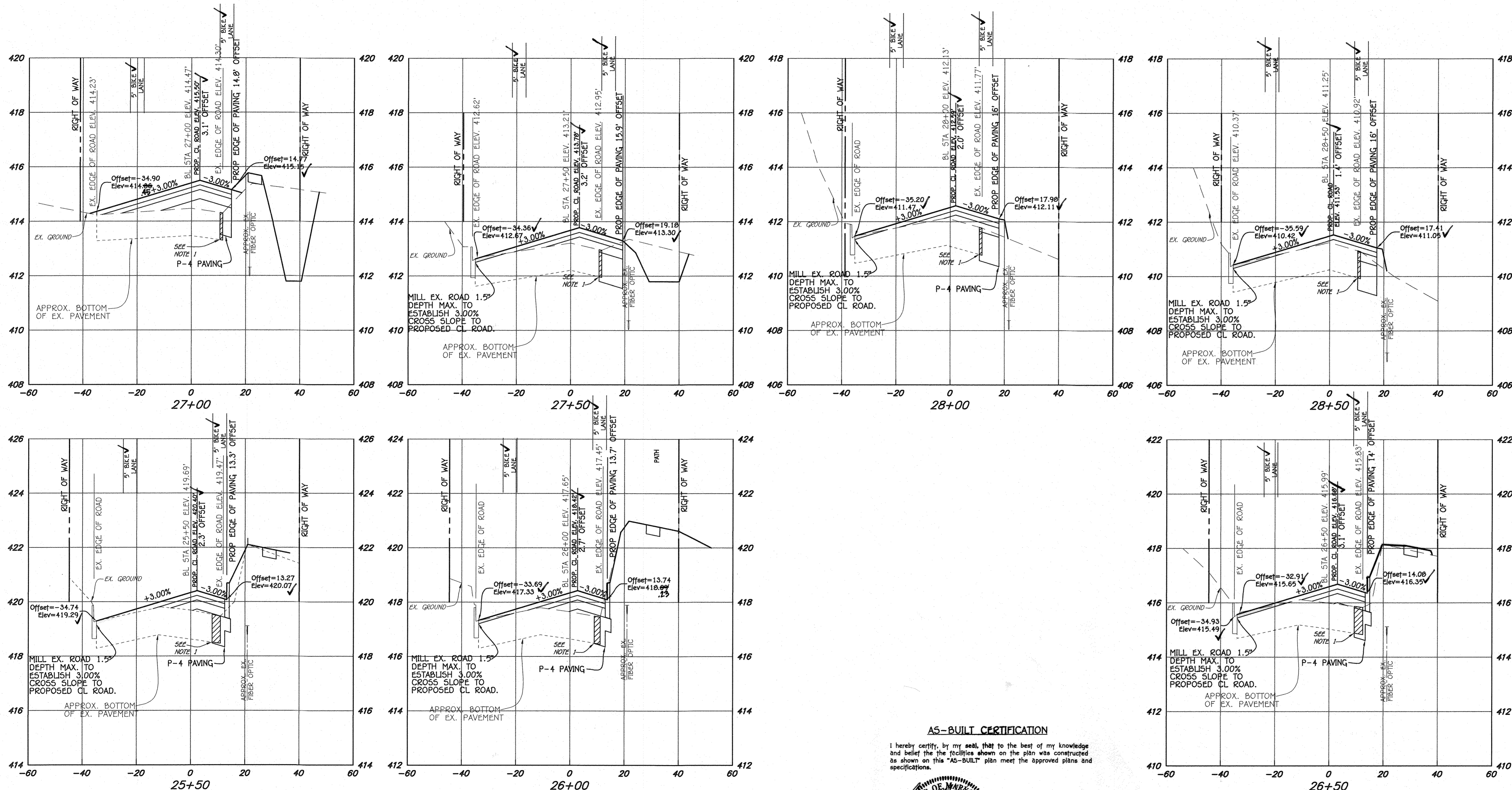
**OWNERS**  
 TERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
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I:\2013\13008\dwg\F-Plan\F-Plan-X-Sections Guilford Road Redline.dwg, Sheet, 8, 7/12/2017 12:21:12 PM, 11

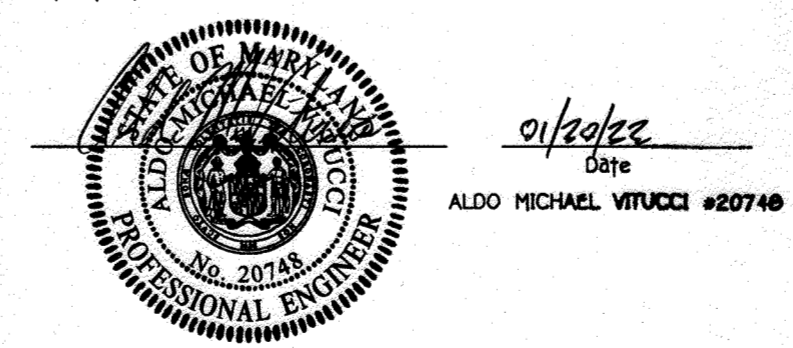
REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17
Approved: Department Of Planning And Zoning		
T. M... for KCS		8/10/17
Chief, Division Of Land Development		Date
Chief, Development Engineering Division		8/1/17
Approved: Howard County Department Of Public Works		Date
Chief, Bureau Of Highway		7/27/17
		Date

NOTES:  
 1) CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUT SUCH THAT A MINIMUM OF 1 FOOT FROM EXISTING EDGE OF PAVING IS REMOVED



SCALE HORIZ. 1" = 20'  
 VERT. 1" = 2'

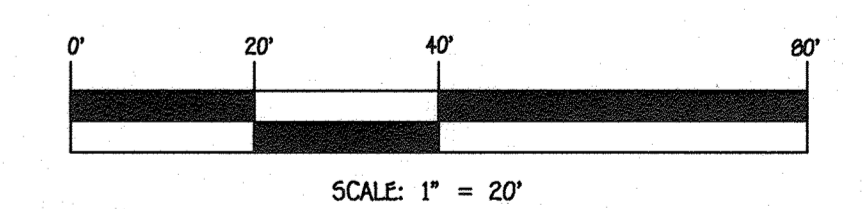
**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



**PROFESSIONAL CERTIFICATION**  
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**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697



GUILFORD ROAD CROSS-SECTIONS  
 STA. 25+50 TO STA. 28+50  
 REPLACEMENT SHEET  
**ENCLAVE AT RIVER HILL  
 PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 12 OF 58 F-15-110

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2899

"AS-BUILT"

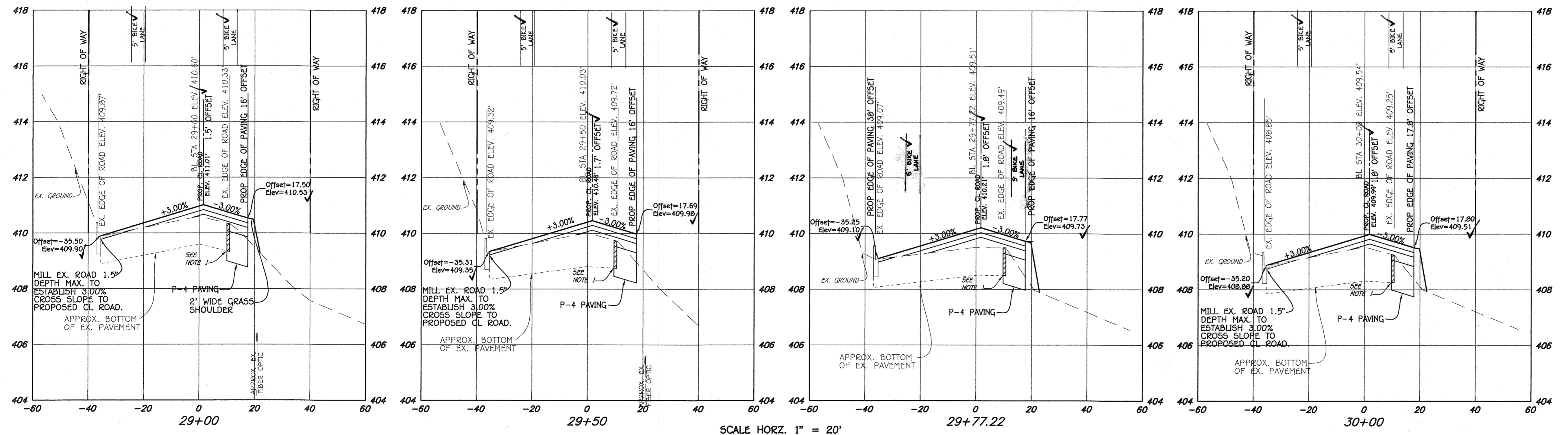
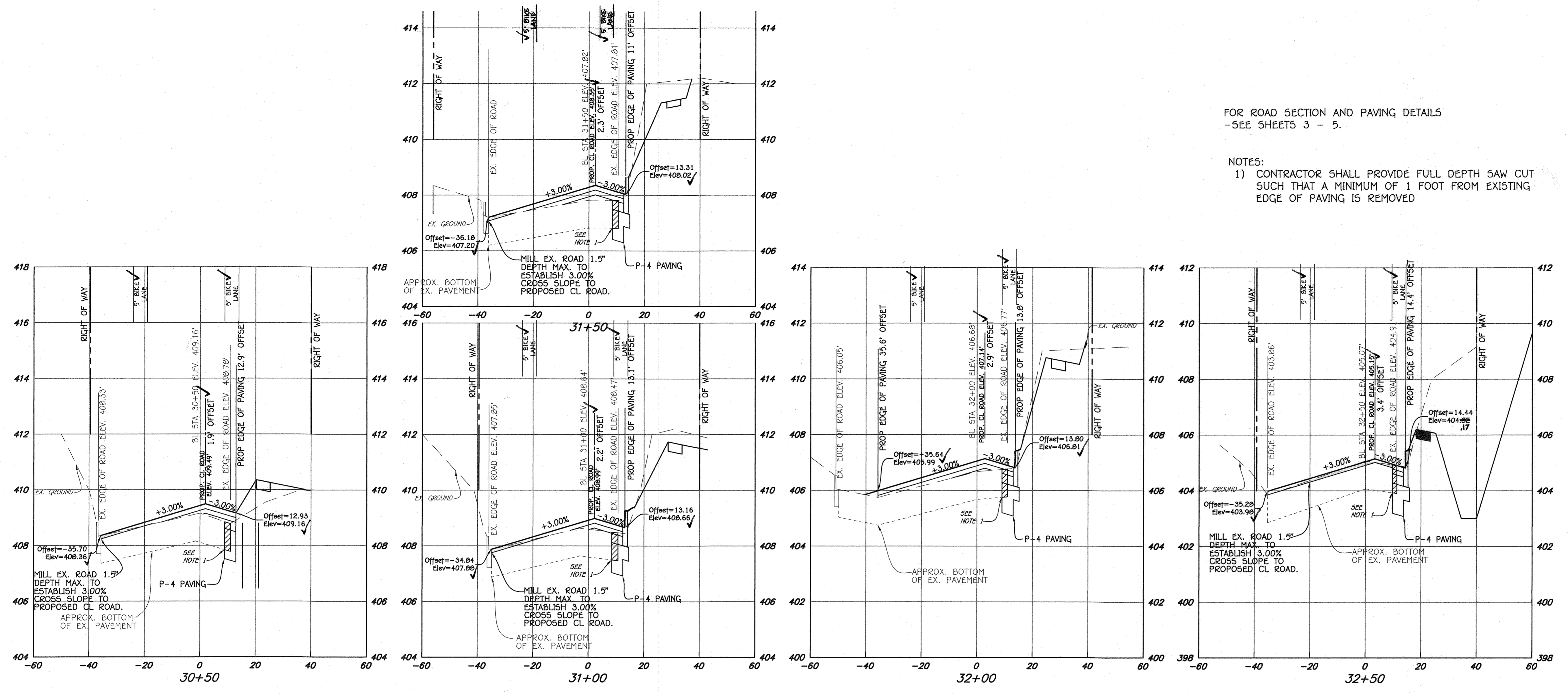
REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17

Approved: Department Of Planning And Zoning  
*T. Mark Fries* 5/10/17  
 Chief, Division Of Land Development Date

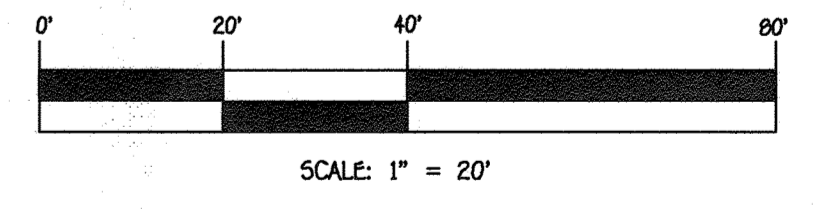
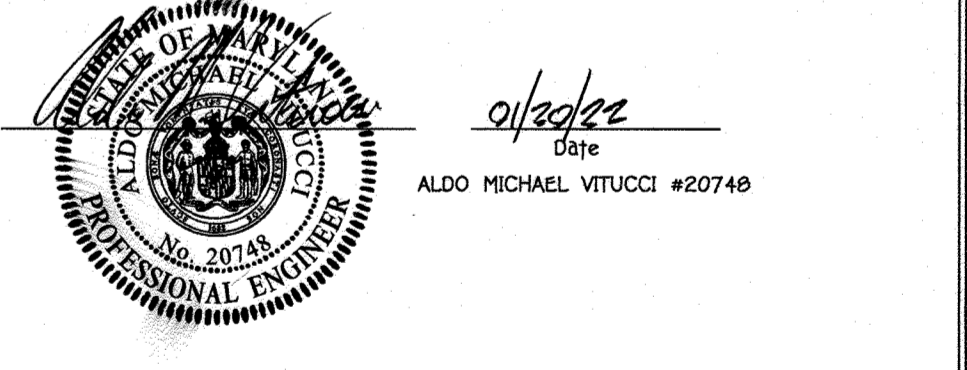
Approved: Howard County Department Of Public Works  
*Howard S. ...* 7/27/17  
 Chief, Bureau Of Highways Date

FOR ROAD SECTION AND PAVING DETAILS  
 -SEE SHEETS 3 - 5.

- NOTES:  
 1) CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUT SUCH THAT A MINIMUM OF 1 FOOT FROM EXISTING EDGE OF PAVING IS REMOVED



AS-BUILT CERTIFICATION  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



GUILFORD ROAD CROSS-SECTIONS  
 STA. 29+00 TO STA. 32+50  
 REPLACEMENT SHEET  
 ENCLAVE AT RIVER HILL  
 PHASE 1  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 13 OF 58 F-15-110

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FILE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-3899



PROFESSIONAL CERTIFICATION  
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*Frank Hanalansan II* 7/12/17  
 Date

DEVELOPER  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

OWNERS  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-365-3697

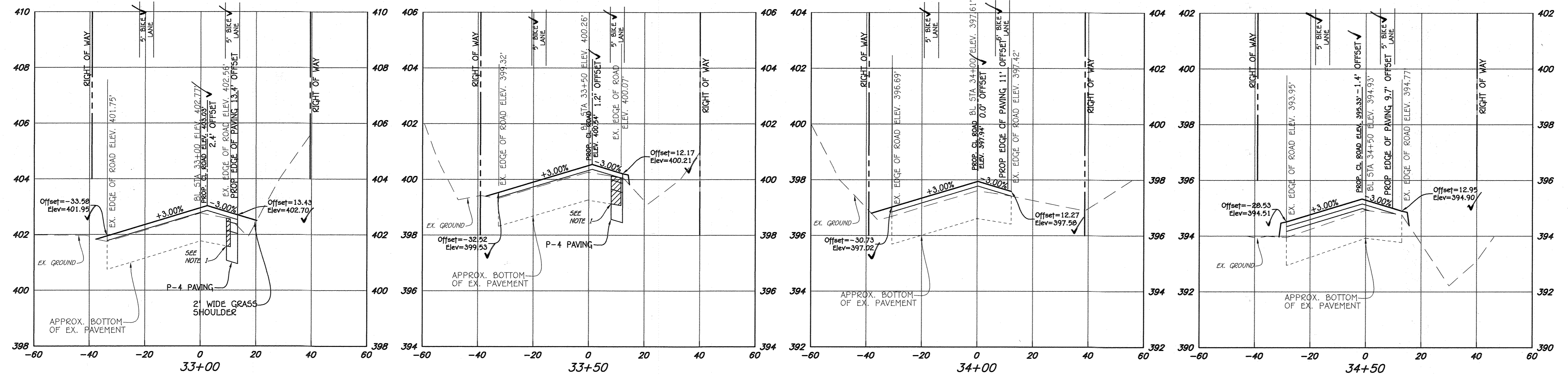
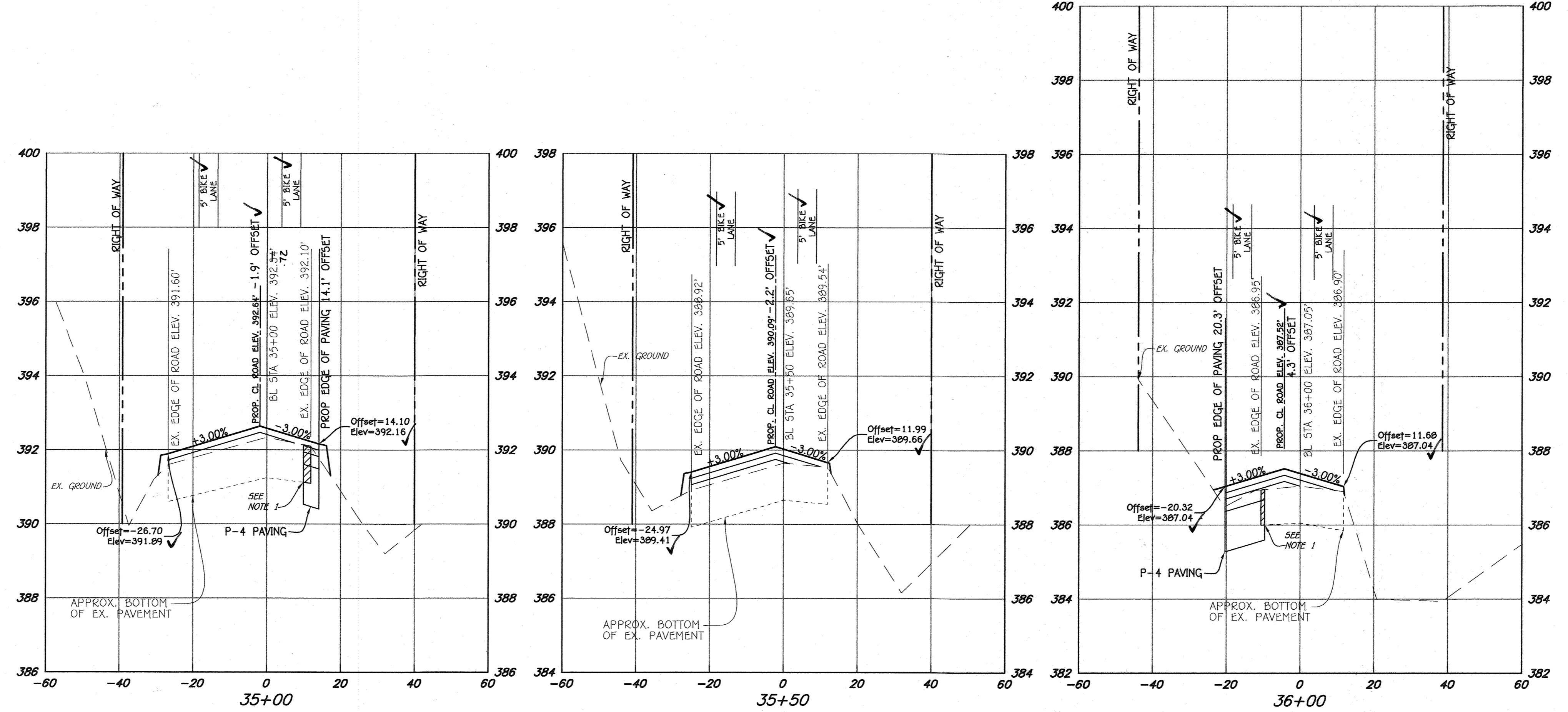
13:003133008.dwg | Plans | Plan-X Sections Guilford Road Redline.dwg | Sheet 10 of 12 | 7/12/2017 12:23:39 PM, 1:1

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17


  

Approved: Department Of Planning And Zoning		
<i>T. Markakis</i>	8/10/17	Date
Chief, Division Of Land Development		
<i>[Signature]</i>	8/1/17	Date
Chief, Development Engineering Division		
Approved: Howard County Department Of Public Works		
<i>[Signature]</i>	7/27/17	Date
Chief, Bureau Of Highways		

NOTES:  
 1) CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUT SUCH THAT A MINIMUM OF 1 FOOT FROM EXISTING EDGE OF PAVING IS REMOVED



SCALE HORIZ. 1" = 20'  
 VERT. 1" = 2'

**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.  
  
 Date: 8/2/17  
 ALDO MICHAEL VITUCCI #20748  
 SCALE: 1" = 20'  
**GUILFORD ROAD CROSS-SECTIONS**  
 STA. 33+00 TO STA. 36+00

**REPLACEMENT SHEET**  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 08 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 14 OF 58 F-15-110



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.  
*Frank Manalansan*  
 7/12/17  
 Date

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

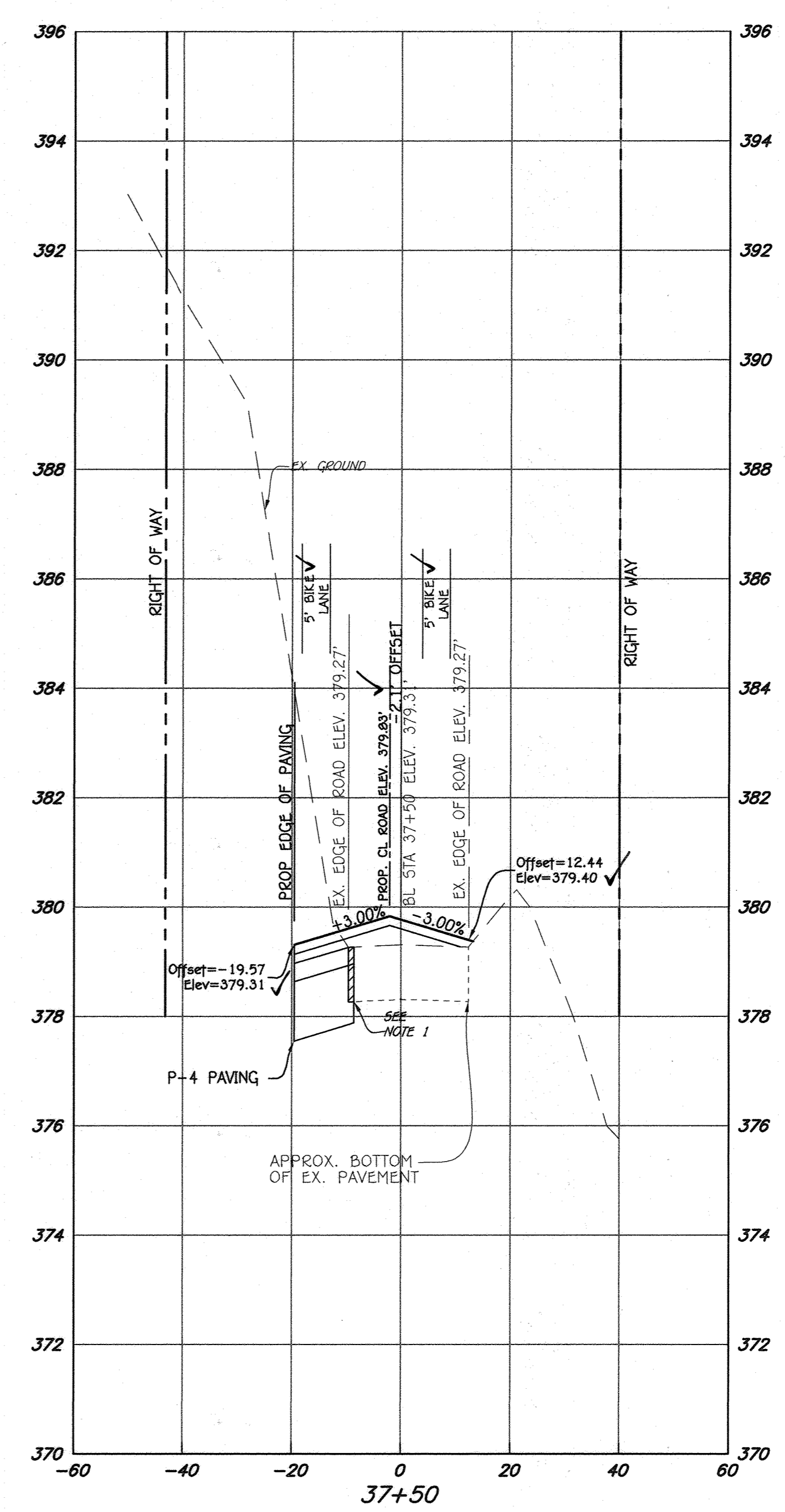
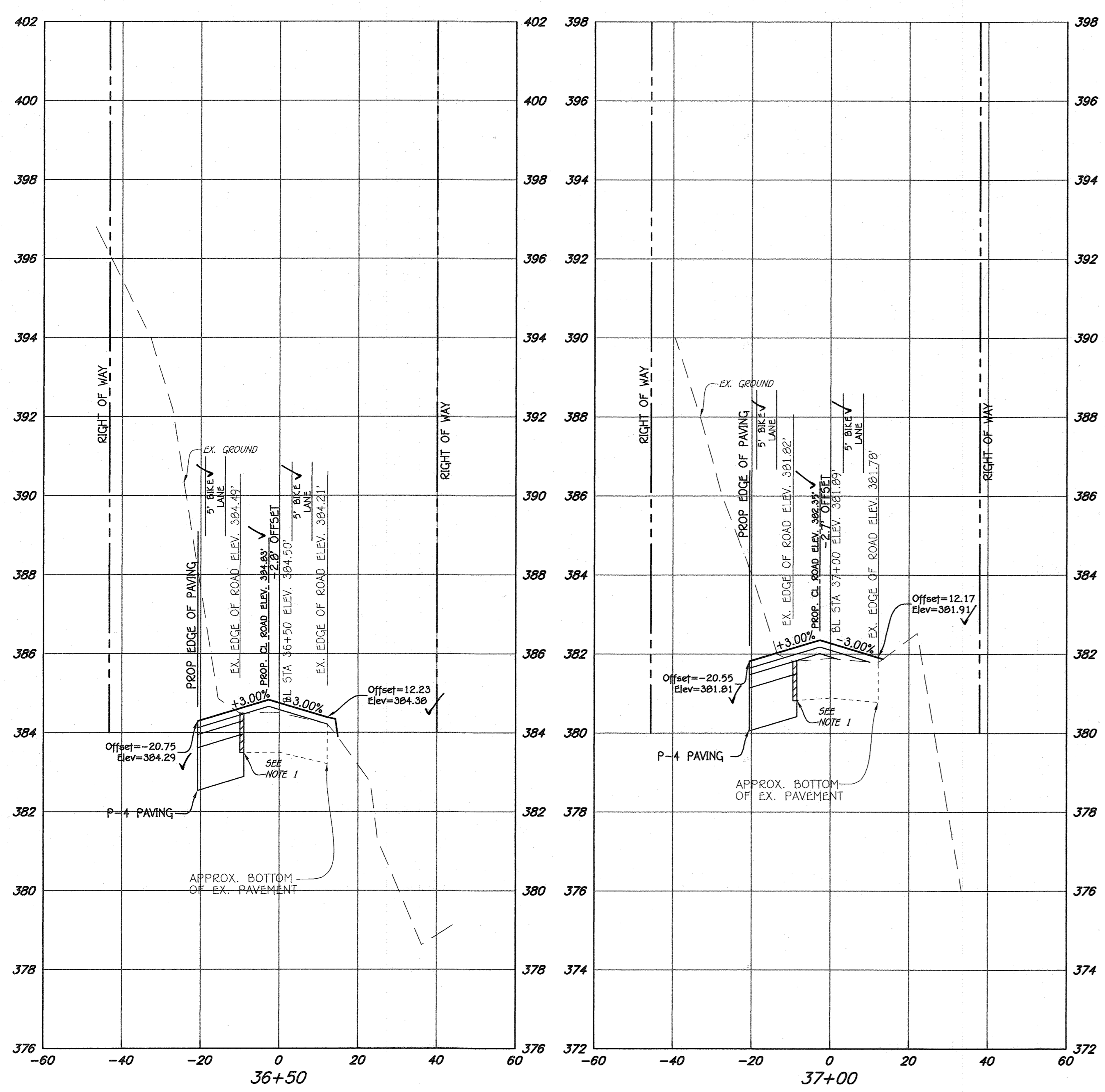
**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FILE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2899

"AS-BUILT"

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17
Approved: Department Of Planning And Zoning		
<i>T. Markakis</i>		8/10/17
Chief, Division Of Land Development		Date
<i>[Signature]</i>		8/1/17
Chief, Development Engineering Division		Date
Approved: Howard County Department Of Public Works		
<i>[Signature]</i>		7/27/17
Chief, Bureau Of Highways		Date

NOTES:  
 1) CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUT SUCH THAT A MINIMUM OF 1 FOOT FROM EXISTING EDGE OF PAVING IS REMOVED

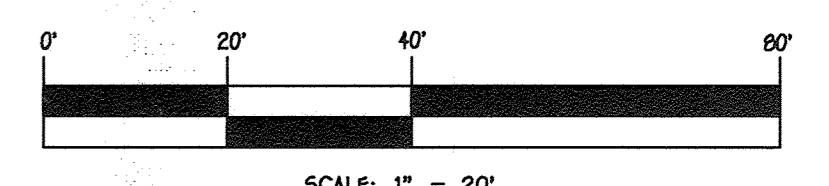


SCALE HORIZ. 1" = 20'  
 VERT. 1" = 2'

**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan were constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

*[Signature]*  
 Date

ALDO MICHAEL VITUCCI #20748  
 PROFESSIONAL ENGINEER



GUILFORD ROAD CROSS-SECTIONS  
 STA. 36+50 TO STA. 37+50

REPLACEMENT SHEET  
**ENCLAVE AT RIVER HILL  
 PHASE 1**

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 15 OF 58 F-15-110

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-3899



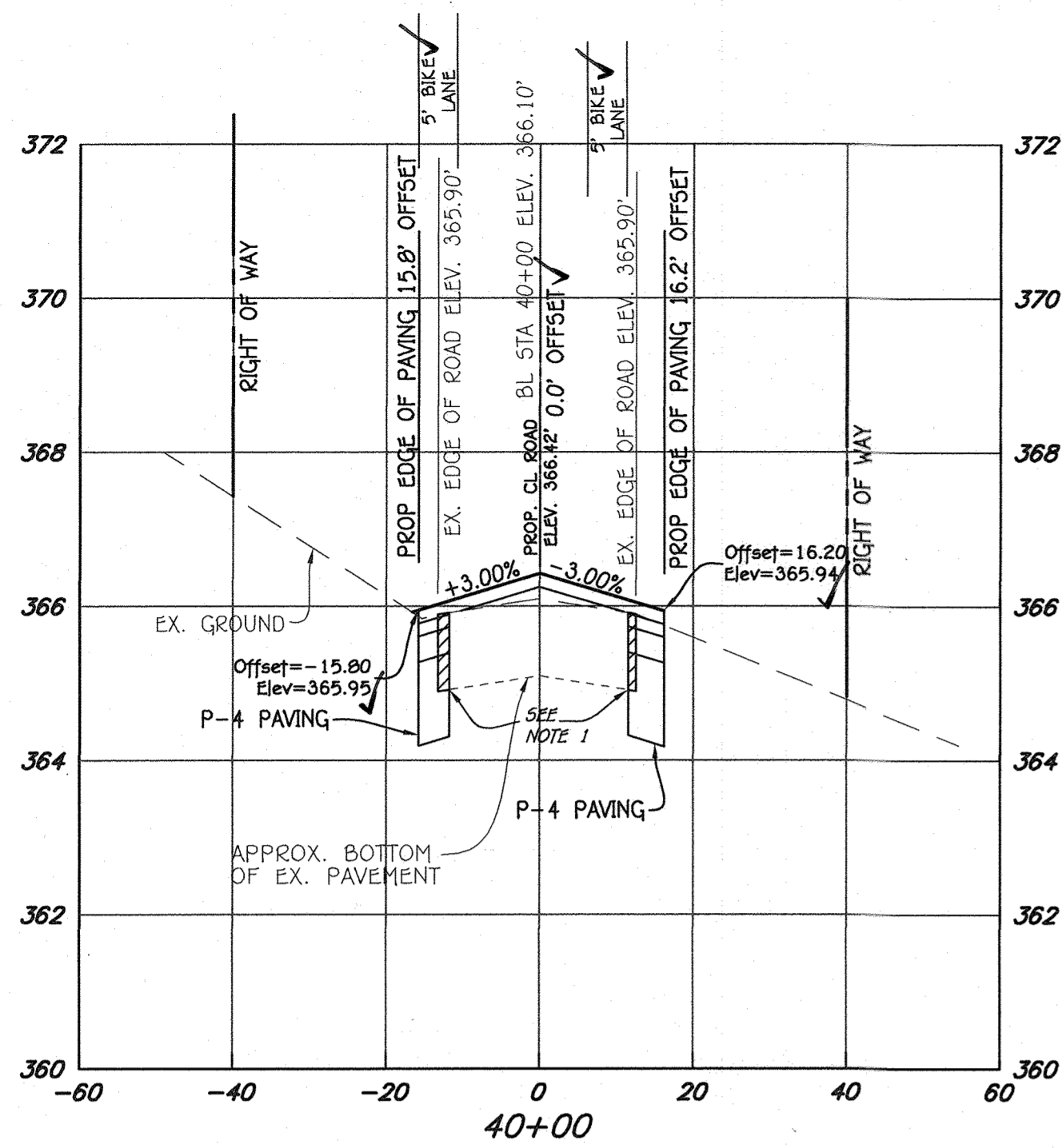
**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

*[Signature]*  
 FRANK PANALANSON II  
 Date: 7/12/17

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-365-3697

"AS-BUILT"



REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17

Approved: Department Of Planning And Zoning

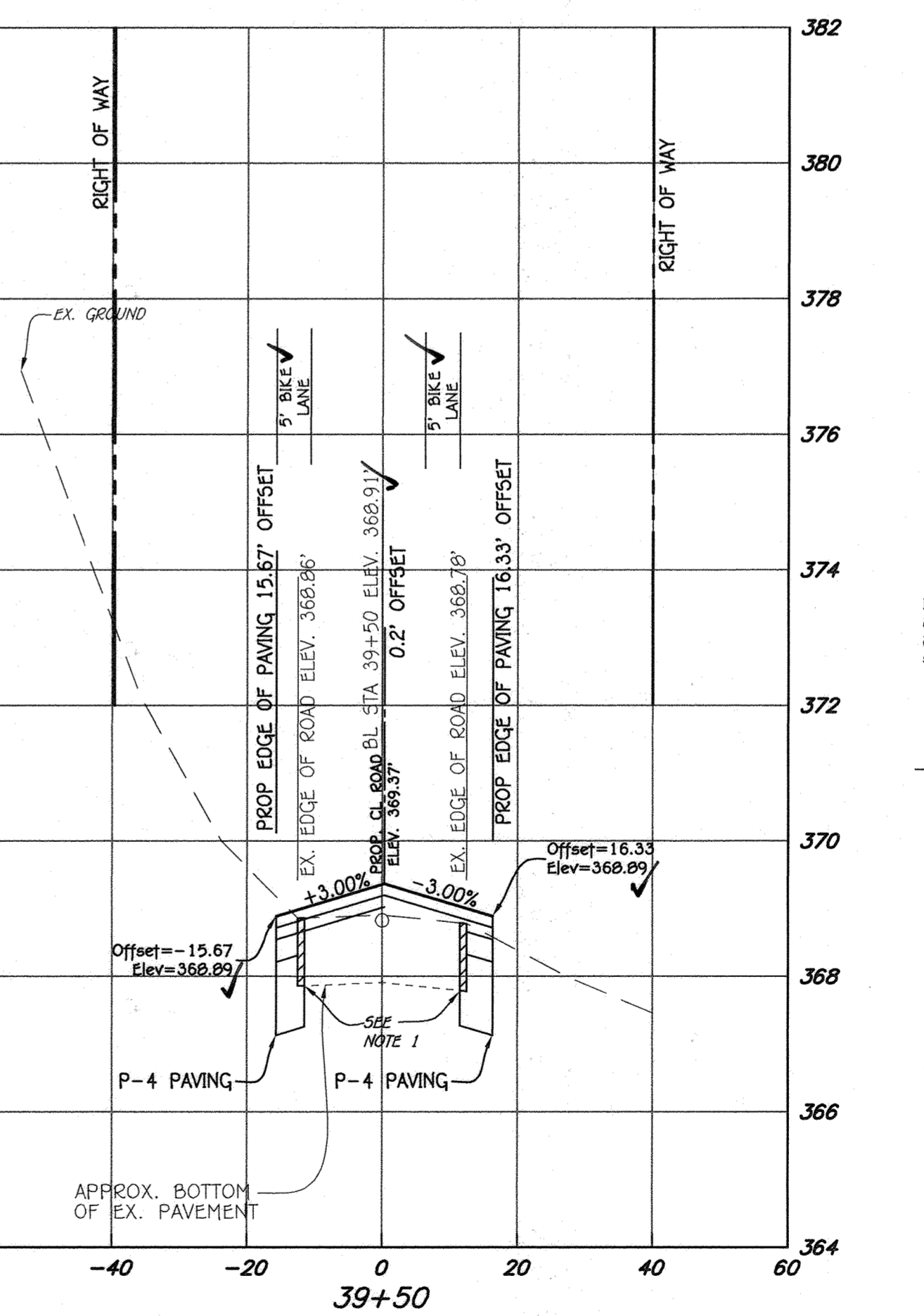
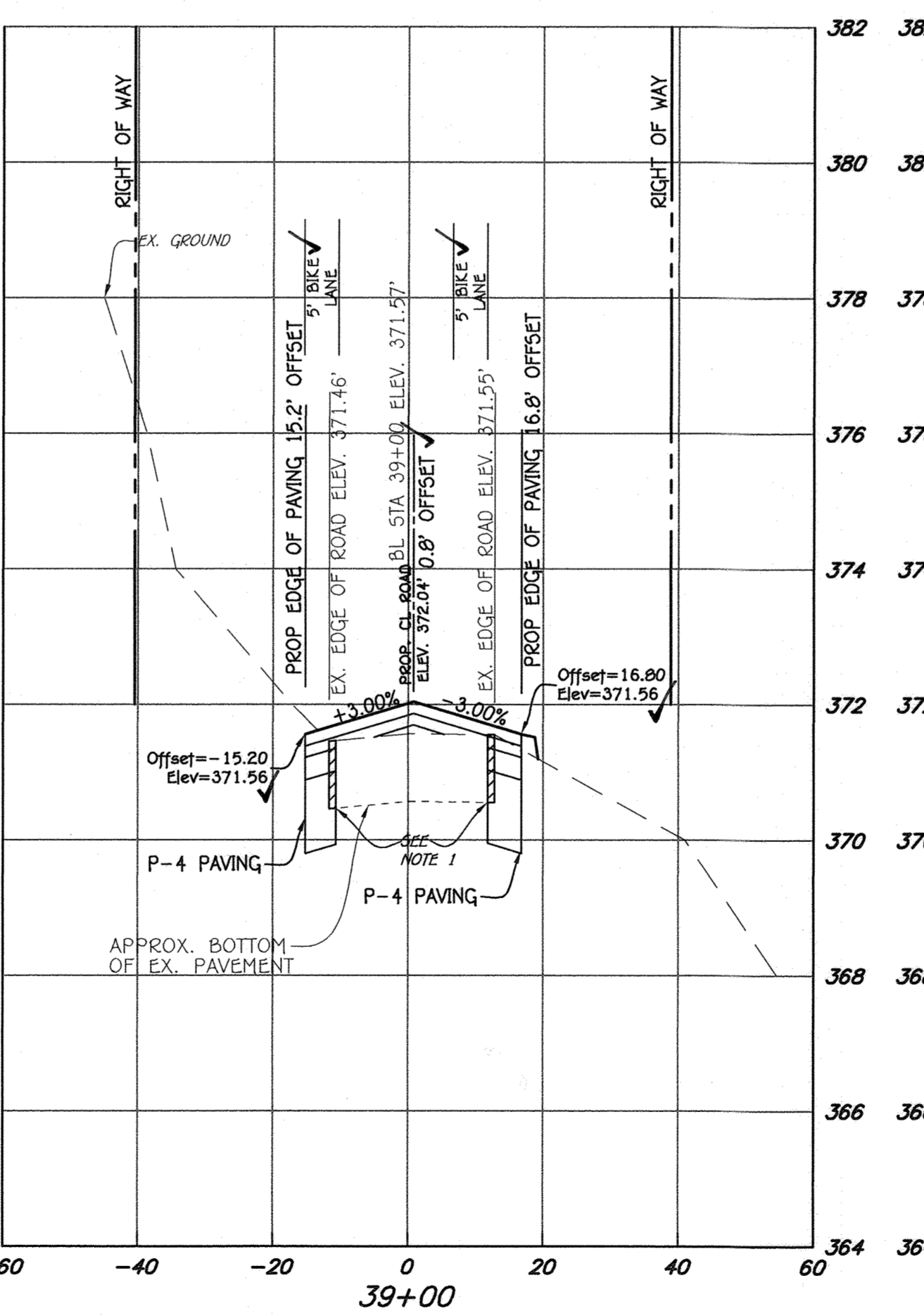
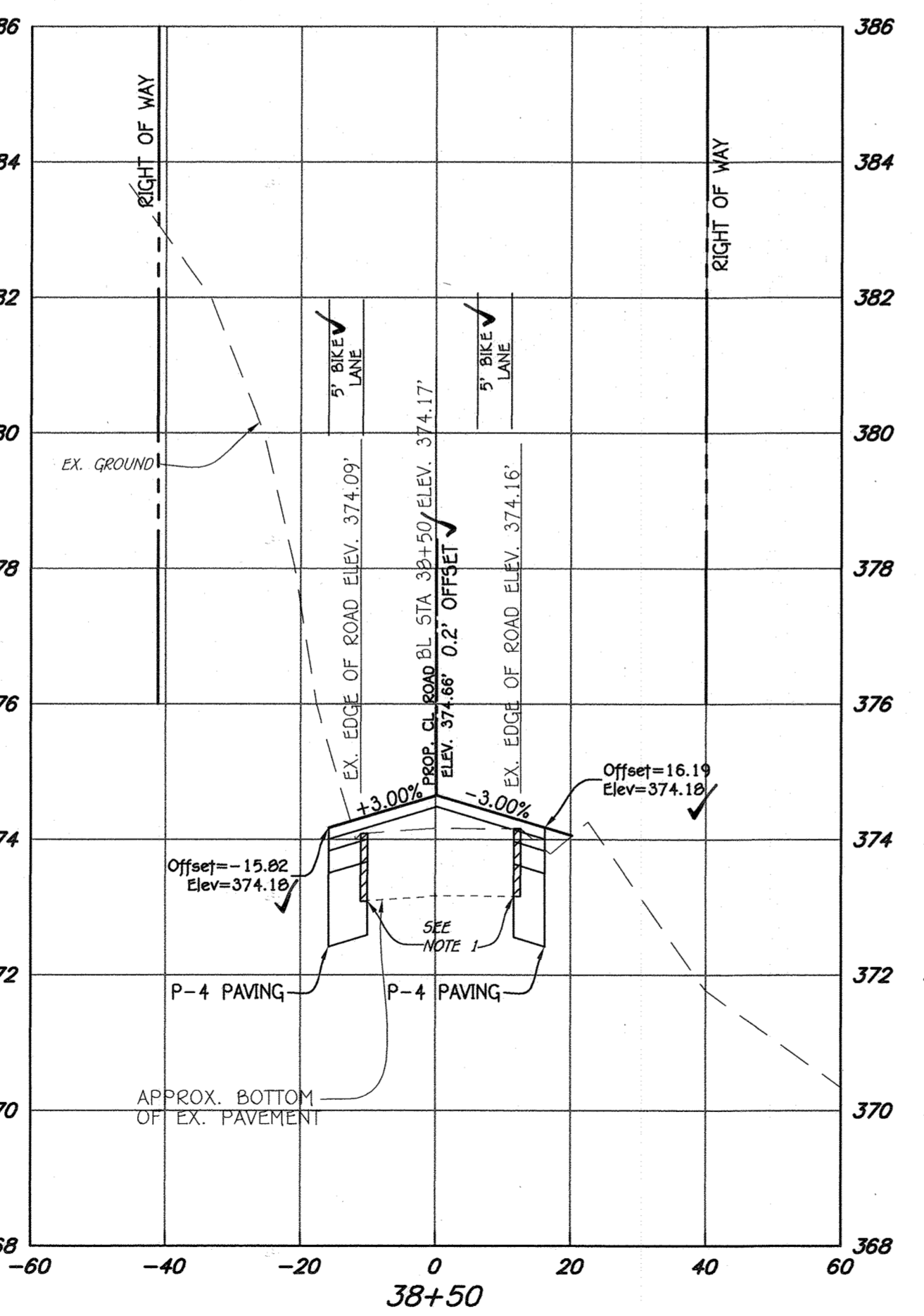
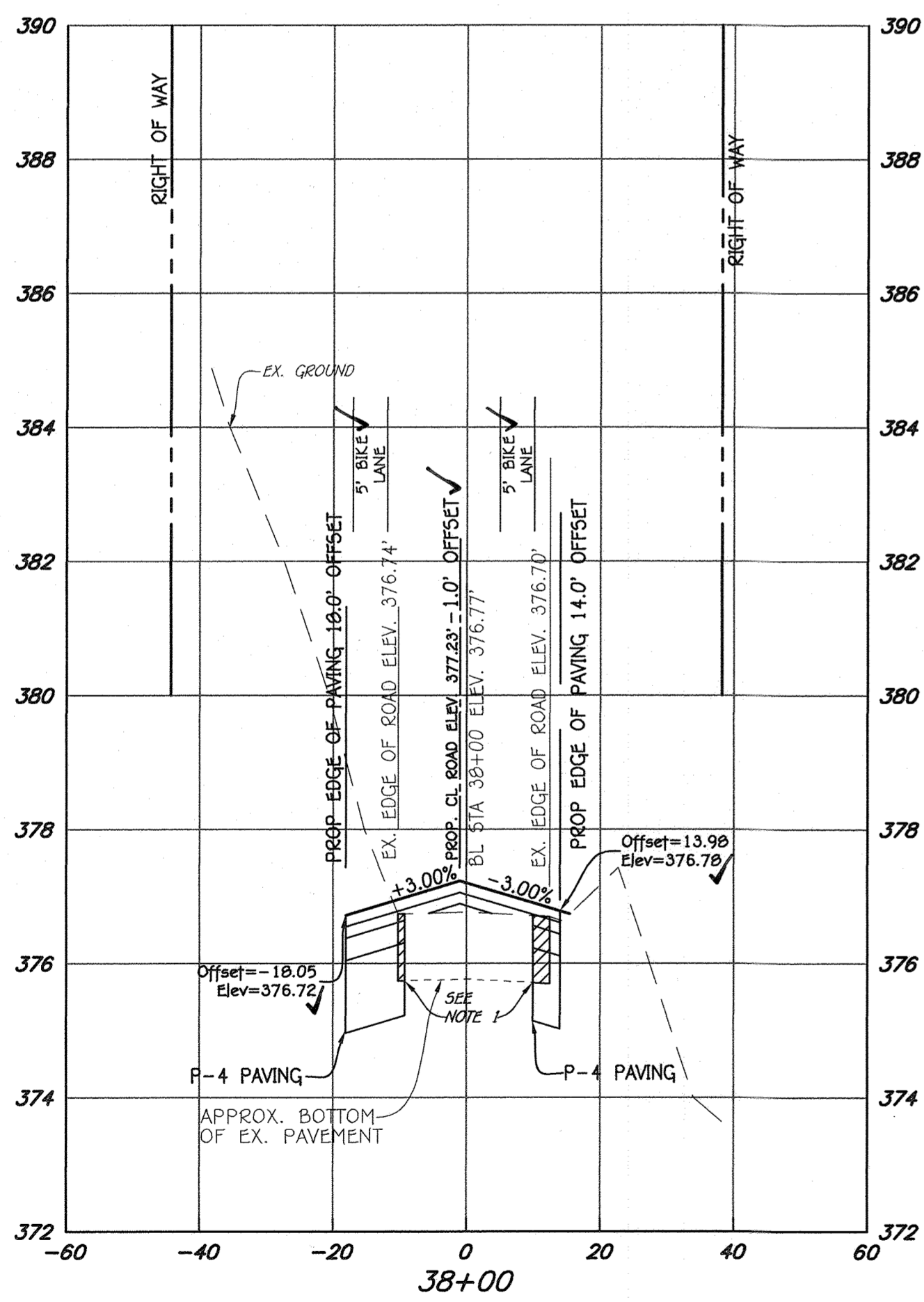
*T. M. ...* 8/10/17  
 Chief, Division Of Land Development Date

*J. ...* 8/1/17  
 Chief, Development Engineering Division Date

Approved: Howard County Department Of Public Works

*Howard ...* 7/27/17  
 Chief, Bureau Of Highways Date

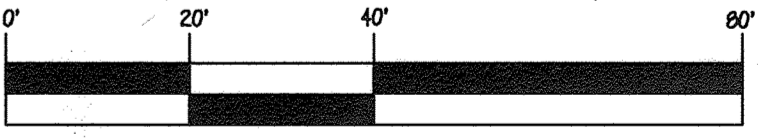
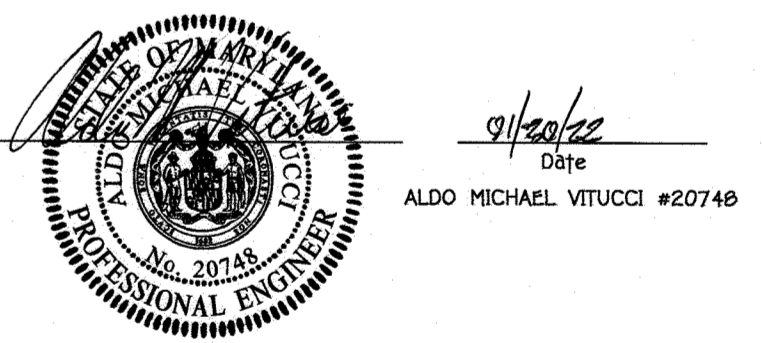
NOTES:  
 1) CONTRACTOR SHALL PROVIDE FULL DEPTH SAW CUT SUCH THAT A MINIMUM OF 1 FOOT FROM EXISTING EDGE OF PAVING IS REMOVED



SCALE HORIZ. 1" = 20'  
 VERT. 1" = 2'

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



SCALE 1" = 20'  
 GUILFORD ROAD CROSS-SECTIONS  
 STA. 38+00 TO STA. 40+00

REPLACEMENT SHEET  
 ENCLAVE AT RIVER HILL  
 PHASE 1

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 16 OF 58 F-15-110

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2899



PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

*Frank Manalansan II*  
 FRANK MANALANSAN II  
 7/12/17  
 Date

DEVELOPER  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

OWNERS  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697

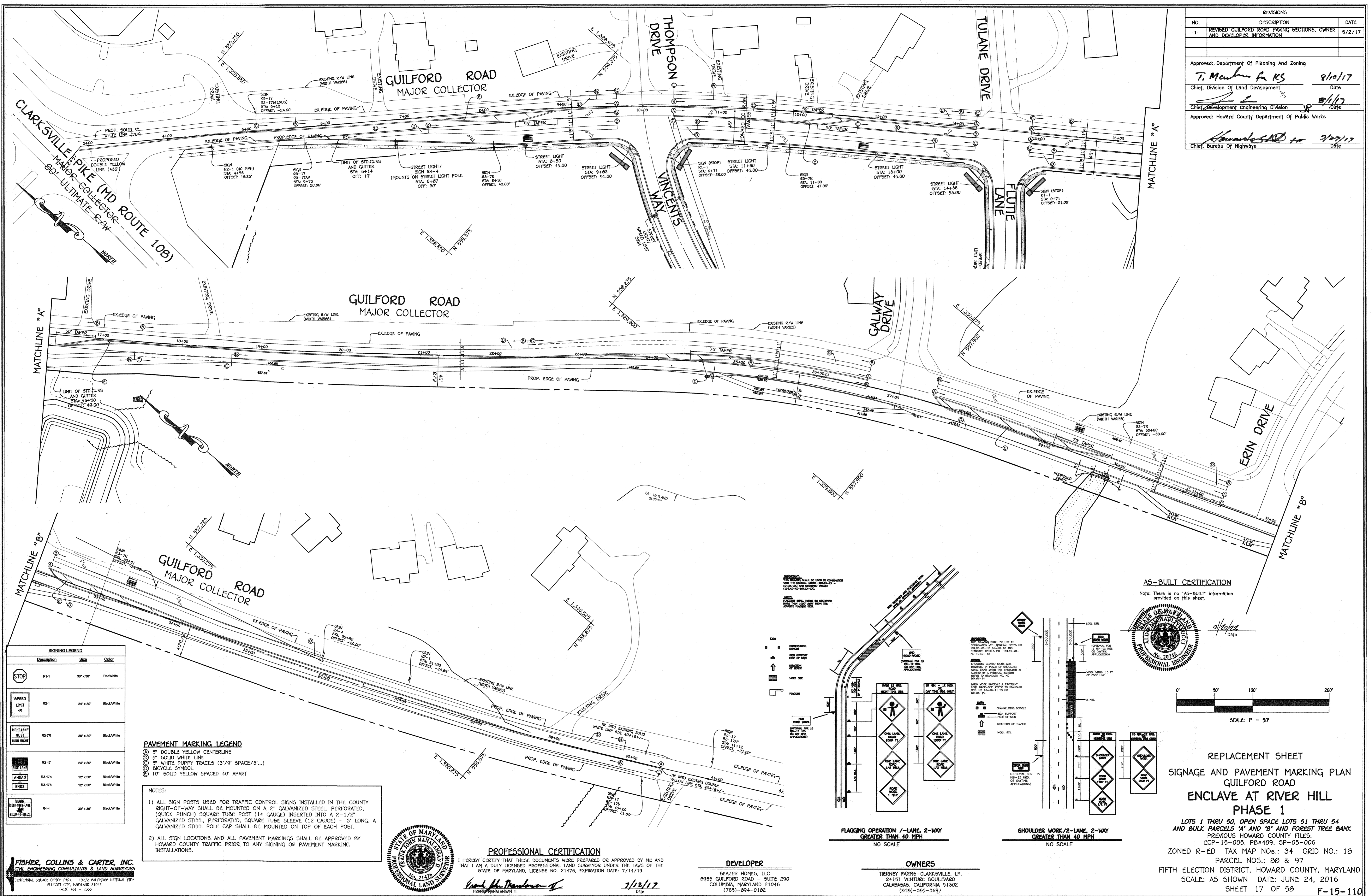
"AS-BUILT"



REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD PAVING SECTIONS, OWNER AND DEVELOPER INFORMATION	5/2/17

Approved: Department Of Planning And Zoning  
*T. Mearns for KS* 8/10/17  
 Chief, Division Of Land Development Date

Approved: Howard County Department Of Public Works  
*Howard S. ...* 7/27/17  
 Chief, Bureau Of Highways Date



SIGNING LEGEND			
Description	Size	Color	
STOP	R1-1	36" x 36"	Red/White
SPEED LIMIT 45	R2-1	24" x 30"	Black/White
BRIGHT LANE MUST TURN RIGHT	R3-7R	30" x 30"	Black/White
ONE WAY	R3-17	24" x 30"	Black/White
AHEAD	R3-17a	12" x 30"	Black/White
ENDS	R3-17b	12" x 30"	Black/White
BELOW HIGH TRAIL	R4-4	30" x 30"	Black/White

PAVEMENT MARKING LEGEND	
Ⓢ	5" DOUBLE YELLOW CENTERLINE
Ⓣ	5" SOLID WHITE LINE
Ⓤ	5" WHITE PUPPY TRACKS (3/8" SPACE/3"...)
Ⓦ	BICYCLE SYMBOL
Ⓧ	10" SOLID YELLOW SPACED 40' APART

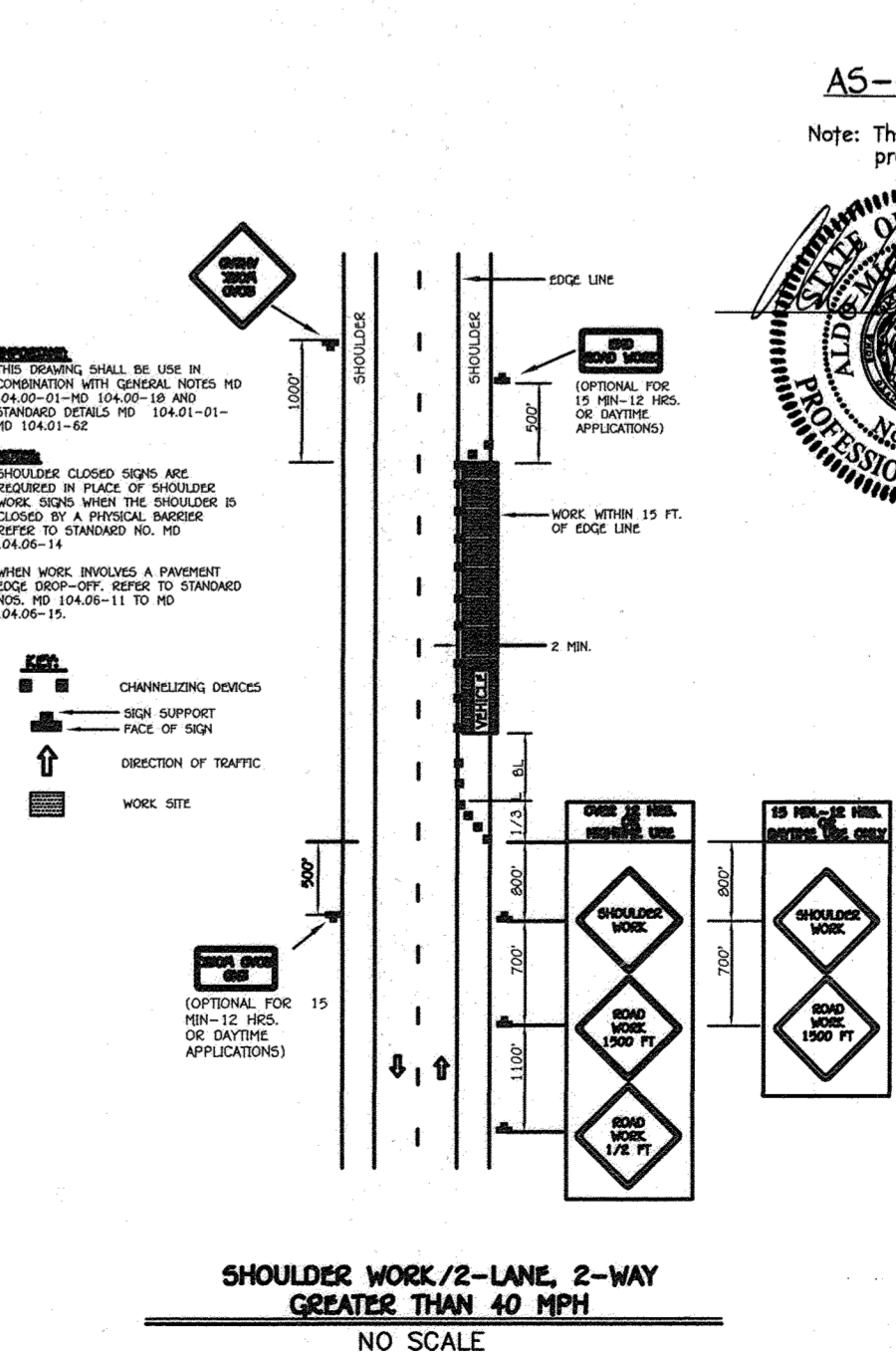
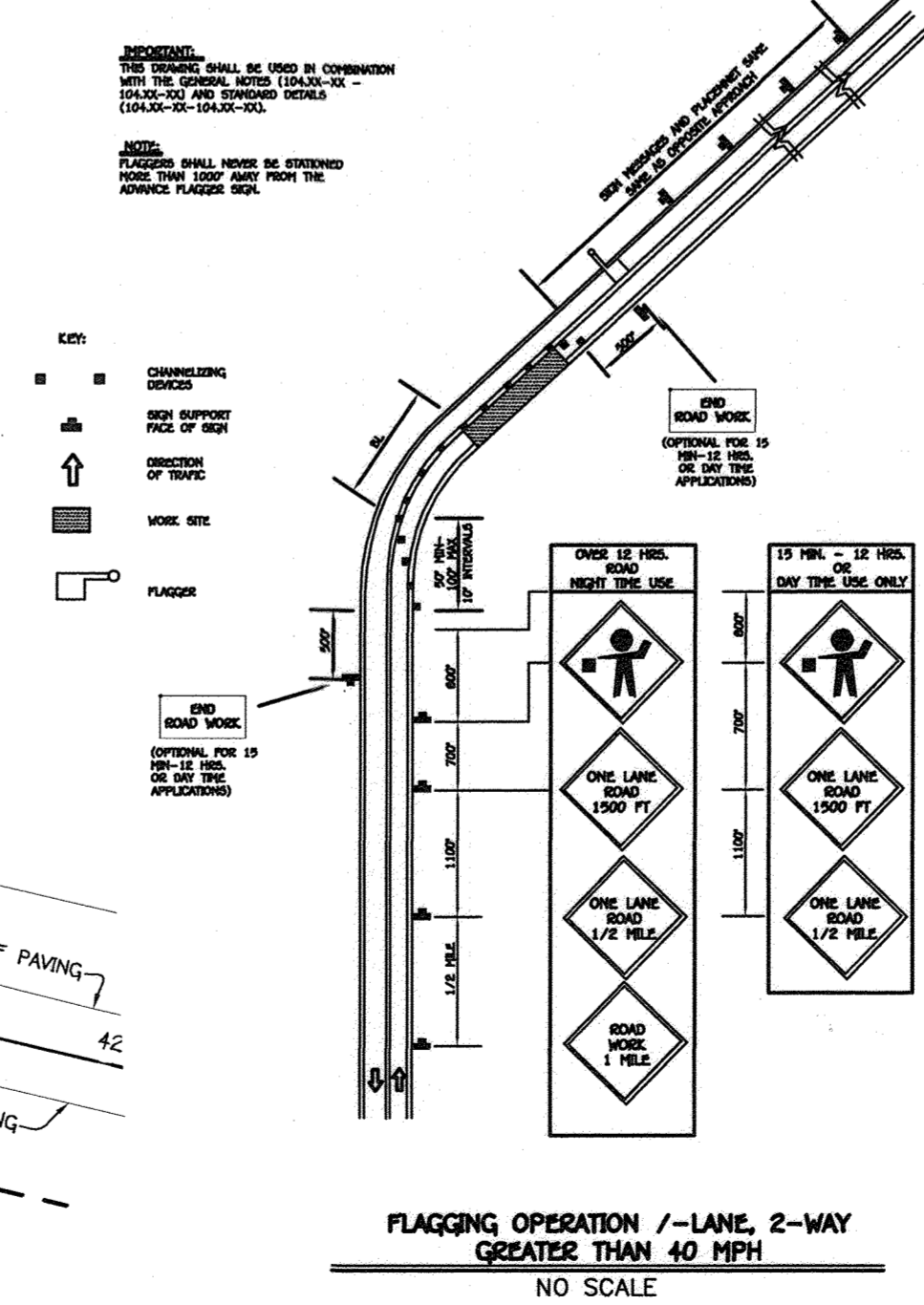
- NOTES:
- 1) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, (QUICK PUNCH) SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
  - 2) ALL SIGN LOCATIONS AND ALL PAVEMENT MARKINGS SHALL BE APPROVED BY HOWARD COUNTY TRAFFIC PRIOR TO ANY SIGNING OR PAVEMENT MARKING INSTALLATIONS.



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.  
*Frank Panalansan II* 7/12/17  
 Date

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

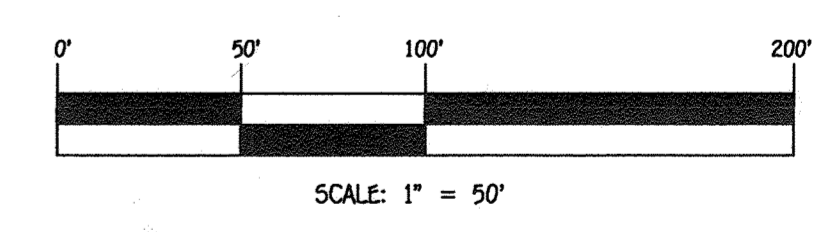
**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-365-3697



**AS-BUILT CERTIFICATION**  
 Note: There is no "AS-BUILT" information provided on this sheet.



*Al Capra*  
 Date



**REPLACEMENT SHEET**  
**SIGNAGE AND PAVEMENT MARKING PLAN**  
**GUILFORD ROAD**  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 17 OF 58 F-15-110

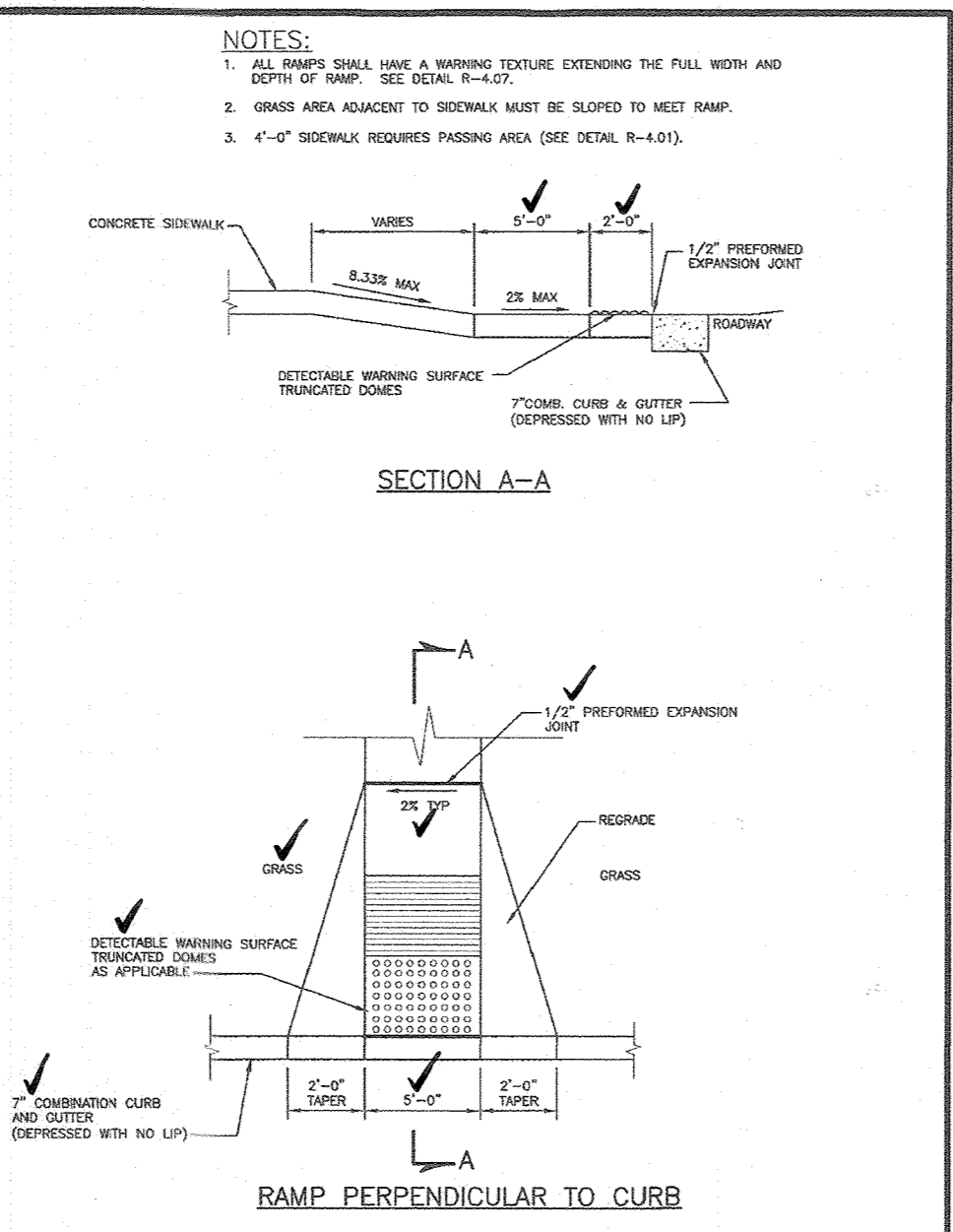
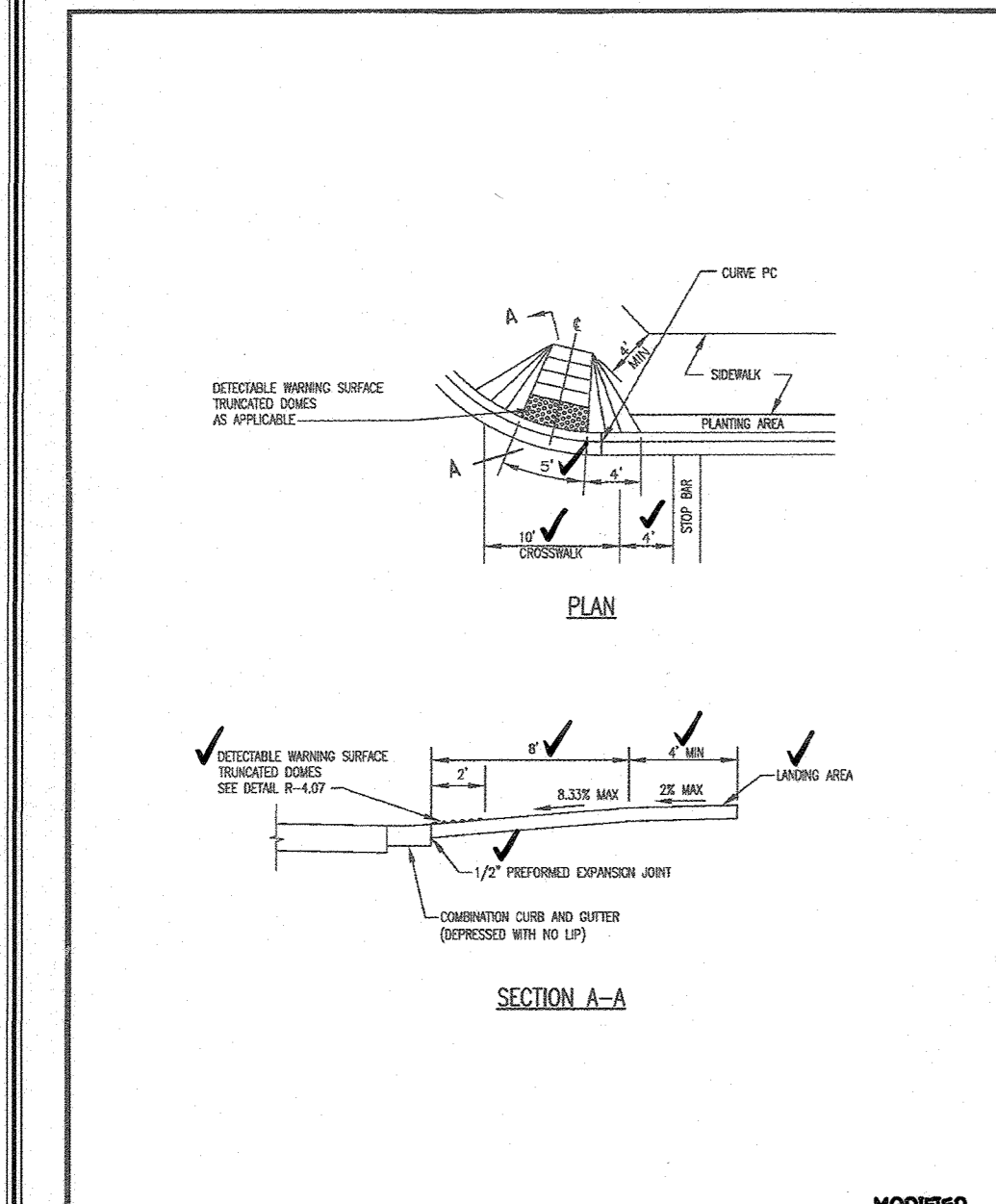
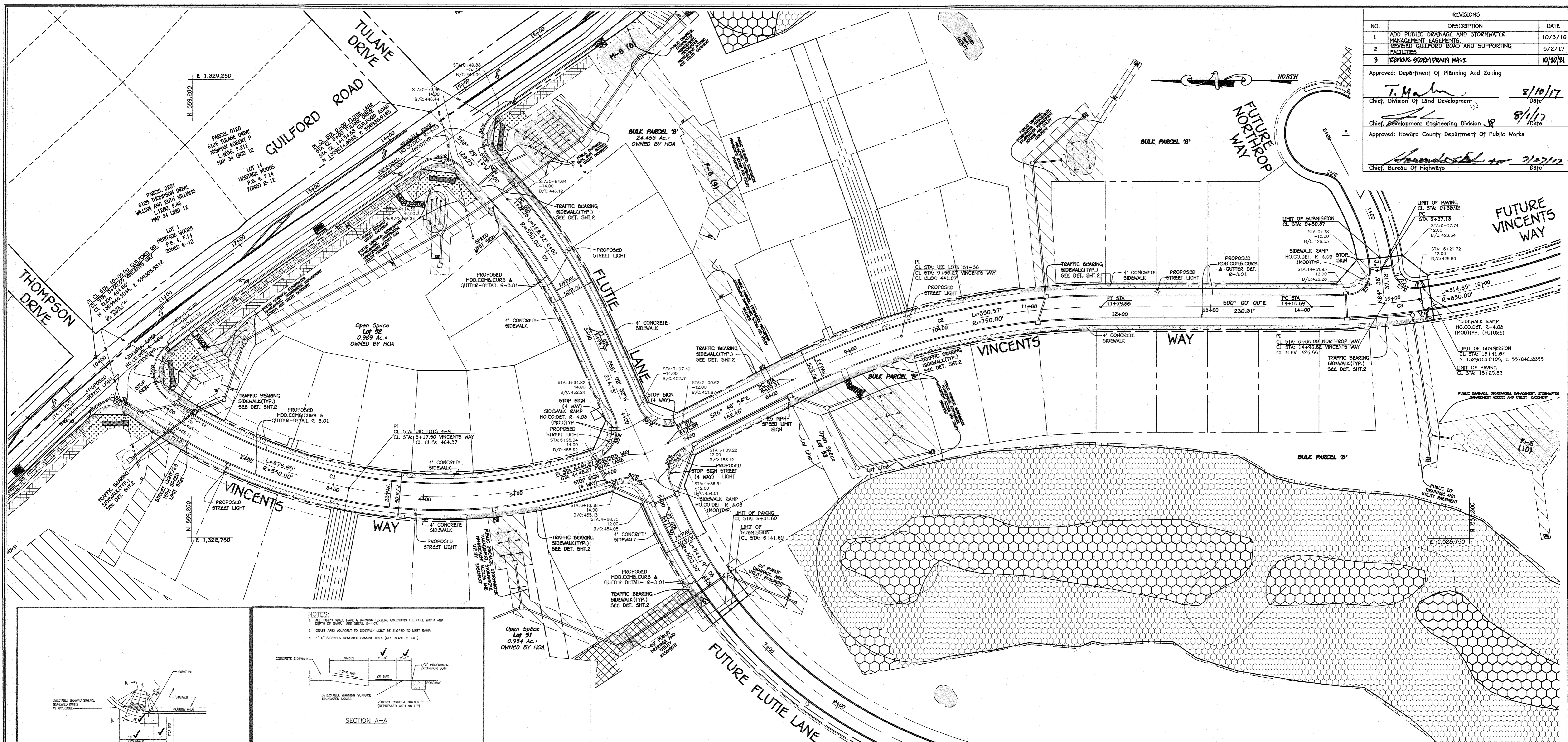
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT FACILITIES	10/3/16
2	REVISED GUILFORD ROAD AND SUPPORTING FACILITIES	5/12/17
3	REVISING NORTHHOOP WAY	10/10/17

Approved: Department of Planning And Zoning  
*T. Mahan* 8/10/17  
 Chief, Division Of Land Development Date

Approved: Engineering Division  
*[Signature]* 8/1/17  
 Chief, Bureau Of Engineering Date

Approved: Howard County Department Of Public Works  
*[Signature]* 7/27/17  
 Chief, Bureau Of Highways Date



Howard County, Maryland Department of Public Works	SIDEWALK RAMP Type B Ramp	Detail R-4.03
---	---------------------------------	------------------

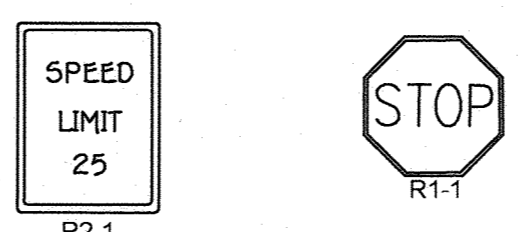
Howard County, Maryland Department of Public Works	SIDEWALK RAMP Layout & Grading Perpendicular to Curb	Detail R-4.05
---	--	------------------

**AS-BUILT CERTIFICATION**

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

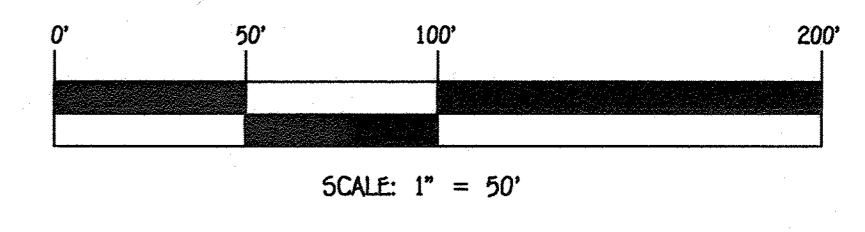


01/20/22  
Date  
ALDO MICHAEL VITUCCI #20748



CURVE #	DELTA	ARC LENGTH	RADIUS	CHORD DIRECTION	CHORD LENGTH
C1	010°25'03"	676.85'	550.00'	S8° 28' 23.82"W	654.94'
C2	007°38'22"	390.57'	750.00'	S13° 23' 27.00"E	347.39'
C3	006°44'28"	314.65'	850.00'	S10° 36' 17.54"E	312.86'
C5	010°25'03"	188.52'	550.00'	S57° 15' 53.15"W	167.86'
C6	011°27'33"	544.19'	500.00'	S34° 51' 45.70"W	517.72'

SIGNING LEGEND			
Size	Description	Size	Color
	R2-1	24" x 30"	Black/White
	R1-1	30" x 30"	Red/White
	MD 665.02	4" x 3"	White/Orange



**GEOMETRY PLAN  
NOTES AND DETAILS  
VINCENTS WAY AND FLUTIE LANE  
REPLACEMENT SHEET**

**ENCLAVE AT RIVER HILL  
PHASE 1**

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
PREVIOUS HOWARD COUNTY FILES:  
ECP-15-005, PB#409, SP-05-006  
ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
PARCEL NOS.: 88 & 97  
FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: JUNE 24, 2016  
SHEET 18 OF 58 F-15-110



**PROFESSIONAL CERTIFICATION**  
 HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.  
*Frank Manalansan, Jr.* 7/13/17  
 Date

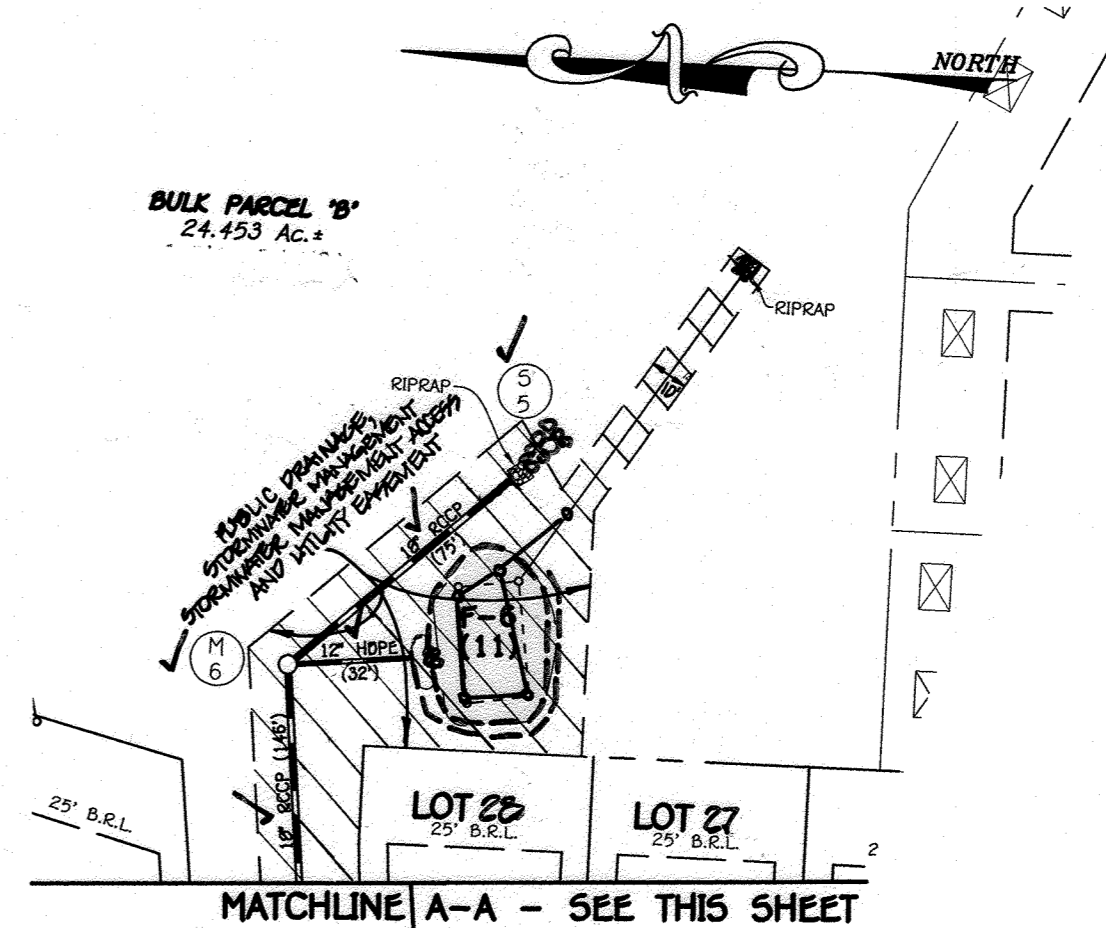
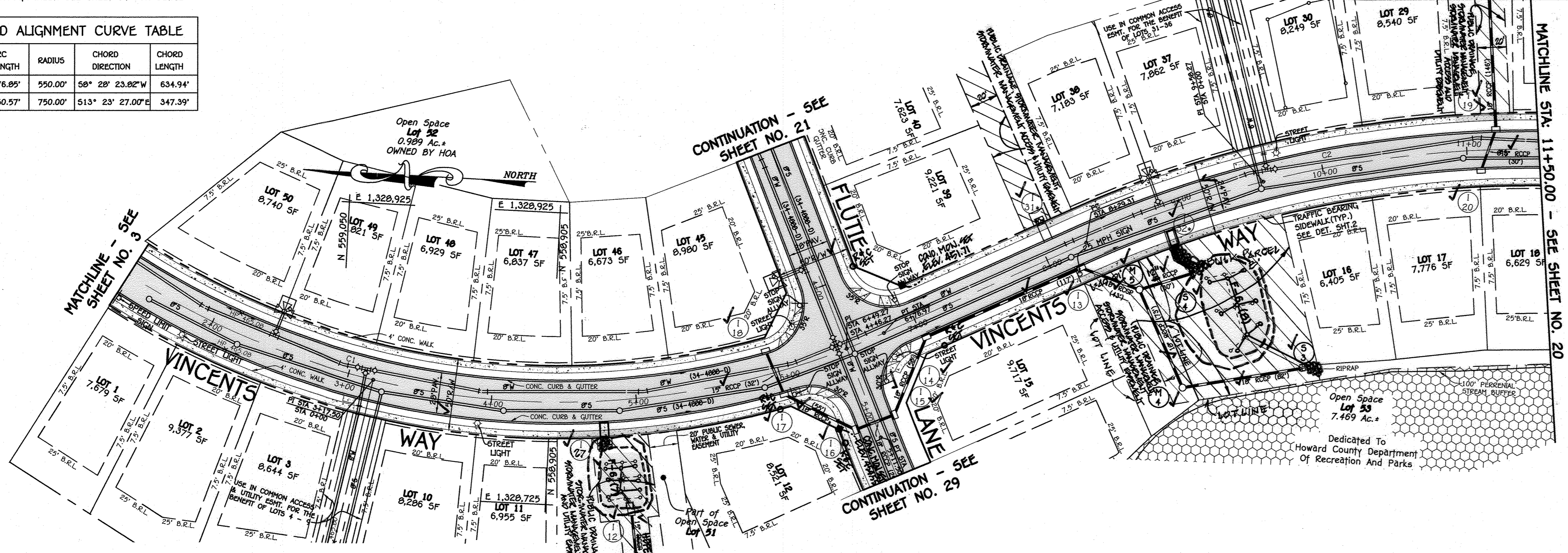
**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (781)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697

• DENOTES COG/COS FLOW THROUGH INLET. SEE SHEET 34 FOR DETAIL

PROPOSED ROAD ALIGNMENT CURVE TABLE				
CURVE #	DELTA	ARC LENGTH	RADIUS	CHORD LENGTH
C1	010°29'03"	676.89'	950.00'	58° 28' 23.82"W 634.94'
C2	007°30'22"	350.57'	750.00'	51.3° 23' 27.00"E 347.39'

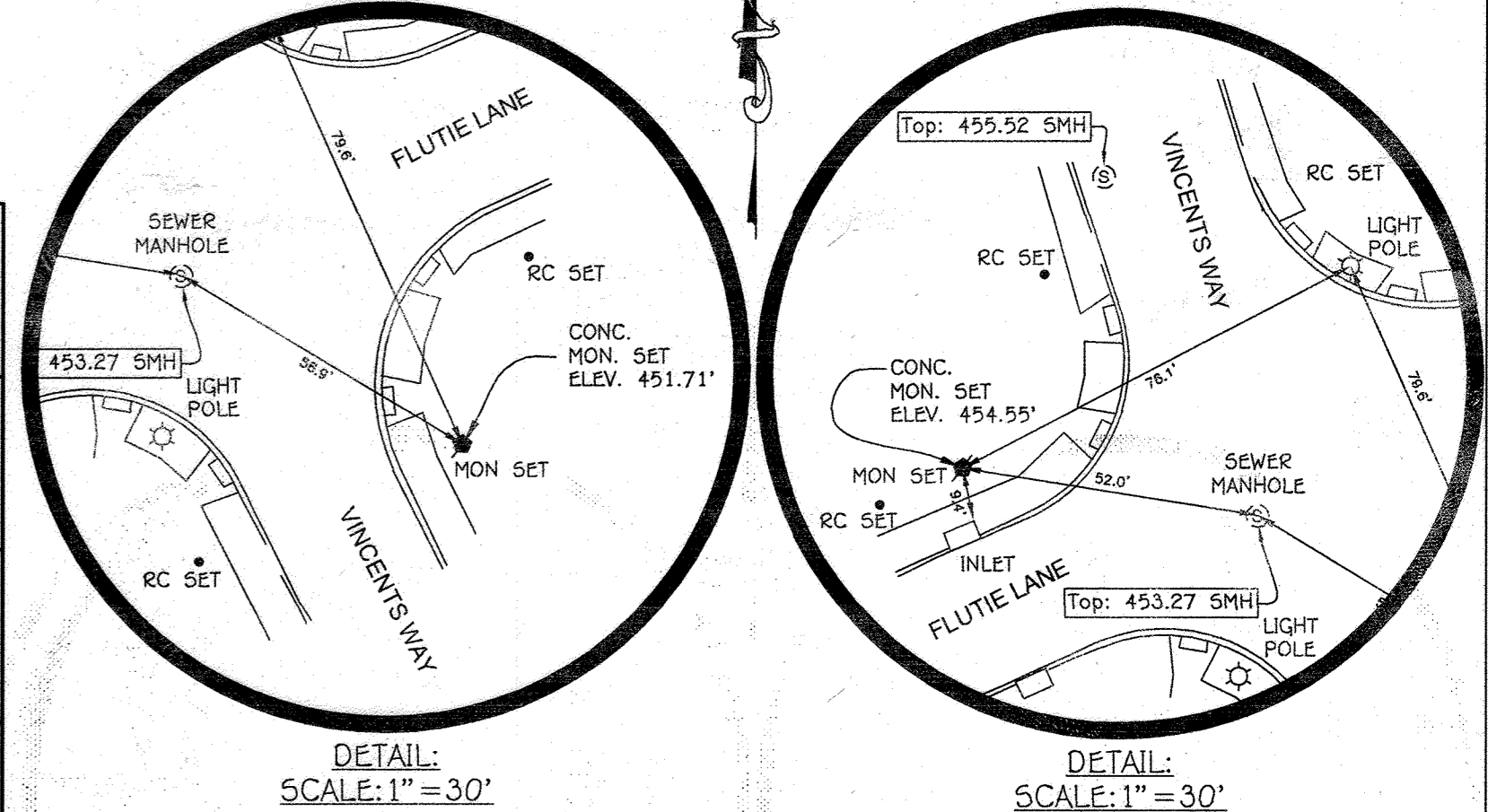
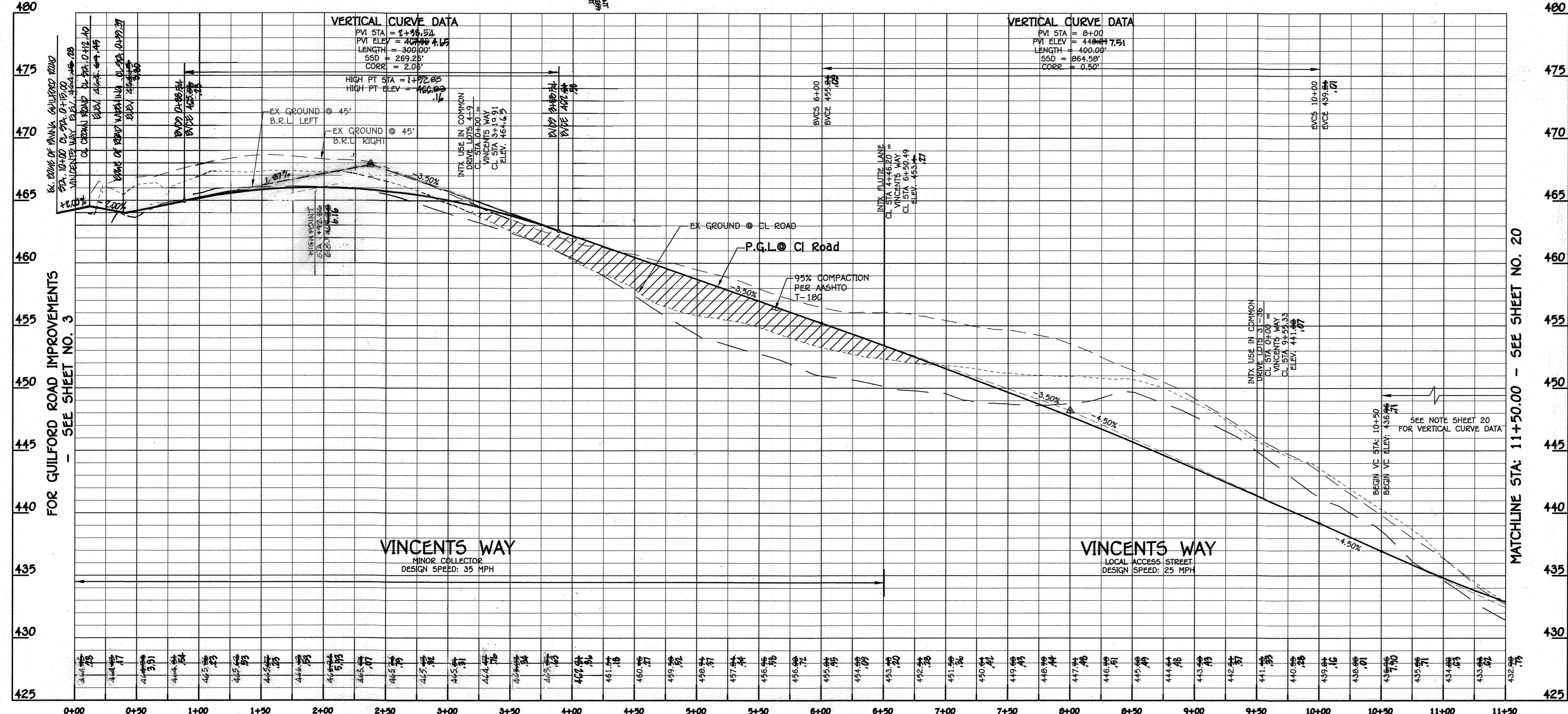
MATCHLINE A-A - SEE THIS SHEET



REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT SCHEDULE	10/9/16
2	REVISED ROAD PROFILE & DRAINAGE DETAIL	7/9/17

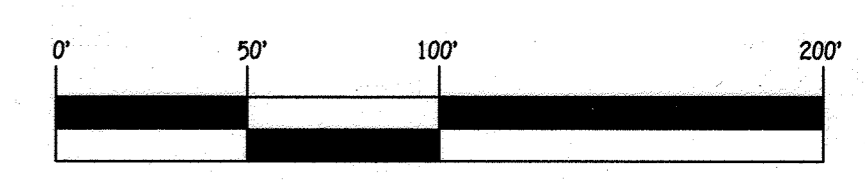
Approved: Department Of Planning And Zoning  
*Neil S. Linder* 8.3.16 Date  
 Chief, Division Of Land Development  
 Approved: Howard County Department Of Public Works  
*Melvin* 7/27/2016 Date  
 Chief, Bureau Of Highways

LEGEND	
SYMBOL	DESCRIPTION
	PROPOSED STORM DRAIN PIPE
	PROPOSED SEWER
	PROPOSED WATER
	FOREST CONSERVATION EASEMENT
	BIO RETENTION FACILITY (7'-6" OR 15'-6" AS NOTED)



**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

*ALDO MICHAEL VITUCCI*  
 Date: 6/20/22  
 ALDO MICHAEL VITUCCI #20748  
 PROFESSIONAL ENGINEER



SCALE: 1" = 50'  
**ROAD PLAN AND PROFILE**  
**VINCENTS WAY**  
 STA: 0+00 - 11+50.00

**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES: ECP-15-005, PB#409, SP-05-006  
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 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 19 OF 58 F-15-110

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FILE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2995



**PROFESSIONAL CERTIFICATION**  
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*Paul R. Anderson*  
 FRANK MANAWANIAN II  
 Date: 6/20/22

**OWNERS**  
 THERNEY FARMS - CLARKSVILLE LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818) 305-3037

**DEVELOPER**  
 BECKER HOMES LLC  
 8925 GUILFORD ROAD - SUITE 200  
 COLUMBIA, MARYLAND 21046  
 (703) 494-0182

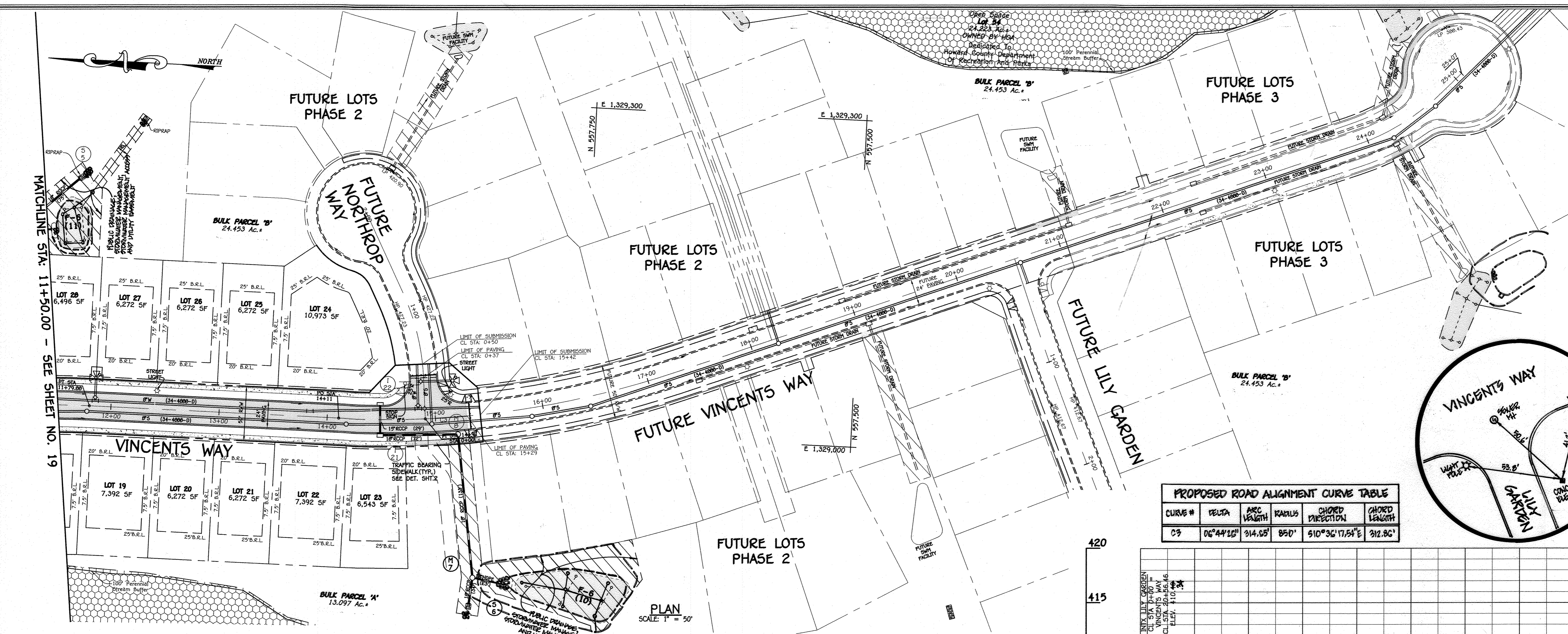
"AS-BUILT"

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADDED PUBLIC DRAINAGE AND STORMWATER MANAGEMENT FACILITIES	10/3/16
2	REMOVED OWNER AND DEVELOPER	7/27/2016

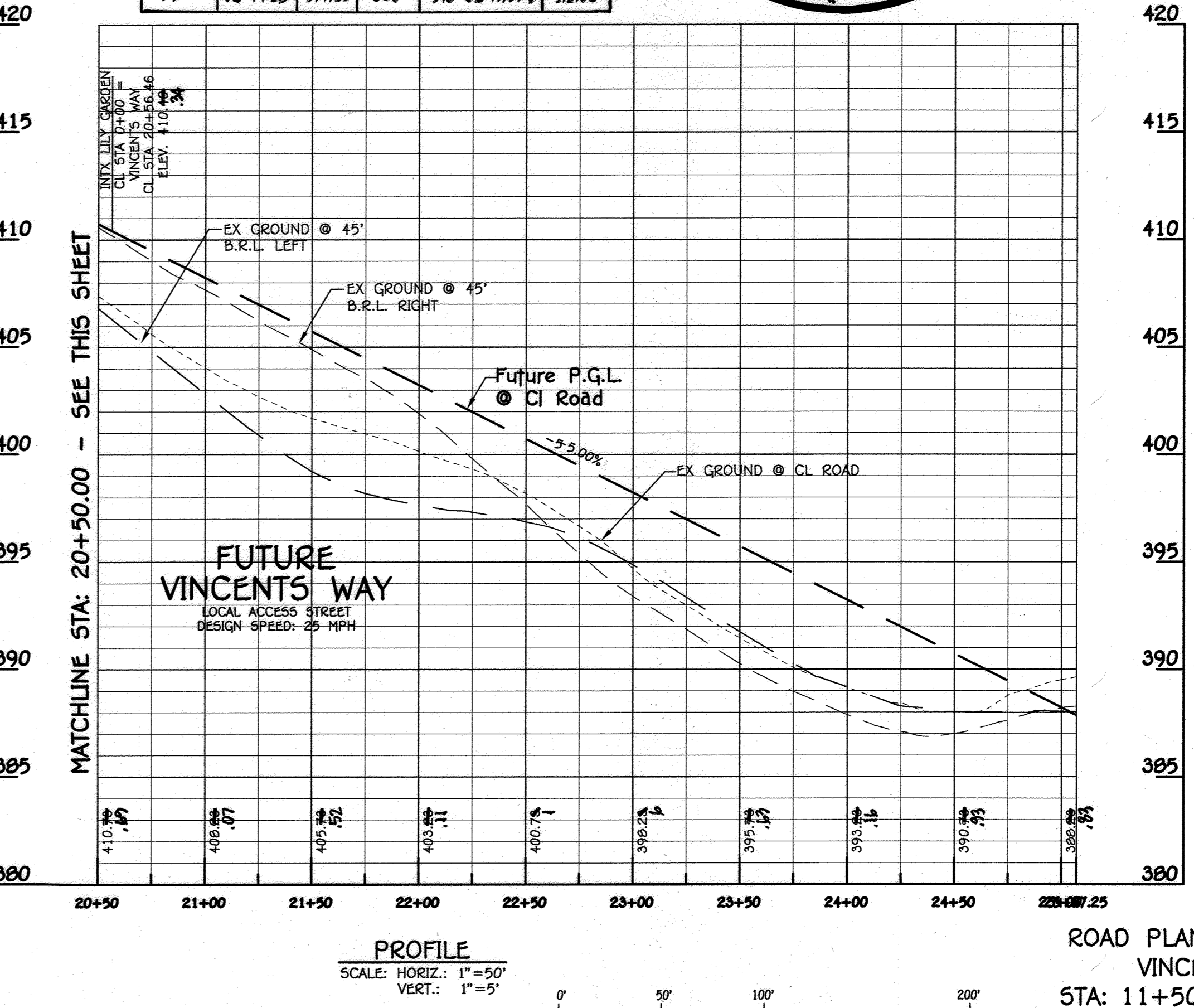
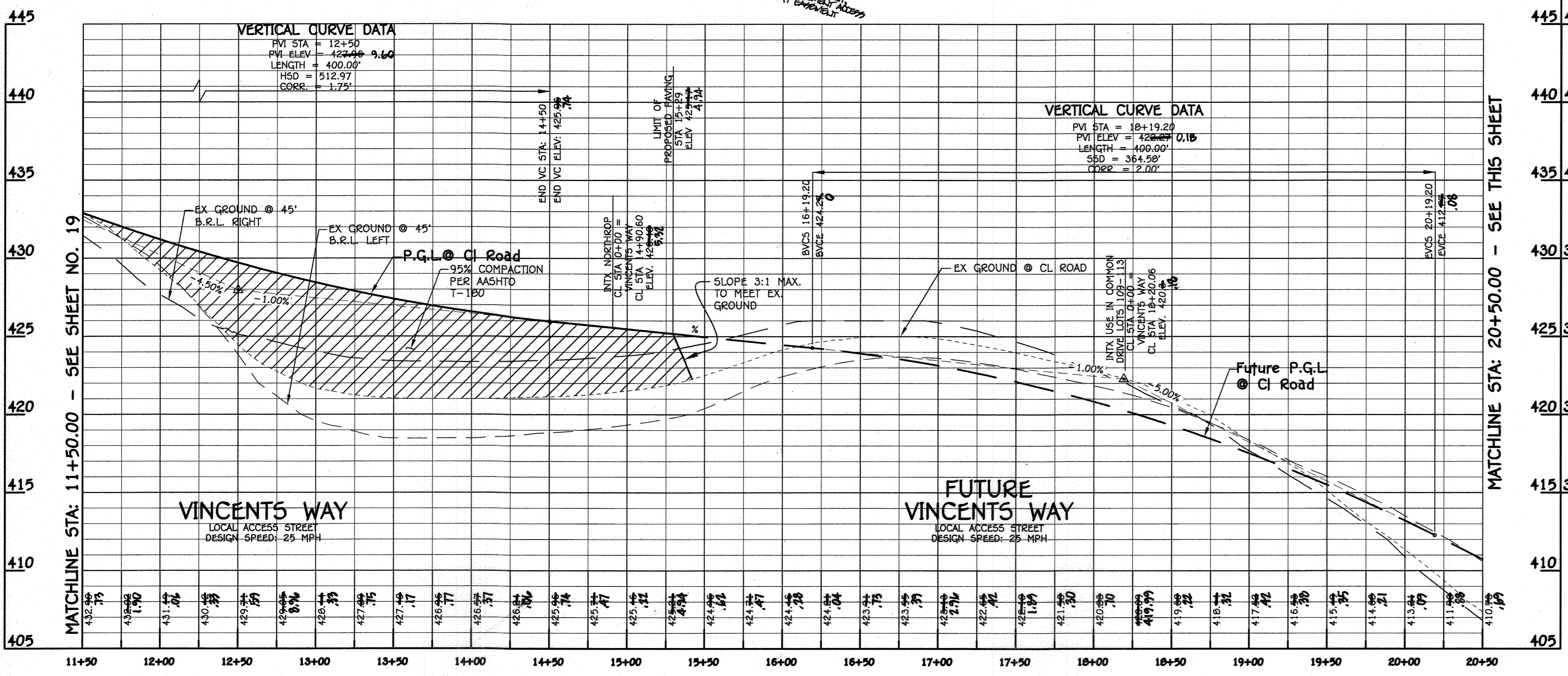
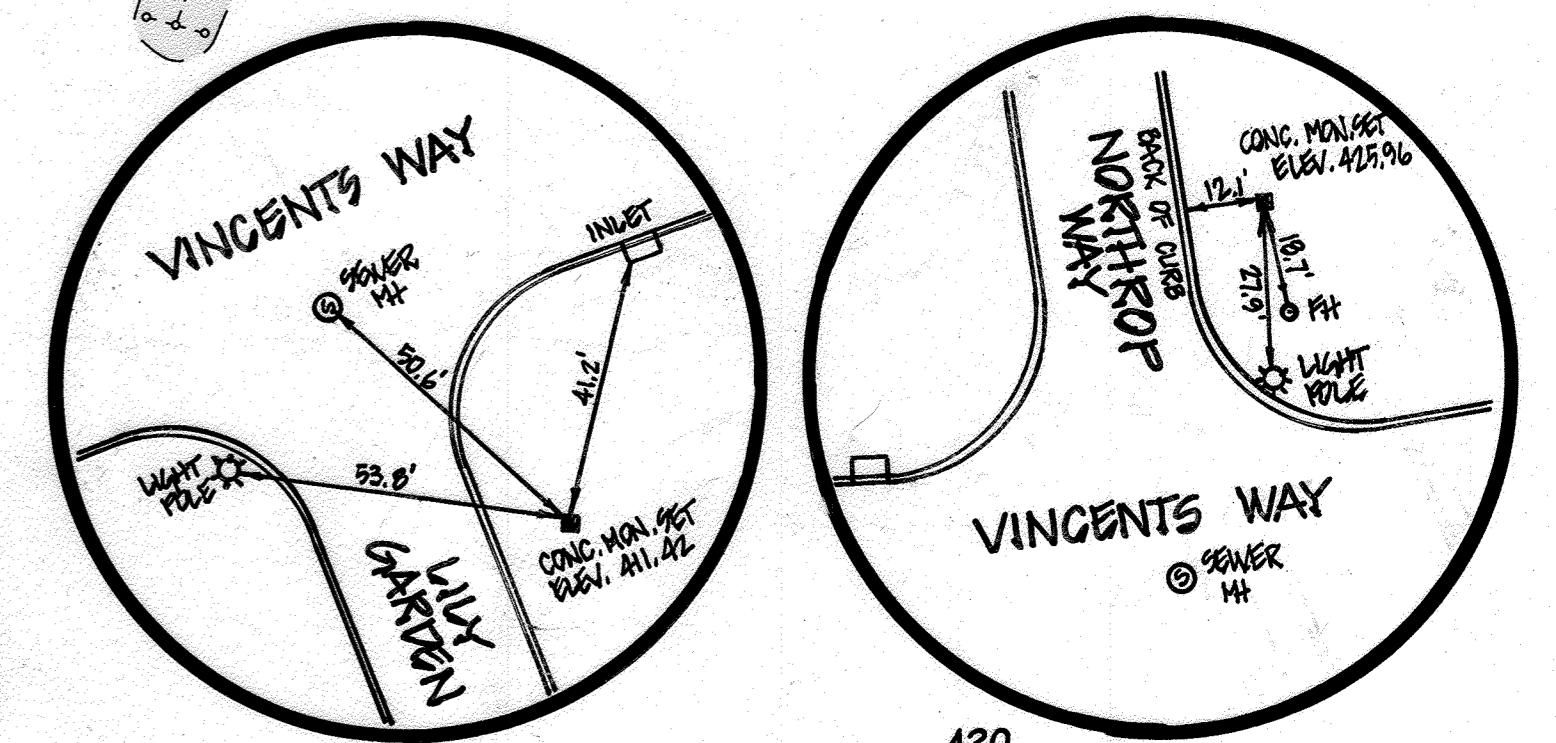
Approved: Department Of Planning And Zoning  
*[Signature]* 8.3.16  
 Chief, Division Of Land Development

Approved: Howard County Department Of Public Works  
*[Signature]* 7/27/2016  
 Chief, Bureau Of Highways

LEGEND	
	PROPOSED STORM DRAIN PIPE
	PROPOSED STORM
	PROPOSED WATER
	FOREST CONSERVATION EASEMENT
	BIO RETENTION FACILITY (F-6) OR (H-6) AS NOTED



CURVE #	DELTA	ARC LENGTH	RADIUS	CHORD DIRECTION	CHORD LENGTH
C9	06°44'12"	314.65'	850'	S10°36'17.54"E	312.86'



**PROFILE**  
 SCALE: HORIZ.: 1"=50'  
 VERT.: 1"=5'

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.  
*[Signature]* 6/29/16

**OWNERS**  
 BENEY PARTNERSHIP - CHARLOTTE, NC  
 2451 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818) 365-3077

**DEVELOPER**  
 BERKELEY HILLS, LLC  
 8005 GUILFORD ROAD - SUITE 200  
 COLUMBIA, MARYLAND 21046  
 (703) 994-0182

**PROFILE**  
 SCALE: HORIZ.: 1"=50'  
 VERT.: 1"=5'

**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan were constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

*[Signature]*  
 ALDO MICHAEL VITUCI #20740  
 PROFESSIONAL ENGINEER

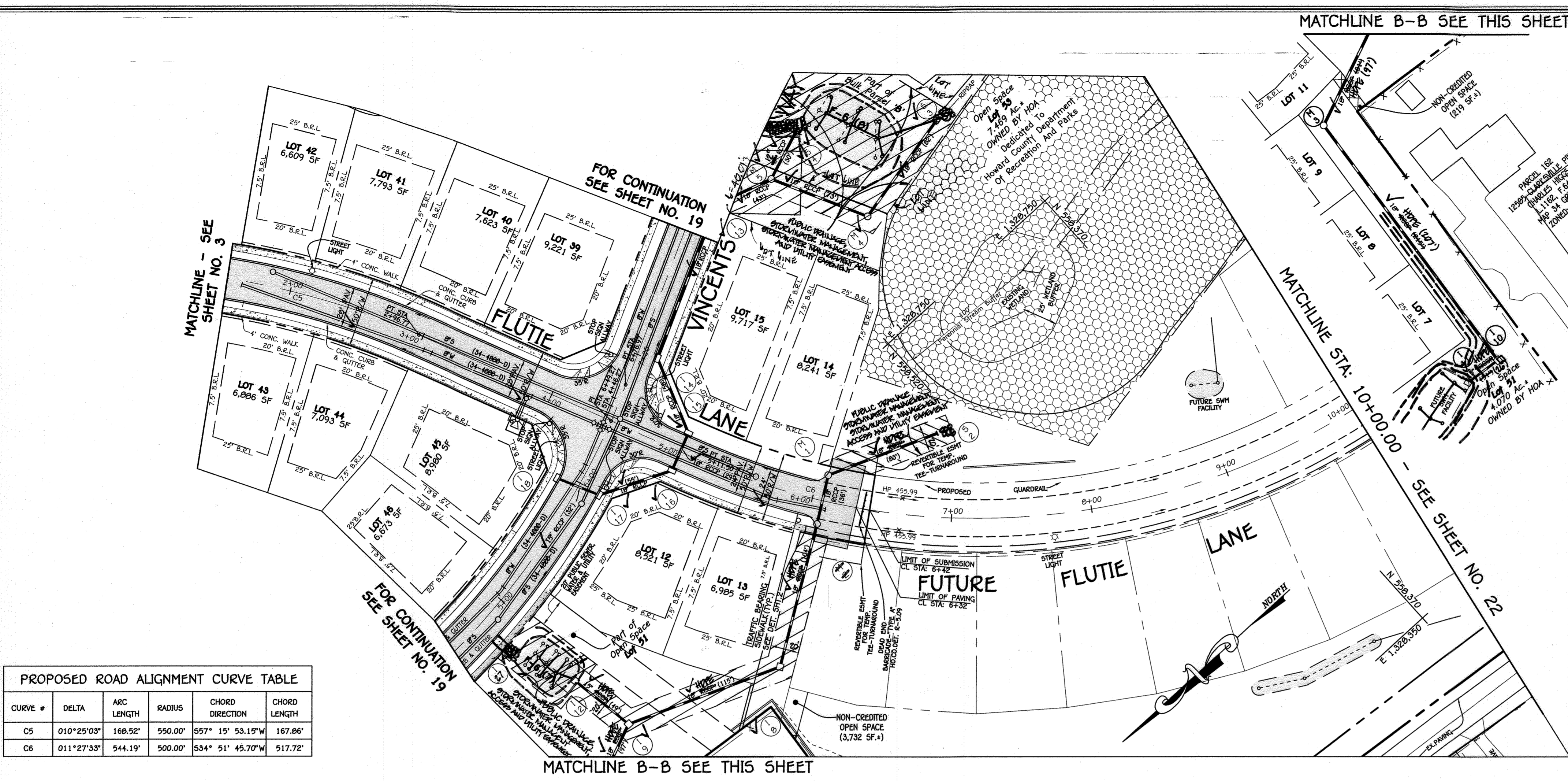
**ROAD PLAN AND PROFILE**  
 VINCENTS WAY  
 STA: 11+50.00 - 25+07.25

**ENCLAVE AT RIVER HILL PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES: ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 00 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 20 OF 58 F-15-110

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELIJAH CITY, MARYLAND 21042  
 (410) 461-3292



"AS-BUILT"



**PROPOSED ROAD ALIGNMENT CURVE TABLE**

CURVE #	DELTA	ARC LENGTH	RADIUS	CHORD DIRECTION	CHORD LENGTH
C5	010°25'03"	166.92'	550.00'	S57° 15' 53.19"W	167.86'
C6	011°27'33"	544.19'	500.00'	S34° 51' 45.70"W	517.72'

**AS-BUILT CERTIFICATION**

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

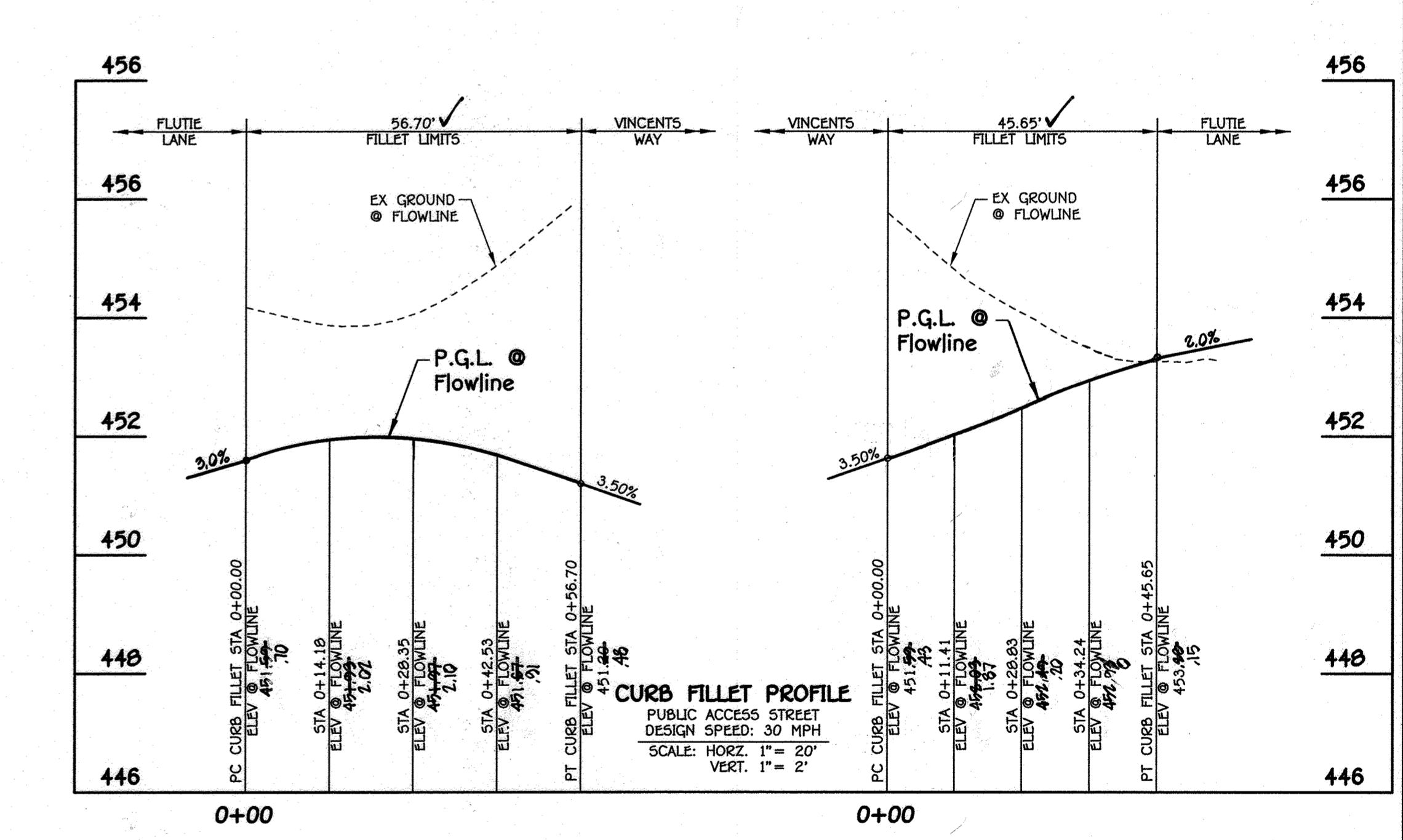
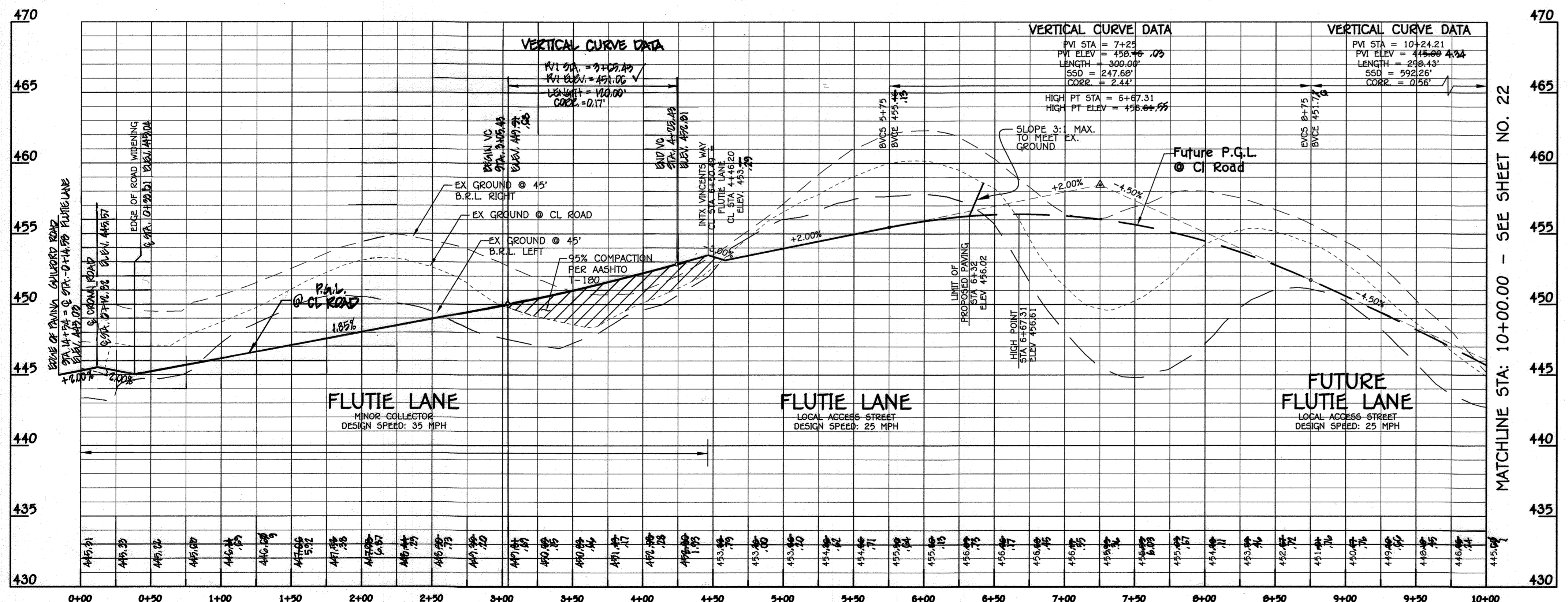
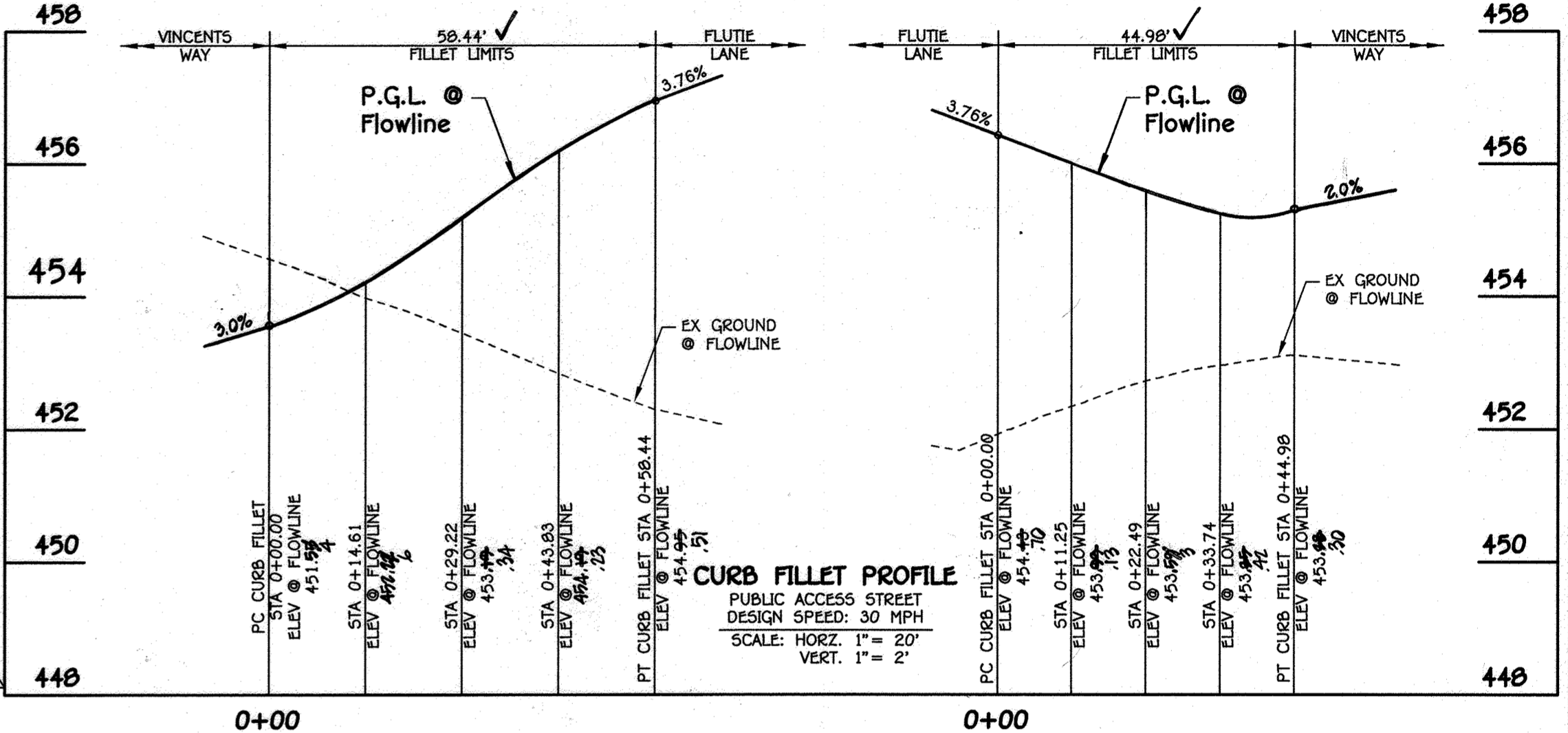
01/29/22  
Date  
ALDO MICHAEL VITUCCI #20748

NO.	REVISIONS DESCRIPTION	DATE
1	ISSUE PUBLIC PLAN AND BIDDING DOCUMENTS	10/21/16
2	CHANGE ROAD PROFILE & CURB AND DRIVEWAY	7/9/17

Approved: Department Of Planning And Zoning  
 Chief, Division Of Land Development: *Kathleen* Date: 8-2-16  
 Chief, Development Engineering Division: *J.P.* Date: 7/16/16  
 Approved: Howard County Department Of Public Works  
 Chief, Bureau Of Highways: *Michael* Date: 7/27/2016

**LEGEND**

SYMBOL	DESCRIPTION
(Symbol)	PROPOSED STORM DRAIN PIPE
(Symbol)	PROPOSED CURB
(Symbol)	PROPOSED WATER
(Symbol)	FOREST CONSERVATION EASEMENT
(Symbol)	BIO RETENTION FACILITY (F-6) OR (H-6) AS NOTED



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALDPOLE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-3299

SCALE: 1" = 50'

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.

*Frank Manalusan II*  
 Date: 6/29/16

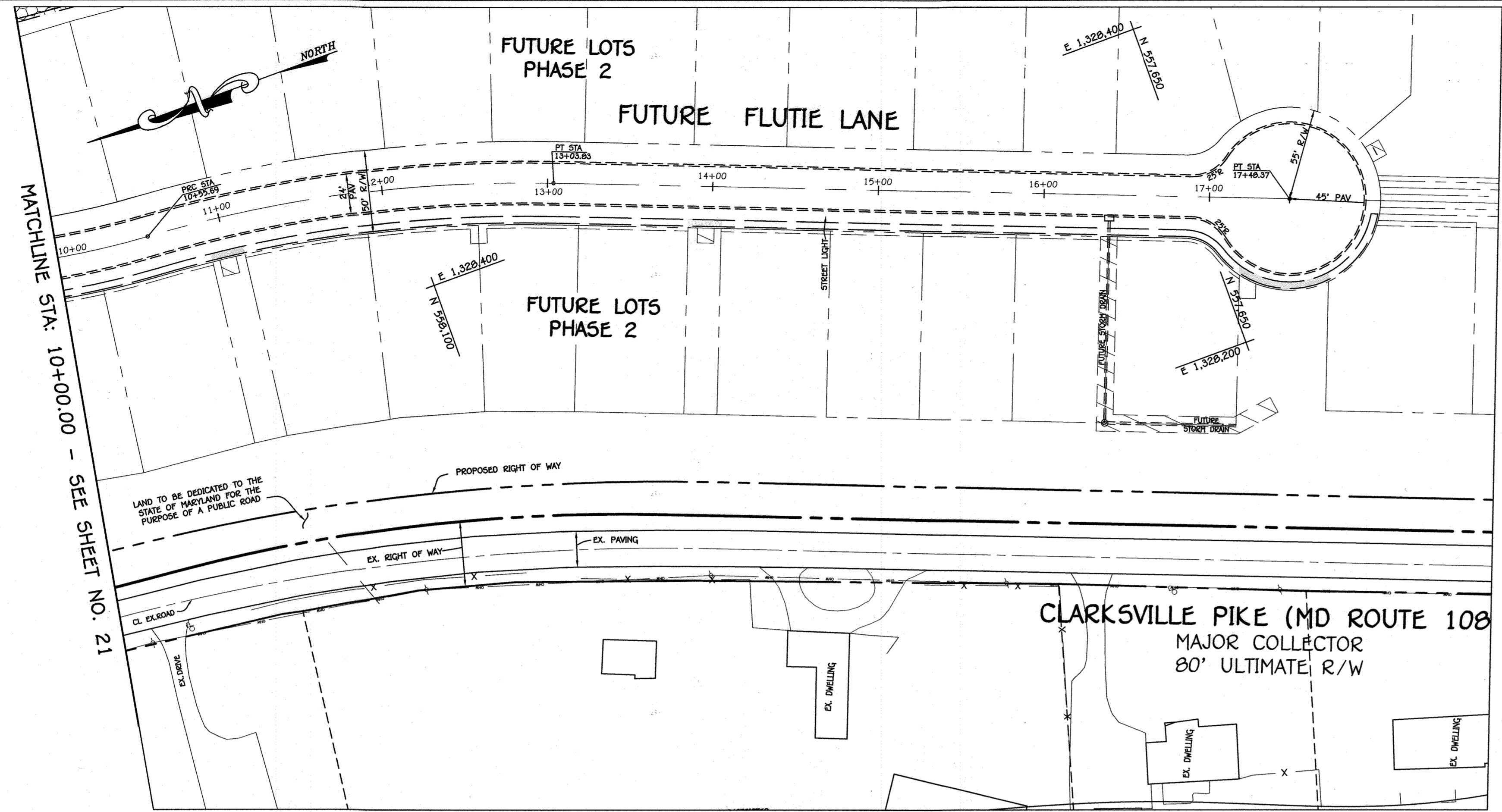
**OWNERS**  
 THEBNEY FARMS - CLARKSVILLE, MD  
 2815 VENTURE BOULEVARD  
 CALABAS, CALIFORNIA 91302  
 (818) 399-9327

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8905 SULLFORD ROAD - SUITE 200  
 COLUMBIA, MARYLAND 21046  
 (703) - 814-0182

**ROAD PLAN AND PROFILE**  
 FLUTIE LANE  
 STA: 0+00.00 - 10+00.00  
**ENCLAVE AT RIVER HILL**  
 PHASE 1

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 21 OF 58 **F-15-110**

"AS-BUILT"



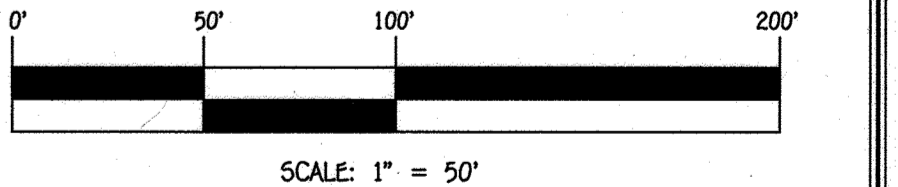
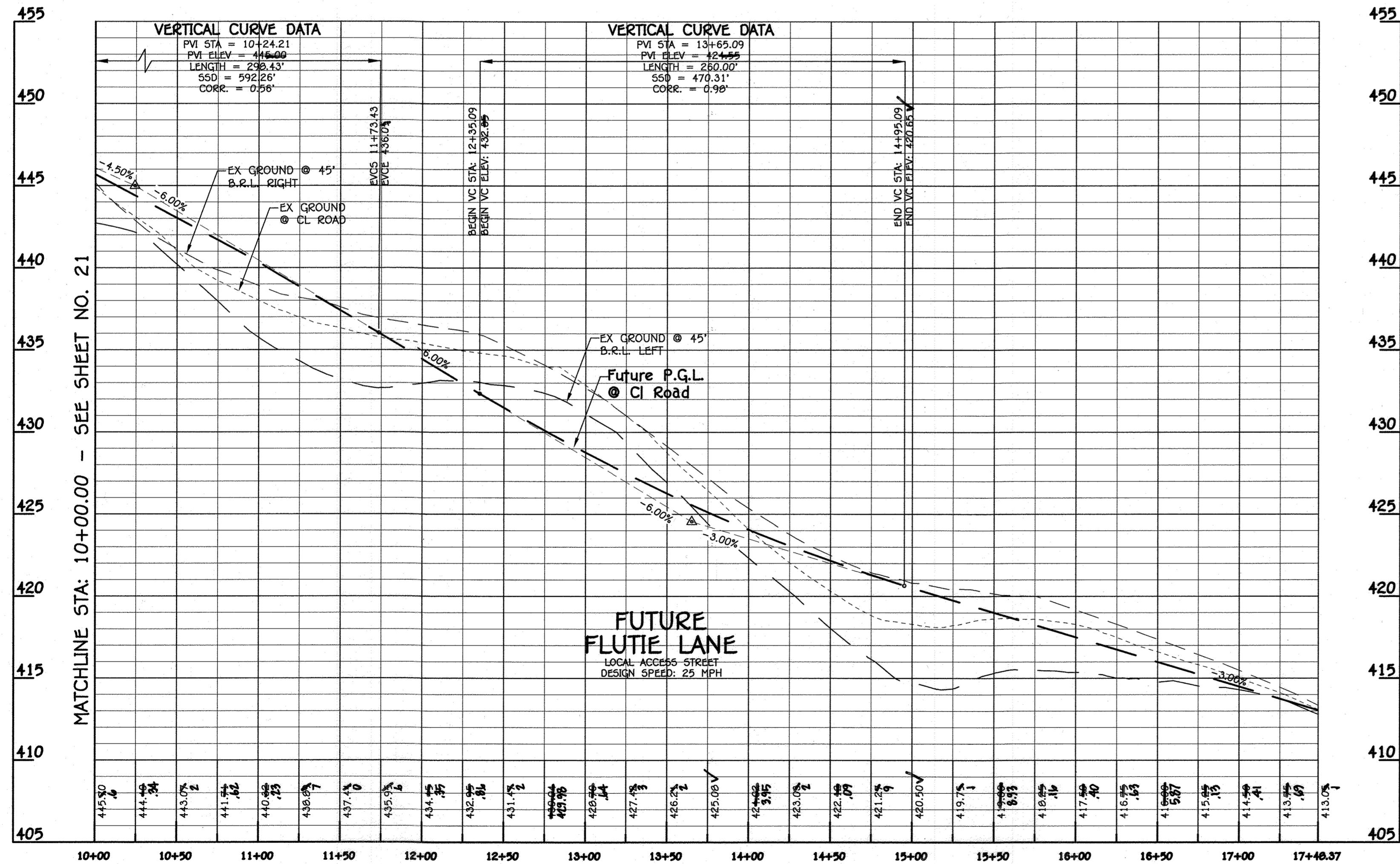
REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED OWNER AND DEVELOPER	7/9/17

Approved: Department Of Planning And Zoning  
*K. S. ...* 8-3-16  
 Chief, Division Of Land Development

Approved: Howard County Department Of Public Works  
*J.P. ...* 8/1/16  
 Chief, Development Engineering Division

Approved: Howard County Department Of Public Works  
*O. ...* 7/27/2011  
 Chief, Bureau Of Highways

LEGEND	
SYMBOL	DESCRIPTION
	PROPOSED STORM DRAIN PIPE
	PROPOSED SEWER
	PROPOSED WATER
	FOREST CONSERVATION EASEMENT
	BID RETENTION FACILITY (7-6) OR (M-6) AS NOTED



**ROAD PLAN AND PROFILE**  
**FLUTIE LANE**  
 STA: 10+00.00 - 17+48.37

**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



8/29/22  
 Aldo Michael Vitucci #20748  
 Date

**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, 5P-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 10  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 22 OF 58 F-15-110

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FILE  
 ELLICOTT CITY, MARYLAND 21142  
 (410) 461-2855



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*Frank Mavalansan*  
 Frank Mavalansan  
 Date: 6/29/16

**OWNERS**  
 TIERNEY PARTNERS - CHARLEVILLE, LP  
 24191 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818) - 385-3697

**DEVELOPER**  
 BEAVER HOMES, LLC  
 8005 GUILFORD ROAD - SUITE 870  
 COLUMBIA, MARYLAND 21046  
 (703) - 874-0182

"AS-BUILT"

**SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)**

- A. SOIL PREPARATION**
1. **TEMPORARY STABILIZATION**
- A. SEEDING PREPARATION CONSISTS OF LOOSING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHisel FLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUNDED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRUCKED WITH RIGGED RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
- B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
2. **PERMANENT STABILIZATION**
- A. A SOIL TEST IS REQUIRED FOR ANY OPEN DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE STABILIZATION ARE:
- I. SOIL PH BETWEEN 6.0 AND 7.0.
  - II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
  - III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOESSLIKE SOILS WILL BE PLANTED, THEN A SANDY SOIL LESS THAN 30 PERCENT SILT PLUS CLAY WOULD BE ACCEPTABLE.
  - IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
  - V. SOIL CONDITIONS SUFFICIENT TO PROVIDE SPACE TO PERMIT ACCURATE ROOT APPLICATION.
- B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS. C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCAPED OR OTHERWISE LOOSED TO A DEPTH OF 3 TO 5 INCHES.
- D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST. E. SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAPE LIME SHOULD BE USED TO CORRECT ACID SOILS AND MANURE OR OTHER SUITABLE MEANS SHOULD BE USED TO CORRECT ALKALINE SOILS. F. APPLY TOPSOIL TO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. G. APPLY TOPSOIL TO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. H. APPLY TOPSOIL TO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. I. APPLY TOPSOIL TO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. J. APPLY TOPSOIL TO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

- B. TOPSOILING**
1. TO PLACE OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION, THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRAINATION.
2. TOPSOIL SAUNDED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
3. TOPSOILING IS LIMITED TO AREAS WHERE:
- A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADAPTABLE TO PRODUCE VEGETATIVE GROWTH.
  - B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR PERENNIAL CONTINUING PLANT AND PLANT NUTRIENTS.
  - C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
  - D. THE SOIL IS SO ACID THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
  - E. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND APPROVED BY THE PROJECT MANAGER.
4. TOPSOIL SPECIFICATIONS: TOPSOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
- A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED AS DETERMINED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE PROJECT MANAGER.
  - B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BROMELIAD GRASS, QUACK GRASS, JOHNSON GRASS, NETTLE, OR OTHERS AS SPECIFIED.
  - C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE PROJECT MANAGER, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
5. **TOPSOIL APPLICATION**
- A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
- B. UNDESIRABLY DISTRIBUTED TOPSOIL IN A 2 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN THE ORDER OF SEEDING OR SOILING AND SHOULD BE PERFORMED IN THE ORDER OF SEEDING OR SOILING. ADDITIONAL SOIL PREPARATION AND TILLAGE, ANY REORGANIZATION IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- C. TOPSOIL MUST NOT BE APPLIED IN SUCH A MANNER THAT IT IS A PROBLEM OR HAZARD TO THE SUBSOIL. TOPSOILING IS EXCESSIVELY MET OR IN A CONDITION THAT MAY OTHERWISE BE DETERMINED TO PREPARE GRADING AND SEEDING OPERATIONS.

- C. SOIL AMENDMENTS (FERTILIZER & LIME SPECIFICATIONS)**
1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE NUTRIENT AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A REGISTERED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSIS.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANUFACTURER'S LABELS MUST BE SUBSTITUTED FOR FERTILIZER WITH POOR APPROVAL FROM THE APPLICABLE AGENCY. FERTILIZERS MUST ALL BE DISCLOSED TO THE SITE FULLY LABELLED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND MANUFACTURER'S INFORMATION.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME) TO BE SUBSTITUTED EXCEPT WHEN HYDRATED LIME WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO 100 MESH SIZES THAT AT LEAST 90 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HEAVILY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GRADE LIMESTONE AT THE RATE OF 1 TO 2 TONS/ACRE (200-400 POUNDS PER 1000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

**DUST CONTROL**

- DEFINITION**
- CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.
- PURPOSE**
- TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, LIMIT HAZARDS AND IMPROVE TRAFFIC SAFETY.
- CONDITIONS WHERE PRACTICE APPLIES**
- THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.
- SPECIFICATIONS**
1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TRACKED TO PREVENT BLOWING.
2. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE, THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN FLOWING ON WINDWARD SIDE OF THE SITE. CHISEL-TYPE PLUGS SPACED ABOUT 12' APART, SPRING-TIPPED HARROWS AND CHISEL PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. SPRAY AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
5. BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALE DICES AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CONTROLLING SOIL BLOWING, CURRENTS AND SOIL BLOWING. CURRENTS AND SOIL BLOWING BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN REDUCING SOIL BLOWING. APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.
- PERMANENT METHODS**
1. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER AND PERMANENT STABILIZATION WITH SOIL. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
2. TOPSOILING - COVERING WITH LESS ERODIBLE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
3. STONE - COVER SURFACE WITH COARSE STONE OR COARSE GRAVEL.

- TEMPORARY SEEDING NOTES (B-4-4)**
- DEFINITION**
- TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.
- PURPOSE**
- TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.
- CONDITIONS WHERE PRACTICE APPLIES**
- EXPOSED SOILS WHERE GOOD GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF THE PERMANENT STABILIZATION PRACTICES ARE REQUIRED.
- CRITERIA**
1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDATIONS BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.1.1.8 AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.
- TEMPORARY SEEDING SUMMARY**
- | HARDINESS ZONE (FROM FIGURE B.3):      | SEEDING DATE (10-20-20) | LIME RATE (20-20) |
|--|-------------------------|-------------------|
| NO. SPECIES APPLICATION RATE (LB./AC.) | SEEDING DATE            | SEEDING DEPTHS    |
| 1                                      |                         |                   |
| 2                                      |                         |                   |
| 3                                      |                         |                   |
| 4                                      |                         |                   |
| 5                                      |                         |                   |
| 6                                      |                         |                   |
| 7                                      |                         |                   |
| 8                                      |                         |                   |
| 9                                      |                         |                   |
| 10                                     |                         |                   |
| 11                                     |                         |                   |
| 12                                     |                         |                   |
| 13                                     |                         |                   |
| 14                                     |                         |                   |
| 15                                     |                         |                   |
| 16                                     |                         |                   |
| 17                                     |                         |                   |
| 18                                     |                         |                   |
| 19                                     |                         |                   |
| 20                                     |                         |                   |

**PERMANENT SEEDING NOTES (B-4-5)**

- A. SEED MIXTURES**
1. **GENERAL USE**
- A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITIONS OR PURPOSES, ENTER THEM IN THE SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
- B. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDATIONS BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR PERMANENT SEEDING.
2. **TURFGRASSES MIXTURES**
- A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
- B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSES. ENTER SELECTED MIXTURES, APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
- C. FOR SITES HAVING DISTURBED AREAS OF 5 ACRES, USE AND SHOW THE RECOMMENDATIONS BY THE TESTING AGENCY. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 1/2 POUNDS PER 1000 SQUARE FEET (1/2 POUNDS PER 1000 SQ. FT.) AT THE TIME OF SEEDING IN ACCORDANCE TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
3. **TURFGRASSES MIXTURES**
- A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
- B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSES. ENTER SELECTED MIXTURES, APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
- C. FOR SITES HAVING DISTURBED AREAS OF 5 ACRES, USE AND SHOW THE RECOMMENDATIONS BY THE TESTING AGENCY. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 1/2 POUNDS PER 1000 SQUARE FEET (1/2 POUNDS PER 1000 SQ. FT.) AT THE TIME OF SEEDING IN ACCORDANCE TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
4. **PERMANENT SEEDING SUMMARY**
- | HARDINESS ZONE (FROM FIGURE B.3):      | SEEDING DATE (10-20-20) | LIME RATE (20-20) |
|--|-------------------------|-------------------|
| NO. SPECIES APPLICATION RATE (LB./AC.) | SEEDING DATE            | SEEDING DEPTHS    |
| 1                                      |                         |                   |
| 2                                      |                         |                   |
| 3                                      |                         |                   |
| 4                                      |                         |                   |
| 5                                      |                         |                   |
| 6                                      |                         |                   |
| 7                                      |                         |                   |
| 8                                      |                         |                   |
| 9                                      |                         |                   |
| 10                                     |                         |                   |
| 11                                     |                         |                   |
| 12                                     |                         |                   |
| 13                                     |                         |                   |
| 14                                     |                         |                   |
| 15                                     |                         |                   |
| 16                                     |                         |                   |
| 17                                     |                         |                   |
| 18                                     |                         |                   |
| 19                                     |                         |                   |
| 20                                     |                         |                   |

**B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING & MULCHING**

- DEFINITION**
- THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
- PURPOSE**
- TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
- CONDITIONS WHERE PRACTICE APPLIES**
- TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.
- A. SEEDING**
1. **SPECIFICATIONS**
- A. ALL SEED MUST MEET THE REQUIREMENT OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A REGISTERED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE. UNDER NO CIRCUMSTANCES SHALL SEED BE USED WITHOUT THE QUALITY OF SEED TAGS AND SEEDING RATE.
- B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAW.
- C. INCULCANTS: THE INCULCANT FOR TREATING LEGAL SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INCULCANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD NEUTRAL INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDRATING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANTS AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INCULCANT LESS EFFECTIVE.
- D. 500 OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT OBSERVATION OF PHYTO-TOXIC MATERIALS.
2. **APPLICATION**
- A. ERY SEEDING: THIS OUTLINES THE USE OF CONVENTIONAL DRIP OR BROADCAST OPERATORS.
1. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1. PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARY.
2. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slopes, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-4-6).
3. ALL sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.
4. **Site Analysis For Total Site Area:**
- Total Area of Site: 86.9 Acres  
Area Disturbed: 97.9 Acres  
Area to be roofed or paved: 3.77 Acres  
Area to be vegetatively stabilized: 54.16 Acres  
Total Cut: 123.217 Cu. Yds.  
Total Fill: 125,050 Cu. Yds.  
Offsite waste/borrow area location: On-Site
7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly, and the next day after each rain event. A written report to be submitted by the contractor, made available upon request, is part of every inspection and should include:
- Inspection date
  - Inspection type (routine, pre-storm event, during rain event)
  - Name and title of inspector
  - Weather information (current conditions as well as time and amount of last recorded precipitation)
  - Brief description of project's status (e.g., percent complete) and/or current activities
  - Evidence of sediment discharges
  - Identification of plan deficiencies
  - Identification of sediment controls that require maintenance
  - Identification of missing or improperly installed sediment controls
  - Compliance status regarding the sequence of construction and stabilization requirements
  - Photographs
  - Monitoring/sampling
  - Maintenance and/or corrective action performed
  - Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).
9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each working shift with a short-term silt fence.
10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may be allowed by the CID per the list of HSCD-approved field changes.
11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (minimum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the CID, no more than 30 acres cumulatively may be disturbed at a given time.
12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.
13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.
14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be implicated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation.
15. Stream channels must not be disturbed during the following restricted time periods (inclusive):
- Use I and IIP March 1 - June 15
  - Use III and IIP October 1 - April 30
  - Use IV March 1 - May 31
16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

**HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES**

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1999 after the future L.O.D and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages: a. Prior to the start of earth disturbance.
- b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading.
- c. Prior to the start of another phase of construction or opening of another grading unit. d. Prior to the removal or modification of sediment control practices.
- Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within five (5) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.
4. All disturbed areas must be established within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slopes, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-4-6).
5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.
6. **Site Analysis For Total Site Area:**
- Total Area of Site: 86.9 Acres  
Area Disturbed: 97.9 Acres  
Area to be roofed or paved: 3.77 Acres  
Area to be vegetatively stabilized: 54.16 Acres  
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Offsite waste/borrow area location: On-Site
7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly, and the next day after each rain event. A written report to be submitted by the contractor, made available upon request, is part of every inspection and should include:
- Inspection date
  - Inspection type (routine, pre-storm event, during rain event)
  - Name and title of inspector
  - Weather information (current conditions as well as time and amount of last recorded precipitation)
  - Brief description of project's status (e.g., percent complete) and/or current activities
  - Evidence of sediment discharges
  - Identification of plan deficiencies
  - Identification of sediment controls that require maintenance
  - Identification of missing or improperly installed sediment controls
  - Compliance status regarding the sequence of construction and stabilization requirements
  - Photographs
  - Monitoring/sampling
  - Maintenance and/or corrective action performed
  - Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).
9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each working shift with a short-term silt fence.
10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may be allowed by the CID per the list of HSCD-approved field changes.
11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (minimum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the CID, no more than 30 acres cumulatively may be disturbed at a given time.
12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.
13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.
14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be implicated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation.
15. Stream channels must not be disturbed during the following restricted time periods (inclusive):
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  - Use IV March 1 - May 31
16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

**SEQUENCE OF CONSTRUCTION - PHASE I**

1. OBTAIN A GRADING PERMIT. (2 WEEKS)
2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK.
3. REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY.
4. CLEAR AND GROOMING AS NECESSARY FOR THE INSTALLATION OF PERIMETER CONTROLS. (2 DAYS)
5. INSTALL THE STABILIZED CONSTRUCTION ENTRANCES AND PERIMETER CONTROLS SHOWN ON SHEETS 25-32. (2 WEEKS)
6. COMPLETE REMAINING CLEARING AND GROOMING WITHIN INSTALLED PERIMETER CONTROLS AND COMPLETE INSTALLATION OF PERMANENT ACCESS BARRIERS, TEMPORARY, PULL AND BURN TRAPS 1-16 WITH ASSOCIATED INTERNAL BURN TRAPS. (1 MONTH) FOR THIS CONSTRUCTION THERE ARE NO CONSTRUCTION DURING 24, 25 AND 26 TO BE PROCEEDED UNTIL BASIN NO. 1 IS REMOVED.
7. REMOVE EXISTING PAVING AND STRUCTURE. (2 WEEKS)
8. BEGIN GRADING OF SITE TO PROPOSED ELEVATIONS AS DEFINED ON SHEETS 25-32. (1 MONTH)
- NOTE:** THE CONTRACTOR SHALL COORDINATE WITH THE INSPECTOR IN REGARDS TO THE REQUIREMENT THAT NO MORE THAN 20 ACRES OF "OPEN" GROUND SHALL BE DISTURBED AT ANY GIVEN TIME.
- NOTE:** THE 20 AC. CONDITION CAN BE MET BY PHASE I GRADING TO CONSIST OF FLUTTE LANE TO STA. 6+50 AND AREA NORTH TO INCLUDE VINCENT WAY TO STA. 8+50. CONSTRUCTION TRAP #1 AND BASIN #1 AND SPOIL AREA (SHEET 29 & 30).
9. COMMENCE INSTALLATION WATER AND SEWER LINES FROM CONTRACT 34-480B-D AND STORM DRAIN SYSTEMS INCLUDING TEMPORARY PIPES SUPPORTING SEDIMENT TRAPS SHOWN ON SHEETS 25-32. THIS INCLUDES SOST #5 FROM MH-B TO 5-6 WHICH IS DELAYED UNTIL TRAP IS REMOVED. (2 MONTHS)
10. BEGIN CONSTRUCTION OF CURB & GUTTER AND INSTALL ROAD BASE COURSE FOR VINCENTS WAY (0+00 TO 15+21) AND FLUTTE LANE (0+00 TO 6+32). (1 MONTH)
11. BEGIN CONSTRUCTION OF CURB AND GUTTER AND BASE COURSE FOR ROAD BEYOND VINCENTS ROAD (1 MONTH)
12. STABILIZE ALL DISTURBANCE WITH TEMPORARY SEEDING. (1 WEEK)
13. OBTAIN APPROVAL FROM SEDIMENT CONTROL INSPECTOR BEFORE PROCEEDING. (2 DAYS)
14. BEGIN REMOVAL OF SEDIMENT BASIN 1, RESOLVE TRAPS 2, 5 AND 10, AND ASSOCIATED INTERNAL BURN TRAPS. (1 WEEK)
15. ALL REMAINING TRAPS ARE TO REMAIN TO SUPPORT FUTURE PHASE OF THIS PROJECT.
16. BEGIN REMOVAL OF SEDIMENT BASIN 1, RESOLVE TRAPS 2, 5 AND 10, REMOVE TEMPORARY PIPES AND COMPLETE INSTALLATION OF SEDIMENT MANAGEMENT FACILITIES. (SEE SHEETS 29 & 30) AS WELL AS REMAINING PERMANENT CURB AND GUTTER AND COMPLETE THE INSTALLATION OF STORM DRAIN AREAS TO BE REMOVED IMMEDIATELY. (1 MONTH)
16. STABILIZE ALL DISTURBED AREAS WITH TEMPORARY SEEDING. (3 DAYS).
17. INSTALL FINISHED SURFACE COURSE, SIDEWALKS AND STREET TREES. (2 WEEKS)
18. OBTAIN APPROVAL OF APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF SEDIMENT CONTROLS. (3 DAYS)
19. REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS.
20. NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM THE POND/BASIN ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES HEREON.
21. THE CONTRACTOR SHALL COORDINATE WITH THE INSPECTOR IN REGARDS TO THE REQUIREMENT THAT NO MORE THAN 20- ACRES OF "OPEN" GROUND SHALL BE DISTURBED AT ANY GIVEN TIME. THIS MAY BE ACCOMPLISHED BY GRADING ONE SPECIFIED AREA AT A TIME, IF REQUIRED.
- NOTE:** WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED, ALL SEDIMENT MUST BE PLACED UPSTREAM OF THE APPROVED TRAPPING DEVICE.
- NOTE:** NO REVISION TO THE SEQUENCE OF CONSTRUCTION WILL BE ALLOWED WITHOUT PRIOR APPROVAL FROM HOWARD SOIL CONSERVATION DISTRICT.
- NOTE:** THIS PLAN SUPPORTS ROAD AND INFRASTRUCTURE CONSTRUCTION TO SUPPORT FUTURE HOUSING CONSTRUCTION. NO HOMES MAY BE CONSTRUCTED UNDER THIS PLAN.

**REVISIONS**

NO.	DESCRIPTION	DATE
1	REMOVE SEQUENCE OF CONSTRUCTION	10/31/16
2	REMOVED OWNER AND DEVELOPER	7/9/17

Approved: Department Of Planning And Zoning  
*Ket Johnson*  
 Chief, Division Of Land Development 8/3/16 Date

Approved: Howard County Department Of Public Works  
*P. McLean*  
 Chief, Bureau Of Highways 7/27/2016 Date

**ENGINEER'S CERTIFICATE**

I Herby Certify That This Plan and Sediment Control Represents A Professional Engineering Based On My Personal Knowledge Of The Site And That It Was Prepared In Accordance With The Standards Of The Howard Soil Conservation District.

*John M. Vitucci*  
 Signature Of Engineer 7/9/16 Date

**DEVELOPER'S CERTIFICATE**

I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary.

*John M. Vitucci*  
 Signature Of Developer 6/29/16 Date

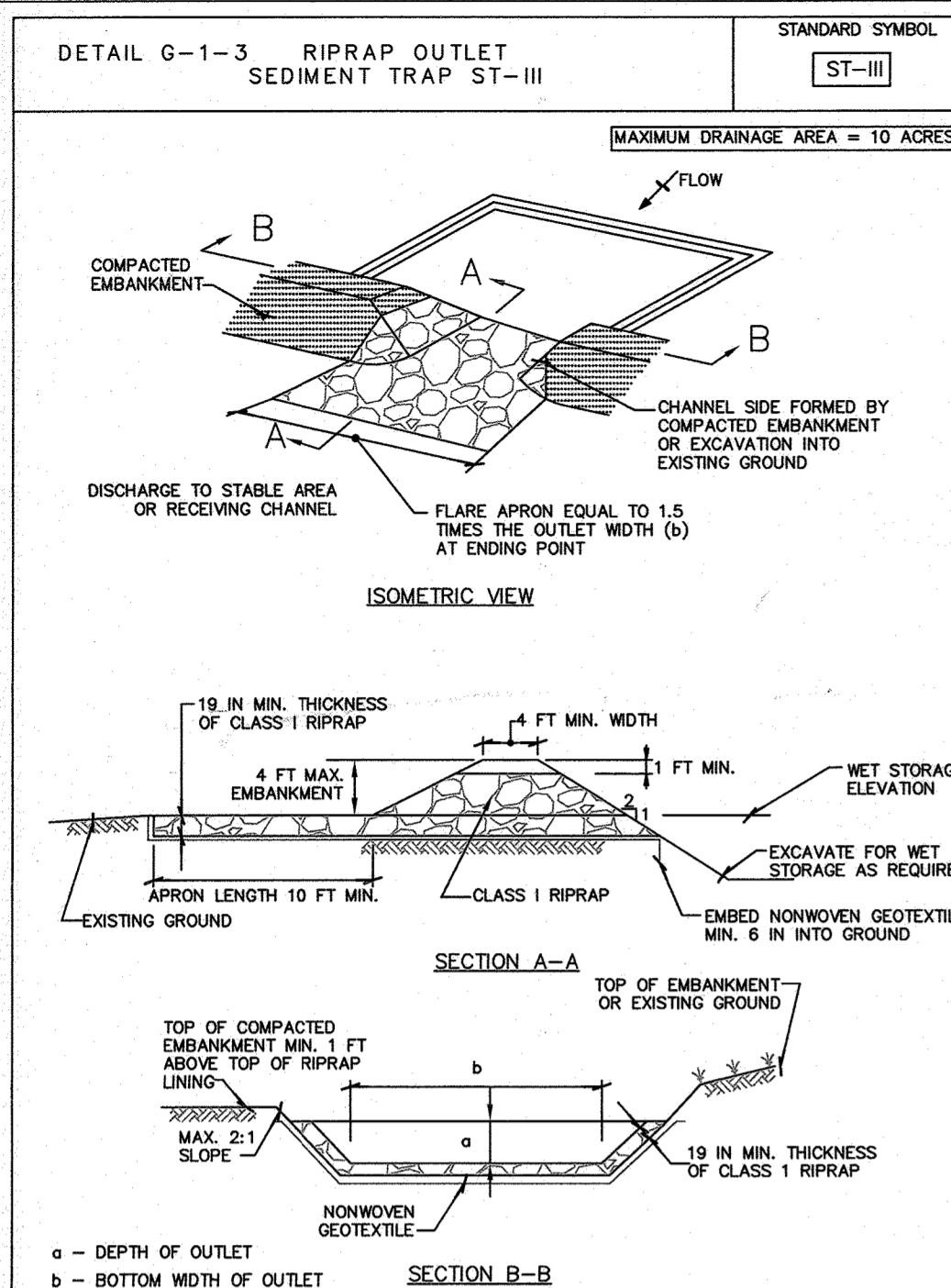
Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.  
*John M. Vitucci*  
 Howard Soil Conservation District 7/19/16 Date

**PERMANENT SEEDING SUMMARY**

HARDINESS ZONE (FROM FIGURE B.3):	SEEDING DATE (10-20-20)	LIME RATE (20-20)
NO. SPECIES APPLICATION RATE (LB./AC.)	SEEDING DATE	SEEDING DEPTHS
1		
2		
3		
4		
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**B. 500: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).**

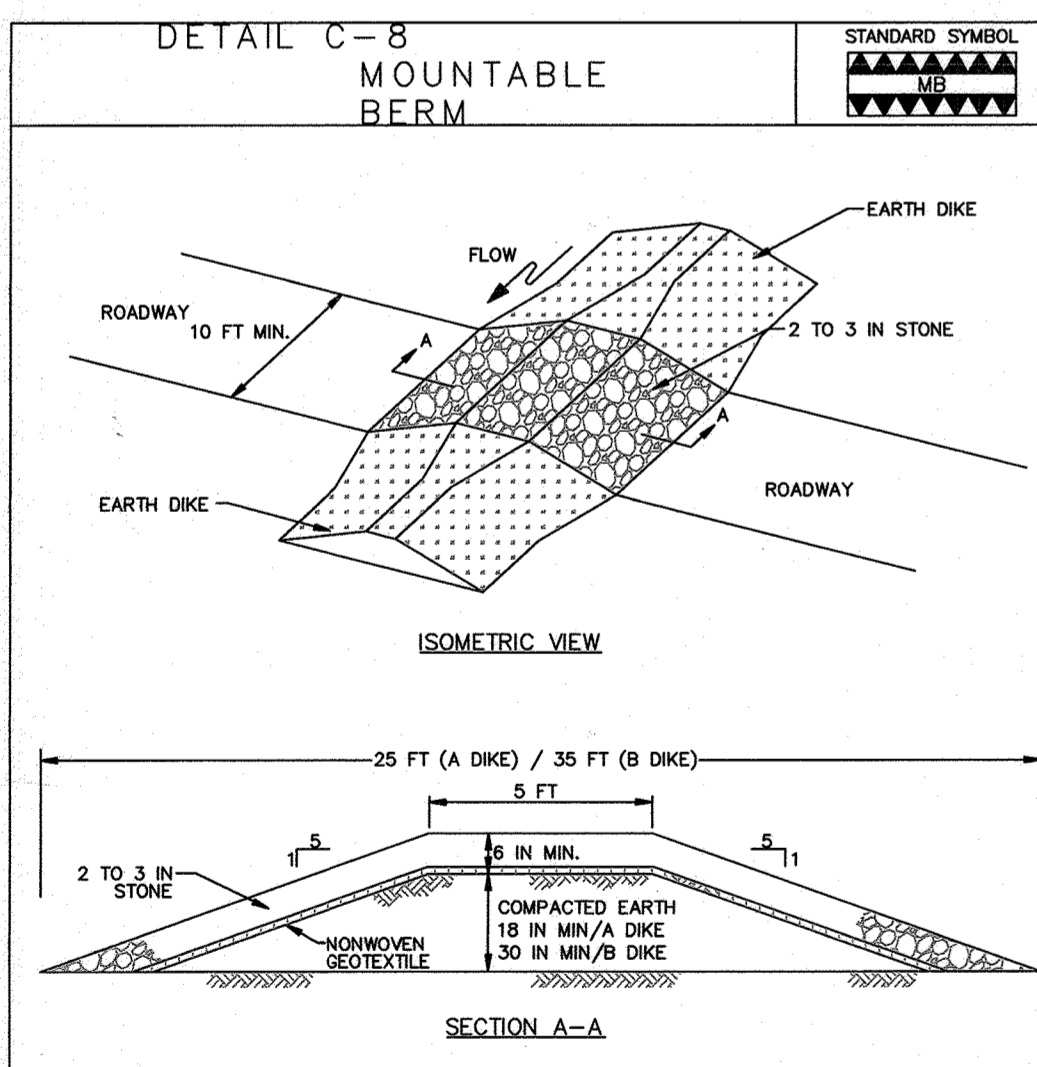
1. **GENERAL SPECIFICATIONS**
- A. CLASS OF TURFGRASS SOIL MUST BE MARYLAND STATE CERTIFIED. 500 LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
- B. 500 MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS TO 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. REQUIREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND UNIFORM PAGES AND LOAM OR UNIFORM ENDS WILL NOT BE ACCEPTABLE.
- C. STANDARD SIZE SECTIONS OF SOIL MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
- D. 500 MUST NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY BE DANGEROUS TO ITS SURVIVAL.
- E. 500 MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. 500 MUST NOT TRANSPORTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
2. **SOIL INSTALLATION**
- A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOIL.
- B. LAY THE FIRST ROW OF SOIL IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED



**CONSTRUCTION SPECIFICATIONS**

- CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.
- CLEAR, GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.
- USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.
- CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE TOP OF RIPRAP OUTLET. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
- MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.
- PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE BOTTOM AND SIDES OF OUTLET AND APRON PRIOR TO PLACEMENT OF RIPRAP. OVERLAP SECTIONS OF GEOTEXTILE AT LEAST 1 FOOT WITH THE SECTION NEARER TO THE TRAP PLACED ON TOP. EMBED GEOTEXTILE AT LEAST 6 INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
- USE CLEAN CLASS 1 RIPRAP PLACED 19 INCHES IN DEPTH FOR THE OUTLET AND APRON. USE OF RECYCLED EQUIPMENT IS ACCEPTABLE.
- CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO APPROVED PLAN, AND IN SUCH A MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.
- STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.
- REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION (20% OF NET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. KEEP POINTS OF INFLOW AND OUTFLOW AS WELL AS INSIDE OF THE TRAP TREE FREE FROM EROSION AND REMOVE ACCUMULATED DEBRIS. MAINTAIN EMBANKMENTS TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. REMOVE ANY TREES, BRUSH, OR OTHER WOODY VEGETATION GROWING ON EMBANKMENT OR NEAR PRINCIPAL SPILLWAY. MAINTAIN LINE, GRADE, AND CROSS SECTION.
- WHEN DEWATERING TRAP, PASS THE REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL STRUCTURE.
- UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

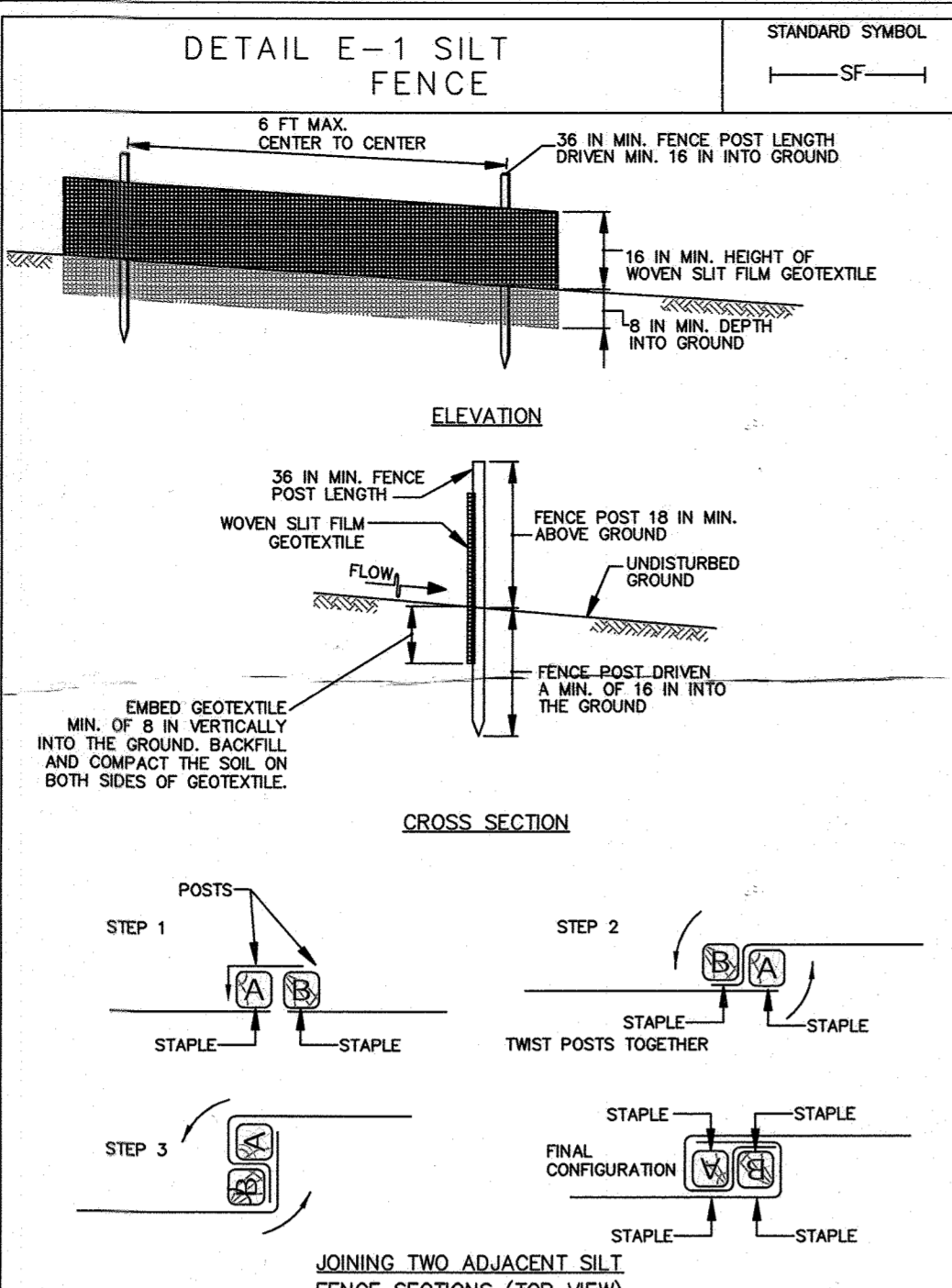
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL	
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



**CONSTRUCTION SPECIFICATIONS**

- USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
- PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
- PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

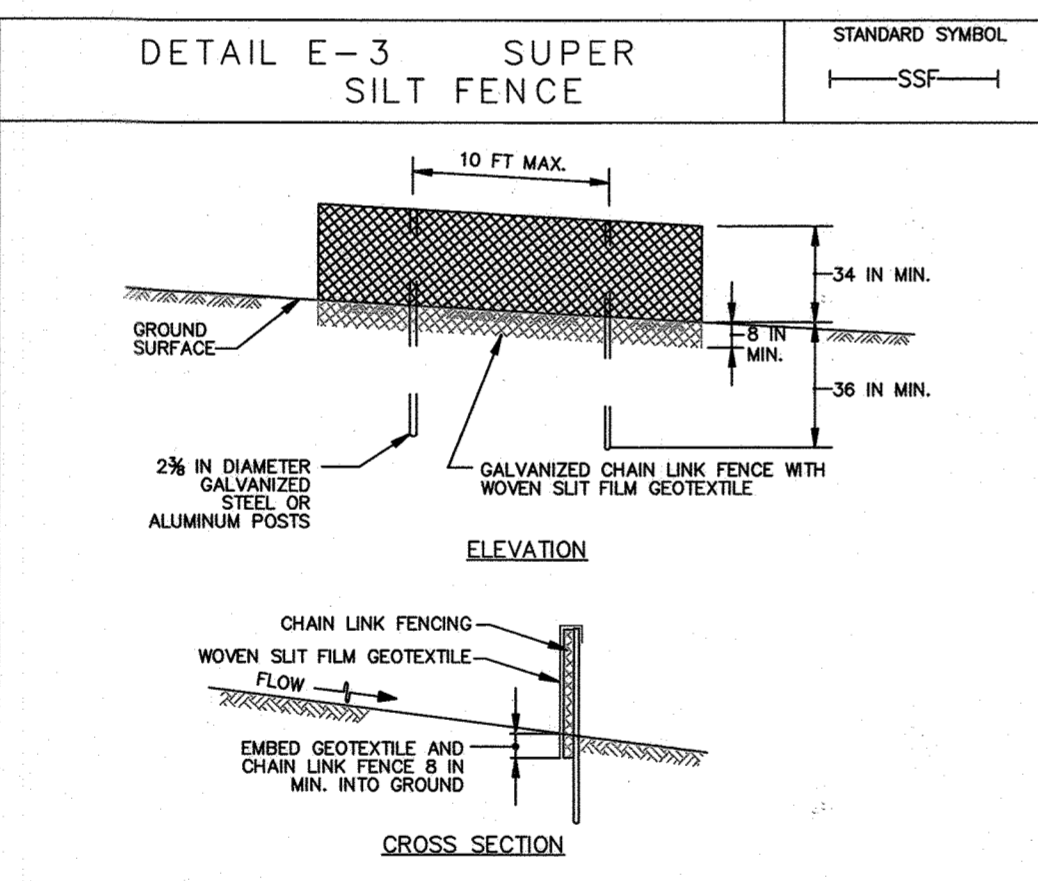
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**CONSTRUCTION SPECIFICATIONS**

- USE WOOD POSTS 1 1/2 X 1 1/2 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
- USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 8 FEET APART.
- USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
- EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

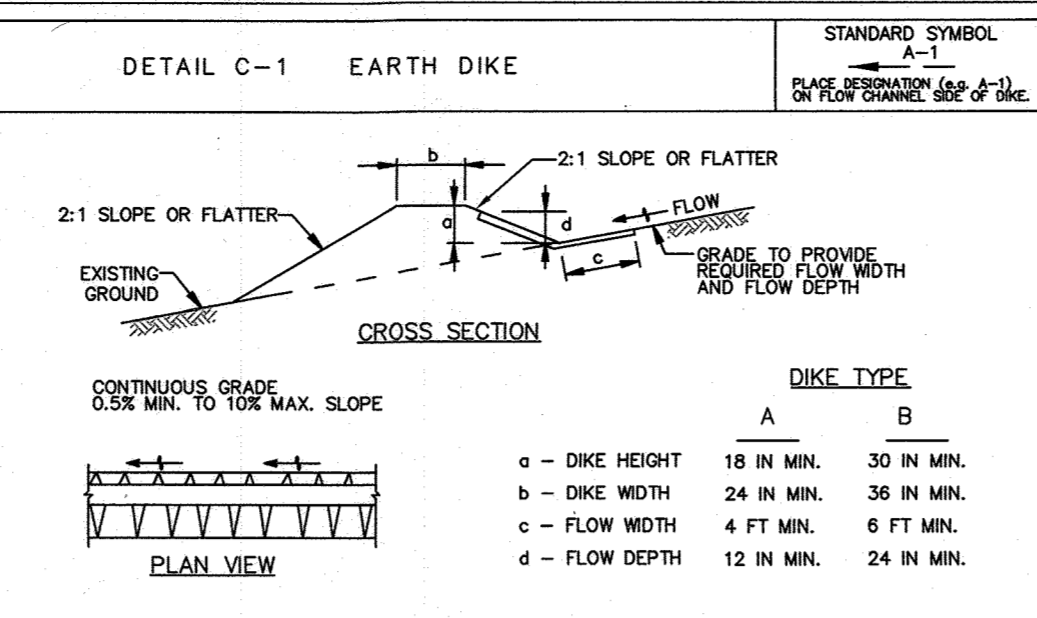
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL	
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

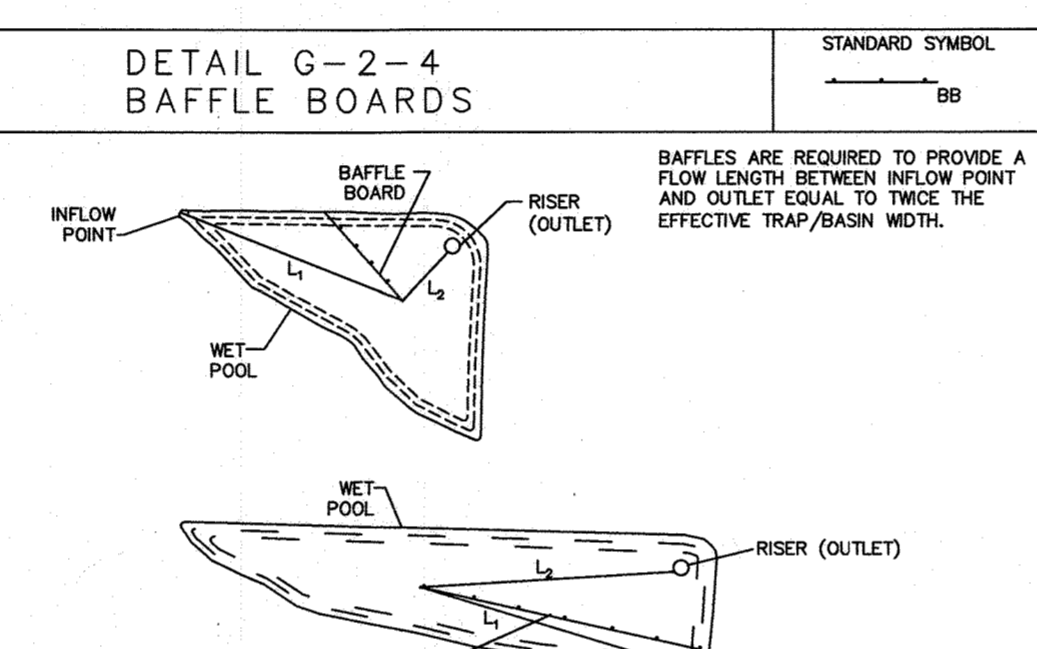
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U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



**CONSTRUCTION SPECIFICATIONS**

- REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL, SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.
- EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROTECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
- COMPACT FILL.
- CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
- STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
- UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

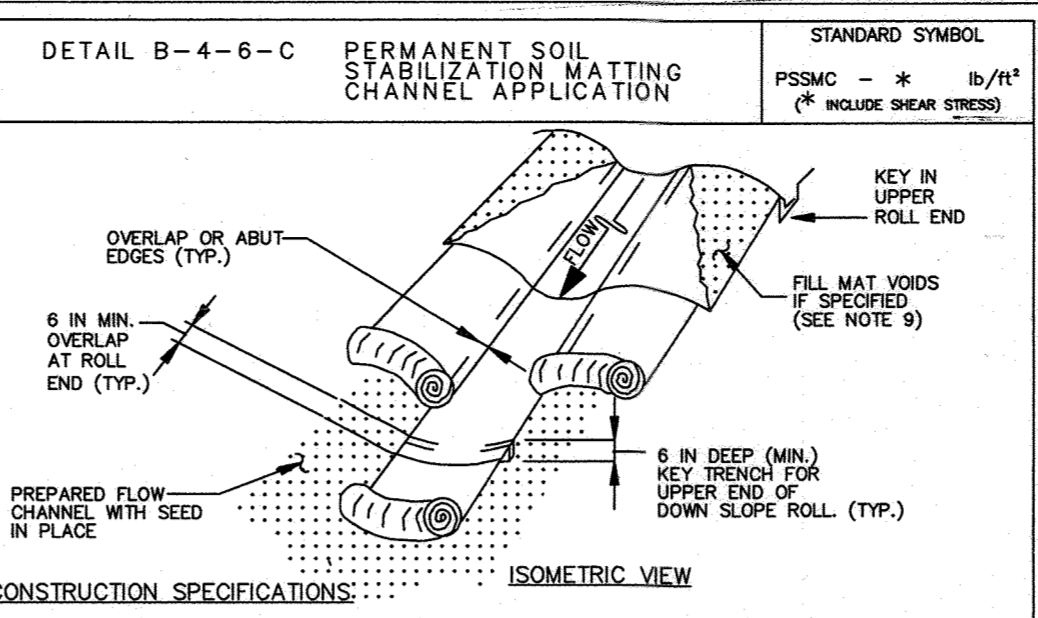
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U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

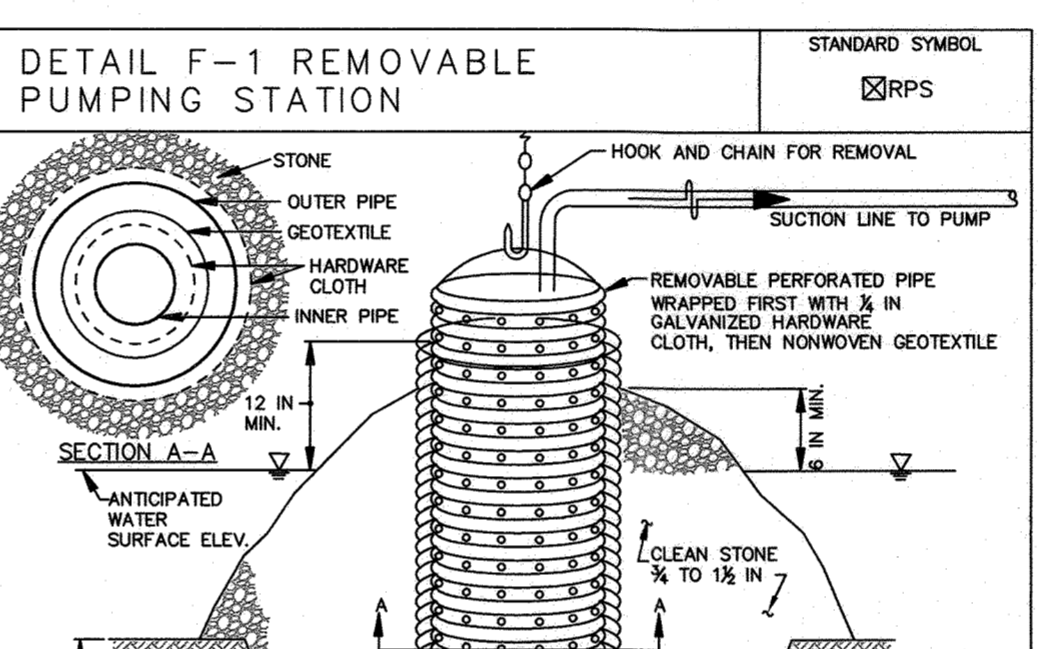
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U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



**CONSTRUCTION SPECIFICATIONS**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-HARMFUL TO THE SKIN. IF PRESENT, MATTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MELT INDEX OF 200 INCHES AND PREVENTS SEPARATION OF SEED OR 2 INCH CENTERLINE LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES OR WOOD STAPLES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAPLES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1 1/2 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDING PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS. UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDING SURFACE. AVOID STRETCHING THE MATTING.
- OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLLS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
- KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEPT AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

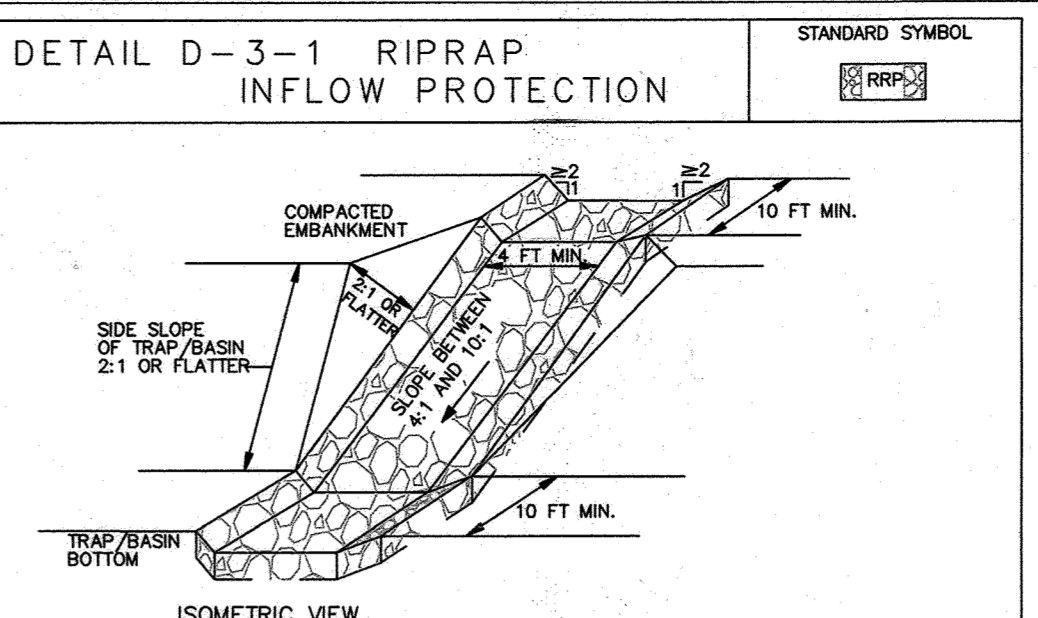
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**CONSTRUCTION SPECIFICATIONS**

- USE CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS 6 INCHES ON CENTER.
- USE A MINIMUM 12 INCH DIAMETER INNER PIPE WITH AN OUTER PIPE A MINIMUM 6 INCHES LARGER IN DIAMETER. BOTTOM OF EACH PIPE MUST BE CAPPED WITH WATER TIGHT SEAL.
- WRAP EACH PIPE WITH 1/2 INCH GALVANIZED HARDWARE CLOTH. ON INNER PIPE WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
- EXCAVATE 8 FEET X 8 FEET X 4 FEET DEEP PIT FOR PIPE PLACEMENT. PLACE CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
- SET TOP INNER AND OUTER PIPES MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION (OR RISER CREST ELEVATION WHEN DEWATERING A BASIN).
- BACKFILL PIT AROUND THE OUTER PIPE WITH 3/4 TO 1 1/2 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
- DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
- A REMOVABLE PUMPING STATION REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, PULL OUT INNER PIPE AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

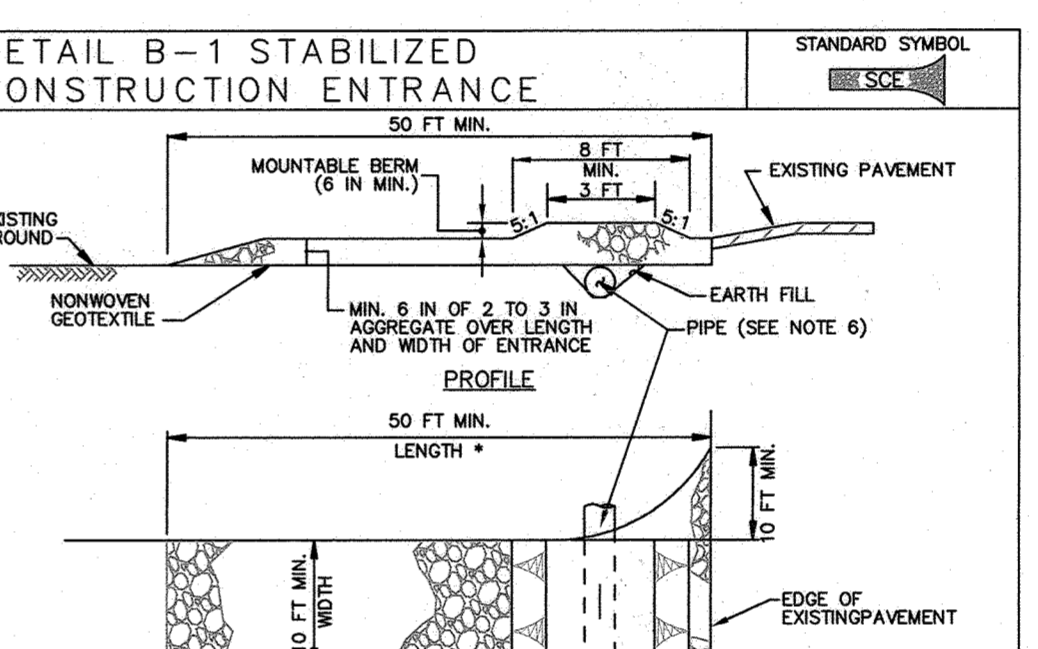
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U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



**CONSTRUCTION SPECIFICATIONS**

- PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
- CONSTRUCT INFLOW CHANNEL WITH CLASS 1 RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 19 INCHES (2 x D<sub>50</sub>) AND A 1 FOOT DEEP FLOW CHANNEL. INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
- INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
- BLEND RIPRAP INTO EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL	
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**CONSTRUCTION SPECIFICATIONS**

- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (\*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SIDE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE. MAINTAIN POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
- PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL	
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED OWNER AND DEVELOPER	7/9/17

Approved: Department of Planning And Zoning  
*Ketelovel*  
 Chief, Division of Land Development 8-3-16  
 Approved: Howard County Department of Public Works  
*Meehan*  
 Chief, Bureau of Highways 7/27/2016

**ENGINEER'S CERTIFICATE**  
 I Herby Certify That This Plan, Specification and Sediment Control Represents A Professional Engineering Design Based On My Personal Knowledge Of The Site, And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

**DEVELOPER'S CERTIFICATE**  
 I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary.

*W. M. Meehan* 7/9/16  
 Signature Of Engineer  
*W. M. Meehan* 7/19/16  
 Signature Of Developer

DETAIL G-1-1 PIPE OUTLET SEDIMENT TRAP ST-I		
PIPE OUTLET SEDIMENT TRAP ST-I, TRAP NO. 1 - AREA 'B'	ST-I	
DRAINAGE AREA - INITIAL	-----	ACRES
DRAINAGE AREA - FINAL	-----	ACRES
DRAINAGE AREA - FINAL	4.06	ACRES
TOTAL STORAGE REQUIRED	22,021	CF
NET STORAGE PROVIDED	24,969	CF
NET STORAGE REQUIRED	7,309	CF
NET STORAGE PROVIDED	7,309	CF
DRY STORAGE PROVIDED	7,309(5W=14,713)	CF
TRAP BOTTOM ELEVATION	22,021	EF
TRAP BOTTOM EMBANKMENT	446.50	FT
RISER CREST (DRY STORAGE) ELEVATION	451.20	FT
OUTLET CREST STORAGE ELEVATION	448.40	FT
CLEANOUT ELEVATION	447.50	FT
TOP OF EMBANKMENT ELEVATION	452.00	FT
SIDE SLOPE	2:1	H:V RATIO
EMBANKMENT TOP WIDTH	4'	FT
PRINCIPAL SPOILER MATERIAL (BARREL, RISER, ANTI-DEEP COLLAR)	METAL	
RISER DIAMETER	36"	IN
BARREL DIAMETER	27"	IN
TRASH RACK DIAMETER	54"	IN
TRASH RACK HEIGHT	2.08'	FT
ANTI-DEEP COLLAR DIMENSIONS	8.25' X 8.25'	FT
OUTLET PROTECTION - LENGTH	15'	FT
OUTLET PROTECTION - WIDTH	15'	FT
OUTLET PROTECTION - DEPTH	19"	IN

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE  
 NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT  
 WATER MANAGEMENT ADMINISTRATION

**FISHER, COLLINS & CARTEE, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTOUR NATIONAL FLEX  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2995



**PROFESSIONAL CERTIFICATION**  
 HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 2/22/17.  
*Michael P. E.* 7/6/16  
 ALDO M. VIUCCI P.E. DATE

**OWNERS**  
 TERRY PERRY - CLARKVILLE, MD  
 24151 VENTURE BULWARK  
 CALABAS, CALIFORNIA 91302  
 (818) - 405-3677

**DEVELOPER**  
 BENNY HINES, LLC  
 8905 GUILFORD ROAD - SUITE 200  
 COLUMBIA, MARYLAND 21046  
 (703) - 894-0182



**AS-BUILT CERTIFICATION**  
 Note: There is no "AS-BUILT" information provided on this sheet.  
*Michael P. E.* 8/2/2016  
 DATE

**GRADING, EROSION AND SEDIMENT CONTROL NOTES AND DETAILS ENCLAVE AT RIVER HILL PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES: ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 80 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 24 OF 58 F-15-110

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET



REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT EASEMENTS	10/3/16
2	REVISE STORM DRAIN #12 & REVISE PIPE TYPE	10/20/17

Approved: Department Of Planning And Zoning  
*T. Munch* for KS 8/10/17  
 Chief, Division Of Land Development Date

Approved: Howard County Department Of Public Works  
 Chief, Development Engineering Division 8/1/17  
 Chief, Bureau Of Highways 7/27/17  
 Chief, Bureau Of Highways Date

**ENGINEER'S CERTIFICATE**  
 I Herby Certify That This Final Grading And Sediment Control Plan Has Been Prepared In Accordance With The Howard Soil Conservation District. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Deemed Necessary.  
*Alto Vitucci* 7/10/17  
 Signature Of Engineer Date

**DEVELOPER'S CERTIFICATE**  
 I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Deemed Necessary.  
*Phil Pflaster* 7/19/17  
 Signature Of Developer Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.  
*Phil Pflaster* 7/19/17  
 Signature Of Professional Engineer Date

**AS-BUILT CERTIFICATION**

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

*Alto Vitucci* 01/20/22  
 Signature Of Professional Engineer Date  
 ALDO MICHAEL VITUCCI #20748

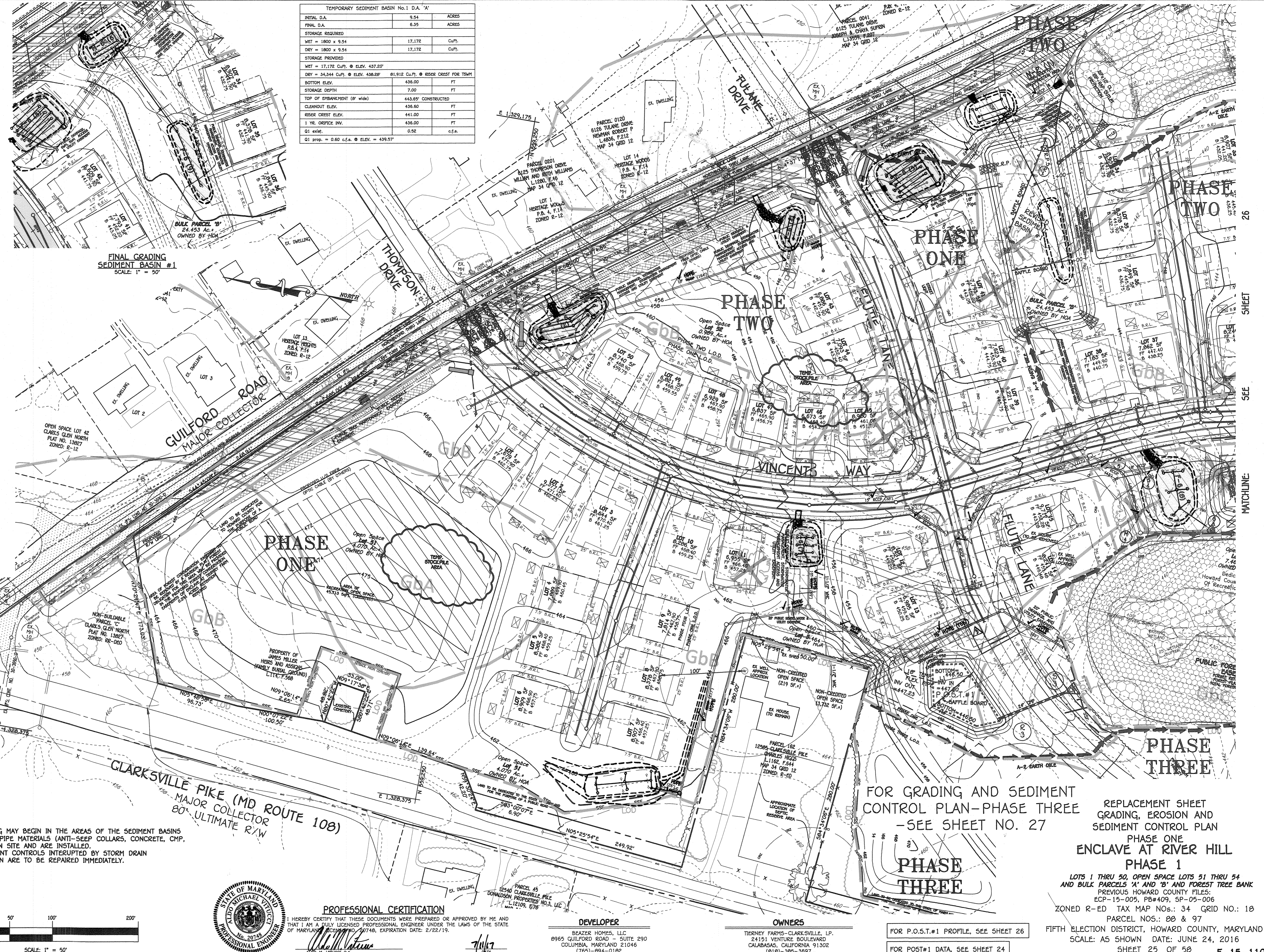
SYMBOL	DESCRIPTION
[Symbol]	EXISTING CONTOUR OF INTERNAL
[Symbol]	EXISTING CONTOUR OF EXTERNAL
[Symbol]	PROPOSED CONTOUR OF INTERNAL
[Symbol]	PROPOSED CONTOUR OF EXTERNAL
[Symbol]	SPOT ELEVATION
[Symbol]	PROPOSED SLOPE
[Symbol]	PROPOSED ROAD WIDTH
[Symbol]	PROPOSED ROAD WEARING SURFACE
[Symbol]	NON CREST OPEN SPACE
[Symbol]	15% SLOPE
[Symbol]	25% OR GREATER SLOPE
[Symbol]	1" SLOPE
[Symbol]	DECOMPOSE SOILS
[Symbol]	100 YD BUFFER
[Symbol]	STORM BUFFER
[Symbol]	EXCHANGE SPACE
[Symbol]	NON ROOFTOP DISCRESSION (R-2)
[Symbol]	DETAIL (R-2) TYPICAL
[Symbol]	BID RETENTION FACILITY (F-6) OR (F-8) AS NOTED
[Symbol]	SPRING TREE TO BE REMOVED
[Symbol]	PUBLIC WATER SEWER & UTILITY EASEMENT
[Symbol]	RECREATIONAL OPEN SPACE
[Symbol]	USE IN CONFORM WITH ZONING
[Symbol]	EXISTING ROAD (1.500', F.477)
[Symbol]	FOREST CONSERVATION EASEMENT
[Symbol]	FOREST CONSERVATION EASEMENT
[Symbol]	FOREST CONSERVATION EASEMENT PLANTING
[Symbol]	FOREST CONSERVATION EASEMENT PLANTING
[Symbol]	NON-RESTORATION AREA (R-1)
[Symbol]	STREET TREES
[Symbol]	ON-SITE STORAGE/LIMIT OF FOREST CONSERVATION EASEMENT

SYMBOL	DESCRIPTION
[Symbol]	SEDIMENT CONTROL LEGEND
[Symbol]	LIMIT OF DISTURBANCE
[Symbol]	PHASING DIVISION
[Symbol]	SUPER SILT FENCE
[Symbol]	SILT FENCE
[Symbol]	STABILIZED CONSTRUCTION ENTRANCE/MOUNTABLE BERM
[Symbol]	EARTH DIKE
[Symbol]	REMOVABLE PUMPING STATION
[Symbol]	FILTER BAG
[Symbol]	EROSION CONTROL MATTING

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 ELLENCOTT CITY, MARYLAND 21042  
 (410) 451 - 2995

SCALE: 1" = 50'

TEMPORARY SEDIMENT BASIN No. 1 D.A. 'A'		
INITIAL D.A.	9.54	ACRES
FINAL D.A.	6.35	ACRES
STORAGE REQUIRED		
WET = 1800 x 9.54	17,172	Cu.Ft.
DRY = 1800 x 9.54	17,172	Cu.Ft.
STORAGE PROVIDED		
WET = 17,172 Cu.Ft. @ ELEV. 437.20'		
DRY = 34,344 Cu.Ft. @ ELEV. 438.20' @ 1.912 Cu.Ft. @ RIDGE CREST FOR TSM		
BOTTOM ELEV.	436.00	FT
STORAGE DEPTH	7.00	FT
TOP OF EMBANKMENT (8' wide)	443.65'	CONSTRUCTED
CLEANOUT ELEV.	436.60	FT
RIDGE CREST ELEV.	441.00	FT
1 YR. ORIFICE INV.	436.00	FT
Q1 outlet	0.52	C.F.A.
Q1 prop. = 0.60 C.F.A. @ ELEV. = 439.57'		



**PROFESSIONAL CERTIFICATION**

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 2/22/19.

*Alto Vitucci* 7/10/17  
 Signature Of Professional Engineer Date

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765) 894-0182

**OWNERS**  
 TERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818) 385-3697

FOR P.O.S.#1 PROFILE, SEE SHEET 26  
 FOR P.O.S.#1 DATA, SEE SHEET 24

**REPLACEMENT SHEET GRADING, EROSION AND SEDIMENT CONTROL PLAN PHASE ONE ENCLAVE AT RIVER HILL PHASE 1**

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK PREVIOUS HOWARD COUNTY FILES: ECP-15-005, PB#409, SP-05-006 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18 PARCEL NOS.: 08 & 97 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JUNE 24, 2016 SHEET 25 OF 58 **F-15-110**

SHEET 25 OF 58 MATCHLINE: 55E

"AS-BUILT"



FOR GRADING AND SEDIMENT CONTROL PLAN-PHASE ONE  
-SEE SHEET NO. 25 & 26

**AS-BUILT CERTIFICATION**  
Note: There is no "AS-BUILT" information provided on this sheet.

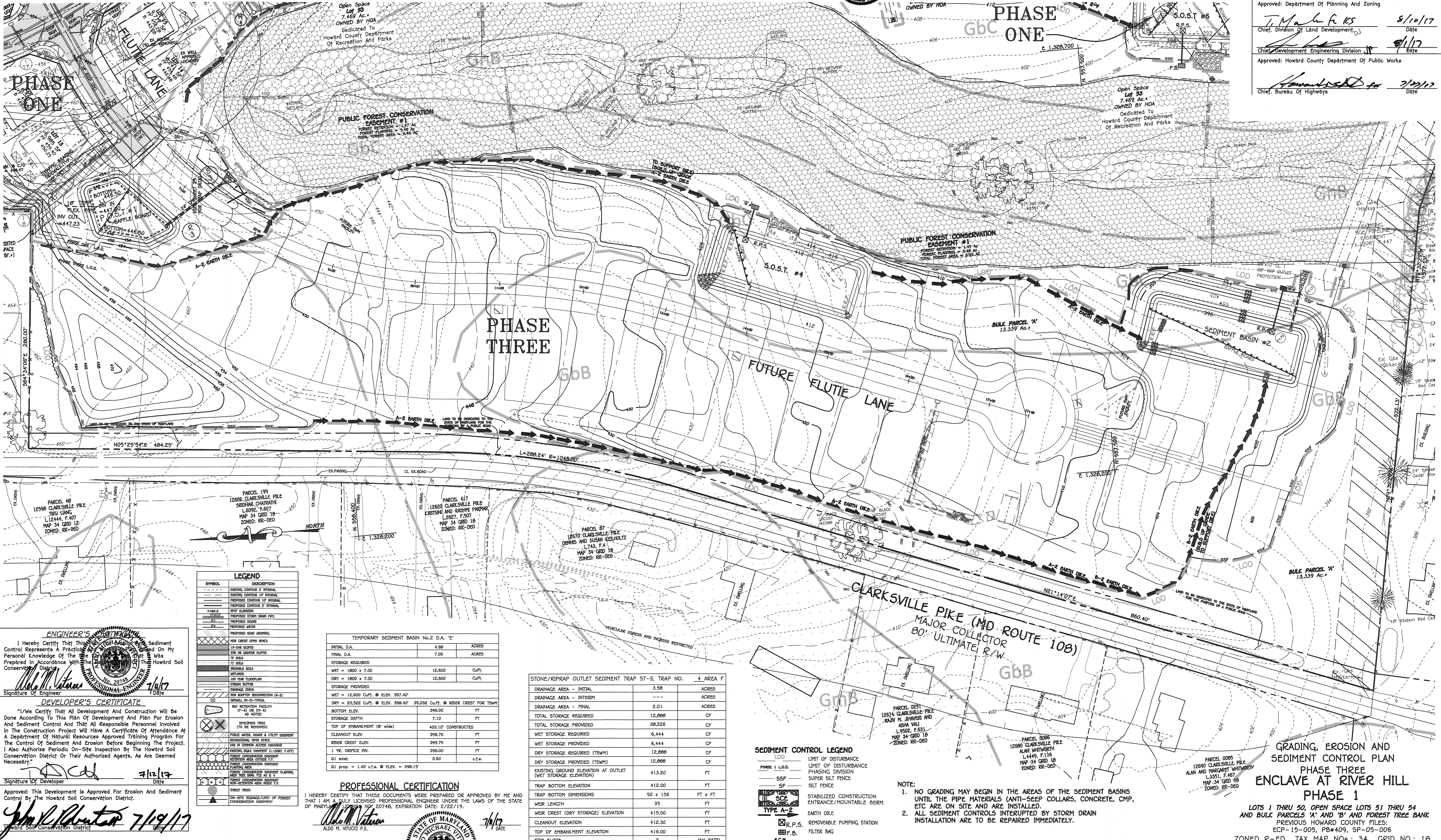


FOR GRADING AND SEDIMENT CONTROL PLAN-PHASE THREE-SEE SHEET NO. 28

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT EASEMENTS	10/3/16

Approved: Department Of Planning And Zoning  
 T. Mahoney 8/10/17  
 Chief, Division Of Land Development Date

Approved: Howard County Department Of Public Works  
 8/1/17  
 Chief, Bureau Of Highway Date



**ENGINEER'S CERTIFICATE**  
 I hereby certify that this plan for Grading and Sediment Control represents a practice performed by me or under my personal knowledge of the site conditions and that it was prepared in accordance with the standards of the Howard Soil Conservation District.  
 Signature of Engineer: *Michael A. Vucchi* 7/19/17  
 Date: 7/19/17

**DEVELOPER'S CERTIFICATE**  
 "I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."  
 Signature of Developer: *John R. Carter* 7/19/17  
 Date: 7/19/17

Approved: This Development is Approved For Erosion And Sediment Control by the Howard Soil Conservation District.

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 1' INTERVAL
---	EXISTING CONTOUR 5' INTERVAL
---	PROPOSED CONTOUR 1' INTERVAL
---	PROPOSED CONTOUR 5' INTERVAL
X MARK	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED SEWER
---	PROPOSED WATER
---	PROPOSED ROAD WIDENING
---	NEW GRASS OPEN SPACE
---	1/2" X 24" SLIPSTAKE
---	5% OR GREATER SLOPES
---	1% SLOPE
---	REDUNDANT SOILS
---	METALS
---	LOG TYPE FLOORPLAN
---	STREAM BUFFER
---	STORAGE DITCH
---	NO BOILER RECONSTRUCTION (R-3)
---	DEMURAL (R-3)-TYPICAL
---	NO RETENTION FACILITY (R-4) OR (R-14) AS NOTED
---	SPECIFIC TREE (R-4) OR (R-14)
---	PUBLIC WATER SOURCE & UTILITY EXPOSED
---	RECREATIONAL OPEN SPACE
---	USE IN COMMON ACCESS EASEMENT
---	1 YR. OBSERVE INV. (L-1000, F.A.T.)
---	FOREST CONSERVATION EASEMENT
---	FOREST CONSERVATION EASEMENT (SEE AREA SHEET P. 2)
---	FOREST CONSERVATION EASEMENT (SEE AREA SHEET P. 2)
---	FOREST CONSERVATION EASEMENT (SEE AREA SHEET P. 2)
---	STREET TREES
---	ON-SITE STORAGE/LIMIT OF FOREST CONSERVATION EASEMENT

TEMPORARY SEDIMENT BASIN No. 2, D.A. 'E'			
INITIAL D.A.	4.98	ACRES	
FINAL D.A.	7.00	ACRES	
STORAGE REQUIRED			
WET = 1800 x 7.00	12,600	Cu.Ft.	
DRY = 1800 x 7.00	12,600	Cu.Ft.	
STORAGE PROVIDED			
WET = 12,600 Cu.Ft. @ ELEV. 397.40'			
DRY = 23,522 Cu.Ft. @ ELEV. 398.40' @ RISER CREST FOR TSWH			
BOTTOM ELEV.	396.00	FT	
STORAGE DEPTH	7.10	FT	
TOP OF EMBANKMENT (P) WIDE	403.10'	CONSTRUCTED	
CLEANOUT ELEV.	396.70	FT	
RISER CREST ELEV.	399.75	FT	
1 YR. OBSERVE INV.	396.00	FT	
Q1 exist.	0.60	c.f.a.	
Q1 prop. = 1.40 c.f.a. @ ELEV. = 398.15'			

STONE/RIPPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 4	AREA	F
DRAINAGE AREA - INITIAL	3.98	ACRES
DRAINAGE AREA - INTERIM		ACRES
DRAINAGE AREA - FINAL	2.01	ACRES
TOTAL STORAGE REQUIRED	12,000	CF
TOTAL STORAGE PROVIDED	38,226	CF
WET STORAGE REQUIRED	6,444	CF
WET STORAGE PROVIDED	6,444	CF
DRY STORAGE REQUIRED (TSWH)	12,000	CF
DRY STORAGE PROVIDED (TSWH)	12,000	CF
EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION)	413.20	FT
TRAP BOTTOM ELEVATION	412.00	FT
TRAP BOTTOM DIMENSIONS	50 x 156	FT x FT
WEIR LENGTH	35	FT
WEIR CREST (DRY STORAGE) ELEVATION	415.00	FT
CLEANOUT ELEVATION	412.30	FT
TOP OF EMBANKMENT ELEVATION	416.00	FT
SIDE SLOPE	2	H:V RATIO
EMBANKMENT TOP WIDTH	4	FT
OUTLET PROTECTION - LENGTH	10	FT
OUTLET PROTECTION - DEPTH	19	IN

**SEDIMENT CONTROL LEGEND**

---	LIMIT OF DISTURBANCE
---	LIMIT OF DISTURBANCE
---	PHASING DIVISION
---	SUPER SILT FENCE
---	SILT FENCE
---	STABILIZED CONSTRUCTION ENTRANCE/MOUNTABLE BERM
---	EARTH DIKE
---	REMOVEABLE PUMPING STATION
---	FILTER BAG
---	EROSION CONTROL MATTING

**DEVELOPER**  
 SEAZER HOMES, LLC  
 8965 QUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (761)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 20748, EXPIRATION DATE: 12/31/19.  
 Signature: *Michael A. Vucchi* 7/19/17  
 Date: 7/19/17  
 ALDO M. VUCCI P.E.

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 451-1299

GRADING, EROSION AND SEDIMENT CONTROL PLAN  
 PHASE THREE ENCLAVE AT RIVER HILL  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 08 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 27 OF 58  
**F-15-110**

REPLACEMENT SHEET

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

**SEDIMENT CONTROL LEGEND**

	LIMIT OF DISTURBANCE
	PHASING DIVISION
	SUPER SILT FENCE
	SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE/MOUNTABLE BERM
	EARTH DIKE
	REMOVABLE PUMPING STATION
	FILTER BAG
	EROSION CONTROL MATTING

**NOTE:**  
 1. NO GRADING MAY BEGIN IN THE AREAS OF THE SEDIMENT BASINS UNTIL THE PIPE MATERIALS (ANTI-SLEEP COLLARS, CONCRETE, CMP, ETC ARE ON SITE AND ARE INSTALLED.  
 2. ALL SEDIMENT CONTROLS INTERRUPTED BY STORM DRAIN INSTALLATION ARE TO BE REPAIRED IMMEDIATELY.

FOR GRADING AND SEDIMENT CONTROL PLAN - PHASE ONE - SEE SHEET NO. 25

**STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 7 AREA A**

Drainage Area - Initial	4.24	ACRES
Drainage Area - Interim	---	ACRES
Drainage Area - Final	4.43	ACRES
Total Storage Required	15,948	CF
Total Storage Provided	32,224	CF
Wet Storage Required	7,974	CF
Wet Storage Provided	7,974	CF
Dry Storage Required (TSWM)	15,948	CF
Dry Storage Provided	15,948	CF
Existing Ground Elevation at Outlet (Wet Storage Elevation)	372.00	FT
Trap Bottom Elevation	370.00	FT
Trap Bottom Dimensions	60 x 110	FT x FT
Weir Length	30	FT
Weir Crest (Dry Storage) Elevation	374.75	FT
Cleanout Elevation	370.50	FT
Top of Embankment Elevation	376.00	FT
Side Slope	2	HV RATIO
Embankment Top Width	4	FT
Outlet Protection - Length	10	FT
Outlet Protection - Depth	19	IN

**STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 8 AREA C**

Drainage Area - Initial	1.02	ACRES
Drainage Area - Interim	---	ACRES
Drainage Area - Final	1.30	ACRES
Total Storage Required	4,680	CF
Total Storage Provided	8,306	CF
Wet Storage Required	2,340	CF
Wet Storage Provided	2,340	CF
Dry Storage Required (TSWM)	4,680	CF
Dry Storage Provided	4,680	CF
Existing Ground Elevation at Outlet (Wet Storage Elevation)	376.80	FT
Trap Bottom Elevation	375.80	FT
Trap Bottom Dimensions	28 x 56	FT x FT
Weir Length	5	FT
Weir Crest (Dry Storage) Elevation	377.95	FT
Cleanout Elevation	376.40	FT
Top of Embankment Elevation	379.80	FT
Side Slope	2	HV RATIO
Embankment Top Width	4	FT
Outlet Protection - Length	10	FT
Outlet Protection - Depth	19	IN

**STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 6 AREA I**

Drainage Area - Initial	3.43	ACRES
Drainage Area - Interim	---	ACRES
Drainage Area - Final	3.94	ACRES
Total Storage Required	14,184	CF
Total Storage Provided	32,224	CF
Wet Storage Required	7,092	CF
Wet Storage Provided	7,092	CF
Dry Storage Required (TSWM)	14,184	CF
Dry Storage Provided (TSWM)	14,184	CF
Existing Ground Elevation at Outlet (Wet Storage Elevation)	395.00	FT
Trap Bottom Elevation	393.00	FT
Trap Bottom Dimensions	60 x 110	FT x FT
Weir Length	16	FT
Weir Crest (Dry Storage) Elevation	397.75	FT
Cleanout Elevation	393.45	FT
Top of Embankment Elevation	399.00	FT
Side Slope	2	HV RATIO
Embankment Top Width	4	FT
Outlet Protection - Length	10	FT
Outlet Protection - Depth	19	IN

**STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 9 AREA H**

Drainage Area - Initial	3.25	ACRES
Drainage Area - Interim	---	ACRES
Drainage Area - Final	4.35	ACRES
Total Storage Required	15,989	CF
Total Storage Provided	20,544	CF
Wet Storage Required	7,948	CF
Wet Storage Provided	9,104	CF
Dry Storage Required (TSWM)	14,310	CF
Dry Storage Provided (TSWM)	14,310 @ 401.00	CF
Existing Ground Elevation at Outlet (Wet Storage Elevation)	400.00	FT
Trap Bottom Elevation	398.00	FT
Trap Bottom Dimensions	50 x 80	FT x FT
Weir Length	12	FT
Weir Crest (Dry Storage) Elevation	402.00	FT
Cleanout Elevation	398.80	FT
Top of Embankment Elevation	404.00	FT
Side Slope	2	HV RATIO
Embankment Top Width	6	FT
Outlet Protection - Length	10	FT
Outlet Protection - Depth	19	IN

**ENGINEER'S CERTIFICATE**  
 I Herby Certify That This Sediment Control Represents A Practical Plan Based On My Personal Knowledge of The Site and That It Was Prepared In Accordance With The Howard Soil Conservation District.  
 Signature of Engineer: *Aldo M. Vitucci* 7/16/17  
 Date: 7/16/17

**DEVELOPER'S CERTIFICATE**  
 I/We Certify That All Development and Construction Will Be Done According To This Plan of Development and Plan For Erosion and Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate of Attendance At A Department of Natural Resources Approved Training Program For The Control Of Sediment and Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Deemed Necessary.  
 Signature of Developer: *John K. Robertson* 7/19/17  
 Date: 7/19/17

Approved: This Development is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.  
 Signature of District Director: *John K. Robertson* 7/19/17  
 Date: 7/19/17

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SOURCE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE  
 ELLSWORTH CITY, MARYLAND 21042  
 (410) 461 - 2993



**PROFESSIONAL CERTIFICATION**  
 I HERBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20740, EXPIRATION DATE: 2/22/19.  
 Signature: *Aldo M. Vitucci*  
 Date: 7/16/17

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697

**LEGEND**

	EXISTING CONTOUR 10' INTERNAL
	PROPOSED CONTOUR 10' INTERNAL
	PROPOSED CONTOUR 2' VERTICAL
	PROPOSED STORM DRAIN PIPE
	PROPOSED STONE
	PROPOSED WEIR
	PROPOSED ROAD WIDENING
	NON-CREST OPEN SPACE
	15-DEG SLOPE
	5-DEG SLOPE
	10' SOIL
	12' SOIL
	WETLANDS
	100 YEAR FLOODPLAIN
	EROSION CONTROL
	DRAINAGE DITCH
	NON-BOOSTER SUBSTATION (N-S)
	800 RETENTION FACILITY (7'-6" OR 11'-6" AS NOTED)
	REMOVABLE TREE (TO BE REMOVED)
	PUBLIC WATER, SEWER & UTILITY EASEMENT
	RESTRICTIVE OPEN SPACE
	USE IN COMMON ACCESS EASEMENT
	FOREST CONSERVATION EASEMENT (F.C.E.)
	FOREST CONSERVATION EASEMENT (F.C.E.)
	FOREST CONSERVATION EASEMENT (F.C.E.)
	FOREST CONSERVATION EASEMENT (F.C.E.)
	ON-SITE SIGNAGE/LIMIT OF FOREST CONSERVATION EASEMENT

**REVISIONS**

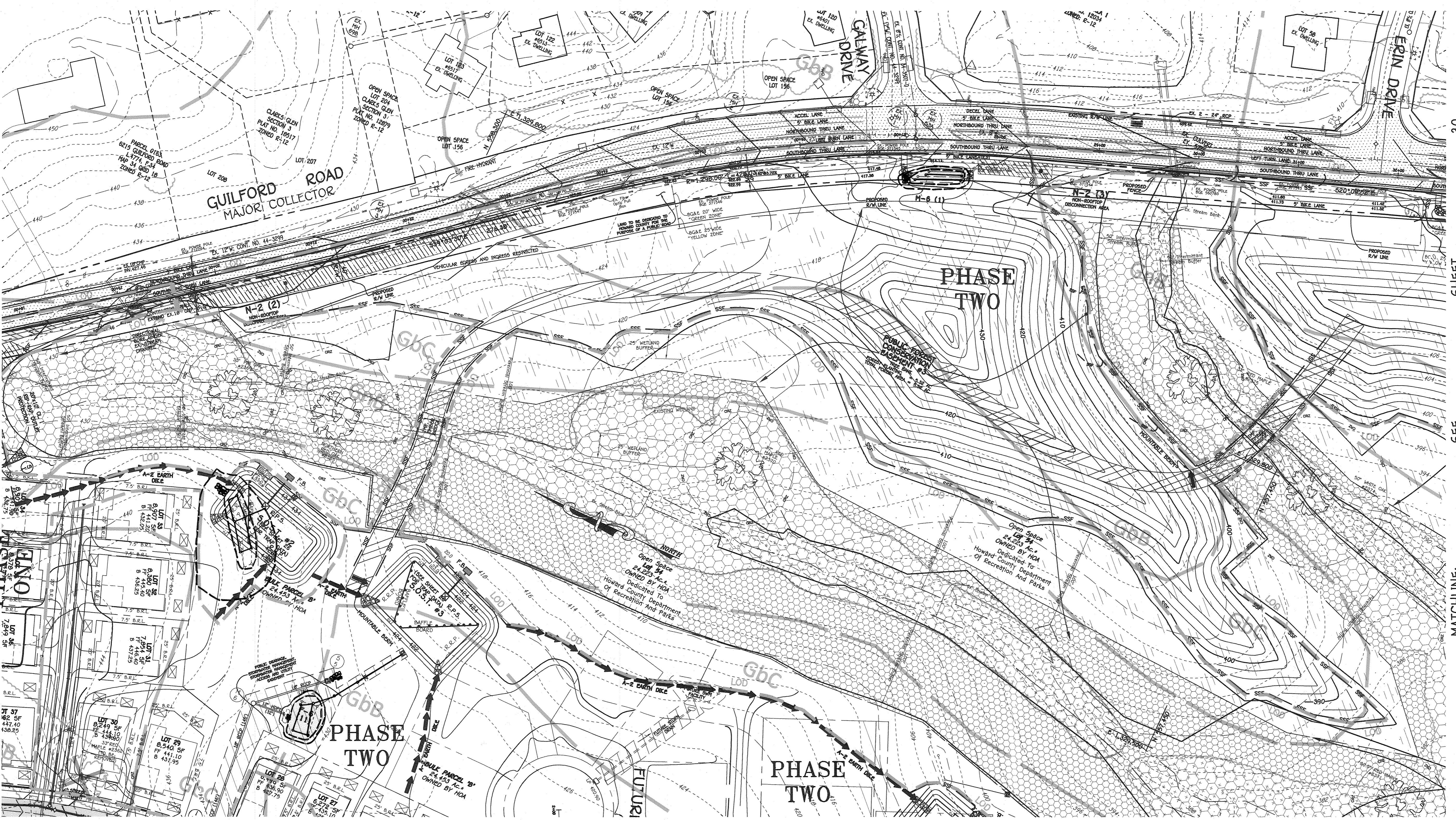
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT EASEMENTS, TEMPORARY ACCESS BRIDGES AND HAUL ROAD	10/3/18

Approved: Department of Planning and Zoning  
 T. M. ... 8/10/17  
 Chief, Division of Land Development  
 8/1/17  
 Chief, Development Engineering Division  
 Approved: Howard County Department of Public Works  
 Chief, Bureau of Highways 7/27/17

**GRADING, EROSION AND SEDIMENT CONTROL PLAN PHASE TWO & THREE ENCLAVE AT RIVER HILL PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK PREVIOUS HOWARD COUNTY FILES: ECP-15-005, PB#409, SP#005-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 08 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 28 OF 58 F-15-110

REPLACEMENT SHEET  
 THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

FOR GRADING AND SEDIMENT CONTROL PLAN  
- PHASE ONE - SEE SHEET NO. 25



- NOTE:
- NO GRADING MAY BEGIN IN THE AREAS OF THE SEDIMENT BASINS UNTIL THE PIPE MATERIALS (ANTI-SEEP COLLARS, CONCRETE, CMP, ETC ARE ON SITE AND ARE INSTALLED.
  - ALL SEDIMENT CONTROLS INTERRUPTED BY STORM DRAIN INSTALLATION ARE TO BE REPAIRED IMMEDIATELY.

FOR GRADING AND SEDIMENT CONTROL PLAN  
- PHASE TWO - SEE SHEET NO. 28

REVISIONS

NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT FACILITIES, TEMPORARY ACCESS BRIDGES AND PAUL ROAD, REMOVE THICKET SE	10/3/16

Approved: Department Of Planning And Zoning  
T. Mark... 8/10/17  
Chief, Division Of Land Development

Chief, Development Engineering Division 8/1/17  
Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways 7/27/17  
I hereby certify that this plan represents a...  
Signature Of Engineer

DEVELOPER'S CERTIFICATE  
I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary.  
Signature Of Developer  
Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District. 7/19/17

LEGEND

SYMBOL	DESCRIPTION
(dashed line)	EXISTING CONTOUR OF INTERVAL
(solid line)	EXISTING CONTOUR OF INTERVAL
(dotted line)	PROPOSED CONTOUR OF INTERVAL
(dashed line with dots)	PROPOSED CONTOUR OF INTERVAL
(number)	SPOT ELEVATION
(line with arrow)	PROPOSED STORM DRAIN PIPE
(line)	PROPOSED WATER
(line with arrow)	PROPOSED ROAD WIDENING
(hatched pattern)	NON CREDIT OPEN SPACE
(hatched pattern)	15-20% SLOPE
(hatched pattern)	20% OR GREATER SLOPE
(hatched pattern)	1" SOILS
(hatched pattern)	2" SOILS
(hatched pattern)	WETLANDS
(hatched pattern)	100 YEAR FLOODPLAIN
(hatched pattern)	EROSION BUFFER
(hatched pattern)	DRAINAGE DITCH
(hatched pattern)	NON ROOFTOP DISCONNECT (R-2)
(hatched pattern)	ROOFTOP 10-20-TON
(hatched pattern)	BIO RETENTION FACILITY (7'-6" IN DIA AS NOTED)
(hatched pattern)	SPECIEN TREE (TO BE REMOVED)
(hatched pattern)	PUBLIC WATER SEWER & UTILITY easement
(hatched pattern)	RECREATIONAL OPEN SPACE
(hatched pattern)	USE IN COMMON ACCESS easement
(hatched pattern)	EXISTING ROAD easement (L, 150R, T, 47T)
(hatched pattern)	FORCE CONCENTRATION easement
(hatched pattern)	SEPARATION AREA OUTSIDE P.P.
(hatched pattern)	FORCE CONCENTRATION easement
(hatched pattern)	PLANTING AREA
(hatched pattern)	FORCE CONCENTRATION easement PLANTING AREA TREE BANK FOR AS & A
(hatched pattern)	FORCE CONCENTRATION easement
(hatched pattern)	NON-RETENTION AREA INSIDE P.P.
(hatched pattern)	ON-SITE SEDIMENT/CONTROL OF FOREST CONSERVATION easement

SEDIMENT CONTROL LEGEND

(dashed line)	L.O.D. LIMIT OF DISTURBANCE
(dashed line)	L.O.D. LIMIT OF DISTURBANCE
(dashed line)	PHASING DIVISION
(dashed line)	SSF SUPER SILT FENCE
(dashed line)	SF SILT FENCE
(hatched pattern)	STABILIZED CONSTRUCTION ENTRANCE/MOUNTABLE BERM
(hatched pattern)	TYPE A-2 EARTH DIKE
(hatched pattern)	REMOVEABLE PUMPING STATION
(hatched pattern)	FILTER BAG
(hatched pattern)	EROSION CONTROL MATTING

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
2200 NATIONAL SQUARE, OFFICE PARK - 10273 BALTIMORE NATIONAL PLACE  
GILBERT CITY, MARYLAND 21042  
(410) 461-2895

PROFESSIONAL CERTIFICATION  
HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE #20740, EXPIRATION DATE: 2/22/19.

DEVELOPER  
BEAZER HOMES, LLC  
8965 GUILFORD ROAD - SUITE 290  
COLUMBIA, MARYLAND 21046  
(781)-894-0182

OWNERS  
TIERNEY FARMS-CLARKSVILLE, LP  
24151 VENTURE BOULEVARD  
CALABASAS, CALIFORNIA 91302  
(818)-385-3697

AS-BUILT CERTIFICATION  
I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

ALDO MICHAEL VITUCCI #20748  
7/16/17

REPLACEMENT SHEET  
GRADING, EROSION AND  
SEDIMENT CONTROL PLAN  
STOCK PILE AREA ONE  
ENCLAVE AT RIVER HILL  
PHASE 1  
LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
PREVIOUS HOWARD COUNTY FILES:  
ECP-15-005, PB#409, SP-05-006  
ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
PARCEL NOS.: 88 & 97  
FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: JUNE 24, 2016  
SHEET 29 OF 58 F-15-110

"AS-BUILT"



### DETAIL G-2-1 TYPICAL ANTI-SEEP COLLARS

**STANDARD SYMBOL**  
PSSMC - \* lb/ft<sup>2</sup> (INCLUDE SHEAR STRESS)

**CONSTRUCTION SPECIFICATIONS:**

- INSTALL COLLAR WITH CORRUGATIONS VERTICAL. P=2.80 FT MIN. (BASIN #2) U=2.25 FT MIN. (BASIN #1)
- 2 FT MIN. TO JOINT
- THE LAST TWO CORRUGATIONS, MINIMUM ON EACH END MUST BE ANNULAR OR FLANGE
- CORRUGATED COLLAR WELDED IN PLACE ON BARREL SECTION
- CONTINUOUS WELD OF COLLAR TO BARREL THE FULL CIRCUMFERENCE OF THE COLLAR ON BOTH SIDES
- PLATES TO BE PRECUT, CLAMPED TOGETHER, PRE-DRILLED, AND LABELED TO FACILITATE WATERPROOF FIELD ASSEMBLY
- WELDED FRAME
- STAINLESS STEEL NUT AND BOLT CONNECTION WITH BUTYL SEALANT BETWEEN PLATES
- FABRICATED STEEL PLATE
- USE BUTYL SEALANT BETWEEN PLATE AND FLANGE
- COLLAR FOR FLANGE JOINT PIPE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

**STANDARD SYMBOL**  
PSSMC - \* lb/ft<sup>2</sup> (INCLUDE SHEAR STRESS)

**CONSTRUCTION SPECIFICATIONS:**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-HARMFUL TO THE SOIL. IF PRESENT, NETTING MUST BE EXTENDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2/32 INCHES AND SUFFICIENTLY BONDED OR SEWN TO 2 INCH CENTERS ALONG LONGITUDINAL AXES OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES OR WOOD STAPLES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST BE 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAPLES MUST BE ROUGH-SAWN HARDWOOD 12 TO 24 INCHES IN LENGTH, 1 1/2 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDING PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS. UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW. CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDING SURFACE AND STRENGTHEN THE MATTING.
- OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
- KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL G-2-7 SEDIMENT BASIN SCHEMATIC VERTICAL DRAW-DOWN DEVICE

**STANDARD SYMBOL**  
V000

**CONSTRUCTION SPECIFICATIONS:**

- PERFORATE PIPE WITH 1 INCH DIAMETER PERFORATIONS SPACED 6 INCHES APART LONGITUDINALLY AND RADIALLY OR IN ACCORDANCE WITH APPROVED PLAN.
- DO NOT EXTEND PERFORATIONS IN THE DRAW-DOWN DEVICE INTO MET STORAGE.
- WRAP THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE FIRST WITH 1/4 INCH GALVANIZED HARDWARE CLOTH, THEN WITH NONWOVEN GEOTEXTILE. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1. MATERIALS DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE.
- AS AN ALTERNATE TO STONE ANCHORING, SECURE DRAW-DOWN DEVICE WITH TWO 1 INCH STEEL ANGLES SET 3 FEET MINIMUM INTO THE GROUND ATTACHED TO DRAW-DOWN DEVICE BY A 1 INCH WIDE GALVANIZED STEEL STRAP OR 12 GAUGE OR HEAVIER WIRE.
- REMOVE SEDIMENT WHEN IT ACCUMULATES TO CLEANOUT ELEVATION (50% OF THE NET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA IN A SUCH MANNER THAT IT WILL NOT EXPOSE MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL G-2-2 CORRUGATED RISER BASE

**STANDARD SYMBOL**  
V000

**CONSTRUCTION SPECIFICATIONS:**

- BOTTOM OF CONCRETE BASE TO BE PLACED ON UNDISTURBED, NATURAL GROUND.
- NO STONE IS ALLOWED UNDER BASE. IF NECESSARY, TO ACHIEVE STABILITY INCREASE DEPTH OF CONCRETE BASE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL F-4 FILTER BAG

**STANDARD SYMBOL**  
FB

**CONSTRUCTION SPECIFICATIONS:**

- TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
- PLACE FILTER BAG ON SUITABLE BASE (E.G. MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
- CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
- REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEPOSITED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
- USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4633
FLOW RATE	70 GAL/MIN/FT <sup>2</sup>	ASTM D-4491
PERMITTIVITY (SEC <sup>2</sup> )	1.2 SEC	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4395
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL H-4-1 TEMPORARY ACCESS BRIDGE

**STANDARD SYMBOL**  
TB

**CONSTRUCTION SPECIFICATIONS:**

- CONSTRUCT TEMPORARY BRIDGE STRUCTURE AT OR ABOVE THE BANK ELEVATION TO PREVENT IMPACTS FROM FLOATING MATERIALS AND DEBRIS.
- PLACE ABUTMENTS PARALLEL TO, AND ON, STABLE BANKS.
- CONSTRUCT BRIDGE TO SPAN ENTIRE CHANNEL UNLESS OTHERWISE INDICATED ON APPROVED PLAN.
- USE STRINGERS CONSISTING OF LOGS, SAWN TIMBER, PRESTRESSED CONCRETE BEAMS, METAL BEAMS, OR OTHER APPROVED MATERIALS.
- SELECT DECKING MATERIALS TO PROVIDE SUFFICIENT STRENGTH TO SUPPORT THE ANTICIPATED LOAD. PLACE ALL DECKING MEMBERS PERPENDICULAR TO THE STRINGERS, BUTT TIGHTLY, AND SECURELY FASTEN. DECKING MATERIALS MUST BE BUTTED TIGHTLY TO PREVENT ANY SOIL MATERIAL TRACKED ONTO THE BRIDGE, FROM FALLING INTO THE WATERWAY BELOW.
- SECURELY FASTEN OPTIONAL RUN PLANKING FOR THE LENGTH OF THE SPAN. PROVIDE A RUN PLANK FOR EACH TRACK OF THE EQUIPMENT WHEELS, ALTHOUGH RUN PLANKS ARE OPTIONAL, THEY MAY BE NECESSARY TO PROPERLY DISTRIBUTE LOADS.
- INSTALL CURBS THE ENTIRE LENGTH OF THE OUTER SIDES OF THE DECK TO PREVENT SEDIMENT FROM ENTERING THE STREAM CHANNEL.
- ANCHOR BRIDGE SECURELY AT ONLY ONE END USING STEEL CABLE OR CHAIN ANCHORING AT ONLY ONE END WILL PREVENT CHANNEL OBSTRUCTION IN THE EVENT THAT FLOODWATERS FLOOD THE BRIDGE. ACCEPTABLE ANCHORS ARE LARGE TREES, LARGE BouldERS, OR DRIVEN STEEL POSTS. ANCHOR MUST BE SUFFICIENT TO PREVENT THE BRIDGE FROM FLOATING DOWNSTREAM.
- AREAS DISTURBED DURING BRIDGE INSTALLATION AND/OR REMOVAL MUST NOT BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE.
- STABILIZE APPROACH TO BRIDGE AND KEEP FREE OF EROSION. CLEAN SEDIMENT FROM DECKING AND CURBS DAILY BY SCRAPPING, SWEEPING, AND/OR VACUUMING. ENSURE THAT DECKING AND CURBS REMAIN TIGHTLY BUTTED WITHOUT GAPS. REMOVE DEBRIS TRAPPED BY BRIDGE. MAINTAIN AREAS ADJACENT TO CROSSING TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
- AFTER THE TEMPORARY CROSSING IS NO LONGER NEEDED, REMOVE IT WITHIN 14 CALENDAR DAYS. IF SUBJECT TO THE USE DESIGNATION CLOSURE, REMOVE AT THE END OF CLOSURE PERIOD. PROTECT STREAM BANKS DURING BRIDGE REMOVAL AND STABILIZE ALL DISTURBED AREAS WITH EROSION CONTROL MATTING. ACCOMPLISH REMOVAL OF THE BRIDGE AND CLEAN UP OF THE AREA WITHOUT CONSTRUCTION EQUIPMENT WORKING IN THE WATERWAY CHANNEL. STORE ALL REMOVED MATERIALS IN AN APPROVED STAGING AREA.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL H-4-1 TEMPORARY ACCESS BRIDGE

**STANDARD SYMBOL**  
TB

**CONSTRUCTION SPECIFICATIONS:**

- CONSTRUCT TEMPORARY BRIDGE STRUCTURE AT OR ABOVE THE BANK ELEVATION TO PREVENT IMPACTS FROM FLOATING MATERIALS AND DEBRIS.
- PLACE ABUTMENTS PARALLEL TO, AND ON, STABLE BANKS.
- CONSTRUCT BRIDGE TO SPAN ENTIRE CHANNEL UNLESS OTHERWISE INDICATED ON APPROVED PLAN.
- USE STRINGERS CONSISTING OF LOGS, SAWN TIMBER, PRESTRESSED CONCRETE BEAMS, METAL BEAMS, OR OTHER APPROVED MATERIALS.
- SELECT DECKING MATERIALS TO PROVIDE SUFFICIENT STRENGTH TO SUPPORT THE ANTICIPATED LOAD. PLACE ALL DECKING MEMBERS PERPENDICULAR TO THE STRINGERS, BUTT TIGHTLY, AND SECURELY FASTEN. DECKING MATERIALS MUST BE BUTTED TIGHTLY TO PREVENT ANY SOIL MATERIAL TRACKED ONTO THE BRIDGE, FROM FALLING INTO THE WATERWAY BELOW.
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- AREAS DISTURBED DURING BRIDGE INSTALLATION AND/OR REMOVAL MUST NOT BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE.
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- AFTER THE TEMPORARY CROSSING IS NO LONGER NEEDED, REMOVE IT WITHIN 14 CALENDAR DAYS. IF SUBJECT TO THE USE DESIGNATION CLOSURE, REMOVE AT THE END OF CLOSURE PERIOD. PROTECT STREAM BANKS DURING BRIDGE REMOVAL AND STABILIZE ALL DISTURBED AREAS WITH EROSION CONTROL MATTING. ACCOMPLISH REMOVAL OF THE BRIDGE AND CLEAN UP OF THE AREA WITHOUT CONSTRUCTION EQUIPMENT WORKING IN THE WATERWAY CHANNEL. STORE ALL REMOVED MATERIALS IN AN APPROVED STAGING AREA.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### REVISIONS

NO.	DESCRIPTION	DATE
1	ADD TEMPORARY ACCESS BRIDGE DETAILS	10/9/16
2	REVISED OWNER AND DEVELOPER	7/19/17

Approved: Department Of Planning And Zoning  
Chief, Division Of Land Development *[Signature]* 8/2/16 Date

Approved: Howard County Department Of Public Works  
Chief, Development Engineering Division *[Signature]* 8/1/16 Date

Approved: Chief, Bureau Of Highways *[Signature]* 7/27/2016 Date

**ENGINEER'S CERTIFICATE**  
I Herby Certify That This Plan of Development And Sediment Control Represents A Practical And Feasible Plan Based On My Personal Knowledge Of The Site Conditions That Was Prepared In Accordance With The Standards And Specifications Of The Howard Soil Conservation District.

*[Signature]* 7/19/16 Date  
Signature Of Engineer

**DEVELOPER'S CERTIFICATE**  
"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

*[Signature]* 6/29/16 Date  
Signature Of Developer

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.  
*[Signature]* 7/19/16 Date  
Howard Soil Conservation District

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461-2299

**PROFESSIONAL CERTIFICATION**  
HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 20748, EXPIRATION DATE: 2/22/17.

*[Signature]* 7/16/16 Date  
ALDO M. VITUCI P.E.

**OWNER**  
TIBBETTS FARMS - CHARLEVILLE LP  
1451 VENTURE BOULEVARD  
CALABASAS, CALIFORNIA 91302  
(818) - 389-9677

**DEVELOPER**  
BEARD HOMES, LLC  
8908 GUILFORD ROAD - SUITE 290  
COLUMBIA, MARYLAND 21046  
(703) - 894-0182

**AS-BUILT CERTIFICATION**  
Note: There is no "AS-BUILT" information provided on this sheet.

*[Signature]* 8/20/16 Date  
Professional Engineer

**GRADING, EROSION AND SEDIMENT CONTROL NOTES AND DETAILS**  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
PREVIOUS HOWARD COUNTY FILES:  
ECP-15-005, PB#409, SP-05-006  
ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
PARCEL NOS.: 88 & 97  
FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: JUNE 24, 2016  
SHEET 31 OF 58 F-15-110

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED OWNER AND DEVELOPER	7/9/17

Approved: Department Of Planning And Zoning

*[Signature]* 8/3/16  
Chief, Division Of Land Development Date

*[Signature]* 1/1/16  
Chief, Development Engineering Division Date

Approved: Howard County Department Of Public Works

*[Signature]* 7/27/2016  
Chief, Bureau Of Highways Date

*[Signature]* 7/9/16  
Signature Of Engineer Date

**DEVELOPER'S CERTIFICATE**

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

*[Signature]* 6/29/16  
Signature Of Developer Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

*[Signature]* 8/2/16  
Howard Soil Conservation District Date

### B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

**Definition**  
Establishment of vegetative cover on cut and fill slopes.

**Purpose**  
To provide timely vegetative cover on cut and fill slopes as work progresses.

**Conditions Where Practice Applies**  
Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

**Criteria**

A. Incremental Stabilization - Cut Slopes

- Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
- Construction sequence example (Refer to Figure B.1):
  - Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
  - Perform Phase 1 excavation, prepare seedbed, and stabilize.
  - Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
  - Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

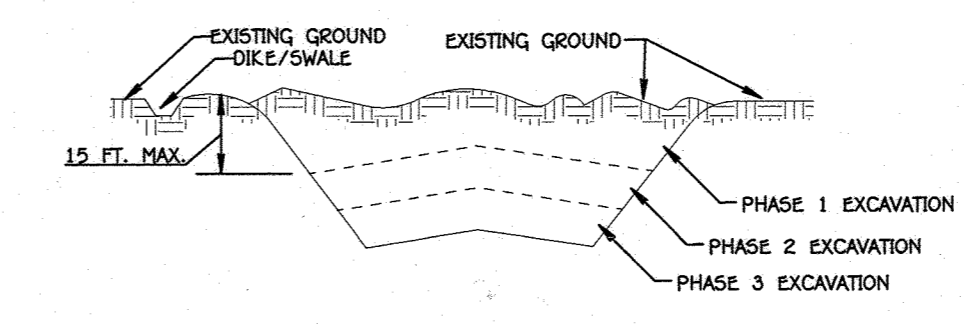


Figure B.1: Incremental Stabilization - Cut

B. Incremental Stabilization - Fill Slopes

- Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
- Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
- At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
- Construction sequence example (Refer to Figure B.2):
  - Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
  - At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
  - Place Phase 1 fill, prepare seedbed, and stabilize.
  - Place Phase 2 fill, prepare seedbed, and stabilize.
  - Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

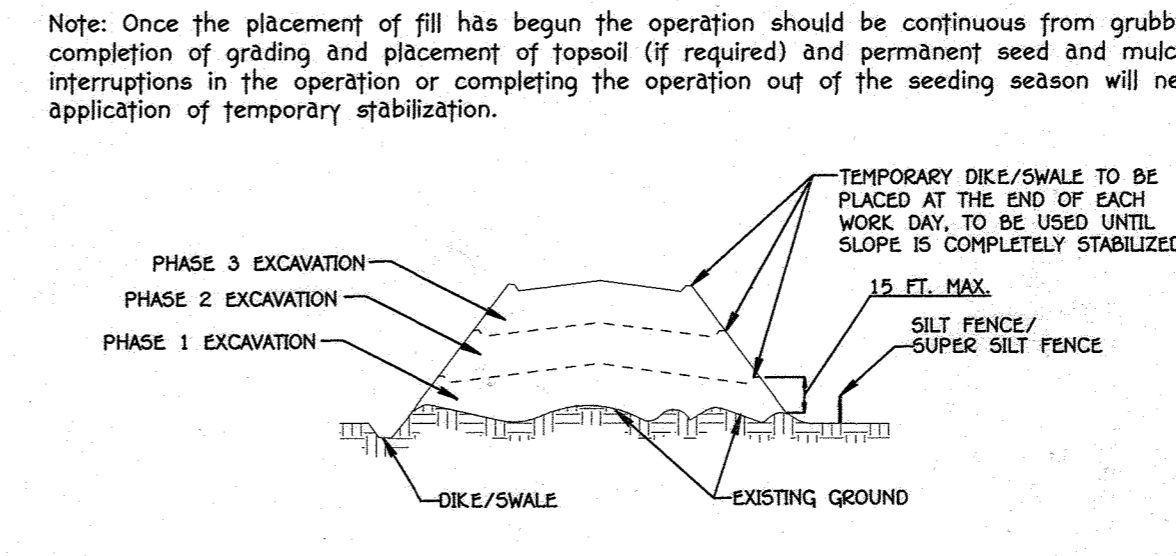
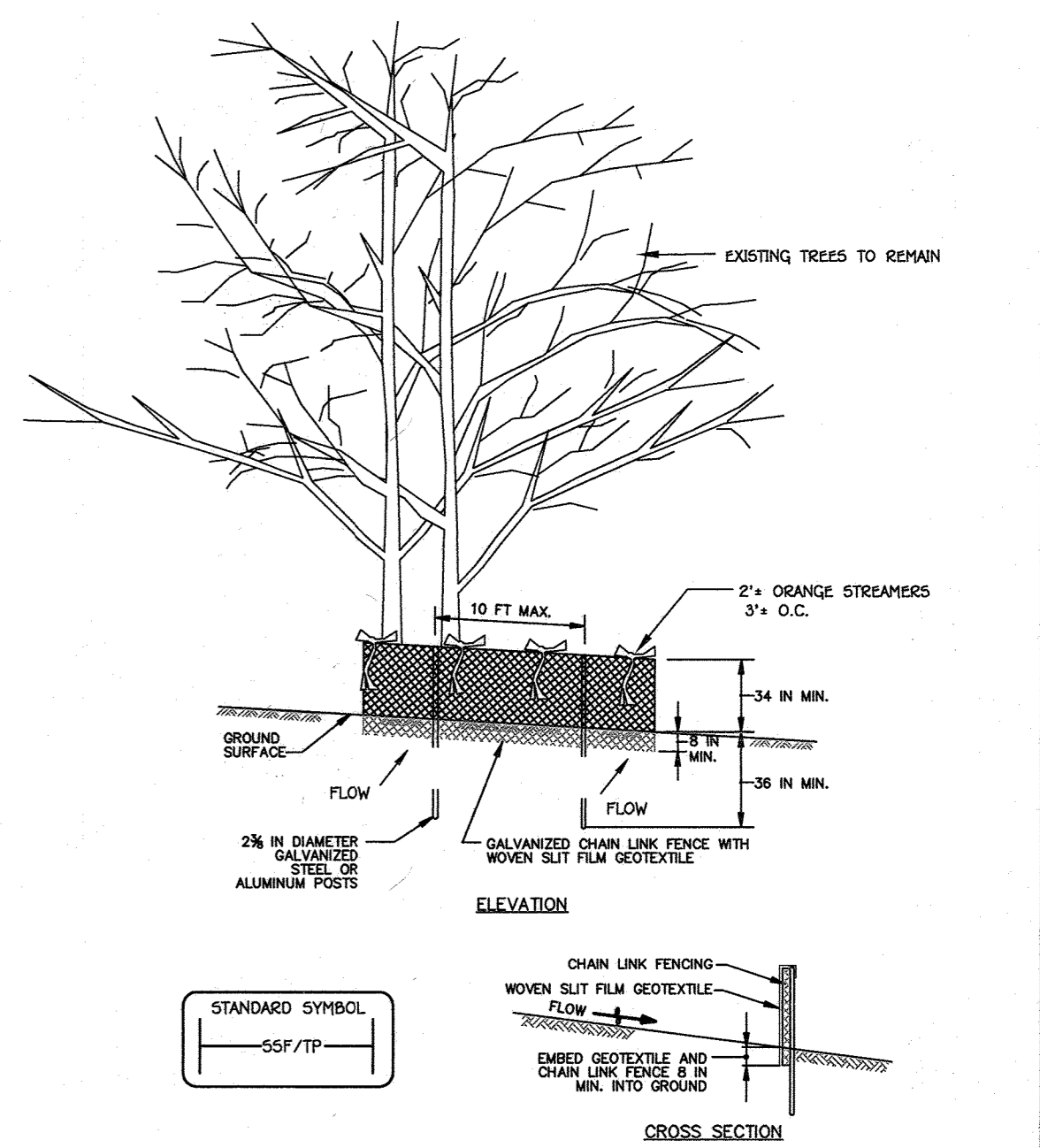


Figure B.2: Incremental Stabilization - Fill



- CONSTRUCTION SPECIFICATIONS**
- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.063 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
  - FASTEN A GAUGE OR HEAVY GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR RIVETS.
  - FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPPER SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
  - WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEEDING BY PACE.
  - EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
  - PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
  - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

**SUPER SILT FENCE, TREE PROTECTION FENCE**  
NOT TO SCALE

**GRADING, EROSION AND SEDIMENT CONTROL NOTES AND DETAILS**

**ENCLAVE AT RIVER HILL**

**PHASE 1**

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK

PREVIOUS HOWARD COUNTY FILES:  
ECP-15-005, PB#409, SP-05-006

ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18

PARCEL NOS.: 88 & 97

FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: JUNE 24, 2016

SHEET 32 OF 58 F-15-110

**AS-BUILT CERTIFICATION**

Note: There is no "AS-BUILT" information provided on this sheet.



*[Signature]*  
Date



**PROFESSIONAL CERTIFICATION**

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 2/22/17.

*[Signature]*  
ALDO M. VITUCCI P.E.

*[Signature]* 7/6/16  
DATE

**OWNERS**

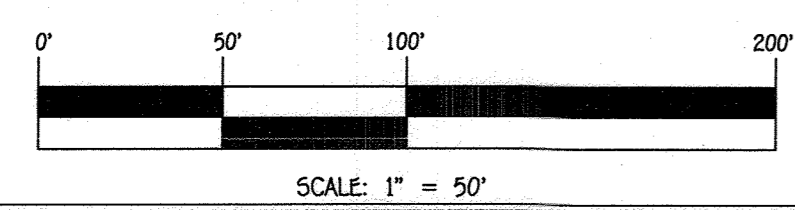
THEBNEY FARM - CLARKSVILLE, LP  
24151 VENTURE BOULEVARD  
CALABASAS, CALIFORNIA 91302  
(818)-385-3097

**DEVELOPER**

BEADER HOMES, LLC  
8905 CULFORD ROAD - SUITE 250  
COLUMBIA, MARYLAND 21046  
(703)-894-0102

**FISHER, COLLINS & CARTEE, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21042  
(410) 461-0895



THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET



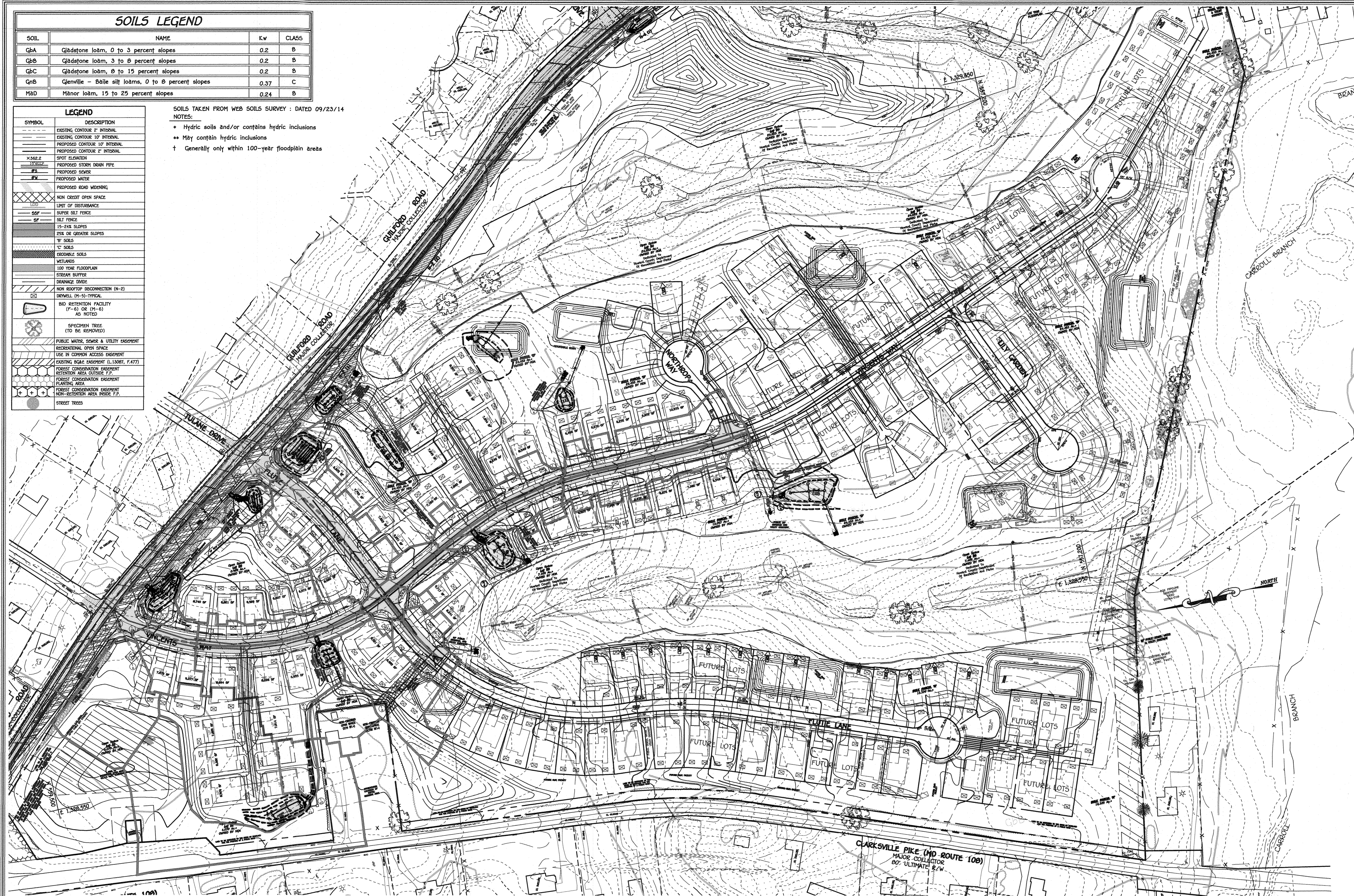
**SOILS LEGEND**

SOIL	NAME	Kw	CLASS
GbA	Gladstone loam, 0 to 3 percent slopes	0.2	B
GbB	Gladstone loam, 3 to 8 percent slopes	0.2	B
GbC	Gladstone loam, 8 to 15 percent slopes	0.2	B
GnB	Glennville - Baile silt loams, 0 to 8 percent slopes	0.37	C
M4D	Manor loam, 15 to 25 percent slopes	0.24	B

**LEGEND**

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
X 362.2	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED SEWER
---	PROPOSED WATER
---	PROPOSED ROAD WIDENING
---	NON CREDIT OPEN SPACE
---	LIMIT OF DISTURBANCE
---	SUPER SILT FENCE
---	SILT FENCE
---	15-25% SLOPES
---	25% OR GREATER SLOPES
---	10' SOILS
---	15' SOILS
---	PROBABLE SOILS
---	MIDLANDS
---	100 YEAR FLOODPLAIN
---	STREAM BUFFER
---	DRAINAGE DIVIDE
---	NON ROOFTOP DISCONNECTION (N-2)
---	DETENTION (M-3) TYPICAL
---	BOD RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	SPECIMEN TREE (TO BE REMOVED)
---	PUBLIC WATER, SEWER & UTILITY EASEMENT
---	RECREATIONAL OPEN SPACE
---	EASE IN COMMON ACCESS EASEMENT
---	EXISTING EASE EASEMENT (L13087, F477)
---	FOREST CONSERVATION EASEMENT
---	RETENTION AREA OUTSIDE F.P.
---	FOREST CONSERVATION EASEMENT
---	PLANTING AREA
---	FOREST CONSERVATION EASEMENT
---	NON-RETENTION AREA INSIDE F.P.
---	STREET TREES

SOILS TAKEN FROM WEB SOILS SURVEY : DATED 09/23/14  
 NOTES:  
 • Hydric soils and/or contains hydric inclusions  
 \*\* May contain hydric inclusions  
 † Generally only within 100-year floodplain areas



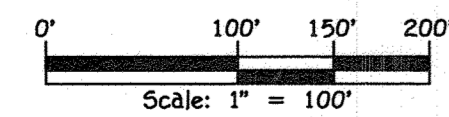
**REVISIONS**

NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT FACILITIES	10/3/16
2	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17
3	REMOVE STORM DRAIN M-2	10/20/21

Approved: Department of Planning and Zoning  
 T. Mark Fu KS 8/10/17  
 Chief, Division Of Land Development Date  
 Chief, Development Engineering Division 8/1/17  
 Approved: Howard County Department Of Public Works  
 Chief, Bureau Of Highways 7/27/17  
 Date

**DRAINAGE AREA DATA**

STRUCTURE NO.	AREA	'C'	ZONED	% IMP.
I-1	0.42 AC.	.61	R-ED	56%
I-2	1.19 AC.	.65	R-ED	62%
I-3	0.53 AC.	.44	R-ED	36%
I-4	0.85 AC.	.57	R-ED	52%
I-5	0.06 AC.	.73	R-ED	72%
I-6	0.87 AC.	.15	R-ED	0%
I-7	1.25 AC.	.15	R-ED	0%
I-8	0.78 AC.	.31	R-ED	20%
I-9	0.36 AC.	.28	R-ED	16%
I-10	0.22 AC.	.39	R-ED	30%
I-11	1.45 AC.	.41	R-ED	33%
I-12	1.01 AC.	.47	R-ED	40%
I-13	0.14 AC.	.43	R-ED	35%
I-14	0.09 AC.	.62	R-ED	59%
I-15	0.17 AC.	.59	R-ED	55%
I-16	0.19 AC.	.56	R-ED	51%
I-17	0.07 AC.	.75	R-ED	75%
I-18	0.53 AC.	.67	R-ED	64%
I-19	0.40 AC.	.64	R-ED	61%
I-20	0.29 AC.	.63	R-ED	60%
I-21	0.54 AC.	.62	R-ED	58%
I-22	0.89 AC.	.62	R-ED	58%
I-23	0.46 AC.	.66	R-ED	63%
I-24	0.55 AC.	.47	R-ED	39%
I-25	0.36 AC.	.56	R-ED	51%
I-26	0.20 AC.	.75	R-ED	75%
I-27	0.08 AC.	.61	R-ED	57%
I-28	0.23 AC.	.53	R-ED	48%
I-29	0.31 AC.	.53	R-ED	48%
I-30	0.13 AC.	.77	R-ED	78%
I-31	0.12 AC.	.62	R-ED	58%
I-32	0.18 AC.	.77	R-ED	77%



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SOURCE OFFICE PARK - 12272 BALTIMORE NATIONAL PIKE  
 ELLESCOTT CITY, MARYLAND 21042  
 (410) 461 - 2895



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.  
 Frank Manalisan II 7/27/17  
 Date

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNEY FARMS - CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697

**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



ALDO MICHAEL VITUCCI #20748  
 Date 01/26/22

**REPLACEMENT SHEET**  
**STORM DRAIN DRAINAGE AREA MAP**  
**AND SOILS MAP**  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 33 OF 58 F-15-110

"AS-BUILT"

I:\2013\13038\dwg\F Plan\Plan Set\13038 Stormdrain DAM.dwg, Sheet 33, 7/12/2017 1:37:25 PM, 1:1

STRUCTURE SCHEDULE							
STRUCTURE NO.	OWNERSHIP AND MAINTENANCE	TOP ELEVATION	INV IN	INV OUT	LOCATION	TYPE	REMARKS
I-1	PUBLIC	435.50	431.15 (I-2) 18"	436.65 24"	N 558709.57 E 1329275.25	'D' INLET	D-4.10
I-2	PUBLIC	442.00	436.45 (M-9) 18"	436.55 18"	N 558773.69 E 1329185.26	'D' INLET	D-4.10
I-3	PUBLIC	447.00	443.75 (I-7) 15"	442.01 18"	N 558928.09 E 1329082.68	'D' INLET	D-4.10
I-4	PUBLIC	459.50	455.50 (M-10) 18"	455.40 18"	N 559142.27 E 1328963.72	'D' INLET	D-4.10
I-5	PUBLIC	465.00	459.60 (I-29) 18"	459.50 15"	VINCENTS WAY 1+03.33 14' L	A-5 INLET	D-4.01
I-6	PUBLIC	464.50		458.45 15"	N 559268.16 E 1328834.61	'D' INLET	D-4.10
I-7	PUBLIC	447.50		444.00 15"	N 558928.60 E 1329047.53	'D' INLET	D-4.10
I-8	PUBLIC	453.00	449.40 (I-9) 18"	449.25 18"	N 558730.81 E 1328632.07	'D' INLET	D-4.10
I-9	PUBLIC	458.00	452.25 (M-3) 18"	451.95 18"	N 558837.76 E 1328674.37	'D' INLET	D-4.10
I-10	PUBLIC	460.00	455.75 (I-11) 15"	455.50 18"	N 558947.99 E 1328432.15	'D' INLET	D-4.10
I-11	PUBLIC	460.00		456.14 15"	N 558973.90 E 1328434.61	'D' INLET	D-4.10
I-12	PUBLIC	458.00		454.00 15"	N 558845.52 E 1328722.85	'D' INLET	D-4.10
I-13	PUBLIC	447.50	443.95 (I-14) 18"	443.60 18"	VINCENTS WAY 8+19.37 12' R	A-5 INLET	D-4.01
I-14	PUBLIC	451.74	446.10 (I-15) 18"	447.44 18"	VINCENTS WAY 7+02.55 12' R	A-5 INLET	D-4.01
I-15	PUBLIC	454.18	449.05 (I-16) 18"	449.60 18"	FLUTIE LANE 5+00.31 12' L	A-5 INLET	D-4.01
I-16	PUBLIC	454.18	450.30 (I-17) 18"	450.74 18"	FLUTIE LANE 5+00.31 12' R	A-5 INLET	D-4.01
I-17	PUBLIC	452.75	451.74 (I-18) 15"	451.24 18"	VINCENTS WAY 5+99.35 14' R	A-5 INLET	D-4.01
I-18	PUBLIC	452.50		452.06 15"	VINCENTS WAY 5+95.06 14' L	A-5 INLET	D-4.01
I-19	PUBLIC	433.50	434.20 (I-20) 15"	430.90 18"	VINCENTS WAY 11+20.47 12' L	A-5 INLET	D-4.01
I-20	PUBLIC	434.44		431.30 15"	VINCENTS WAY 11+09.36 12' L	A-5 INLET	D-4.01
I-21	PUBLIC	425.00	421.90 (I-22) 15"	421.70 18"	VINCENTS WAY 14+48.97 14' R	A-5 INLET	D-4.01
I-22	PUBLIC	425.00		422.55 15"	VINCENTS WAY 14+48.97 14' L	A-5 INLET	D-4.01
I-23	PUBLIC	446.25	442.10 (I-24) 15"	442.00 18"	FLUTIE LANE 0+95.64 14' L	A-10 INLET	D-4.03
I-24	PUBLIC	446.25		442.00 15"	FLUTIE LANE 0+95.64 14' R	A-10 INLET	D-4.03
I-25	PUBLIC	448.00			GUILFORD ROAD 13+73.34 40.6' R	COG/COS OPENING	MD-374.68
I-26	PUBLIC	460.50			GUILFORD ROAD 11+02.31 40' R	COG/COS OPENING	MD-374.68
I-27	PUBLIC	459.70		458.70	VINCENTS WAY 4+76.92 12' R	COG/COS OPENING	MD-374.68
I-28	PUBLIC	447.70		446.70	VINCENTS WAY 8+80 12' R	COG/COS OPENING	MD-374.68
I-29	PUBLIC	465.10	460.00 (M-12) 18"	460.00 18"	VINCENTS WAY 0+77.05 14' R	A-5 INLET	D-4.01
I-30	PUBLIC	465.70		460.70 15"	GUILFORD ROAD 9+52.44 40' R	A-5 INLET	D-4.01
I-31	PUBLIC	405.00			GUILFORD ROAD 32+42.45 14.4' R	COG/COS OPENING	MD-374.68
I-32	PUBLIC	414.00			GUILFORD ROAD 27+404.31 15' R	COG/COS OPENING	MD-374.68
M-1	PUBLIC	456.40	447.50 (M-2) 18"	447.50 18"	FLUTIE LANE 16+07.39 19' L	4' DIA. MANHOLE	G-5.12
M-2	PUBLIC	456.11	448.10 (I-8) 18"	447.01 18"	FLUTIE LANE 16+07.36 17' R	4' DIA. MANHOLE	G-5.12
M-3	PUBLIC	464.00	453.40 (I-10) 18"	453.40 18"	N 558928.40 E 1328638.11	4' DIA. MANHOLE	G-5.12
M-4	PUBLIC	444.00	437.50 (M-5) 18"	439.00 18"	N 558470.96 E 1328826.62	4' DIA. MANHOLE	G-5.12
M-5	PUBLIC	449.50	443.00 (I-13) 18"	442.10 12"	N 558503.98 E 1328892.18	4' DIA. MANHOLE	G-5.12
M-6	PUBLIC	434.70	429.00 (I-19) 18"	429.00 12"	N 558279.73 E 1329159.97	4' DIA. MANHOLE	G-5.12
M-7	PUBLIC	419.50	411.00 (M-8) 18"	411.00 12"	N 557842.77 E 1328863.00	4' DIA. MANHOLE	G-5.12
M-8	PUBLIC	425.00	421.00 (I-21) 18"	420.70 18"	VINCENTS WAY 15+19.69 16' L	4' DIA. MANHOLE	G-5.12
M-9	PUBLIC	446.50	438.50 (I-23) 18"	438.10 18"	FLUTIE LANE 1+22.84 18' R	4' DIA. MANHOLE	G-5.12
M-10	PUBLIC	464.00	456.00 (M-11) 18"	456.00 18"	N 559164.17 E 1328900.37	4' DIA. MANHOLE	G-5.12
M-11	PUBLIC	465.00	457.50 (I-5) 18"	457.50 18"	VINCENTS WAY 1+25.99 18' L	5' DIA. MANHOLE	G-5.13
M-12	PUBLIC	464.00	460.50 (I-30) 15"	460.20 18"	GUILFORD ROAD 9+86.75 44' R	4' DIA. MANHOLE	G-5.12
S-1	PUBLIC	432.75	430.00 (I-1) 24"		N 558661.41 E 1329319.43	END SECTION	D-5.51
S-2	PUBLIC	448.71	446.50 (M-1) 18"		N 558537.15 E 1328679.61	END SECTION	D-5.51
S-3	PUBLIC	441.21	438.50 (M-4) 18"		N 558391.26 E 1328843.65	END SECTION	D-5.51
S-4	PUBLIC	444.24	442.00 (M-5) 12"		N 558475.72 E 1328902.57	END SECTION	D-5.51
S-5	PUBLIC	431.46	429.25 (M-6) 18"		N 558224.10 E 1329210.70	END SECTION	D-5.51
S-6	PUBLIC	412.21	409.75 (M-7) 18"		N 557845.01 E 1328839.10	END SECTION	D-5.51
S-12	PUBLIC	460.44		458.50 15"	N 559200.61 E 1328923.60	END SECTION	D-5.51
S-13	PUBLIC	443.13		441.10 15"	N 558842.33 E 1329165.30	END SECTION	D-5.51

\*\* DENOTES THROAT OPENING  
\* DENOTES COG/COS FLOW THROUGH OPENING. SEE DETAIL ON THIS SHEET

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FILE  
ELLCOTT CITY, MARYLAND 21042  
(410) 481-3992



**PROFESSIONAL CERTIFICATION**

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

Frank M. Pawlanski  
FRANK PAWLANSKI II

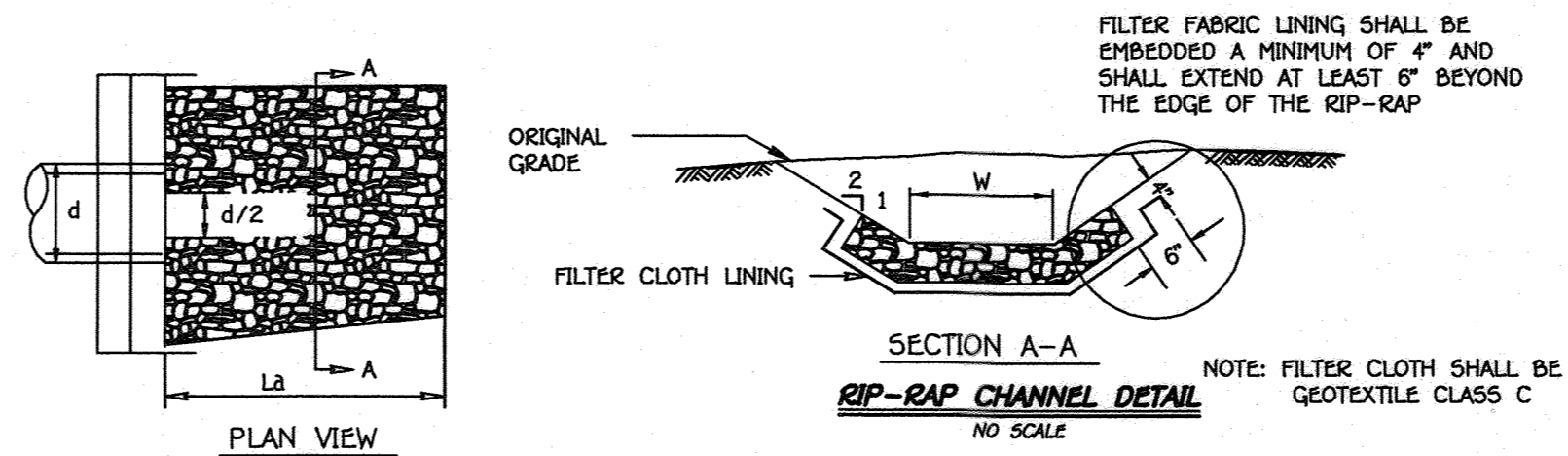
7/12/17  
Date

**DEVELOPER**

BEAZER HOMES, LLC  
8965 GUILFORD ROAD - SUITE 290  
COLUMBIA, MARYLAND 21046  
(781)-894-0182

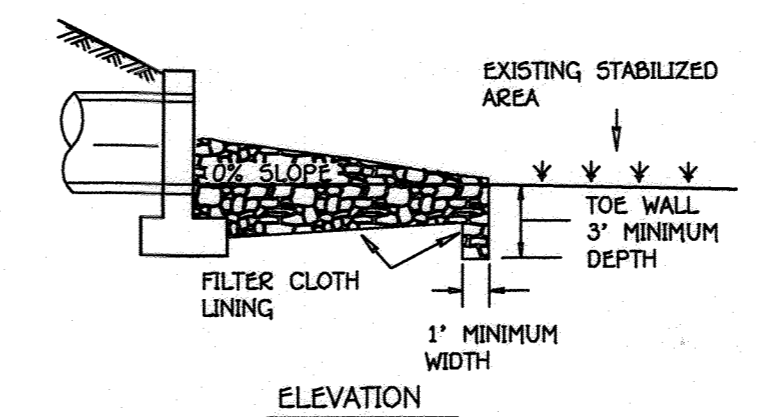
**OWNERS**

TIERNEY FARMS-CLARKSVILLE, LP  
24151 VENTURE BOULEVARD  
CALABASAS, CALIFORNIA 91302  
(818)-385-3697



**CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS**

- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
- Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
- Stones for the riprap or gabion outlets may be placed by equipment. Each shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogenous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.



RIP-RAP CHANNEL DESIGN DATA													
STRUCTURE	AREA (S.F.)	WETTED PERIMETER	R	R <sup>2/3</sup>	S	S <sup>1/2</sup>	W	d	n	V (f.p.s.)	Q (c.f.s.)	BLANKET THICKNESS	PIPE SIZE
S-1	18.21	14.36	0.7886	0.8536	0.005	0.0707	6.0'	1.87	0.04	0.97	17.71	19"	18"
S-2	4.80	8.03	0.5981	0.7099	0.005	0.0707	4.5'	0.79	0.04	1.83	8.78	15"	18"
S-3	3.42	7.18	0.4763	0.6099	0.005	0.0707	4.5'	0.60	0.04	1.58	5.42	15"	18"
S-4	3.49	7.23	0.4826	0.6165	0.005	0.0707	4.5'	0.61	0.04	1.59	5.55	15"	18"
S-5	2.49	6.56	0.3800	0.5247	0.005	0.0707	4.5'	0.46	0.04	1.37	3.42	15"	18"
S-6	3.70	7.36	0.5026	0.6321	0.005	0.0707	4.5'	0.65	0.04	1.65	6.09	15"	18"

**PIPE SCHEDULE (PUBLIC)**

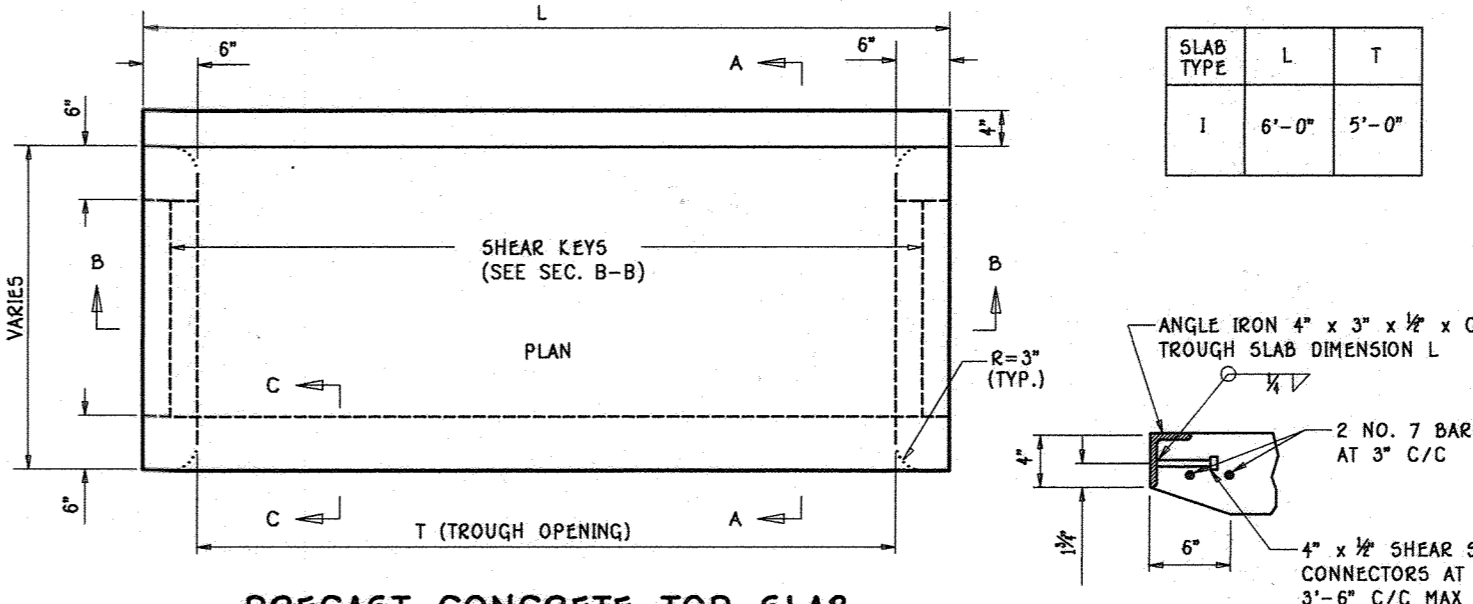
SIZE	CLASS	LENGTH
10"	RCPP	190 L.F.
* 15"	RCPP, CL. IV	524 L.F.
* 18"	RCPP, CL. IV	1,880 L.F.
* 24"	RCPP, CL. IV	109 L.F.

NOTE: RCPP, CL. IV MAY BE SUBSTITUTED WITH HDPE PIPE MATERIAL WHERE DEPTH OF COVER PERMITS.

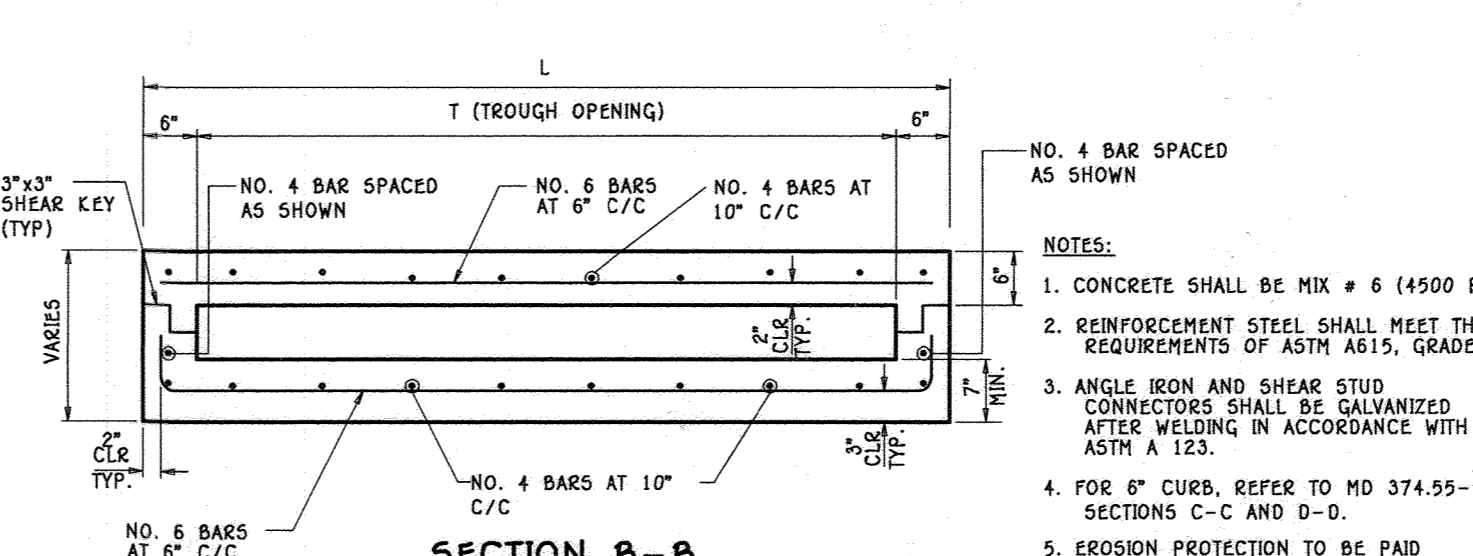
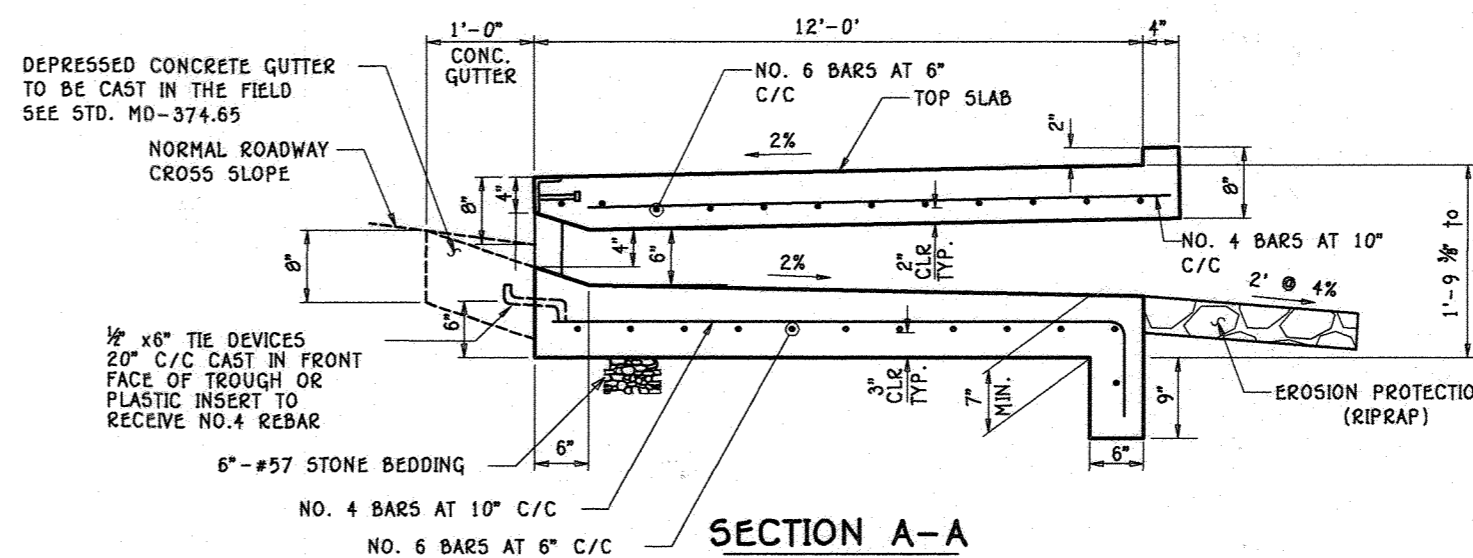
**PIPE SCHEDULE (PRIVATE)**

SIZE	CLASS	LENGTH
* 6"	PERFORATED PVC, 90% AD	972 L.F.
6"	PVC, 90% AD	832 L.F.
* 15"	RCPP, CL. IV	41 L.F.
* 18"	RCPP, CL. IV	259 L.F.

NOTE: RCPP, CL. IV MAY BE SUBSTITUTED WITH HDPE PIPE MATERIAL WHERE DEPTH OF COVER PERMITS.  
\* CONTRACTOR MAY SUBSTITUTE 6" DIA. PERFORATED HDPE PIPE CLASS II PER AASHTO SPECIFICATION M202 (AND N-12 OF 10 PIPE OR EQUIVALENT)



**PRECAST CONCRETE TOP SLAB**



**PRECAST OR CAST-IN-PLACE COG/COS OPENING FOR 8\"/>**

REVISIONS		
NO.	DESCRIPTION	DATE
1	UPDATE STRUCTURE SCHEDULE	5/2/17
2	PRECAST INLET DRAIN SUBMITTAL & REV. PIPE SCHEDULE	1/18/19
3	REVISED STORM DRAIN PH-2 & REV. PIPE SCHEDULE	10/10/21

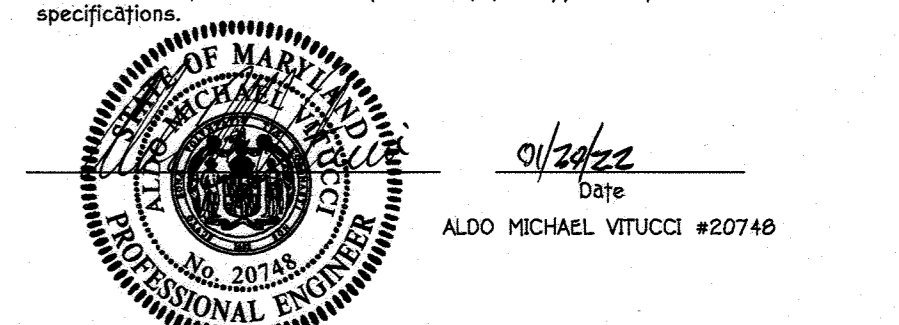
Approved: Department of Planning And Zoning  
T. Mark Hicks 8/10/17  
Chief, Division of Land Development Date

Approved: Howard County Department of Public Works  
8/1/17  
Chief, Development Engineering Division Date

Approved: Howard County Department of Public Works  
7/27/17  
Chief, Bureau of Highways Date

**AS-BUILT CERTIFICATION**

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



ALDO MICHAEL VITUCCI #20748  
Date

**REPLACEMENT SHEET  
STORM DRAIN PROFILES,  
NOTES AND DETAILS  
ENCLAVE AT RIVER HILL  
PHASE 1**

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
PREVIOUS HOWARD COUNTY FILES:  
ECP-15-005, PB#409, SP-05-006  
ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
PARCEL NOS.: 88 & 97  
FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: JUNE 24, 2016  
SHEET 34 OF 58 F-15-110

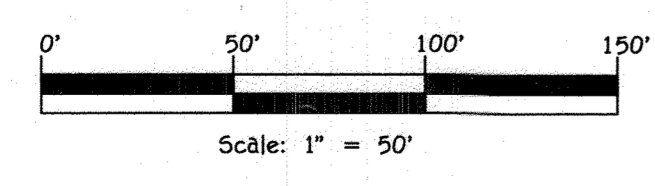
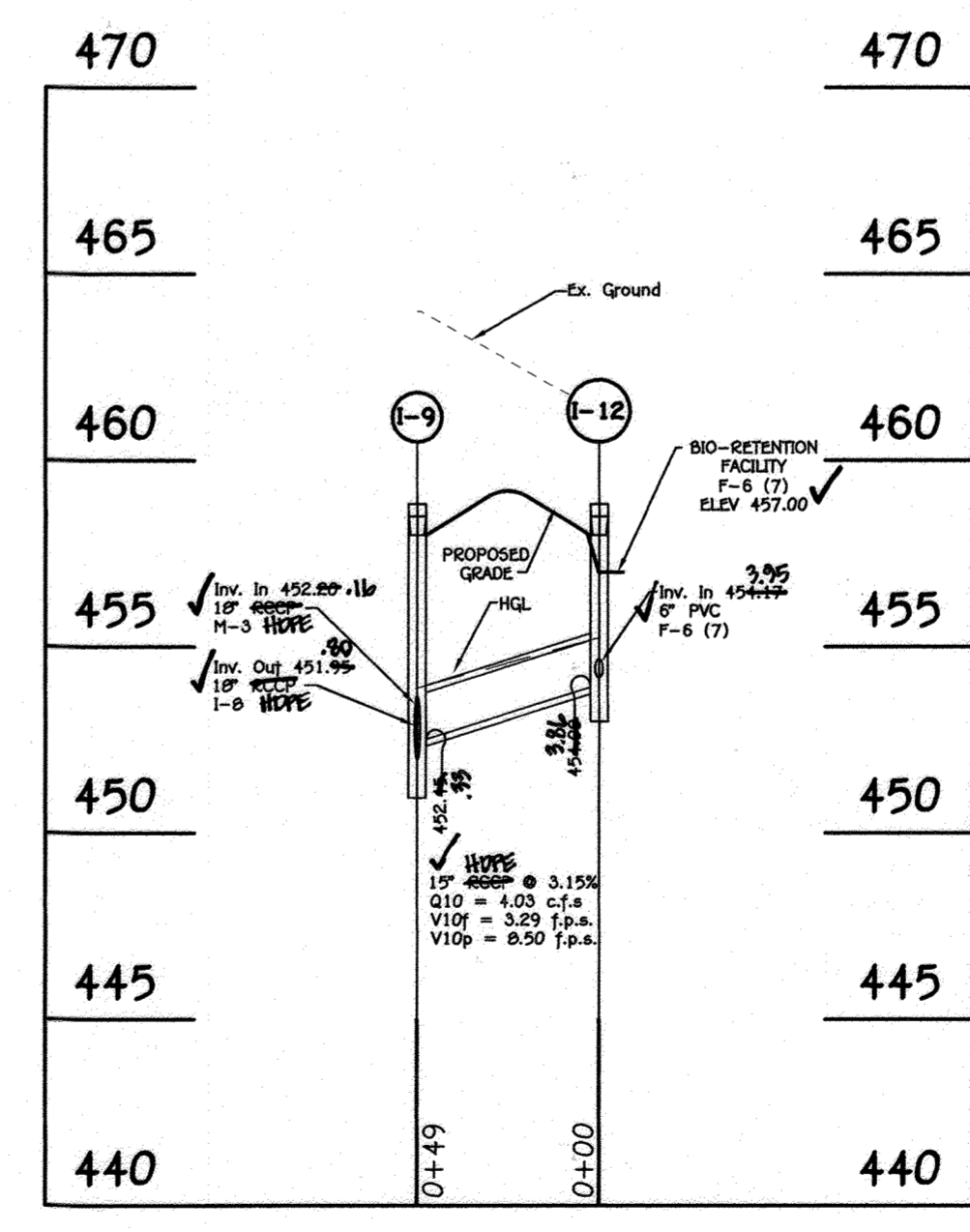
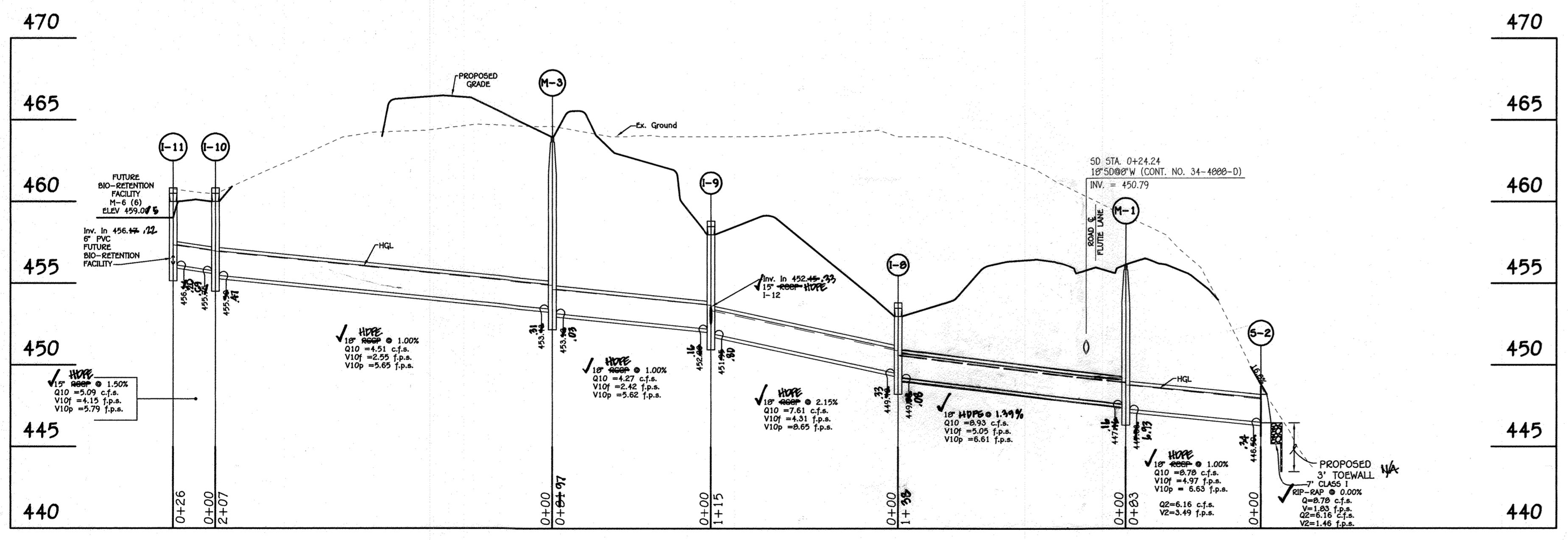
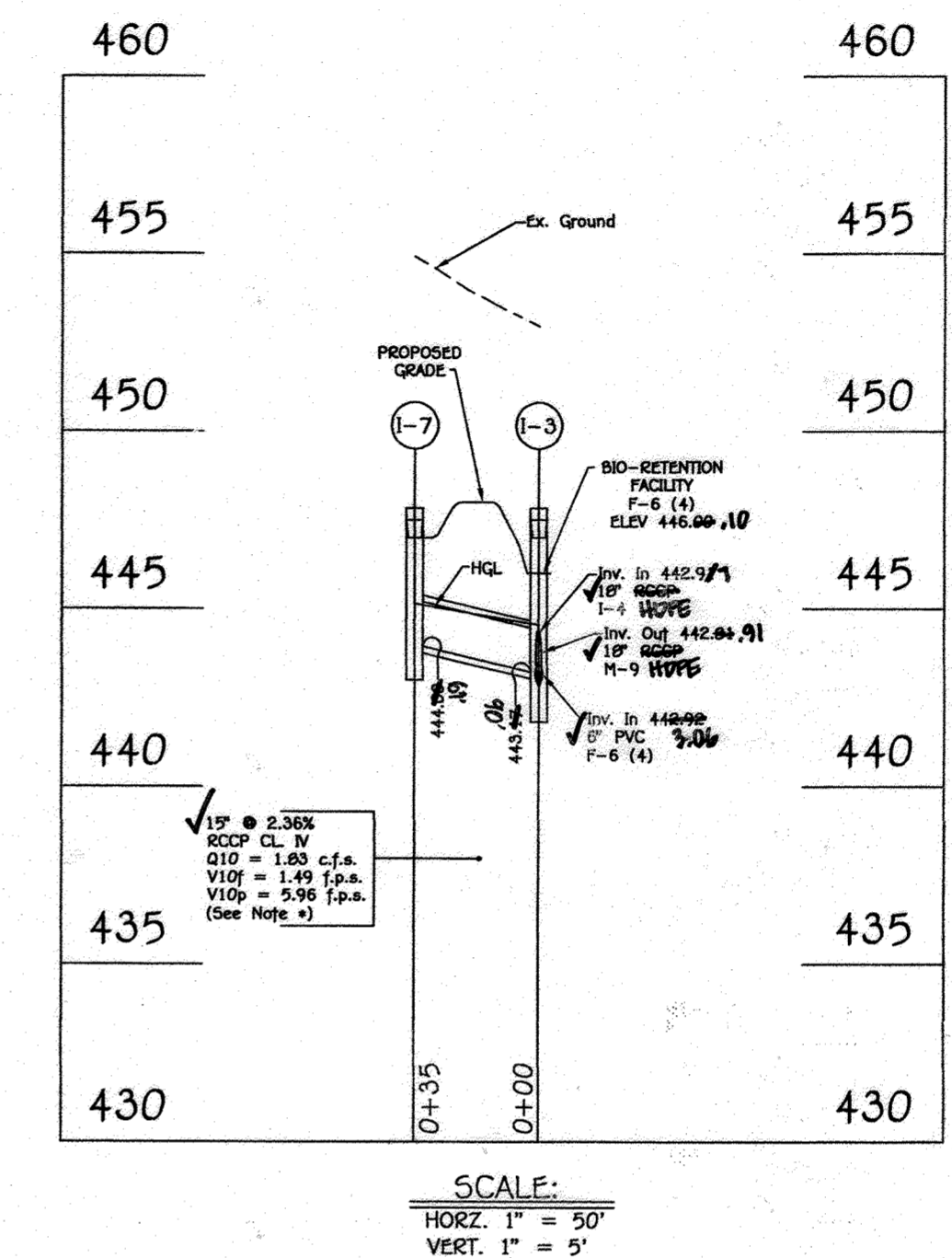
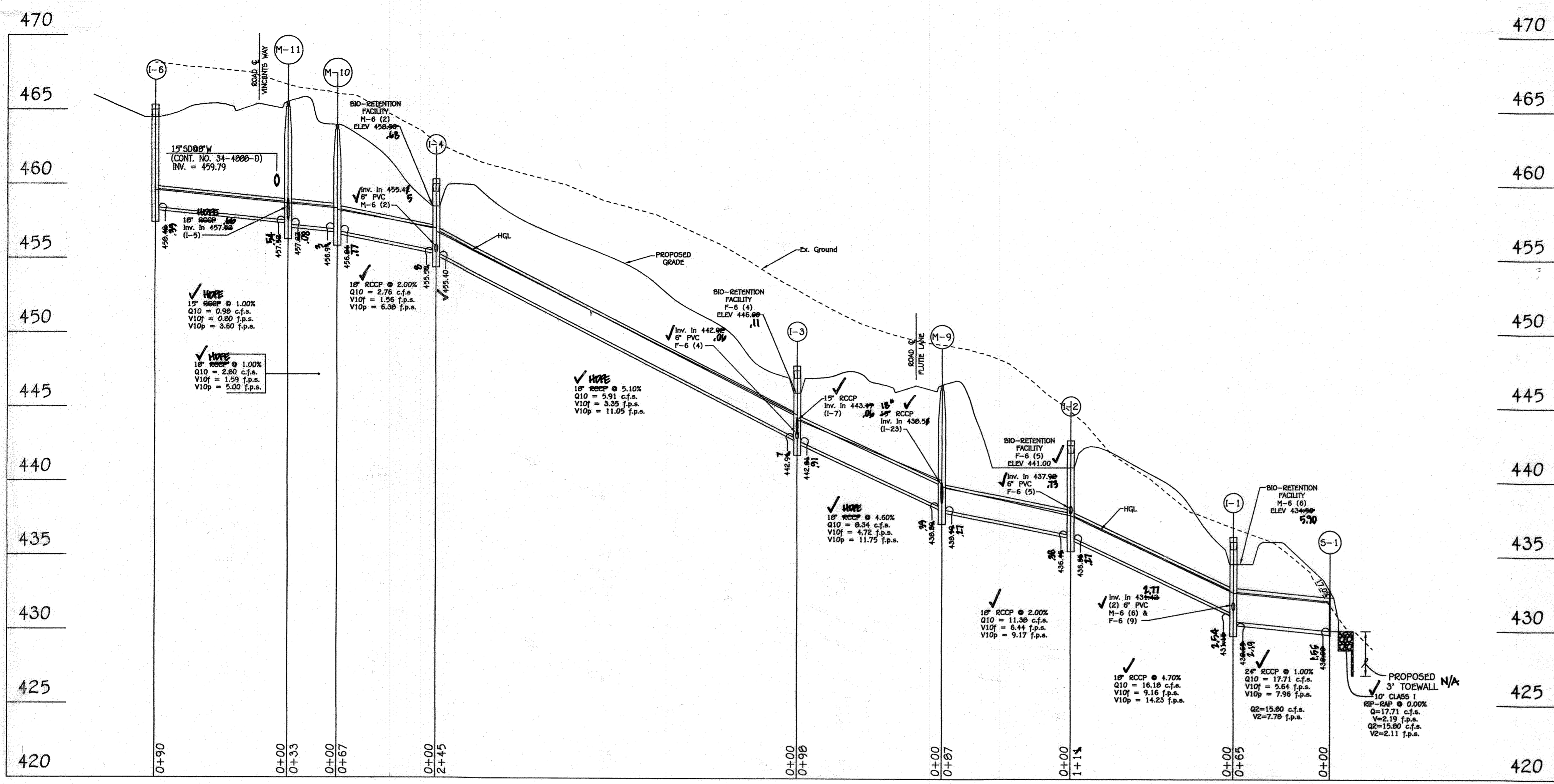
"AS-BUILT"

REVISIONS		
NO.	DESCRIPTION	DATE
1	REMOVE STORM DRAIN PROFILES AND CHANNEL PROFILES	7/9/17
2	REMOVE STORM DRAIN M-2 & REVISE PROFILE	10/30/21

Approved: Department Of Planning And Zoning  
*Neil Shaloud* 8.7.16  
 Chief, Division Of Land Development Date

Approved: Chief, Development Engineering Division  
*JP* 8/1/16  
 Date

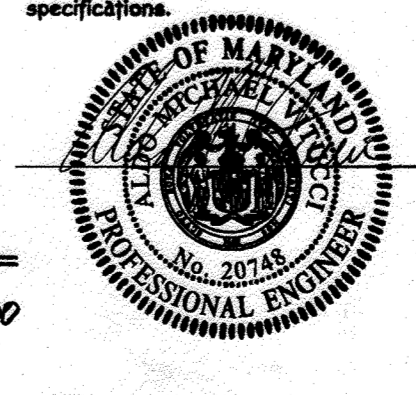
Approved: Howard County Department Of Public Works  
*McVean* 7/27/2016  
 Chief, Bureau Of Highways Date



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

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

AS-BUILT CERTIFICATION  
 I hereby certify, by my seal, that to the best of my knowledge and belief the the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



*ALDO MICHAEL VITUCCI*  
 Date  
 ALDO MICHAEL VITUCCI #20748



PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.  
*Frank M. Manlansan II*  
 FRANK MANLANSON II  
 6/20/16  
 Date

OWNER  
 TERRY PARK - CLAREVILLE LP  
 24151 VENTURE BOULEVARD  
 CALABAS, CALIFORNIA 91308  
 (818) 308-9277

DEVELOPER  
 BEATER HOMES, LLC  
 8929 GULL FORD ROAD - SUITE 200  
 COLUMBIA, MARYLAND 21046  
 (410) - 874-0182

STORM DRAIN PROFILES  
**ENCLAVE AT RIVER HILL**

PHASE 1  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 10  
 PARCEL NOS.: 00 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 35 OF 50 F-15-110

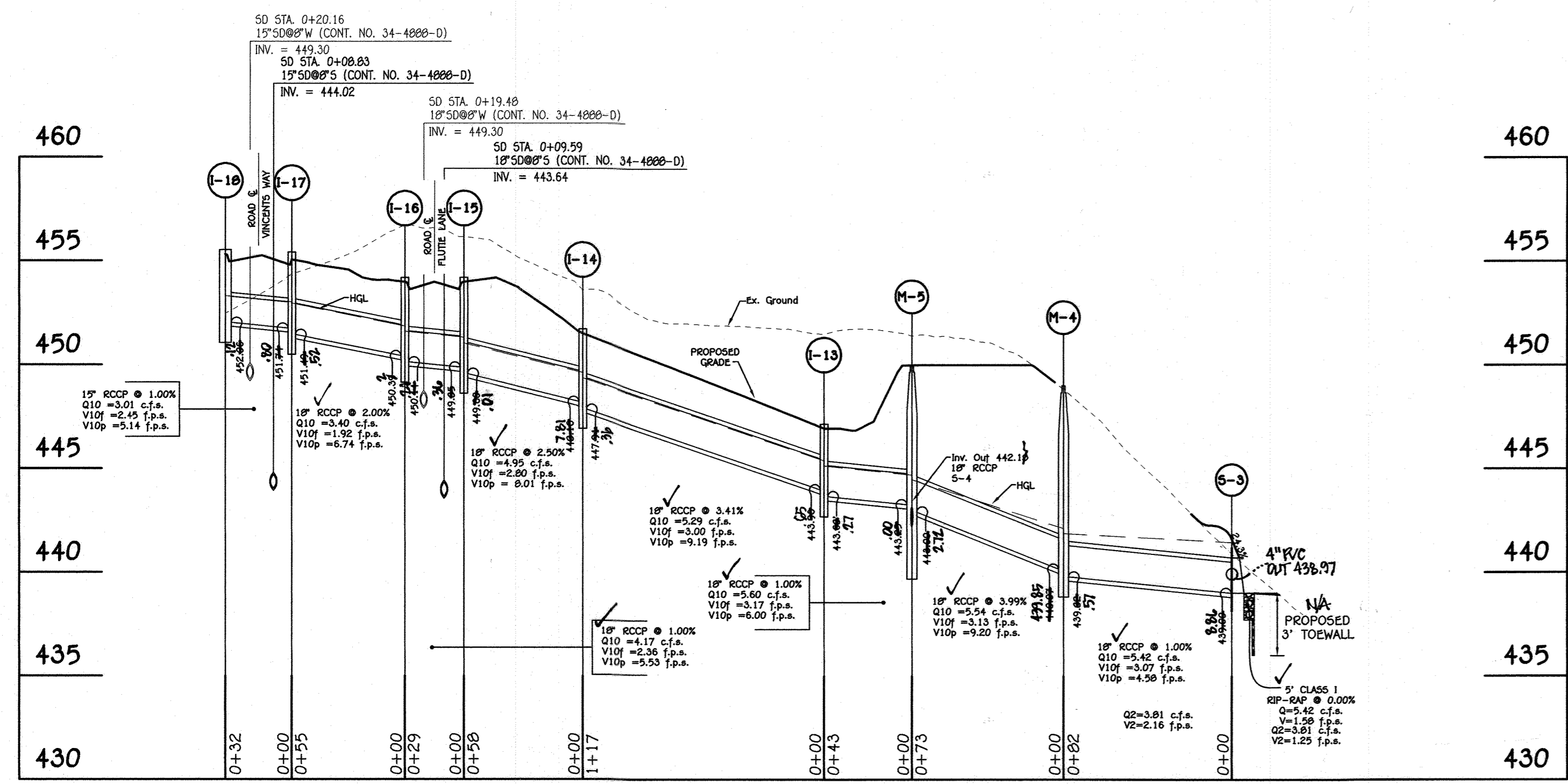
FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2295

"AS-BUILT"

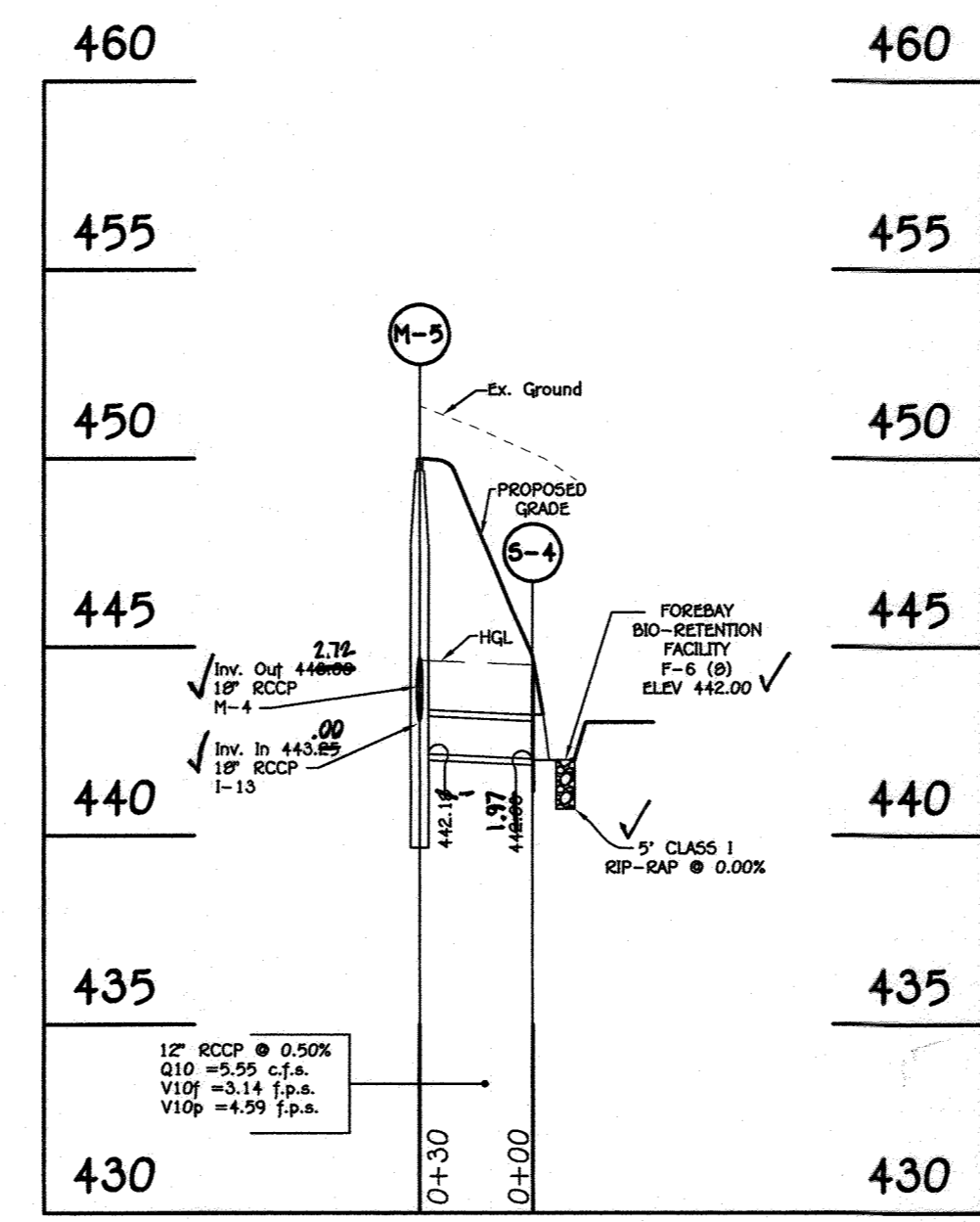
REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED OWNER AND DEVELOPER AND ADD FROM DRAW REVISIONS	7/9/17

Approved: Department Of Planning And Zoning  
*Carl Shelton* 8-3-16  
 Chief, Division Of Land Development Date

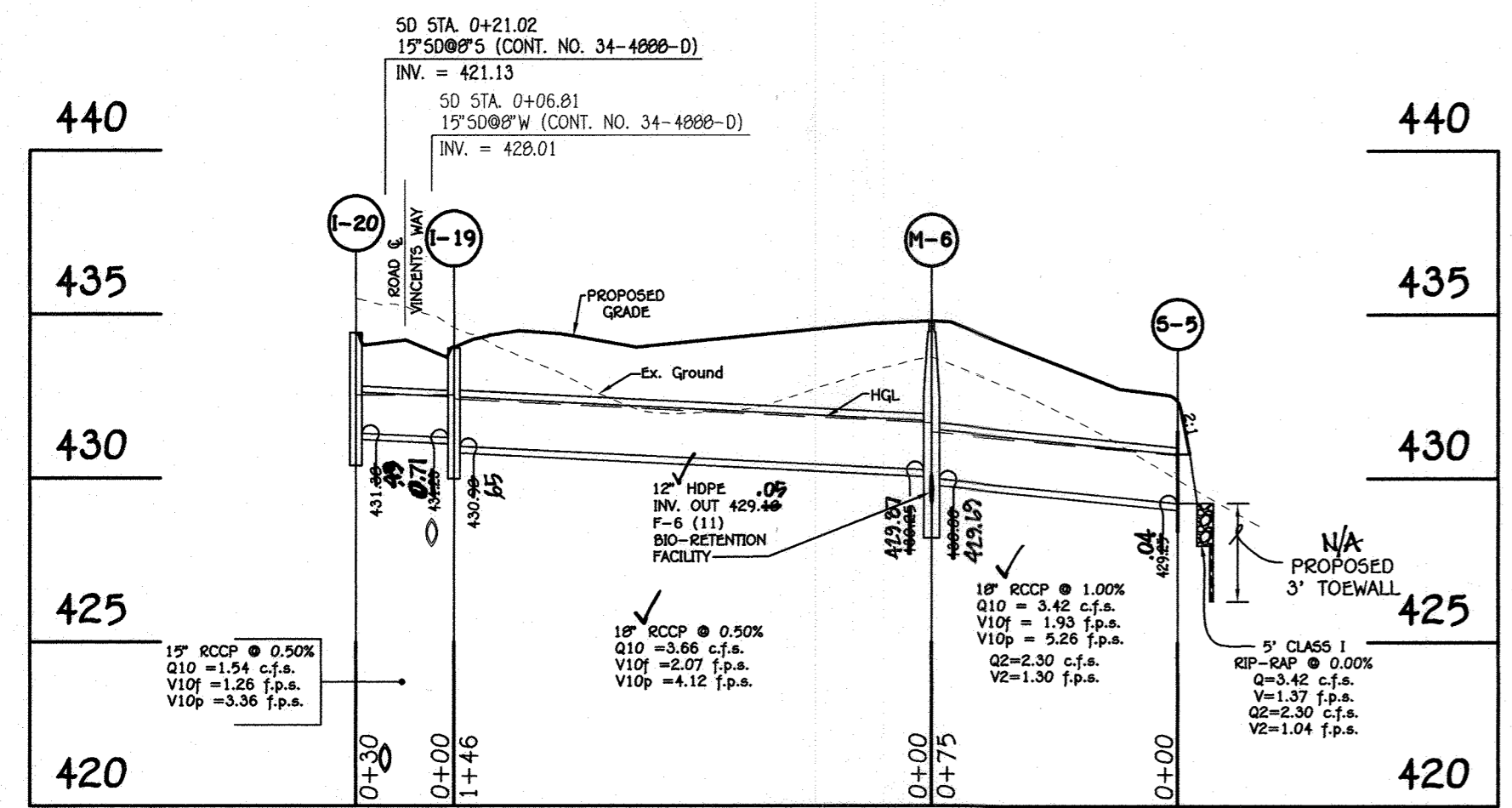
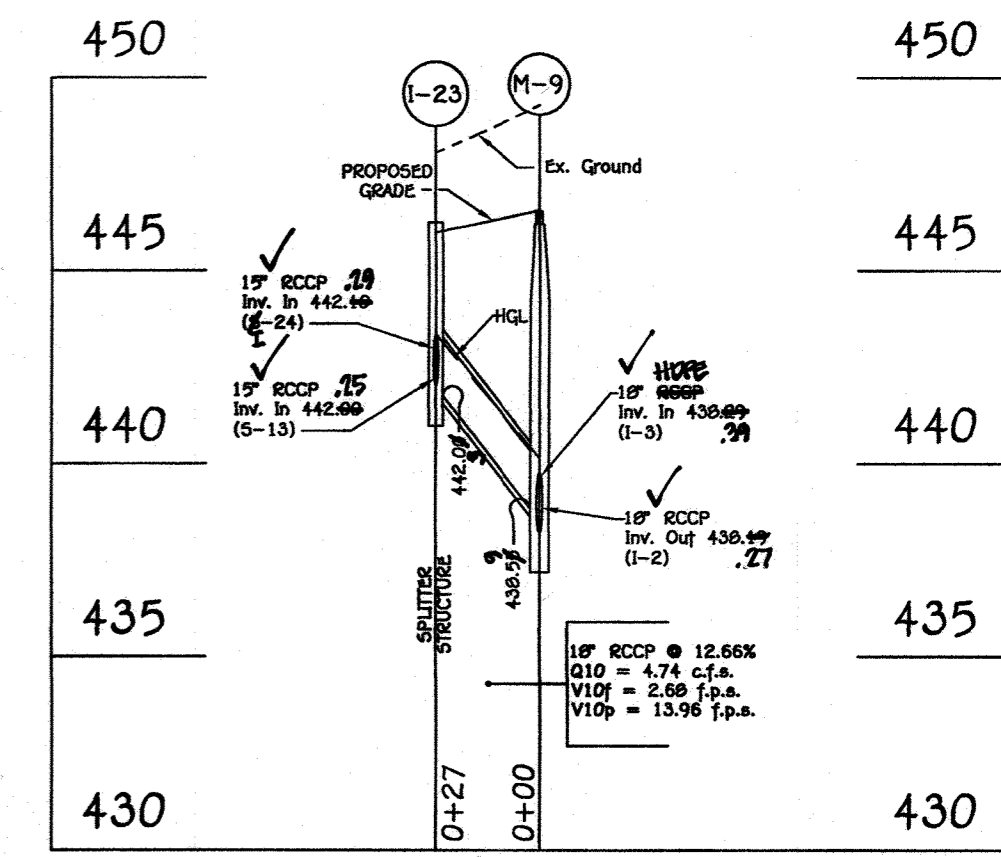
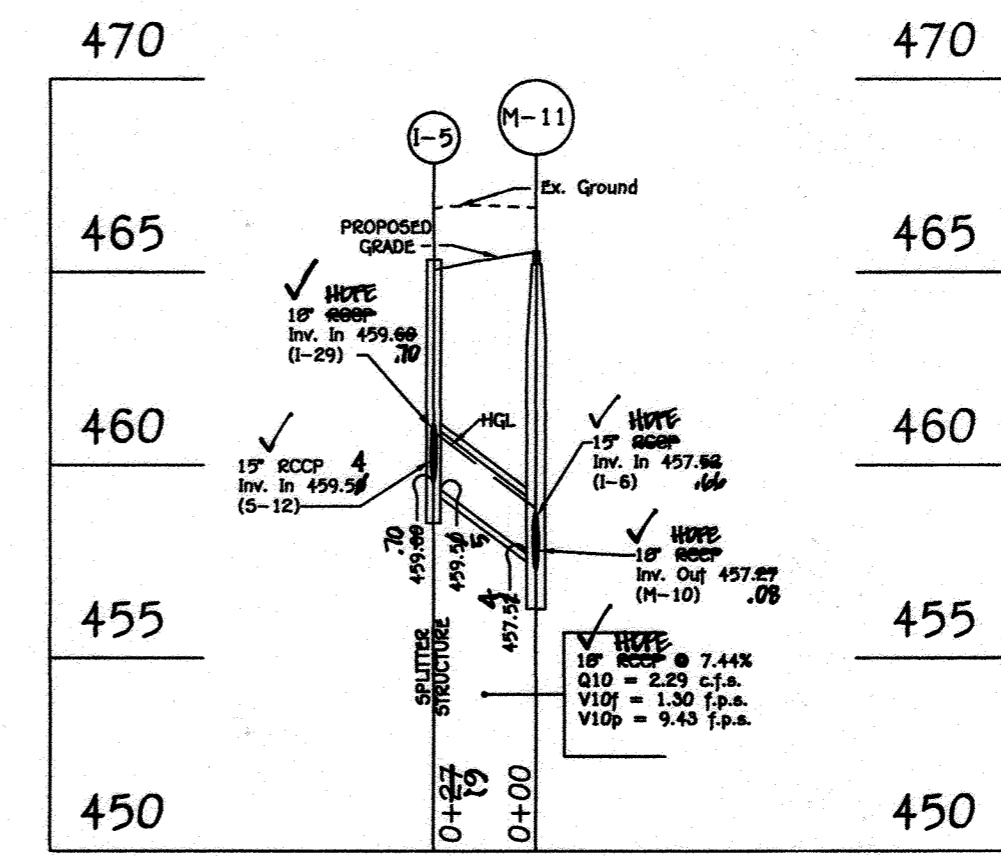
Approved: Howard County Department Of Public Works  
*Maureen* 7/27/2016  
 Chief, Bureau Of Highways Date



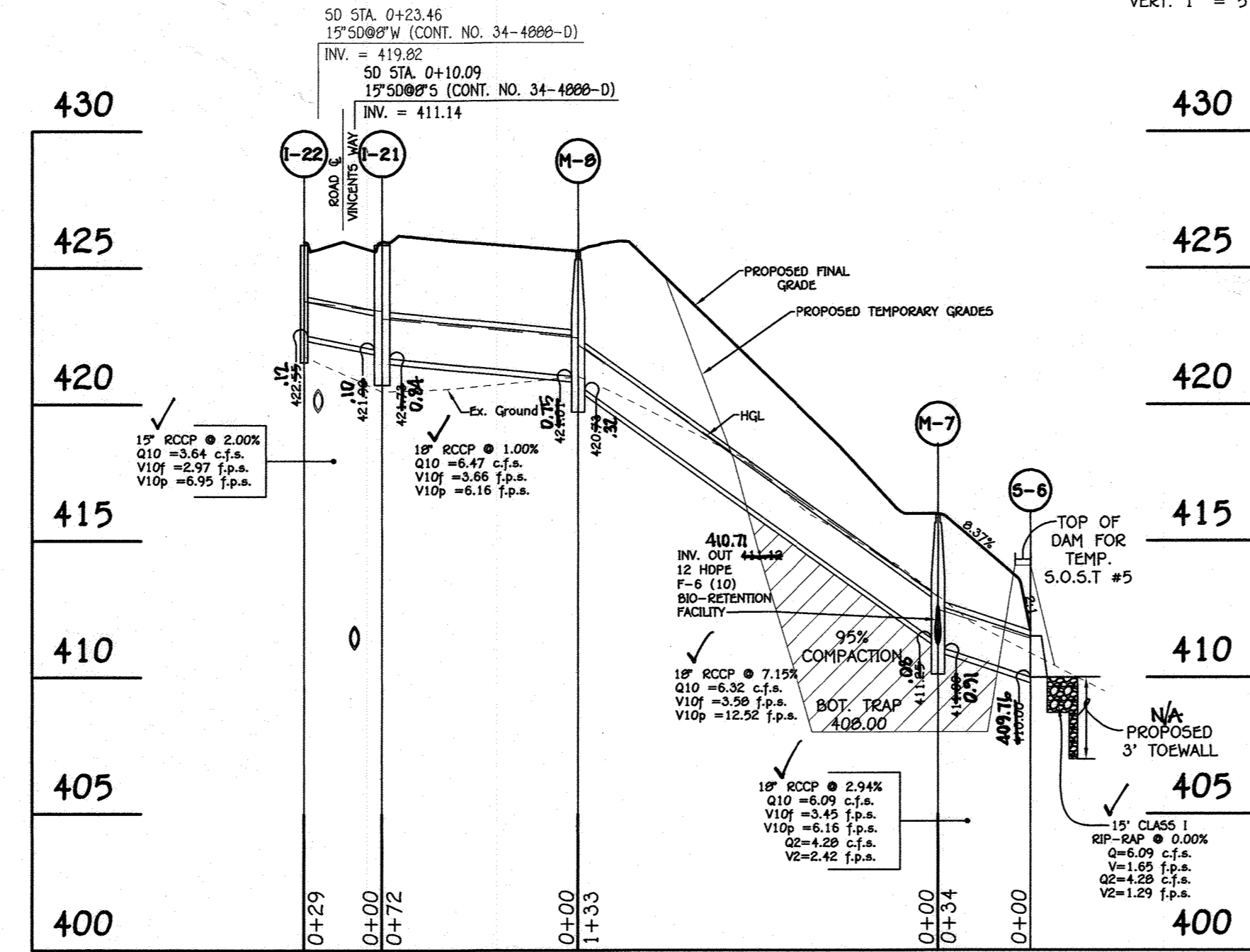
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 HORIZ. 1" = 50'  
 VERT. 1" = 5'



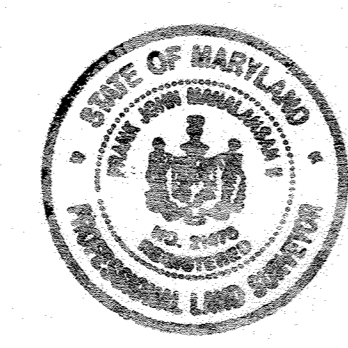
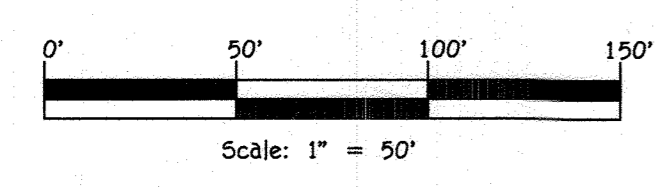
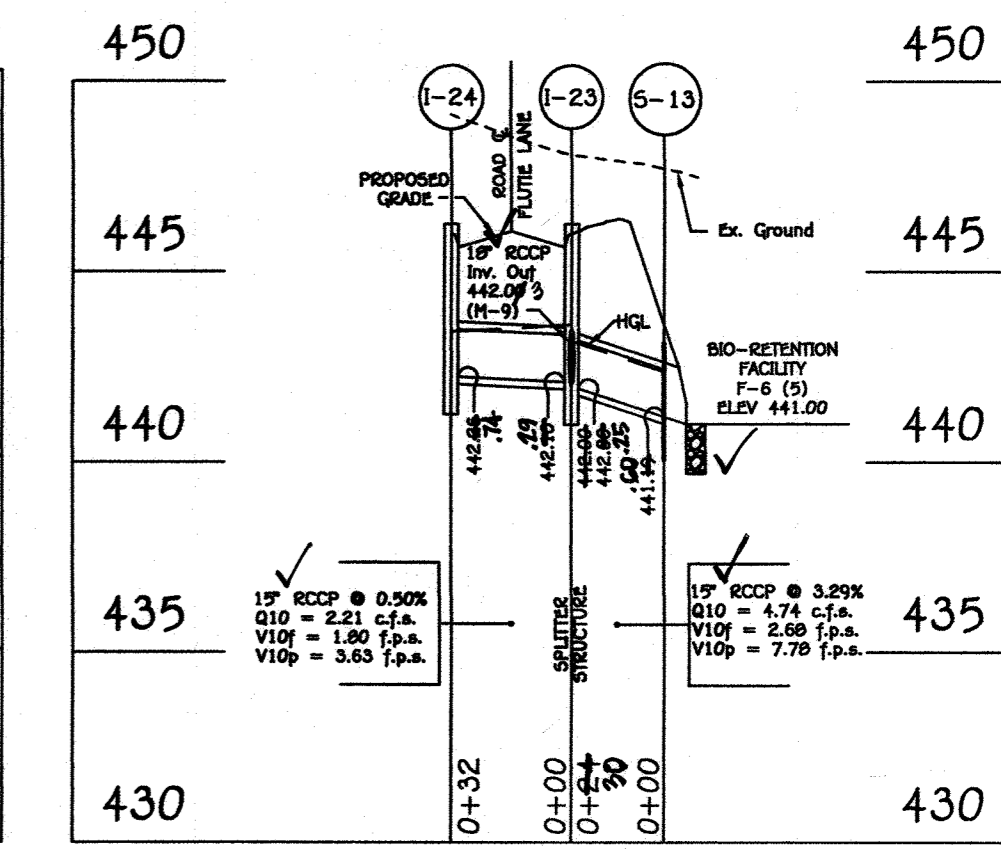
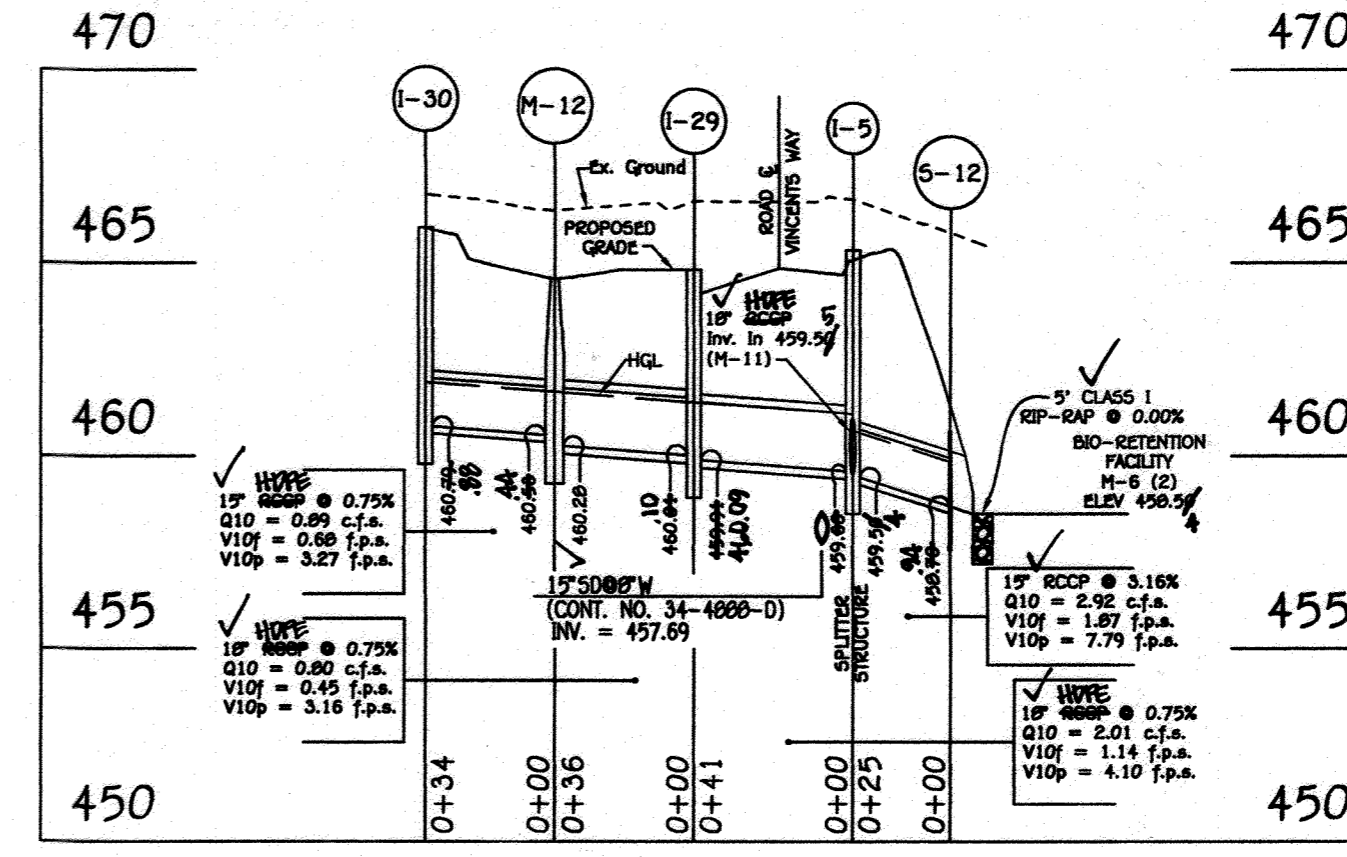
SCALE:  
 HORIZ. 1" = 50'  
 VERT. 1" = 5'



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



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



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.  
*Frank Manalansan II*  
 FRANK MANALANSAN II  
 6/20/16  
 Date

**OWNER**  
 HIGLEY FARMS - CLARKSVILLE, MD  
 2401 VENTURE BOULEVARD  
 CLARKSVILLE, MARYLAND 21031  
 (301) 389-3697

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8009 GUILFORD ROAD - SUITE 200  
 COLUMBIA, MARYLAND 21046  
 (767) - 894-0102

**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan were constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.  
  
*Aldo Michael Vitucci*  
 ALDO MICHAEL VITUCCI #20748  
 Date

**STORM DRAIN PROFILES**  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, 5P-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 08 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 36 OF 58 F-15-110

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 451-2895

"AS-BUILT"

**Infiltration and Filter System Construction Specifications**

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WC, and Re v. In some instances where permeability is great, these facilities may be used for Op as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorus and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

**Design Constraints:**

- > Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
- > Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance).
- > Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
- > Test soil conditions to determine if soil amendments are necessary.
- > Plants shall be located so that access is possible for structure maintenance.
- > Stabilize heavy flow areas with erosion control mats or sod.
- > Temporarily divert flows from seeded areas until vegetation is established.
- > See Table A.5 for additional design considerations.

**Bio-retention**

**Soil Bed Characteristics**

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume (Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993). Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.5.

Table A.5 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P2O5)	75 lbs. per acre, minimum
Potassium (potash - K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	10 to 25 %
Silt	30 to 55 %
Sand	35 to 60%

**Mulch Layer**

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

**Planting Guidance**

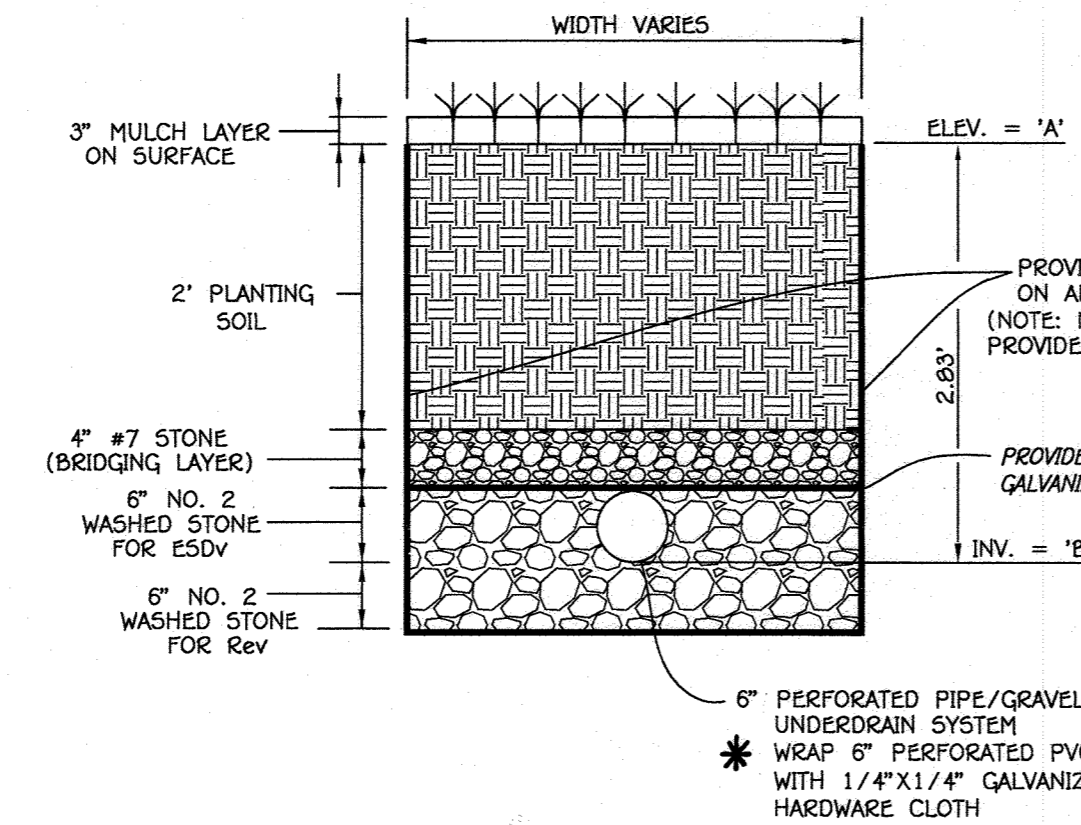
Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.

The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge is the highest elevation and generally supports plants adapted to dryer conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Clayton and Schueler, 1997.

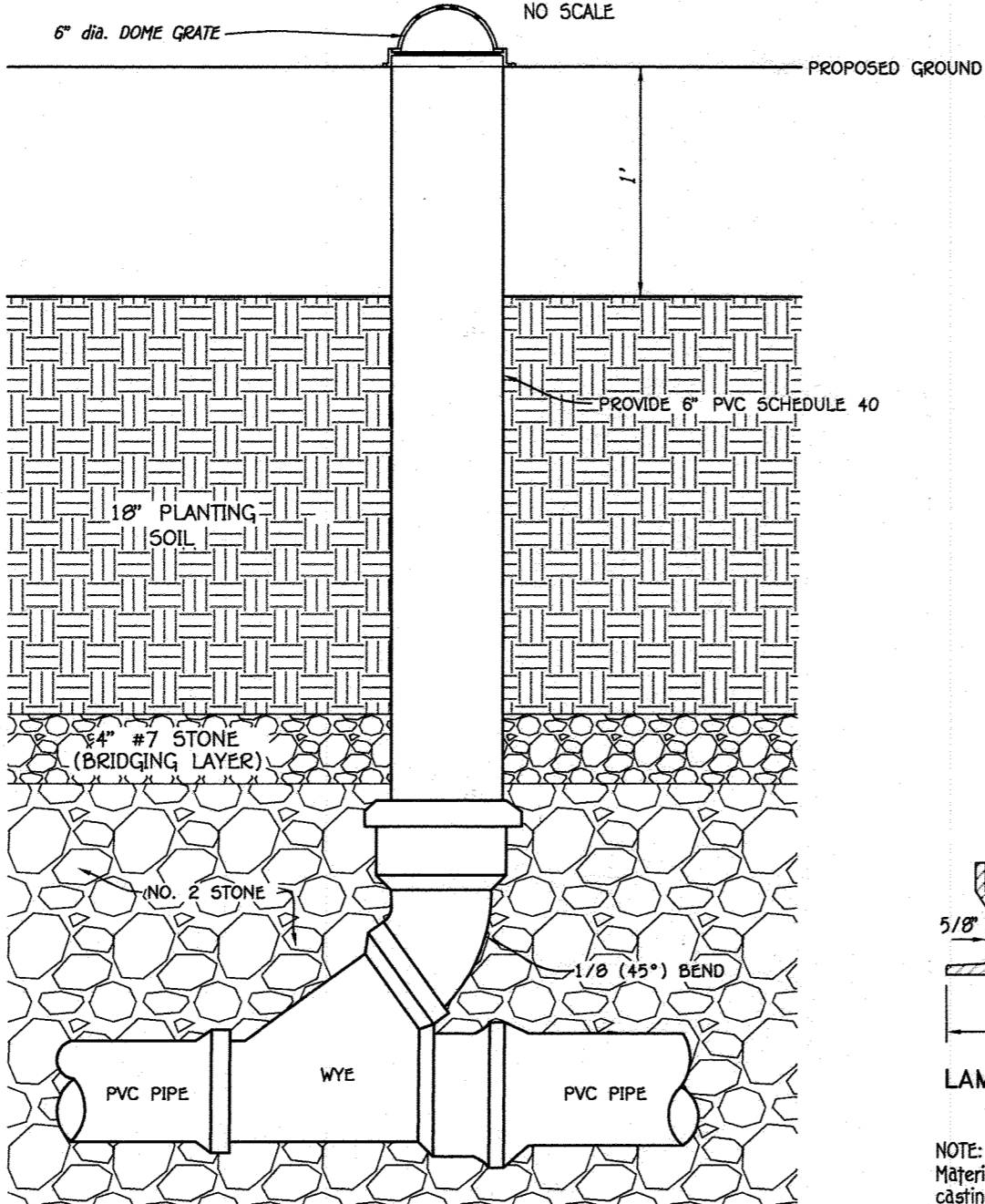
**OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (M-6) AND (F-6)**

- ANNUAL MAINTENANCE OF PLANT MATERIAL MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.
- OWNERSHIP AND MAINTENANCE OBLIGATIONS FOR THE BIO RETENTION FACILITIES WHICH INCLUDES FOREBAYS, INLET STRUCTURES, UNDERDRAINS, PLANTING MATERIALS AND OUTFALLS SHALL BE CONSIDERED PRIVATELY OWNED, UNLESS OTHERWISE NOTED, SHALL BE THE RESPONSIBILITY OF THE ENCLAVE AT TERRY FARM HOMEOWNERS ASSOCIATION. IF A STRUCTURE OR STORM DRAIN IS DESIGNATED AS PUBLIC, OWNERSHIP AND MAINTENANCE OBLIGATIONS SHALL BE THE RESPONSIBILITY OF HOWARD COUNTY. (SEE STRUCTURE SCHEDULE AND PIPE SCHEDULE FOR PUBLIC/PRIVATE DESIGNATION-SHEET 34)

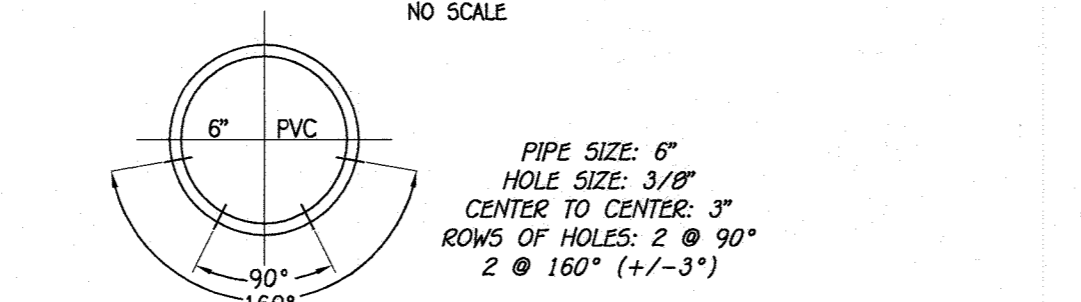
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M-6 (1)	410.00	410.00	1.0
F-6 (2)	410.00	410.00	1.0
M-6 (3)	409.60	409.60	1.0
F-6 (4)	441.00	441.00	1.0
F-6 (5)	441.00	441.00	1.0
M-6 (6)	434.50	434.50	2.11
F-6 (7)	457.00	454.44	3.95
F-6 (8)	442.00	439.44	3.0
F-6 (9)	437.60	434.44	3.0
F-6 (10)	470.00	468.44	6.80
F-6 (11)	429.60	426.44	5.90



TYPICAL SECTION - BIO-RETENTION FACILITY (F-6)

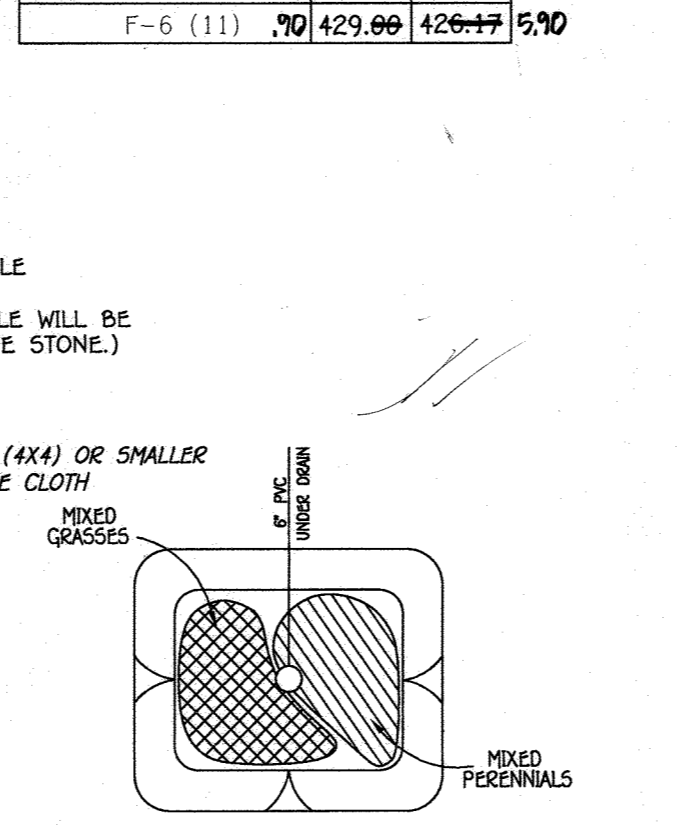


TYPICAL CLEAN-OUT DETAIL

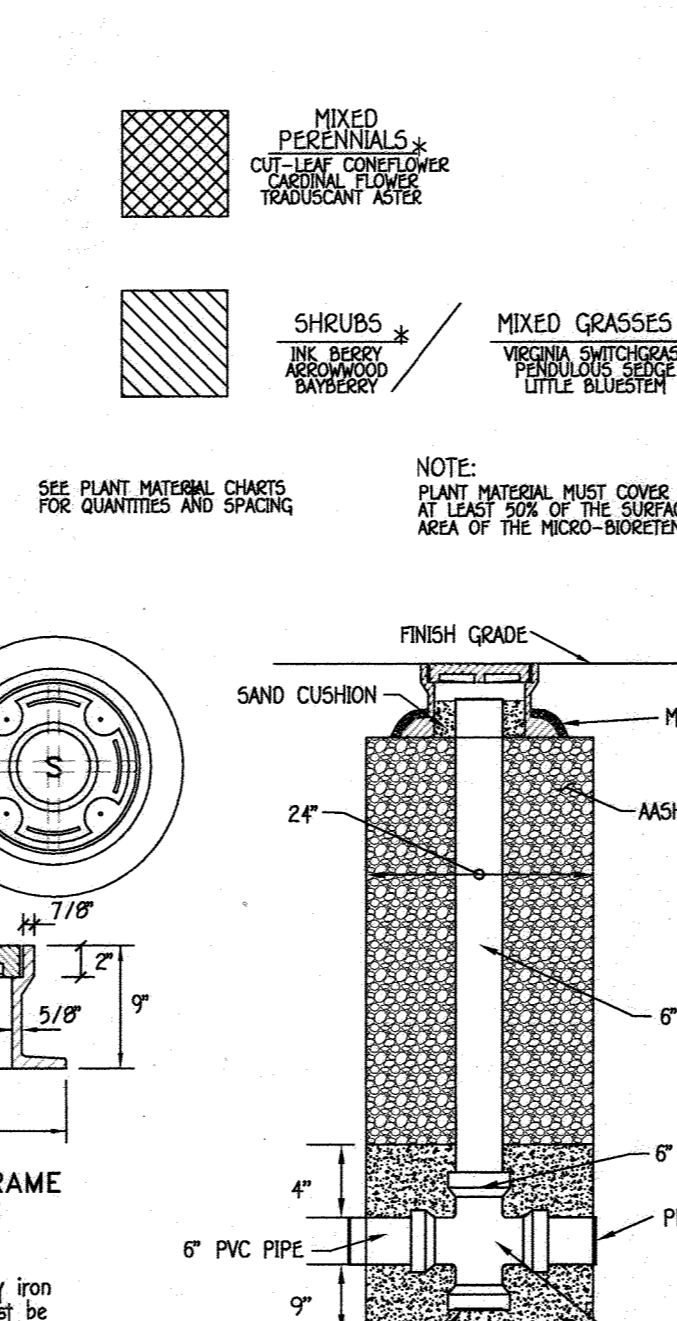


I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND THE APPROVED PLANS AND SPECIFICATIONS.

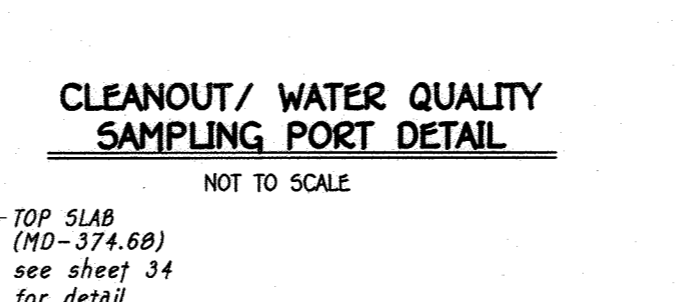
\* CONTRACTOR MAY SUBSTITUTE 6" DIAMETER SLOTTED HOPE PIPE CLASS II PER ASPHO SPECIFICATION M252 (ADD N-18 ST 10 PIPE OR EQUIVALENT)



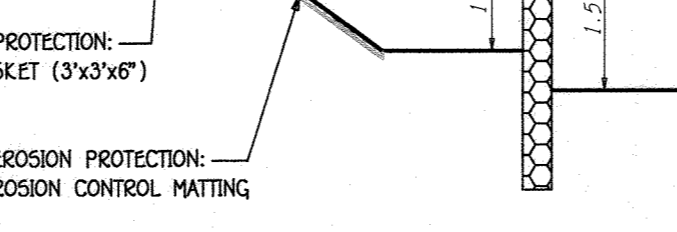
MICRO-BIORETENTION PLANTING DETAIL



CLEANOUT/WATER QUALITY SAMPLING PORT DETAIL



SCHEMATIC SECTION FLOW INLET INTO BIO-RETENTION FOREBAY



SCHEMATIC SECTION FLOW INLET INTO MICRO BIO-RETENTION

**DRAINAGE AREA M-6 (1) BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
34	MIXED PERENNIALS	1 FT.
17	SHRUBS	2 FT.

**DRAINAGE AREA F-6 (2) MICRO-BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
106	MIXED PERENNIALS	1 FT.
93	SHRUBS	2 FT.

**DRAINAGE AREA M-6 (3) BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
34	MIXED PERENNIALS	1 FT.
17	SHRUBS	2 FT.

**DRAINAGE AREA F-6 (4) MICRO-BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
51	MIXED PERENNIALS	1 FT.
46	SHRUBS	2 FT.

**DRAINAGE AREA F-6 (5) MICRO-BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
106	MIXED PERENNIALS	1 FT.
93	SHRUBS	2 FT.

**DRAINAGE AREA M-6 (6) BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
83	MIXED PERENNIALS	1 FT.
42	SHRUBS	2 FT.

**DRAINAGE AREA F-6 (7) MICRO-BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
69	MIXED PERENNIALS	1 FT.
35	SHRUBS	2 FT.

**DRAINAGE AREA F-6 (8) BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
136	MIXED PERENNIALS	1 FT.
68	SHRUBS	2 FT.

**DRAINAGE AREA F-6 (9) BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
102	MIXED PERENNIALS	1 FT.
51	SHRUBS	2 FT.

**DRAINAGE AREA F-6 (10) MICRO-BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
207	MIXED PERENNIALS	1 FT.
104	SHRUBS	2 FT.

**DRAINAGE AREA F-6 (11) MICRO-BIORETENTION PLANT MATERIAL**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
74	MIXED PERENNIALS	1 FT.
37	SHRUBS	2 FT.

**PLANT MATERIAL- BIO-RETENTION F-6 (12)**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
225 (674 sq.ft.)	GRASSES	36" o.c.
96	SHRUBS	36"-40" o.c.

**PLANT MATERIAL- BIO-RETENTION M-6 (13)**

QUANTITY	NAME	MAXIMUM SPACING (FT.)
130 (389 sq.ft.)	GRASSES	36" o.c.
56	SHRUBS	36"-40" o.c.

**STORMWATER MANAGEMENT PRACTICES (CONT'D)**

SWM FACILITY TYPE/ID	OWNERSHIP/MAINTENANCE	LOT #	ESDV REQUIRED CUFT.	ESDV PROVIDED CUFT.	DISCONNECTION OF ROOFTOP RUNOFF N-1 (Y/N)	DISCONNECTION OF NON-ROOFTOP RUNOFF N-2 (Y/N)	DRY WELLS M-5 (Y/N)	MICRO-BIO-RETENTION M-6 (Y/N)	MICRO-BIO-RETENTION F-6 (Y/N)
M-6 (1)	PUBLIC	0.5 LOT 51	649	671	Y	Y	Y	Y	Y
F-6 (2)	PRIVATE	0.5 LOT 52	1,022	1,022	Y	Y	Y	Y	Y
M-6 (3)	PUBLIC	PUBLIC ROW	414	414	Y	Y	Y	Y	Y
F-6 (4)	PRIVATE	0.5 LOT 52	552	552	Y	Y	Y	Y	Y
F-6 (5)	PRIVATE	BULK PARCEL#	3,147	3,283	Y	Y	Y	Y	Y
M-6 (6)	PRIVATE	BULK PARCEL#	1,089	1,092	Y	Y	Y	Y	Y
F-6 (7)	PRIVATE	0.5 LOT 51	1,024	1,322	Y	Y	Y	Y	Y
F-6 (8)	PRIVATE	BULK PARCEL#	2,204	2,790	Y	Y	Y	Y	Y
F-6 (9)	PRIVATE	BULK PARCEL#	1,804	1,948	Y	Y	Y	Y	Y
F-6 (10)	PRIVATE	BULK PARCEL#	3,243	3,678	Y	Y	Y	Y	Y
F-6 (11)	PRIVATE	BULK PARCEL#	1,289	1,372	Y	Y	Y	Y	Y
N-2 (1)	PRIVATE	PUBLIC ROW	223	223	Y	Y	Y	Y	Y
N-2 (2)	PRIVATE	PUBLIC ROW	446	446	Y	Y	Y	Y	Y
N-2 (3)	PRIVATE	PUBLIC ROW	108	108	Y	Y	Y	Y	Y
N-2 (4)	PRIVATE	PUBLIC ROW	262	262	Y	Y	Y	Y	Y
N-2 (5)	PRIVATE	PUBLIC ROW	312	312	Y	Y	Y	Y	Y
TOTAL			19,301	21,987					

NOTES:  
(1) OWNED AND MAINTAINED BY THE ENCLAVE AT TERRY FARM HOMEOWNERS ASSOCIATION  
(2) FINAL DESIGN FOR STORMWATER MANAGEMENT PRACTICES #12 AND #13 SHALL BE PROVIDED AT THE SITE DEVELOPMENT PLAN STAGE

**STORMWATER MANAGEMENT PRACTICES**

SWM FACILITY TYPE/ID	OWNERSHIP/MAINTENANCE	LOT#	ESDV REQUIRED CUFT.	ESDV PROVIDED CUFT.	DISCONNECTION OF ROOFTOP RUNOFF N-1 (Y/N)	DISCONNECTION OF NON-ROOFTOP RUNOFF N-2 (Y/N)	DRY WELLS M-5 (Y/N)	MICRO-BIO-RETENTION M-6 (Y/N)	MICRO-BIO-RETENTION F-6 (Y/N)
M-6 (1)	PUBLIC	0.5 LOT 51	649	671	Y	Y	Y	Y	Y
F-6 (2)	PRIVATE	0.5 LOT 52	1,022	1,022	Y	Y	Y	Y	Y
M-6 (3)	PUBLIC	PUBLIC ROW	414	414	Y	Y	Y	Y	Y
F-6 (4)	PRIVATE	0.5 LOT 52	552	552	Y	Y	Y	Y	Y
F-6 (5)	PRIVATE	BULK PARCEL#	3,147	3,283	Y	Y	Y	Y	Y
M-6 (6)	PRIVATE	BULK PARCEL#	1,089	1,092	Y	Y	Y	Y	Y
F-6 (7)	PRIVATE	0.5 LOT 51	1,024	1,322	Y	Y	Y	Y	Y
F-6 (8)	PRIVATE	BULK PARCEL#	2,204	2,790	Y	Y	Y	Y	Y
F-6 (9)	PRIVATE	BULK PARCEL#	1,804	1,948	Y	Y	Y	Y	Y
F-6 (10)	PRIVATE	BULK PARCEL#	3,243	3,678	Y	Y	Y	Y	Y
F-6 (11)	PRIVATE	BULK PARCEL#	1,289	1,372	Y	Y	Y	Y	Y
N-2 (1)	PRIVATE	PUBLIC ROW	223	223	Y	Y	Y	Y	Y
N-2 (2)	PRIVATE	PUBLIC ROW	446	446	Y	Y	Y	Y	Y
N-2 (3)	PRIVATE	PUBLIC ROW	108	108	Y	Y	Y	Y	Y
N-2 (4)	PRIVATE	PUBLIC ROW	262	262	Y	Y	Y	Y	Y
N-2 (5)	PRIVATE	PUBLIC ROW	312	312	Y	Y	Y	Y	Y
TOTAL			19,301	21,987					

NOTES:  
(1) PRIVATELY OWNED AND MAINTAINED BY HOWARD COUNTY AND THE ENCLAVE AT TERRY FARM HOMEOWNERS ASSOCIATION.  
(2) FOR STRUCTURE SCHEDULE AND PIPE SCHEDULE - SEE SHEET 34

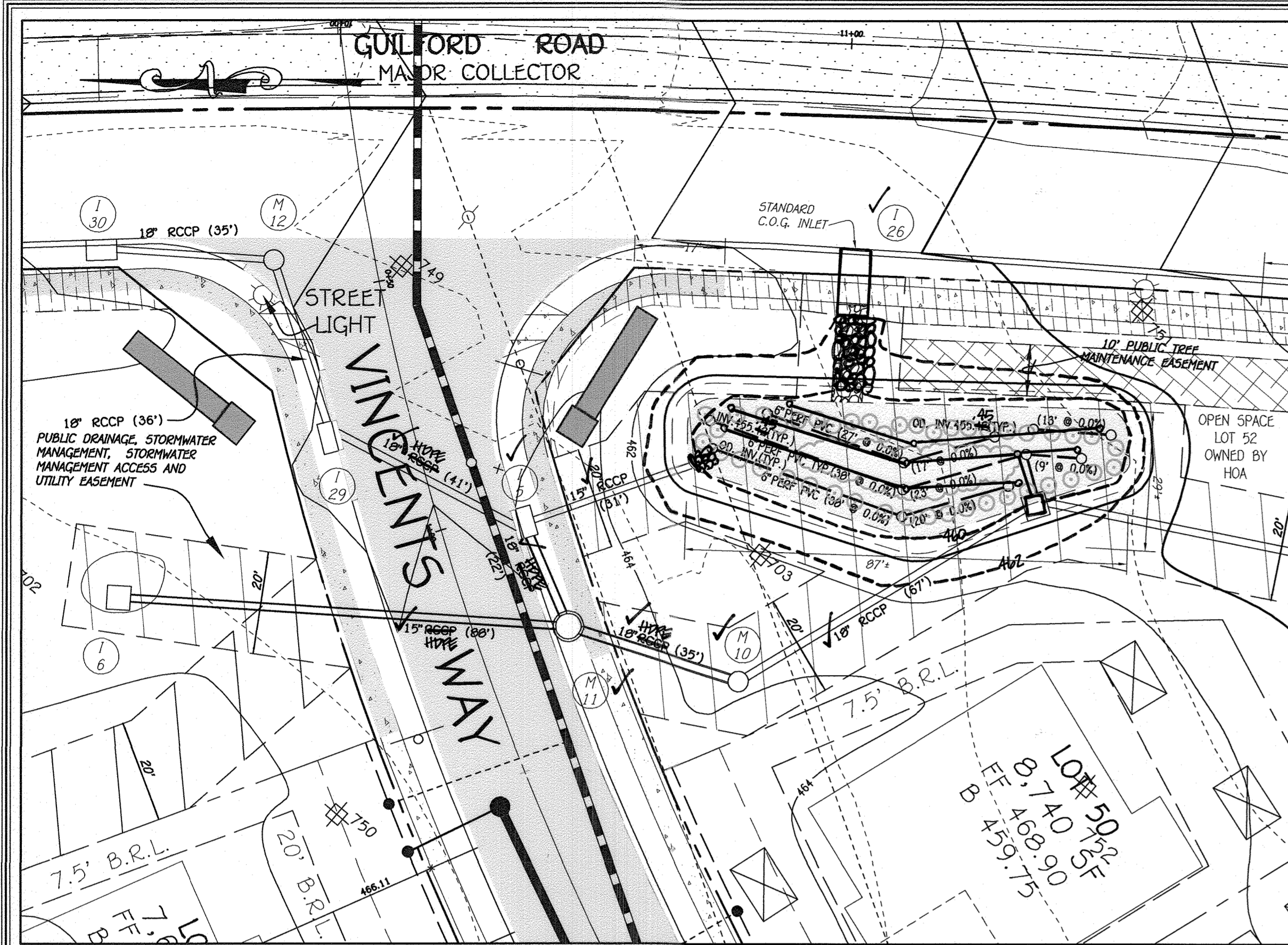
**B.4.C Specifications for Micro-Bioretenion, Rain Gardens, Landscape Infiltration & Infiltration Berms**

- Material Specifications**  
The allowable materials to be used in these practices are detailed in Table B.4.1.
- Filtering Media or Planting Soil**  
The soil shall be a uniform mix of stones, stumps, roots or other similar objects larger than two inches in size. No other materials or substances shall be mixed or dumped within the micro-bioretenion practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.  
The planting soil shall be tested and shall meet the following criteria:  
Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)  
Organic Content - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and clay (40%).  
Clay Content - Media shall have a clay content of less than 5%.  
pH Range should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.  
There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.
- Compaction**  
It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoses to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.
- Operation**  
Operation can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to restructure the soil profile through the 12 inch compaction zone. Subsoiler methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.
- Rototill**  
Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any pooled water before preparing (rototilling) base.
- Backfilling**  
When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.
- Planting**  
When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.
- Plant Material**  
Recommended plant material for micro-bioretenion practices can be found in Appendix A, Section A.2.3.
- Plant Installation**  
Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3" shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.
- Rootstock**  
The rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted to 1/2 to 2/3 of the ball above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground and bed cover after installation.
- Stakes**  
Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.
- Grasses and legume seeds**  
Grasses and legume seeds should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.
- Fertilizer**  
The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers, debris, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 5 pounds per 1000 square feet.
- Underdrains**  
Underdrains should meet the following criteria:  
Pipe - should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTM F 758, Type P5 28, or AASHTO-M-278) in a gravel layer. The preferred material is "slotted, 4 rigid pipe (e.g., PVC or HDPE).  
Perforations - If perforated pipe is used, perforations should be 3/8" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 1/4" (No. 4 or #44) galvanized hardware cloth.  
Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.  
The main collector pipe shall be at a minimum 0.5% slope.  
A rigid, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter.  
A 1/4" layer of pea gravel (1/4" to 3/8" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".  
The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out ports must be provided (one minimum per every 1000 square feet of surface area).
- Miscellaneous**  
These practices may not be constructed until all contributing drainage area has been stabilized.

**STORMWATER MANAGEMENT NOTES AND DETAILS**

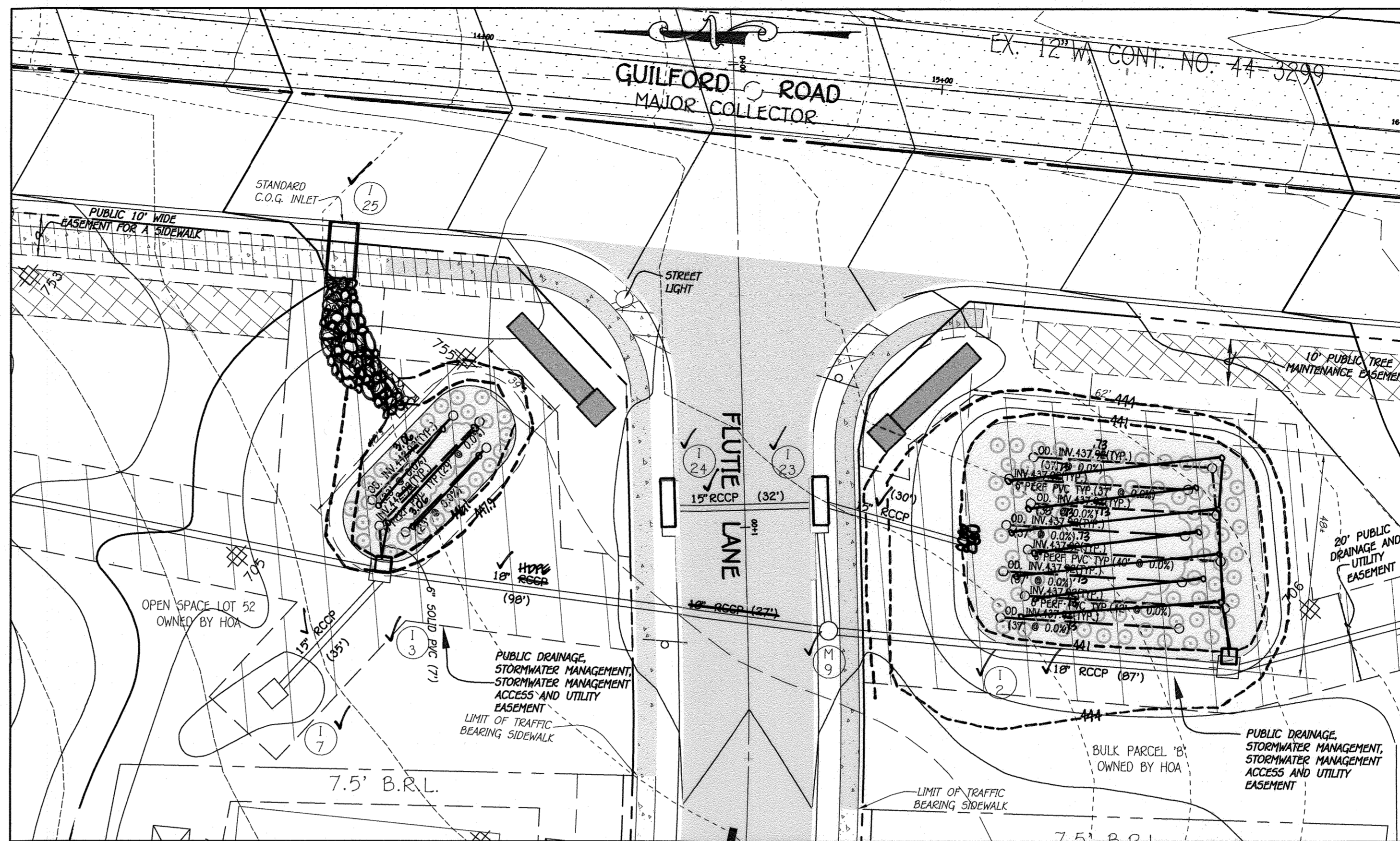
**ENCLAVE AT RIVER HILL PHASE 1**

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK PREVIOUS HOWARD COUNTY FILES: ECP-



**M-6 (2)**  
 (MICRO-BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 36,947 SqFt  
 FILTER AREA: 1,701 SqFt  
 ELEVATION 456.64  
 PERIMETER 137.9  
 WEIR ELEVATION 459.50-97

NOTE:  
 1) STORMWATER MANAGEMENT FACILITIES TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.



**F-6 (4)**  
 (MICRO-BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 23,004 SqFt  
 FILTER AREA: 819 SqFt  
 ELEVATION 446.00-11  
 PERIMETER 117.6  
 WEIR ELEVATION 442.00-1.86

NOTE:  
 1) STORMWATER MANAGEMENT FACILITIES TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.

**F-6 (5)**  
 (MICRO-BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 50,871 SqFt  
 FILTER AREA: 2,972 SqFt  
 ELEVATION 441.0  
 PERIMETER 207.6  
 WEIR ELEVATION 448.00-1.79

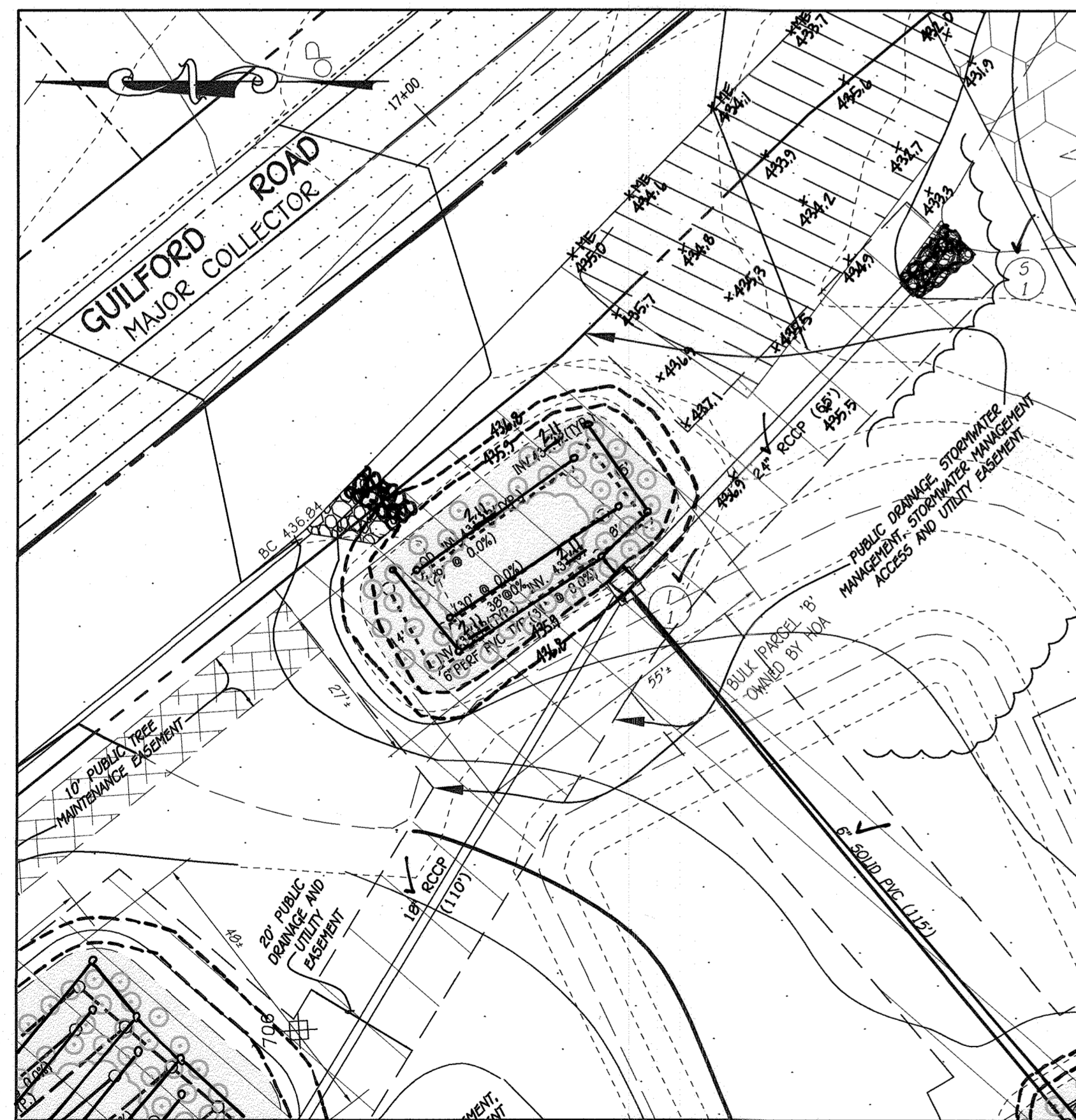
NOTE:  
 1) STORMWATER MANAGEMENT FACILITIES TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT FACILITIES	10/3/16
2	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17

Approved: Department of Planning And Zoning  
*T. Mah* for *K.S.* 8/10/17  
 Chief, Division Of Land Development Date

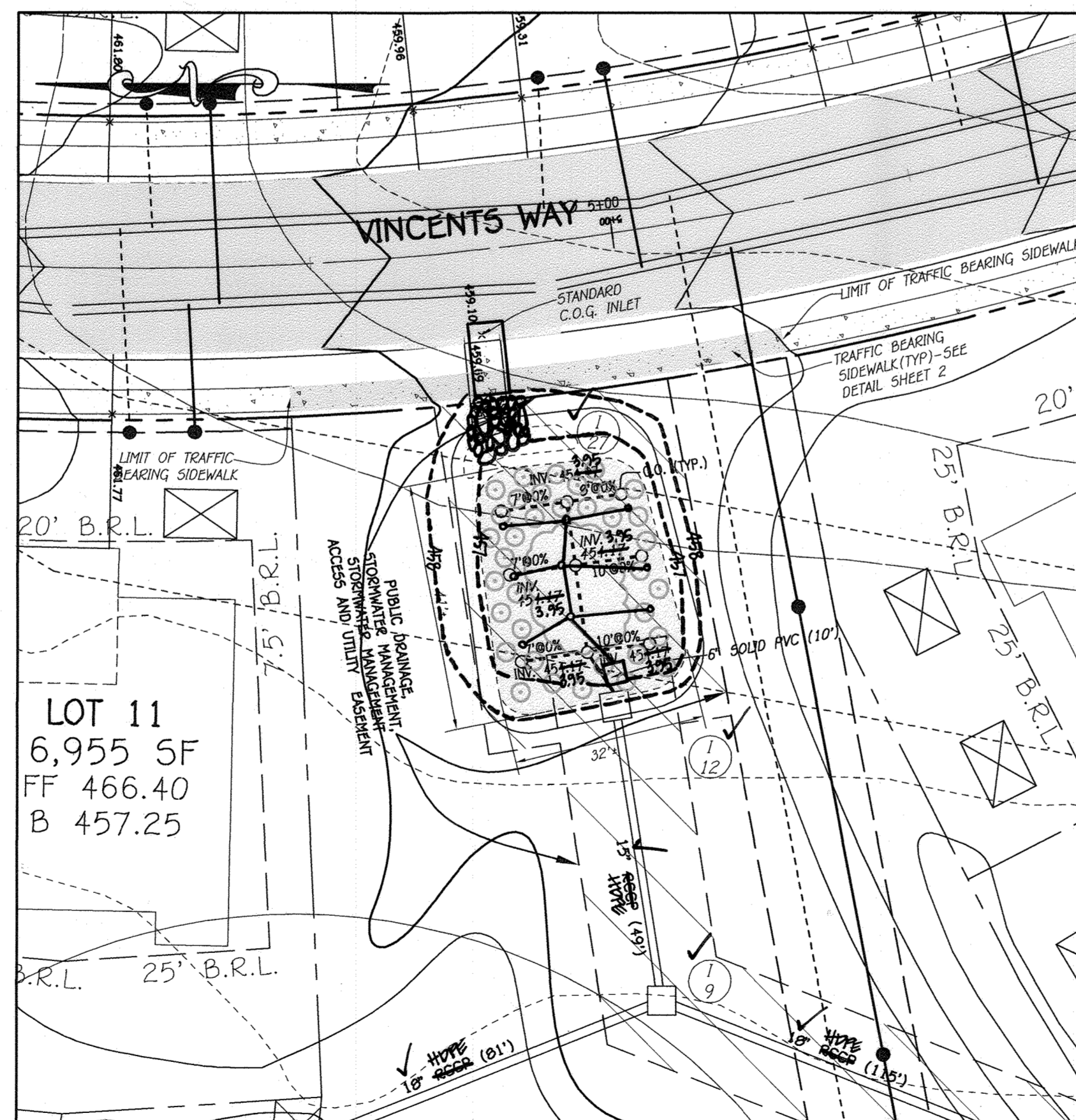
Approved: Howard County Department Of Public Works  
*Howard* for *J.P.* 8/1/17  
 Chief, Bureau Of Highways Date

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
•	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED SEWER
---	PROPOSED WATER
---	PROPOSED ROAD WIDENING
---	NON CREDIT OPEN SPACE
---	LIMIT OF DISTURBANCE
---	50% SILT FENCE
---	5% SILT FENCE
---	15-24% SLOPES
---	25% OR GREATER SLOPES
---	1" SOILS
---	10" SOILS
---	ERODIBLE SOILS
---	WETLANDS
---	100 YEAR FLOODPLAIN
---	STREAM BUFFER
---	DRAINAGE DITCH
---	NON ROOFTOP DISCONNECTION (N-2)
---	DRYWELL (M-5)-TYPICAL
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	SPECIMEN TREES (TO BE REMOVED)
---	PUBLIC WATER, SEWER & UTILITY EASEMENT
---	RECREATIONAL OPEN SPACE
---	USE IN COMMON ACCESS EASEMENT
---	EXISTING SCALE EASEMENT (L13067, F.477)
---	FOREST CONSERVATION EASEMENT RETENTION AREA OUTSIDE P.F.
---	FOREST CONSERVATION EASEMENT PLANTING AREA TREE SIZES: T2, T3 & 4
---	FOREST CONSERVATION EASEMENT NON-RETENTION AREA INSIDE P.F.
---	STREET TREES
---	ON-SITE SIGNAGE/LIMIT OF FOREST CONSERVATION EASEMENT



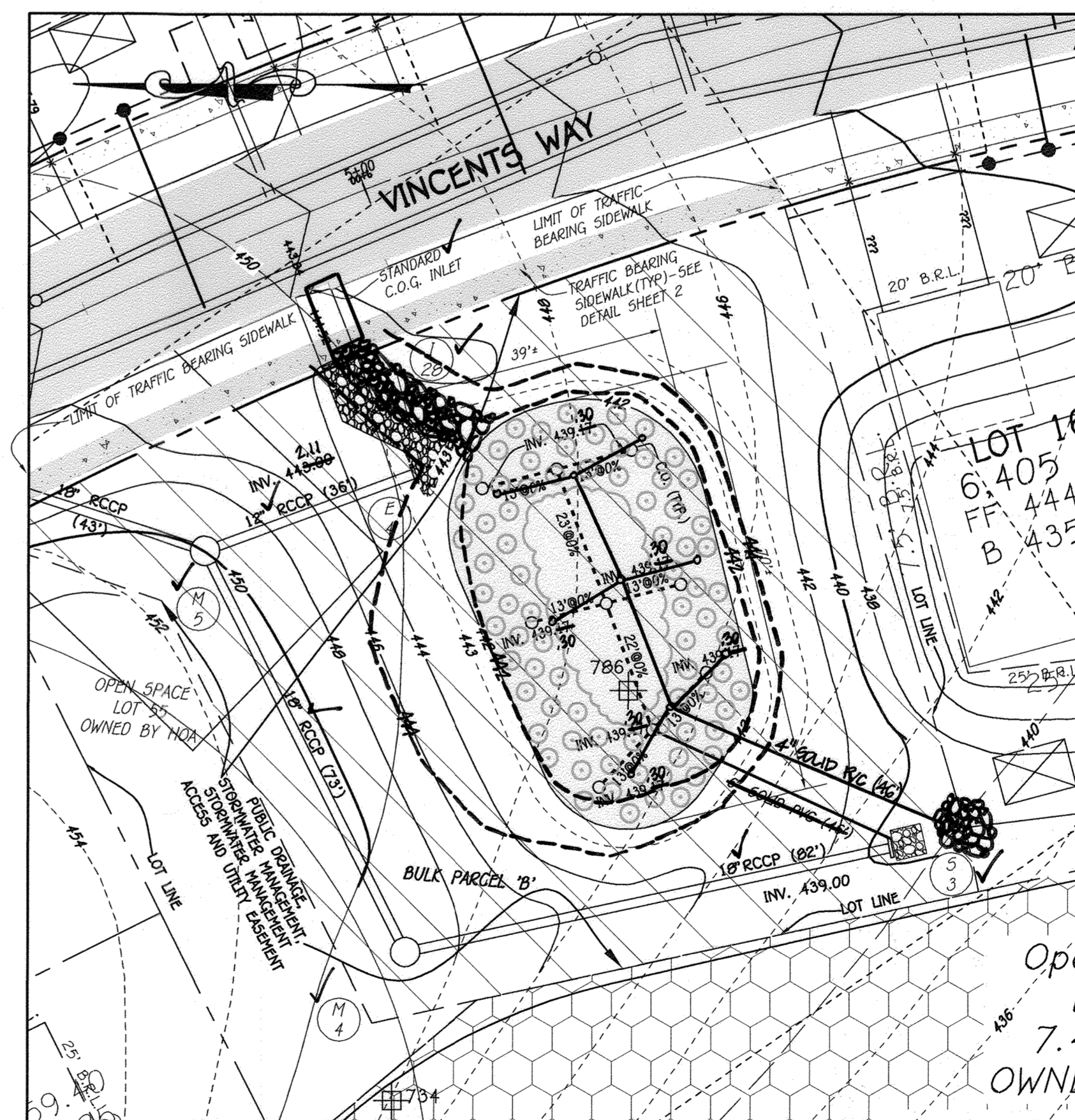
**M-6 (6)**  
 (MICRO-BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 18,424 SqFt  
 FILTER AREA: 1,334 SqFt  
 ELEVATION 434.79  
 PERIMETER 144.7  
 WEIR ELEVATION 435.76

NOTE:  
 1) STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.



**F-6 (7)**  
 (MICRO-BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 35,291 SqFt  
 FILTER AREA: 1,160 SqFt  
 ELEVATION 457.0  
 PERIMETER 189.13  
 WEIR ELEVATION 458.75

NOTE:  
 1) STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.



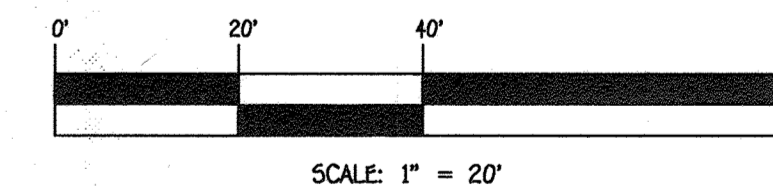
**F-6 (8)**  
 (MICRO-BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 60,339 SqFt  
 FILTER AREA: 2,508 SqFt  
 ELEVATION 442.0  
 PERIMETER 180.7  
 WEIR ELEVATION 448.4

NOTE:  
 1) STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.

**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



Date: *6/24/16*  
 ALDO MICHAEL VITUCCI #20748



**REPLACEMENT SHEET  
 STORMWATER MANAGEMENT PLANS,  
 NOTES AND DETAILS  
 ENCLAVE AT RIVER HILL  
 PHASE 1**

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 38 OF 58 F-15-110

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE: P.O. BOX 10272 BALTIMORE NATIONAL FILE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2899



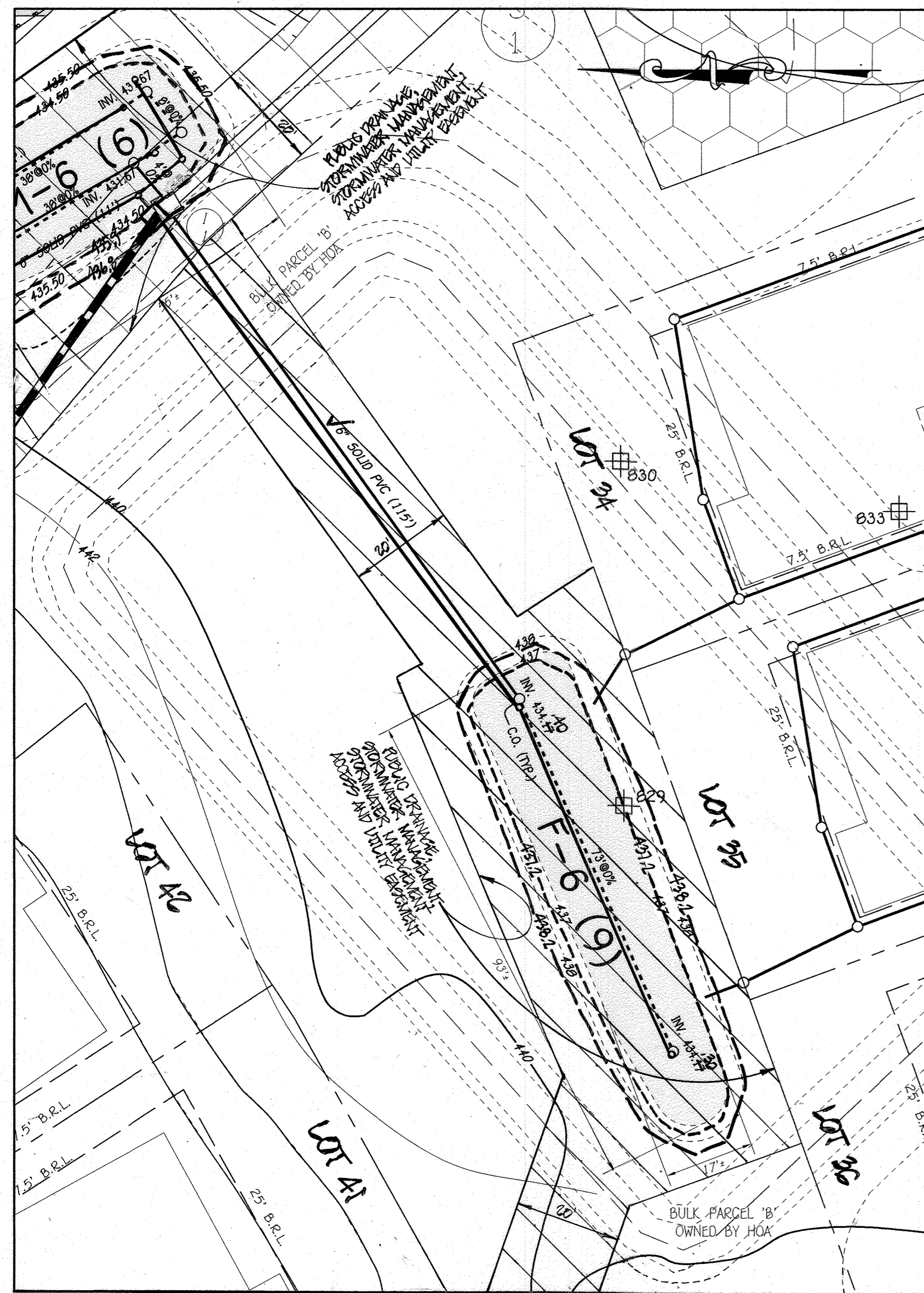
**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.  
*Frank J. Manalansan II*  
 Date: *7/12/17*

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 230  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

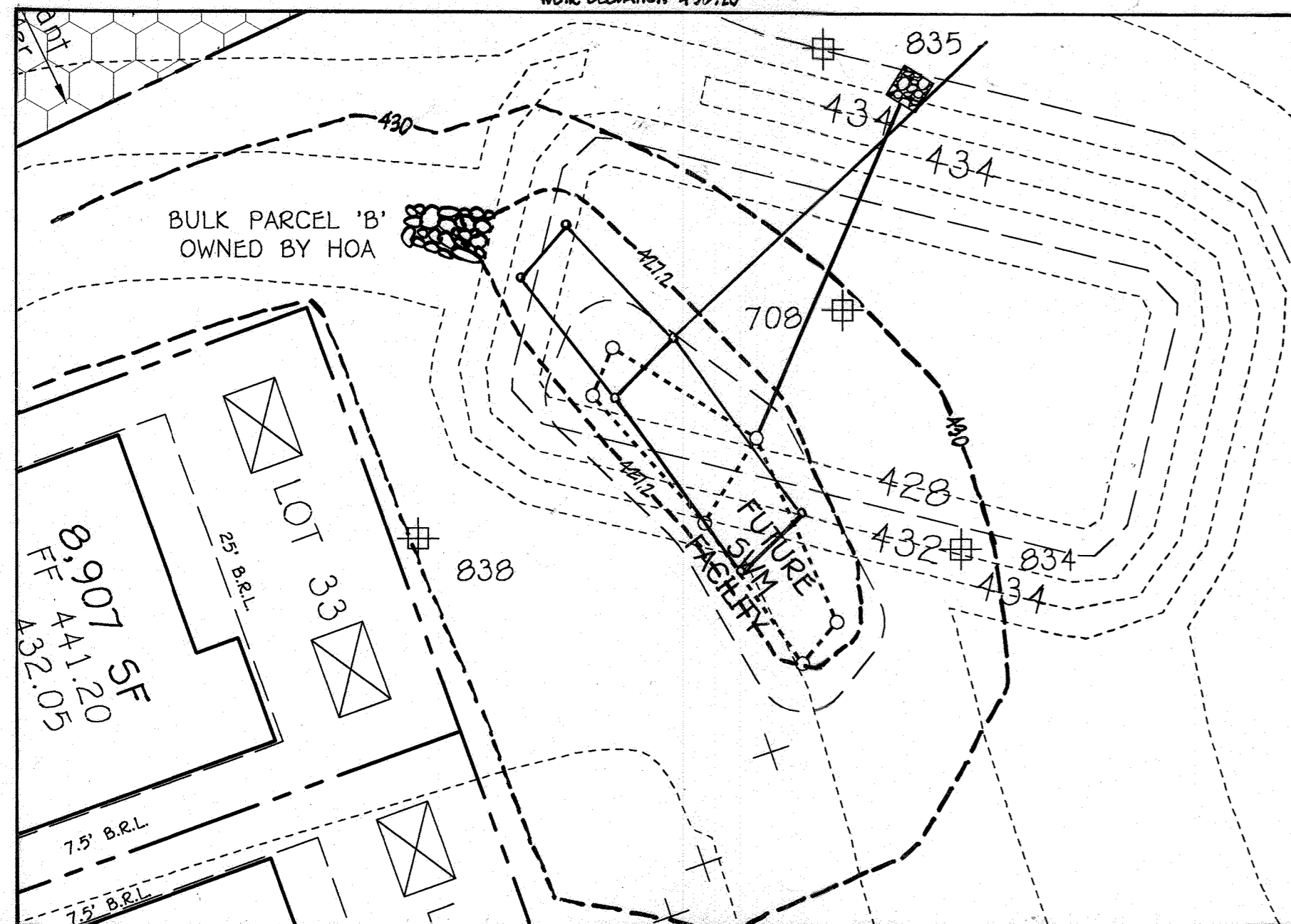
**OWNERS**  
 TIERNY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697

"AS-BUILT"



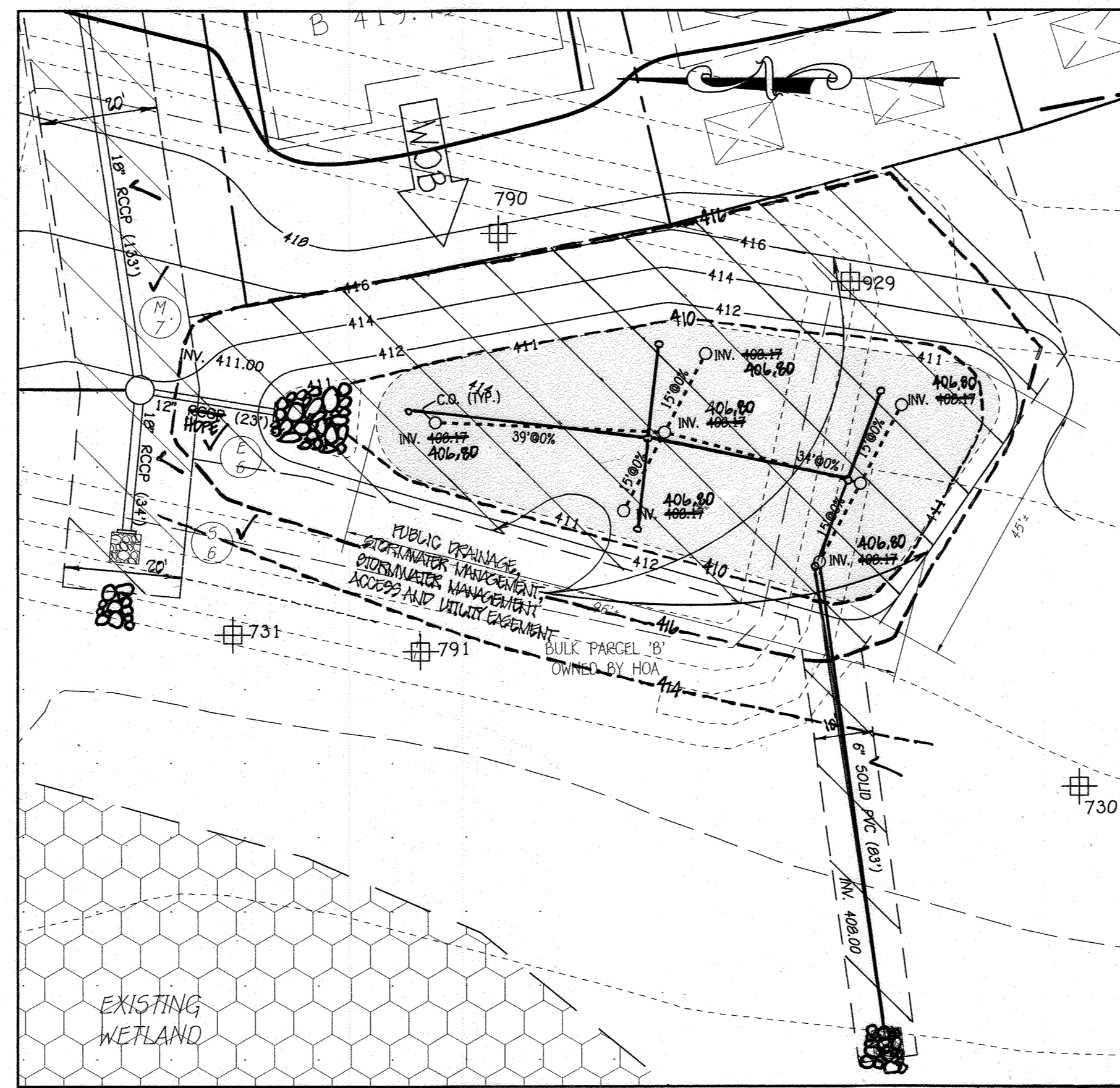
**F-6 (9)**  
 (MICRO BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 57,544 Sq.Ft.  
 FILTER AREA: 1,630 Sq.Ft.  
 ELEVATION 437.00  
 PERIMETER 644.715  
 WEIR ELEVATION 439.10

NOTE:  
 1) STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.



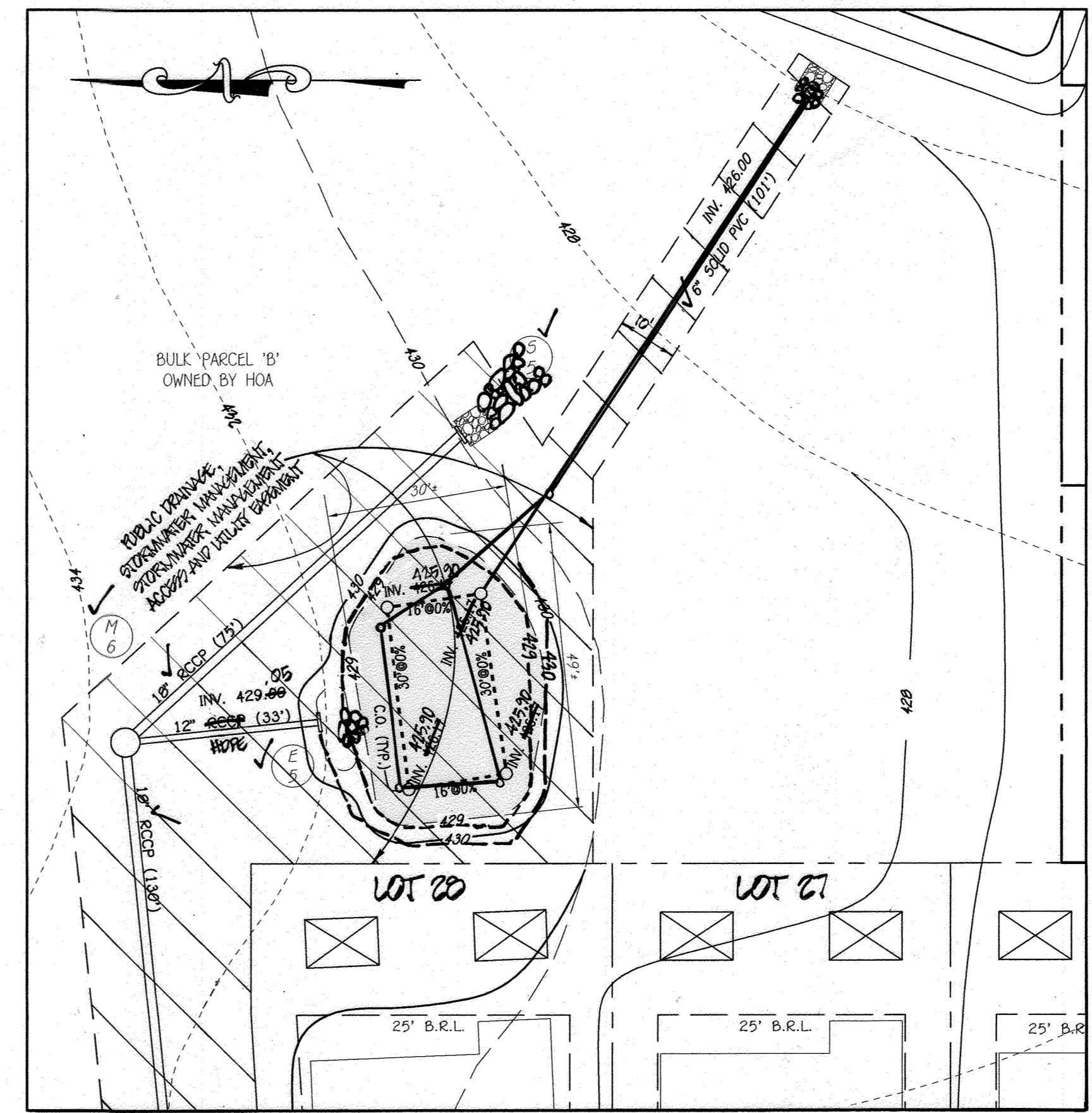
**M-6 (13)**  
 (MICRO BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 20,000 Sq.Ft.  
 FILTER AREA: 4,000 Sq.Ft.  
 ELEVATION 437.00  
 PERIMETER 1,000.00  
 WEIR ELEVATION 439.10

NOTE:  
 1) STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.  
 2) FINAL DESIGN TO BE PROVIDED WITH SITE DEVELOPMENT PLAN.  
 SEE 207-17-014



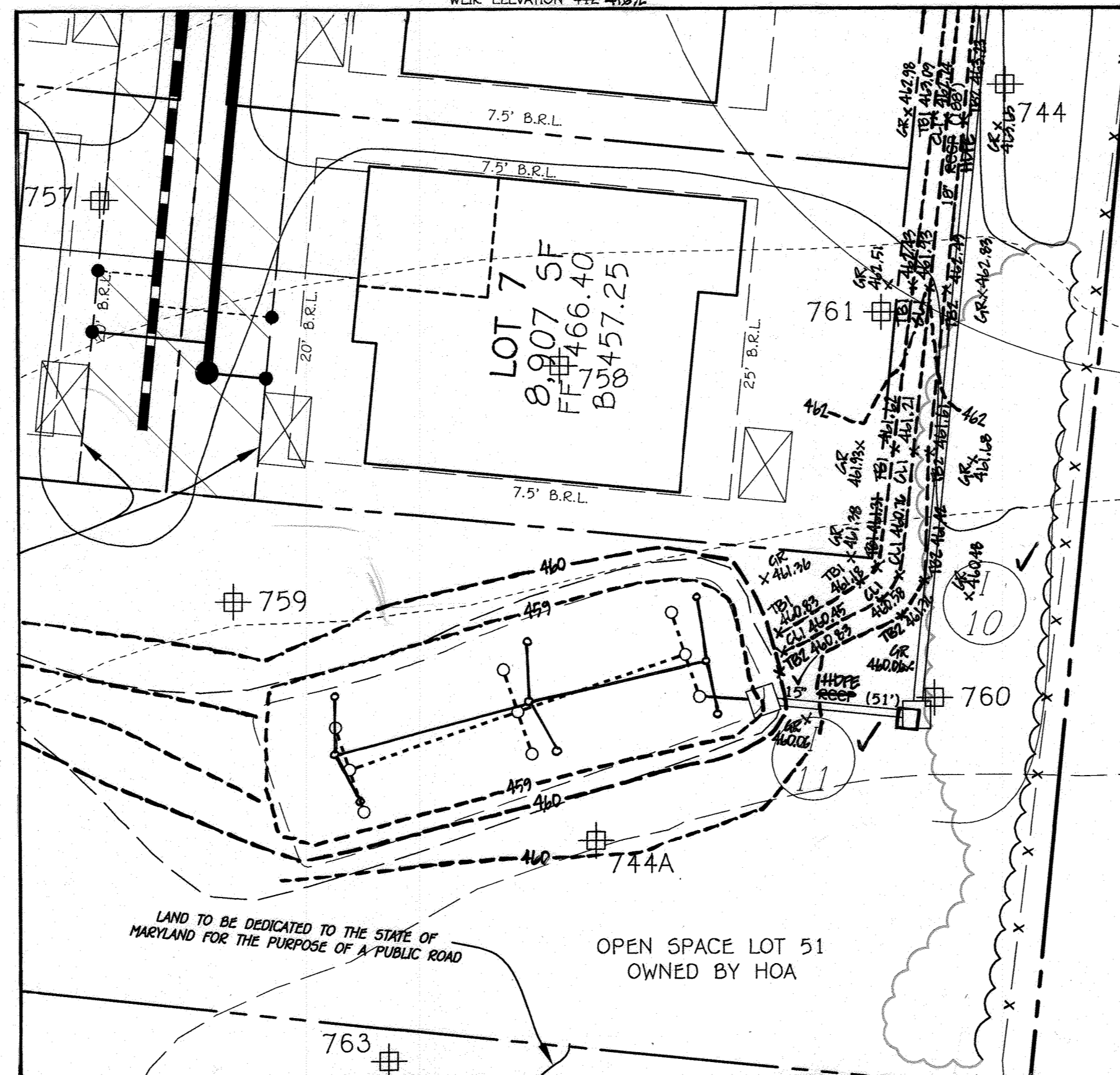
**F-6 (10)**  
 (MICRO BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 69,218 Sq.Ft.  
 FILTER AREA: 3,304 Sq.Ft.  
 ELEVATION 409.10  
 PERIMETER 249.5  
 WEIR ELEVATION 410.2

NOTE:  
 1) STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.



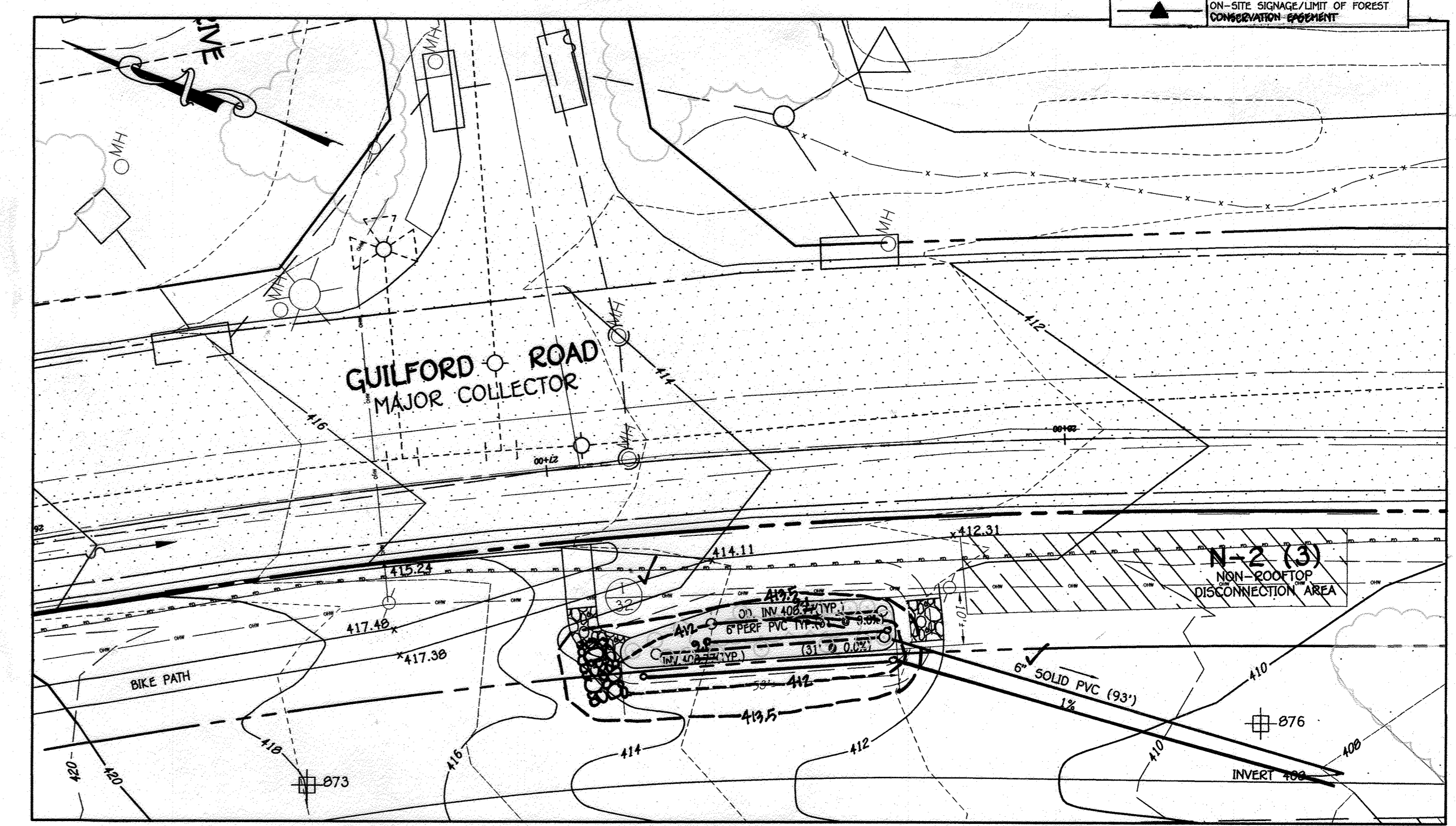
**F-6 (11)**  
 (MICRO BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 36,965 Sq.Ft.  
 FILTER AREA: 1,000 Sq.Ft.  
 ELEVATION 429.00  
 PERIMETER 113.4  
 WEIR ELEVATION 430.10

NOTE:  
 1) STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.



**F-6 (12)**  
 (MICRO BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 20,000 Sq.Ft.  
 FILTER AREA: 4,000 Sq.Ft.  
 ELEVATION 466.40  
 PERIMETER 844.20  
 WEIR ELEVATION 467.2

NOTE:  
 1) STORMWATER MANAGEMENT FACILITY TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.  
 2) FINAL DESIGN TO BE PROVIDED WITH SITE DEVELOPMENT PLAN.  
 SEE 207-17-014



**M-6 (1)**  
 (BIO-RETENTION FACILITY)  
 SCALE: 1" = 20'  
 DRAINAGE AREA: 7,716 Sq.Ft.  
 FILTER AREA: 494 Sq.Ft.  
 ELEVATION 412.31  
 PERIMETER 143.5  
 WEIR ELEVATION 413.50

NOTE: NO CONTRIBUTING DRAINAGE TO FLOW ACROSS BIKE PATH

SCALE: 1" = 20'

REVISIONS		DATE
NO.	DESCRIPTION	
1	ADD PUBLIC UTILITY AND STORMWATER MANAGEMENT EXHIBITS AND SURVEY BIO-RETENTION FACILITY (F-6 (9) AND F-6 (10))	10/9/16
2	REVISE GUILFORD ROAD & ADJACENT FACILITIES AND REMOVE OTHER 1 FACILITY	7/9/17

Approved: Department of Planning And Zoning  
*Karl Sedwick* 8-3-16  
 Chief, Division of Land Development  
 Date

Approved: Howard County Department of Public Works  
*J. McNeill* 8/1/16  
 Chief, Bureau of Highways  
 Date

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
X 562.2	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED SEWER
---	PROPOSED WATER
---	PROPOSED ROAD WIDENING
---	NON CREDIT OPEN SPACE
---	LIMIT OF DISTURBANCE
---	SUPER SILT FENCE
---	SILT FENCE
---	15-24% SLOPES
---	25% OR GREATER SLOPES
---	'C' SOILS
---	'U' SOILS
---	ERODIBLE SOILS
---	WETLANDS
---	100 YEAR FLOODPLAIN
---	STREAM BUFFER
---	DRAINAGE DIVIDE
---	NON ROOFTOP DISCONNECTION (N-2)
---	DRAWELL (N-2) TYPICAL
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	SPECIMEN TREE (TO BE REMOVED)
---	PUBLIC WATER, SEWER & UTILITY EASEMENT
---	RECREATIONAL OPEN SPACE
---	USE IN COMMON ACCESS EASEMENT
---	EXISTING SEAL EASEMENT (L.13087, F.477)
---	FOREST CONSERVATION EASEMENT
---	FOREST CONSERVATION EASEMENT PLANTING AREA OUTSIDE F.P.
---	FOREST CONSERVATION EASEMENT PLANTING AREA
---	FOREST CONSERVATION EASEMENT PLANTING AREA INSIDE F.P.
---	NON-RETENTION AREA INSIDE F.P.
---	STREET TREES
---	ON-SITE SIGNAGE/LIMIT OF FOREST CONSERVATION EASEMENT

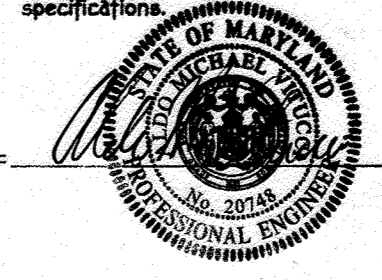
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 451-2895



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.  
*Frank Mavalangan II* 6/29/16  
 FRANK MAVALANGAN II Date

**DEVELOPER**  
 BEAZER HOMES, LLC  
 9565 GUILFORD ROAD - SUITE 200  
 COLUMBIA, MARYLAND 21046  
 (767)-894-0182

**OWNERS**  
 TIERNY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALARASAS, CALIFORNIA 91302  
 (818)-305-3697

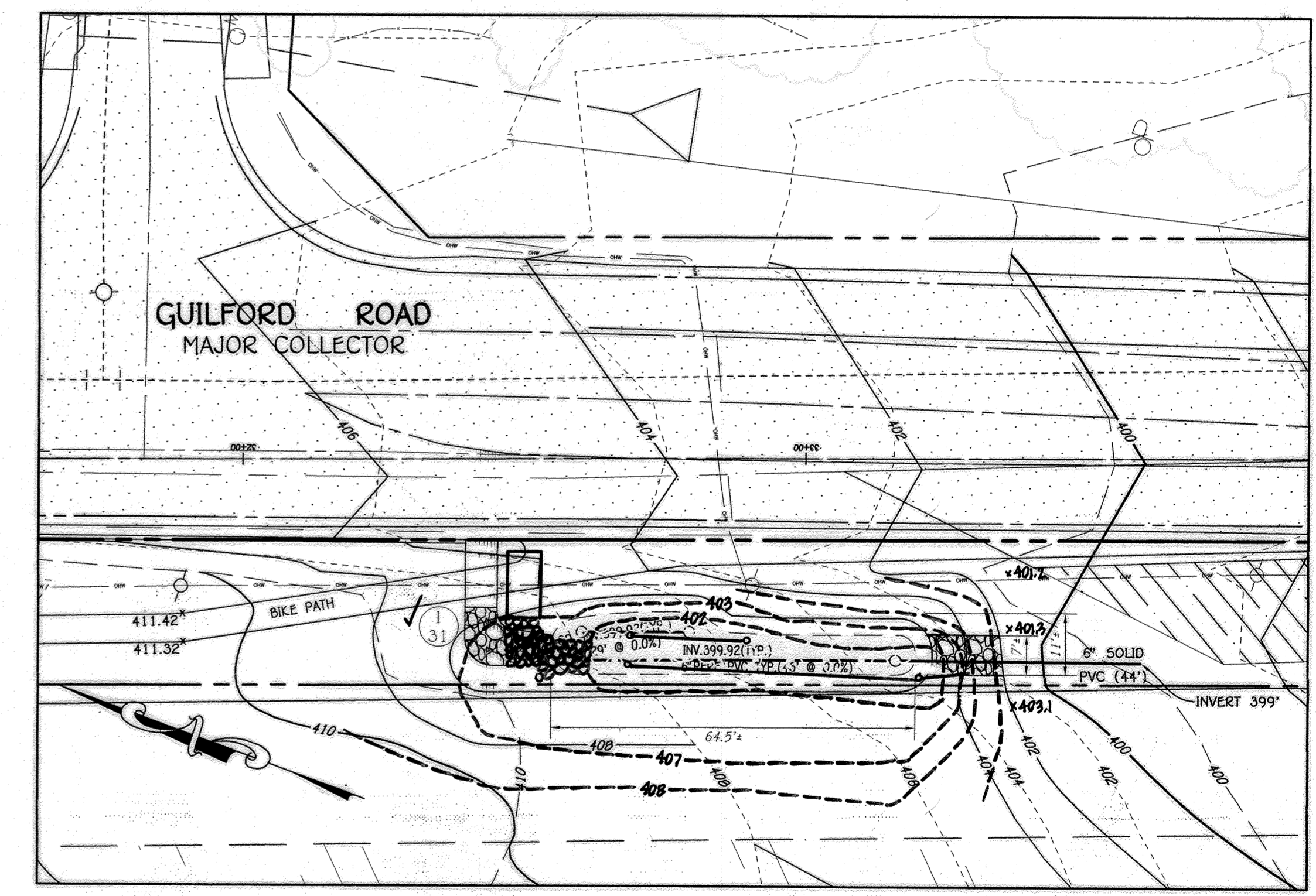
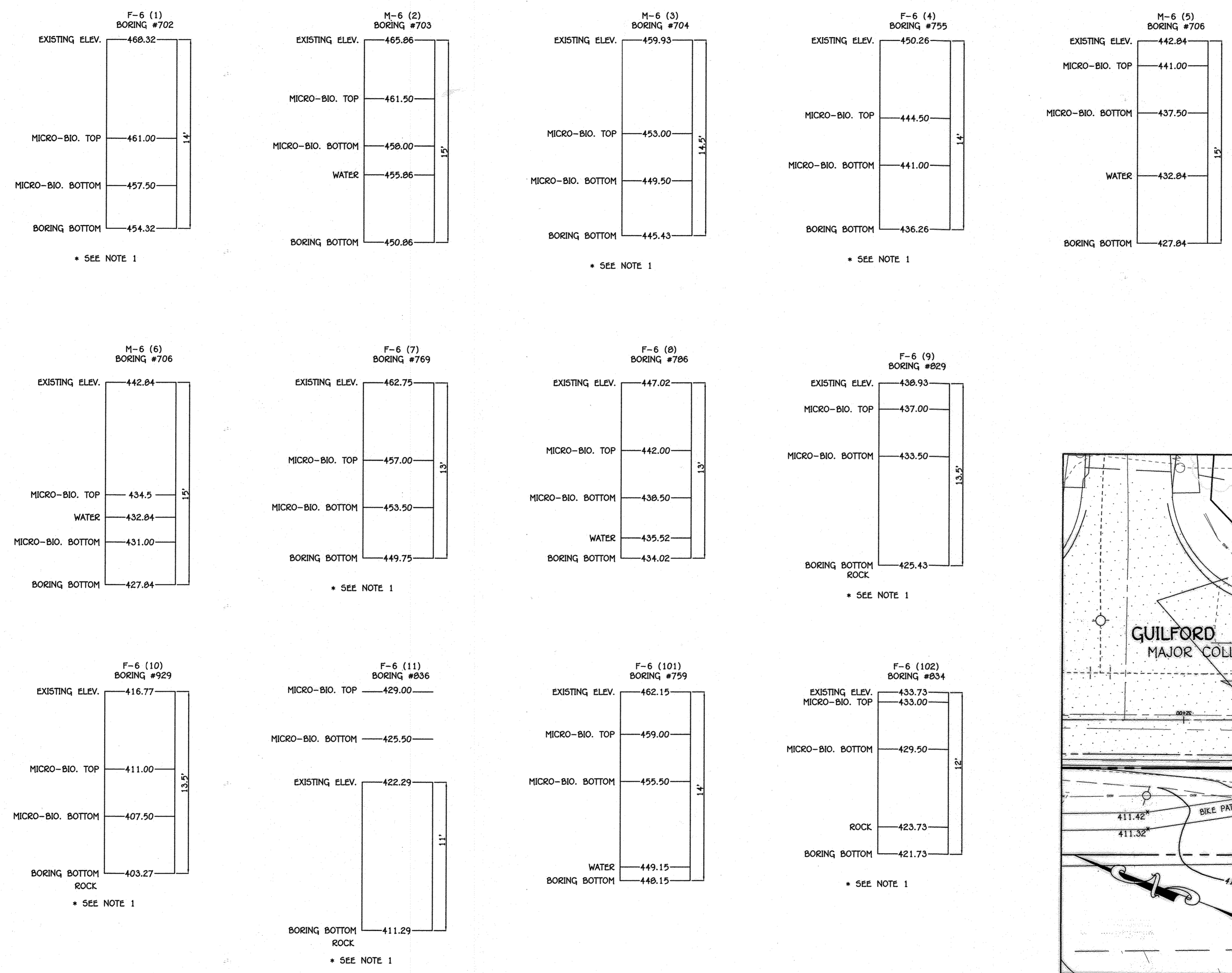


I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan were constructed as shown in this "AS-BUILT" plan meet the approved plans and specifications.  
 8/24/16  
 ALDO MICHAEL VITUCCI #20748  
 Date

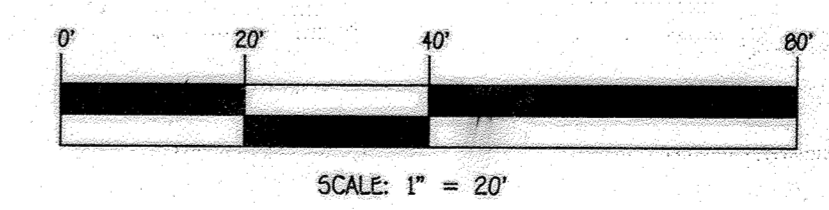
**STORMWATER MANAGEMENT PLANS, NOTES AND DETAILS**  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 08 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 39 OF 58 F-15-110

"AS-BUILT"

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED GUILFORD ROAD & ADJACENT FACILITIES AND RELATED DRAINAGE & RETENTION	7/19/17
Approved: Department Of Planning And Zoning		
	<i>Karl Schulz</i> Chief, Division Of Land Development	8.3.16 Date
	<i>[Signature]</i> Chief, Development Engineering Division	11/16 Date
Approved: Howard County Department Of Public Works		
	<i>[Signature]</i> Chief, Bureau Of Highways	7/27/2016 Date



NOTE: NO CONTRIBUTING DRAINAGE TO FLOW ACROSS BIKE PATH



**BORING LOGS, NOTES AND DETAILS**  
**ENCLAVE AT RIVER HILL**

**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 40 OF 58 **F-15-110**

\*NOTE 1 - NO WATER FOUND

**AS-BUILT CERTIFICATION**  
 I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.  
 Date: 01/24/22  
 ALDO MICHAEL VITUCCI #20748  
 PROFESSIONAL ENGINEER

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.  
 Date: 6/27/16  
 FRANK MANAWANAN II

**OWNERS**  
 TERRY PACO - OAKSHIRE LP  
 14191 VENTURE BOULEVARD  
 OAKLAND, CALIFORNIA 94612  
 (916) - 365-3007

**DEVELOPER**  
 BEAVER HILLS LLC  
 8705 GUILFORD ROAD SUITE 200  
 COLUMBIA, MARYLAND 21046  
 (703) - 874-0182

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461 - 2925

"AS-BUILT"

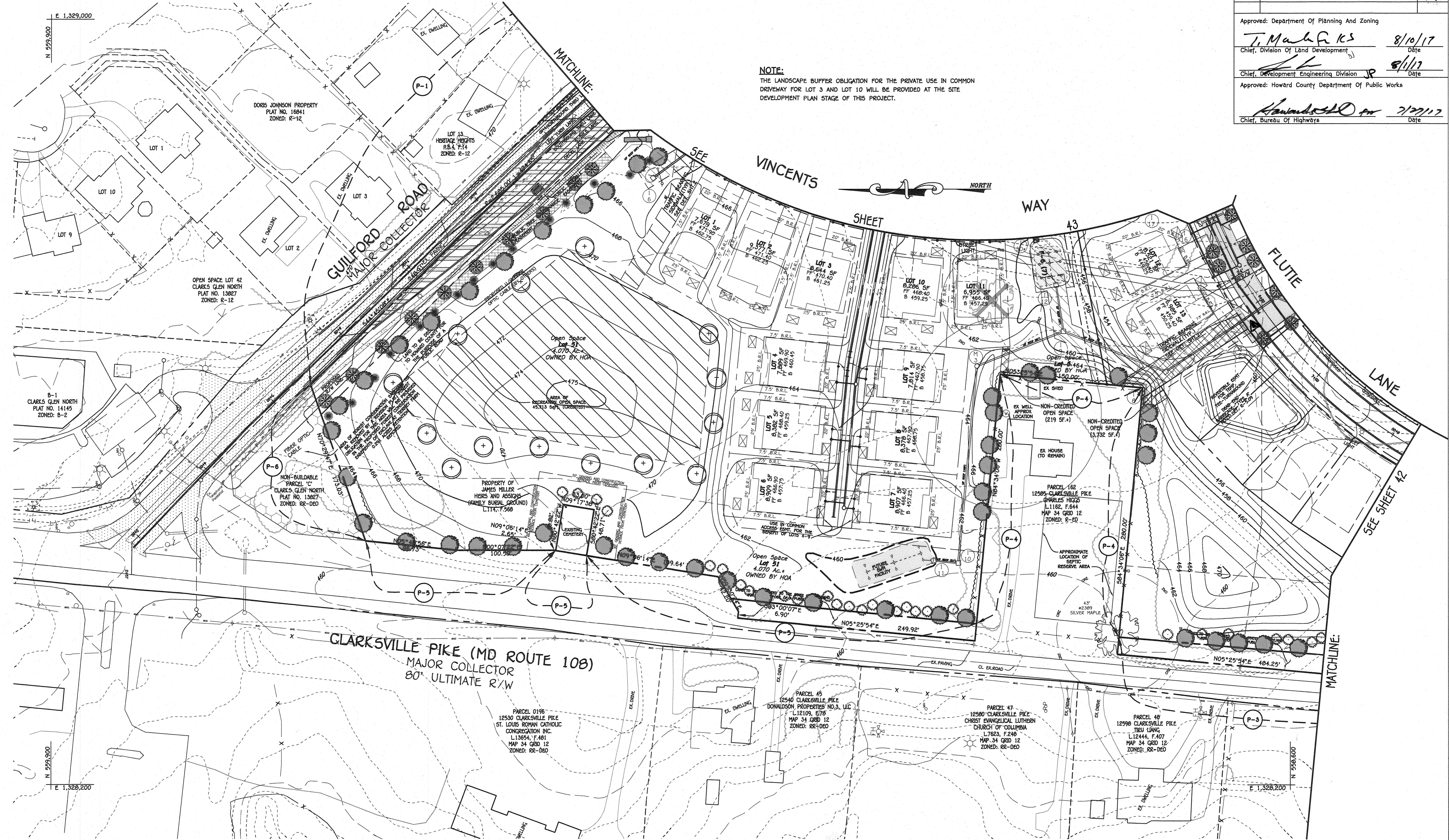


SYMBOL	DESCRIPTION
(Symbol)	EXISTING CONTOUR 5' INTERVAL
(Symbol)	EXISTING CONTOUR 10' INTERVAL
(Symbol)	PROPOSED CONTOUR 5' INTERVAL
(Symbol)	PROPOSED CONTOUR 10' INTERVAL
(Symbol)	PROPOSED STORM DRAIN PIPE
(Symbol)	PROPOSED SEWER
(Symbol)	PROPOSED WATER
(Symbol)	PROPOSED ROAD MEDIAN
(Symbol)	NON-CREST OPEN SPACE
(Symbol)	LEFT OF OBSTRUCTION
(Symbol)	SURVEY BULL EYE
(Symbol)	OUT FENCE
(Symbol)	15'-24" SLOPES
(Symbol)	EX. OR GRASSY SLOPES
(Symbol)	1" SOILS
(Symbol)	10" SOILS
(Symbol)	ROCKY SLOPE
(Symbol)	WETLANDS
(Symbol)	100 YR. FLOODPLAIN
(Symbol)	STORM WATER
(Symbol)	SEWERAGE CONDUIT
(Symbol)	NON-ROOFTOP AIR CONDITIONING (N-R)
(Symbol)	SEWER (12" & 18" SIZES)
(Symbol)	810 RETENTION FACILITY (17'-8" OR (17'-8") AS NOTED)
(Symbol)	SPECIMEN TREE (TO BE REMOVED)
(Symbol)	PUBLIC WHITE GOODS & UTILITY GARMENT
(Symbol)	RECREATIONAL OPEN SPACE
(Symbol)	USE IN COMMON ACCESS GARMENT
(Symbol)	EXISTING SCALE GARMENT (L13087, F1777)
(Symbol)	FOREST CONSERVATION GARMENT
(Symbol)	RETENTION AREA OUTSIDE FZ
(Symbol)	FOREST CONSERVATION GARMENT
(Symbol)	PLAYING AREA
(Symbol)	FOREST CONSERVATION GARMENT
(Symbol)	NON-RETENTION AREA INSIDE FZ
(Symbol)	SHRUB TREES
(Symbol)	PERMETRER LANDSCAPING

REVISIONS		
NO.	DESCRIPTION	DATE
1	UPDATE GUILDFORD ROAD AND SUPPORTING FACILITIES	5/2/17
2	REPLACE STORM DRAIN #1-2	10/20/21

Approved: Department of Planning And Zoning  
*T. Mark Hicks* 8/10/17  
 Chief, Division Of Land Development Date

Approved: Howard County Department Of Public Works  
*Howard County* 7/27/17  
 Chief, Bureau Of Highways Date



**NOTE:**  
 THE LANDSCAPE BUFFER OBLIGATION FOR THE PRIVATE USE IN COMMON DRIVEWAY FOR LOT 3 AND LOT 10 WILL BE PROVIDED AT THE SITE DEVELOPMENT PLAN STAGE OF THIS PROJECT.

**LANDSCAPE DEVELOPER'S CERTIFICATE**  
 I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

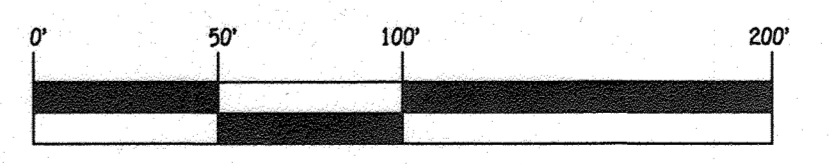
*T.J. Collins* 7/12/17  
 Name Date

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

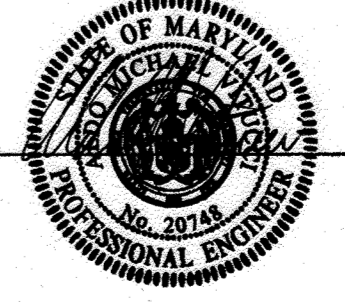
*Frank J. Manalansan II*  
 PROFESSIONAL LAND SURVEYOR  
 Name Date

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILDFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697



SCALE: 1" = 50'  
**AS-BUILT CERTIFICATION**  
 Note: There is no "AS-BUILT" information provided on this sheet.



REPLACEMENT SHEET  
 STREET TREE AND LANDSCAPE PLAN  
**ENCLAVE AT RIVER HILL PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK PREVIOUS HOWARD COUNTY FILES: ECP-15-005, PB#409, SP-05-006 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18 PARCEL NOS.: B8 & 97 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JUNE 24, 2016 SHEET 41 OF 58 **F-15-110**

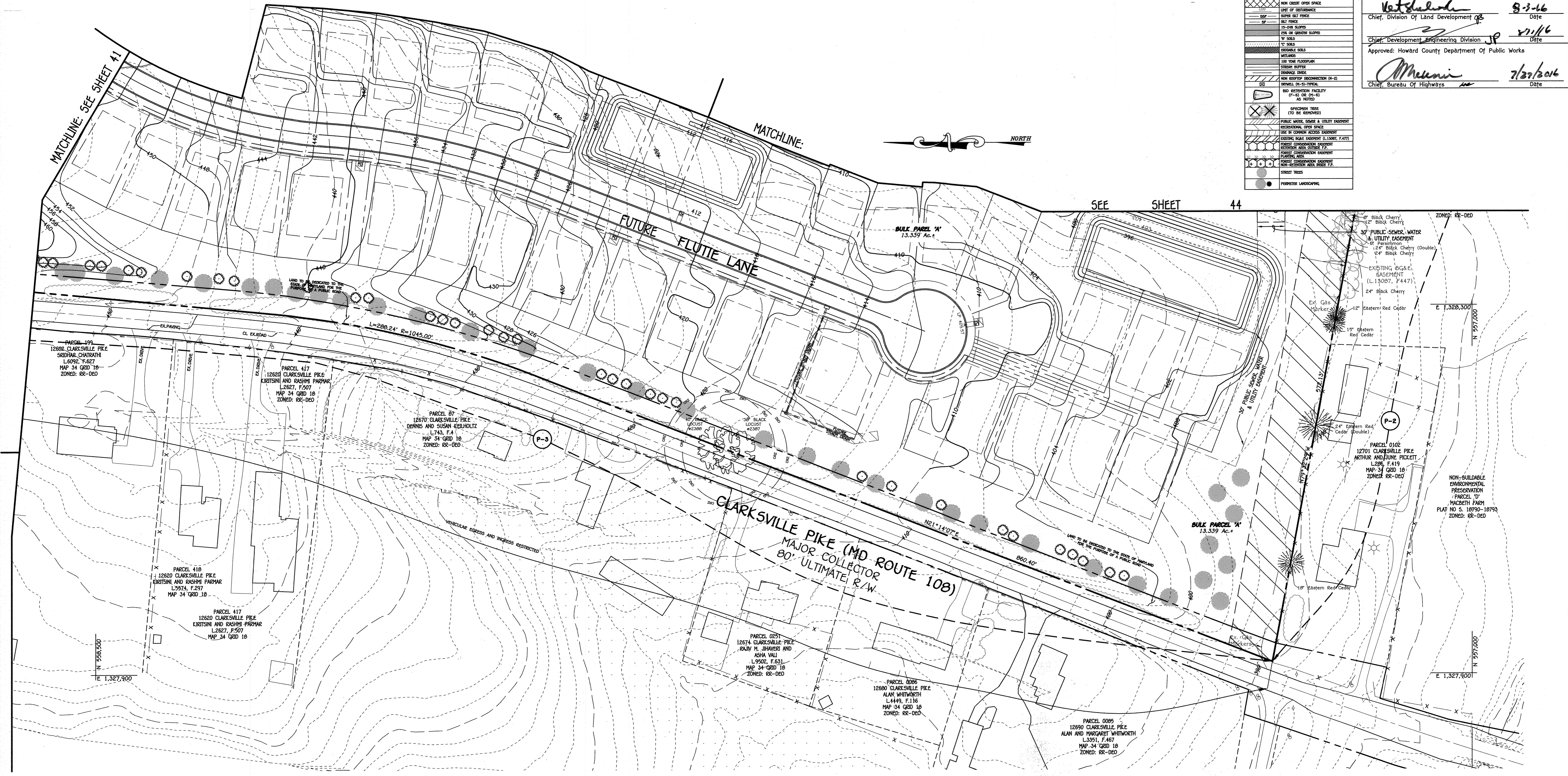
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED OWNER & DEVELOPER	7/19/17

Approved: Department Of Planning And Zoning  
*[Signature]* 8-3-16 Date  
 Chief, Division Of Land Development

Approved: Howard County Department Of Public Works  
*[Signature]* 7/27/2016 Date  
 Chief, Bureau Of Highways

SYMBOL	DESCRIPTION
[Symbol]	EXISTING CONTOUR 2' INTERVAL
[Symbol]	EXISTING CONTOUR 10' INTERVAL
[Symbol]	PROPOSED CONTOUR 2' INTERVAL
[Symbol]	PROPOSED CONTOUR 10' INTERVAL
[Symbol]	PROPOSED CONTOUR 5' INTERVAL
[Symbol]	PROPOSED STREET DRAIN PIPE
[Symbol]	PROPOSED SIDEWALK
[Symbol]	PROPOSED DRIVE
[Symbol]	PROPOSED ROAD
[Symbol]	PROPOSED ROAD WIDENING
[Symbol]	NON-CREST OPEN SPACE
[Symbol]	LINE OF RESERVANCE
[Symbol]	SURVEY BULLY MARK
[Symbol]	BULLY MARK
[Symbol]	15'-15' SLOPE
[Symbol]	2% OR GREATER SLOPE
[Symbol]	1" SOILS
[Symbol]	2" SOILS
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[Symbol]	97" SOILS
[Symbol]	98" SOILS
[Symbol]	99" SOILS
[Symbol]	100" SOILS



**LANDSCAPE DEVELOPER'S CERTIFICATE**  
 I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

*[Signature]* 6/29/16  
 Name Date

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.

*[Signature]* 6/29/16  
 Name Date

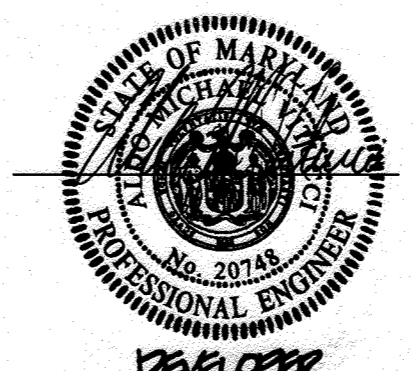


**AS-BUILT CERTIFICATION**  
 Note: There is no "AS-BUILT" information provided on this sheet.

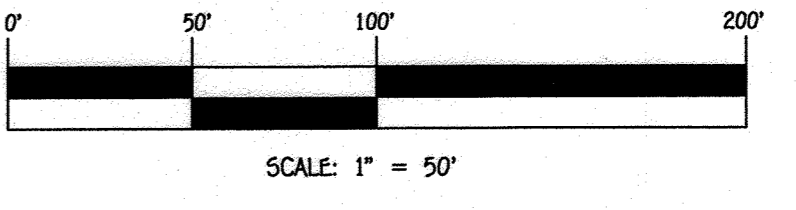
*[Signature]* 6/29/16  
 Name Date

**OWNERS**  
 TIBNEY PRIMO-CLARKVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALIFORNIA, CALIFORNIA 91702  
 (916) 395-3277

**DEVELOPER**  
 DEWEZ THOMAS, LLC  
 8705 GUILFORD ROAD - SUITE 070  
 CALUMET, MARYLAND 21046  
 (763) 694-0182

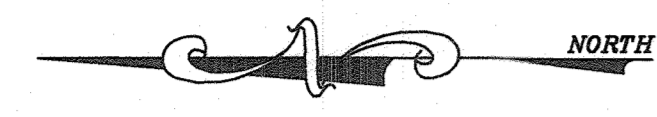


**PROFESSIONAL ENGINEER**  
 No. 20748  
 6/29/16  
 Date



**STREET TREE AND LANDSCAPE PLAN**  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 42 OF 58 F-15-110

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET



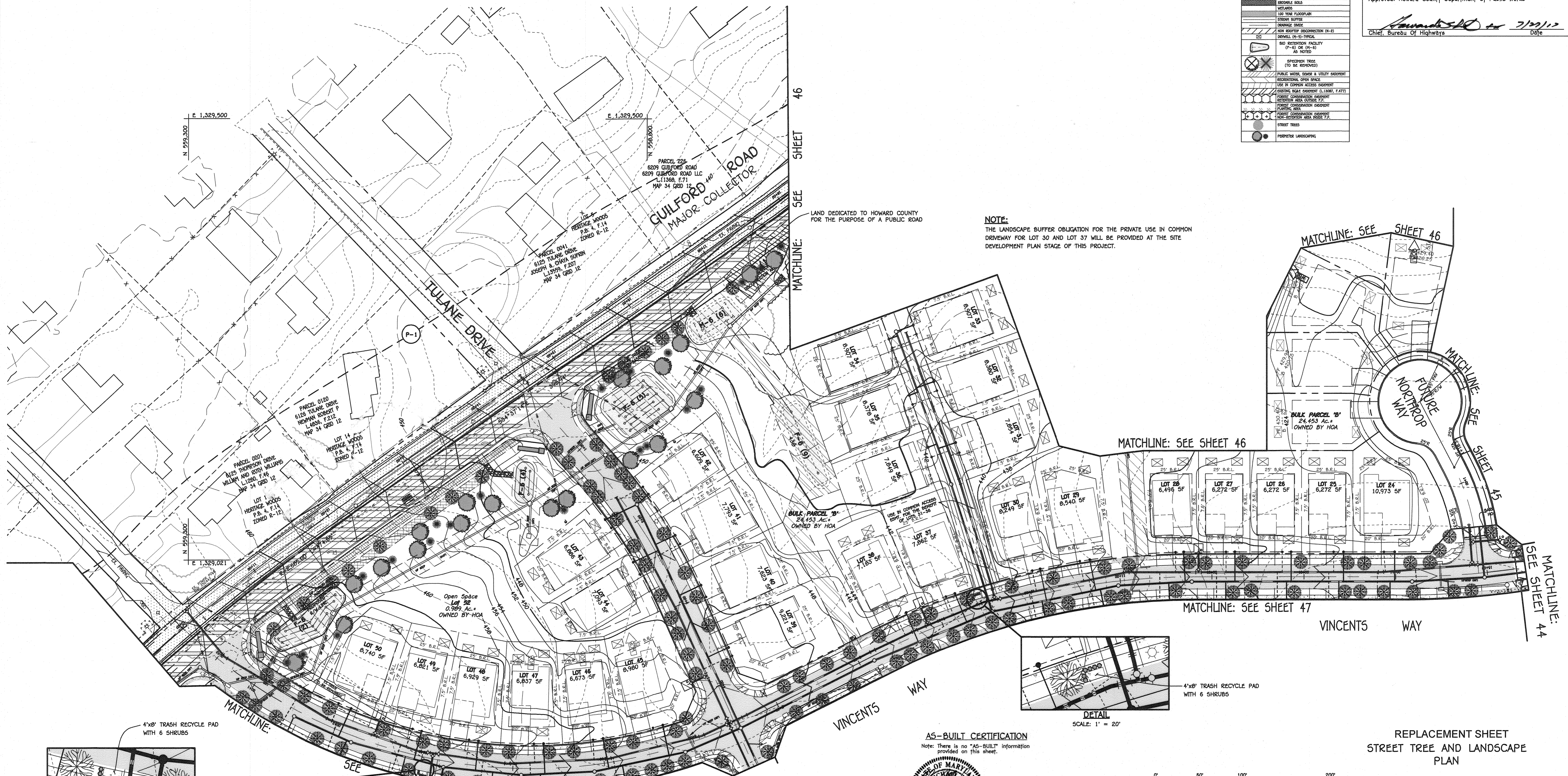
LEGEND	
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	PROPOSED CONTOUR 2' INTERVAL
	PROPOSED CONTOUR 10' INTERVAL
	SPOT ELEVATION
	PROPOSED STORM DRAIN PIPE
	PROPOSED SEWER
	PROPOSED WATER
	PROPOSED ROAD MEDIAN
	MIN. GROUND OPEN SPACE
	SITE OF DISTURBANCE
	SUPER SET FORCE
	BELT FORCE
	12-48% SLOPES
	5% SOILS
	15% SOILS
	PROPOSED SOILS
	WETLANDS
	100 YEAR FLOODPLAIN
	STREAM BUFFER
	DRAINAGE BASIN
	NON ROOFTOP DISCHARGE (N-2)
	DEWALL (N-3) TYPICAL
	800 RETENTION FACILITY (R-4) OR (R-5) AS NOTED
	PROPOSED TREE (T-1) OR (T-2) AS NOTED
	PUBLIC WATER, SEWER & UTILITY easement
	RECREATIONAL OPEN SPACE
	USE IN COMMON ACCESS easement
	EXISTING SCALE easement (L13007, F477)
	FOREST CONSERVATION easement
	FOREST CONSERVATION easement
	FOREST CONSERVATION easement
	FOREST CONSERVATION easement
	STREET TREES
	PROPOSED LANDSCAPING

REVISIONS		
NO.	DESCRIPTION	DATE
1	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17

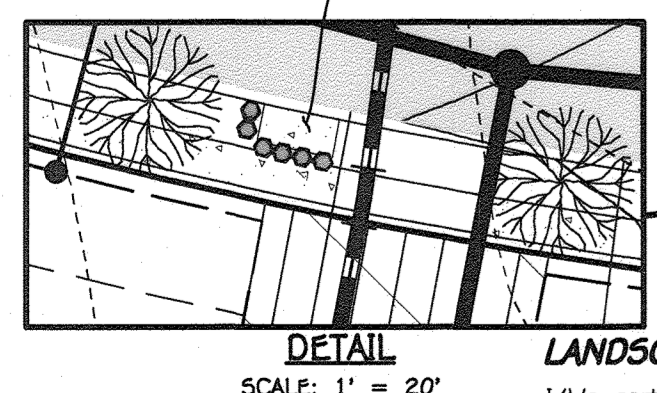
Approved: Department Of Planning And Zoning  
*T. Mah* **AKS** 8/10/17  
 Chief, Division Of Land Development Date

Approved: Chief, Development Engineering Division  
 8/1/17  
 Date

Approved: Howard County Department Of Public Works  
*[Signature]* 7/27/17  
 Chief, Bureau Of Highways Date



**NOTE:**  
 THE LANDSCAPE BUFFER OBLIGATION FOR THE PRIVATE USE IN COMMON DRIVEWAY FOR LOT 30 AND LOT 37 WILL BE PROVIDED AT THE SITE DEVELOPMENT PLAN STAGE OF THIS PROJECT.



**LANDSCAPE DEVELOPER'S CERTIFICATE**  
 I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Name: *[Signature]* Date: 7/12/17

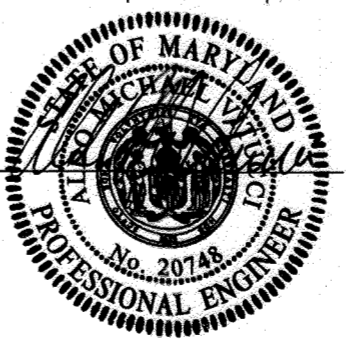


**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

*Frank J. Manulansan II* 7/14/17  
 FRANK MANULANSAN II Date

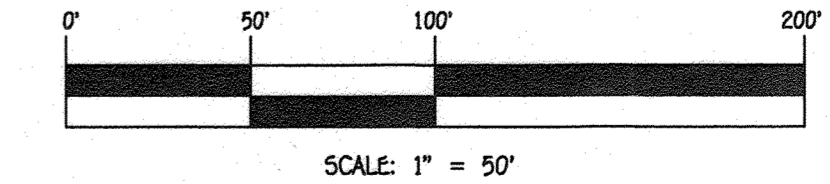
**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697



**AS-BUILT CERTIFICATION**  
 Note: There is no "AS-BUILT" information provided on this sheet.

*[Signature]* 01/24/22  
 Date



**REPLACEMENT SHEET**  
**STREET TREE AND LANDSCAPE PLAN**  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 10  
 PARCEL NOS.: 08 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 43 OF 58 F-15-110

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC ROWS AND HYDRAULIC MANAGEMENT ELEMENT	10/9/16
2	RENAME OWNER & DEVELOPER	7/3/17

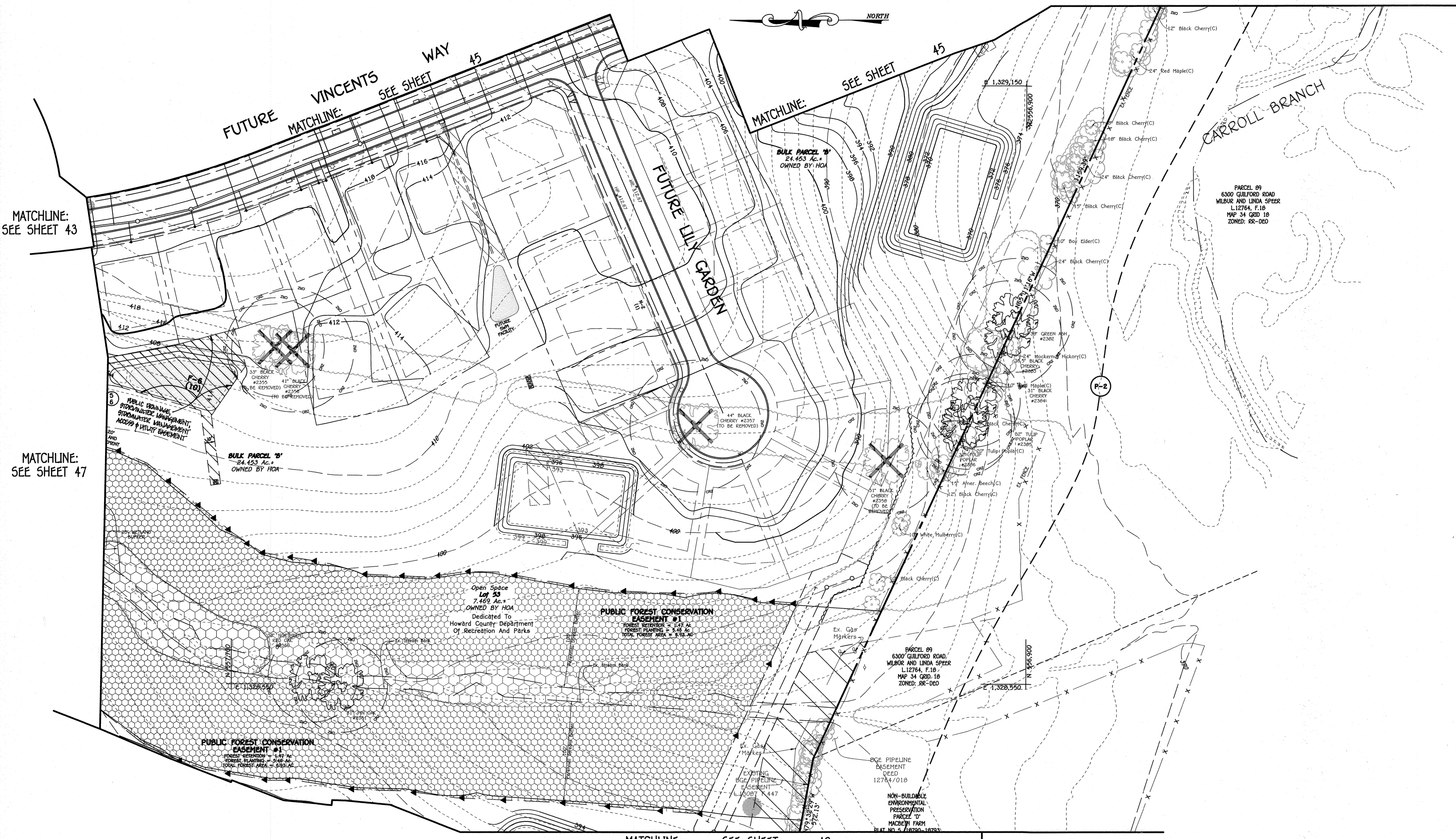
Approved: Department Of Planning And Zoning

*Ketshel* 8-3-16  
Chief, Division Of Land Development Date

*W. McLean* 8/1/16  
Chief, Development Engineering Division Date

Approved: Howard County Department Of Public Works

*O. McLean* 7/23/2016  
Chief, Bureau Of Highways Date



LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED DRAIN
---	PROPOSED WATER
---	PROPOSED ROAD MEDIAN
---	NON CREDIT OPEN SPACE
---	LINE OF OBSERVANCE
---	CONCRETE WALL
---	6" SLOPE
---	15-24% SLOPE
---	5% OR GREATER SLOPE
---	10' SOILS
---	10' SOILS
---	DESIGNABLE WELLS
---	WELLS
---	100 YEAR FLOODPLAIN
---	CONCRETE CURB
---	CONCRETE DRIVE
---	NON ROOFTOP DISCONNECT (N-R)
---	ROOFTOP DISCONNECT (R-D)
---	810 RETENTION FACILITY (7'-6" OR (8'-6") AS NOTED)
---	FOREST CONSERVATION EASEMENT
---	PLANTING AREA
---	FOREST CONSERVATION EASEMENT
---	NON-SECTION AREA NEAR F.A.
---	STREET TREES
---	PERMITTEE LANDSCAPING

MATCHLINE: SEE SHEET 43

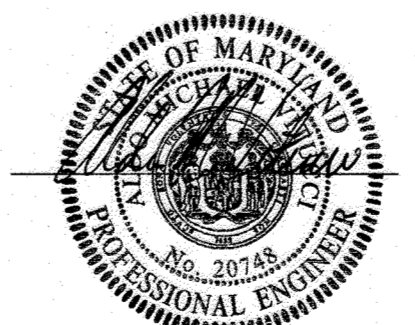
MATCHLINE: SEE SHEET 47



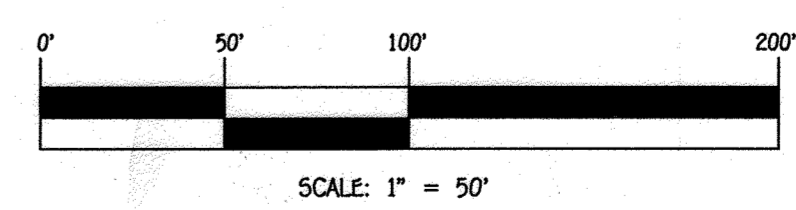
MATCHLINE: SEE SHEET 42

PLAN  
SCALE: 1" = 50'

AS-BUILT CERTIFICATION  
Note: There is no "AS-BUILT" information provided on this sheet.



01/20/16  
Date



**LANDSCAPE DEVELOPER'S CERTIFICATE**

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape implementation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

*Frank Manalangan II*  
Name  
6/29/16  
Date



**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.

*Frank Manalangan II*  
Name  
6/29/16  
Date

**OWNERS**

KENNEY FARM - CLARESVILLE, MD  
24151 VENTURE BOULEVARD  
CALABASAS, CALIFORNIA 91302  
(818) - 365-3677

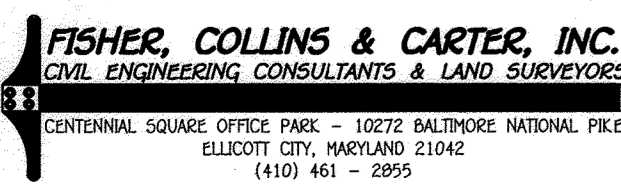
**DEVELOPER**

BEAVER HOMES, LLC  
8765 GUILFORD ROAD - SUITE 200  
COLUMBIA, MARYLAND 21046  
(763) - 824-0182

STREET TREE AND LANDSCAPE PLAN  
**ENCLAVE AT RIVER HILL**  
PHASE 1

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
PREVIOUS HOWARD COUNTY FILES:  
ECP-15-005, PB#409, SP-05-006  
ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
PARCEL NOS.: 88 & 97  
FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: JUNE 24, 2016  
SHEET 44 OF 58 F-15-110

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

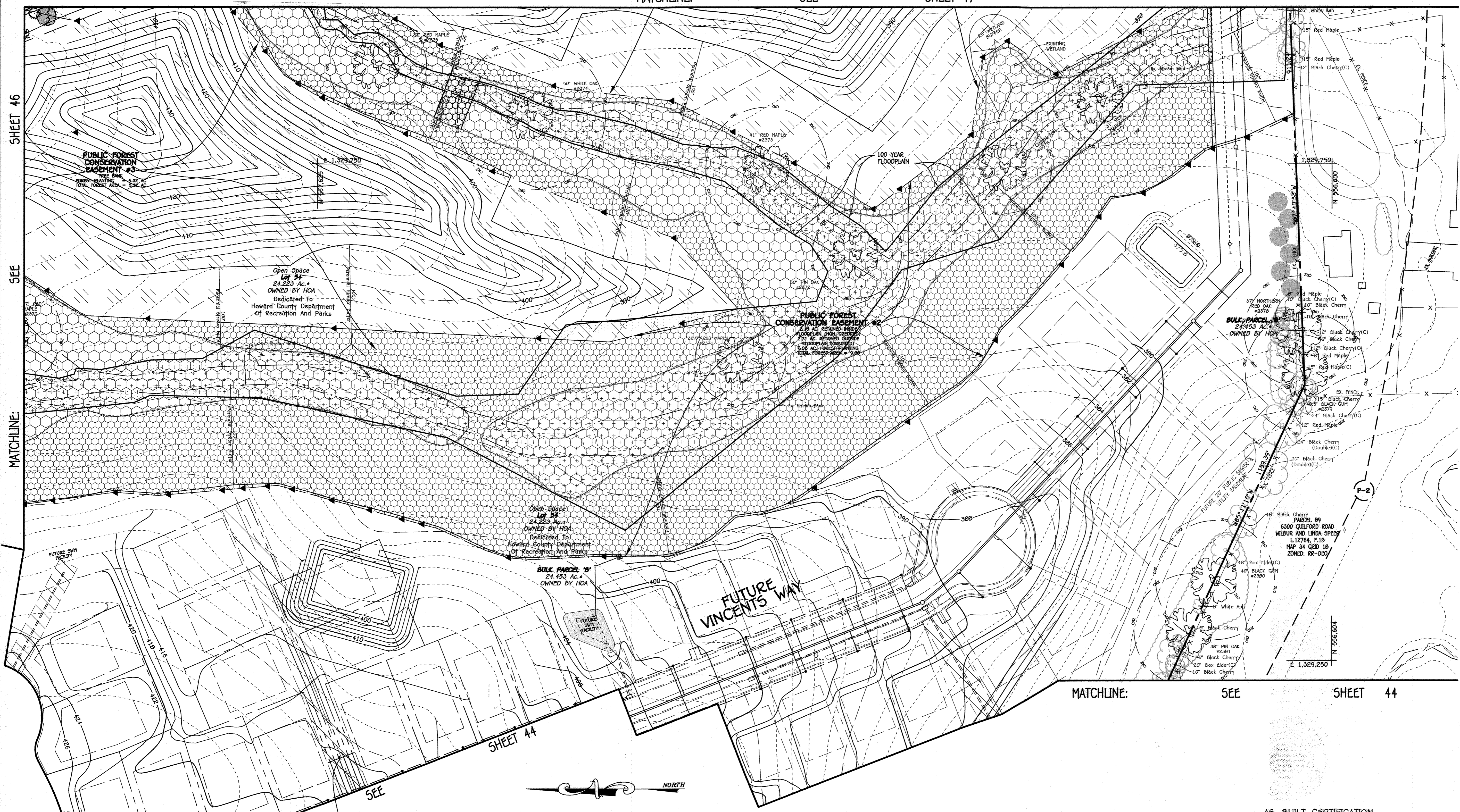


SHEET 46

SEE

MATCHLINE:

MATCHLINE: SEE SHEET 43



REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE REPRODUCTION EASEMENT	10/9/16
2	REVISED OWNER & DEVELOPER	7/27/17

Approved: Department Of Planning And Zoning

*Ket Stalinski* 2-2-16  
 Chief, Division Of Land Development CP Date

*JR* 7/1/16  
 Chief, Development Engineering Division Date

Approved: Howard County Department Of Public Works

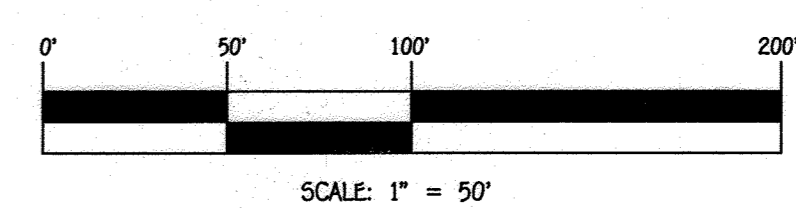
*Ames* 7/27/2016  
 Chief, Bureau Of Highways Date

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED SEWER
---	PROPOSED WATER
---	PROPOSED ROAD MARKING
---	NON CREDIT OPEN SPACE
---	LINE OF OBSTRUCTION
---	RAISED KID FENCE
---	SELF FENCE
---	15-24% SLOPES
---	10% SLOPS
---	PROPOSED SLOPE
---	WETLANDS
---	100 YEAR FLOODPLAIN
---	CRACK EXPANSION
---	IRREGULAR SHAPE
---	NON ROOFTOP OBSTRUCTION (N-2)
---	SEWER 18-24" DIAMETER
---	800 RETENTION FACILITY (17'-6" (N-6) AS NOTED)
---	SPECIMEN TREE (TO BE RETAINED)
---	PUBLIC WATER, SEWER & UTILITY OCCUPANT
---	RECORDING DATE
---	USE IN COMMON ACCESS EASEMENT
---	EXISTING SHADE SHED (L1000, F100)
---	RETENTION AREA OUTSIDE F.P.
---	PLANTING AREA
---	FOREST CONSERVATION EASEMENT
---	NON-RETENTION AREA DEER F.P.
---	SHRUB TREES
---	PERMETRE LANDSCAPING

AS-BUILT CERTIFICATION  
 Note: There is no "AS-BUILT" information provided on this sheet.



*01/20/22*  
 Date



**LANDSCAPE DEVELOPER'S CERTIFICATE**  
 I/we certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/we further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

*[Signature]* 6-29-16  
 Name Date

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2295



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.

*[Signature]* 6/29/16  
 FRANK MANALANSAN II Date

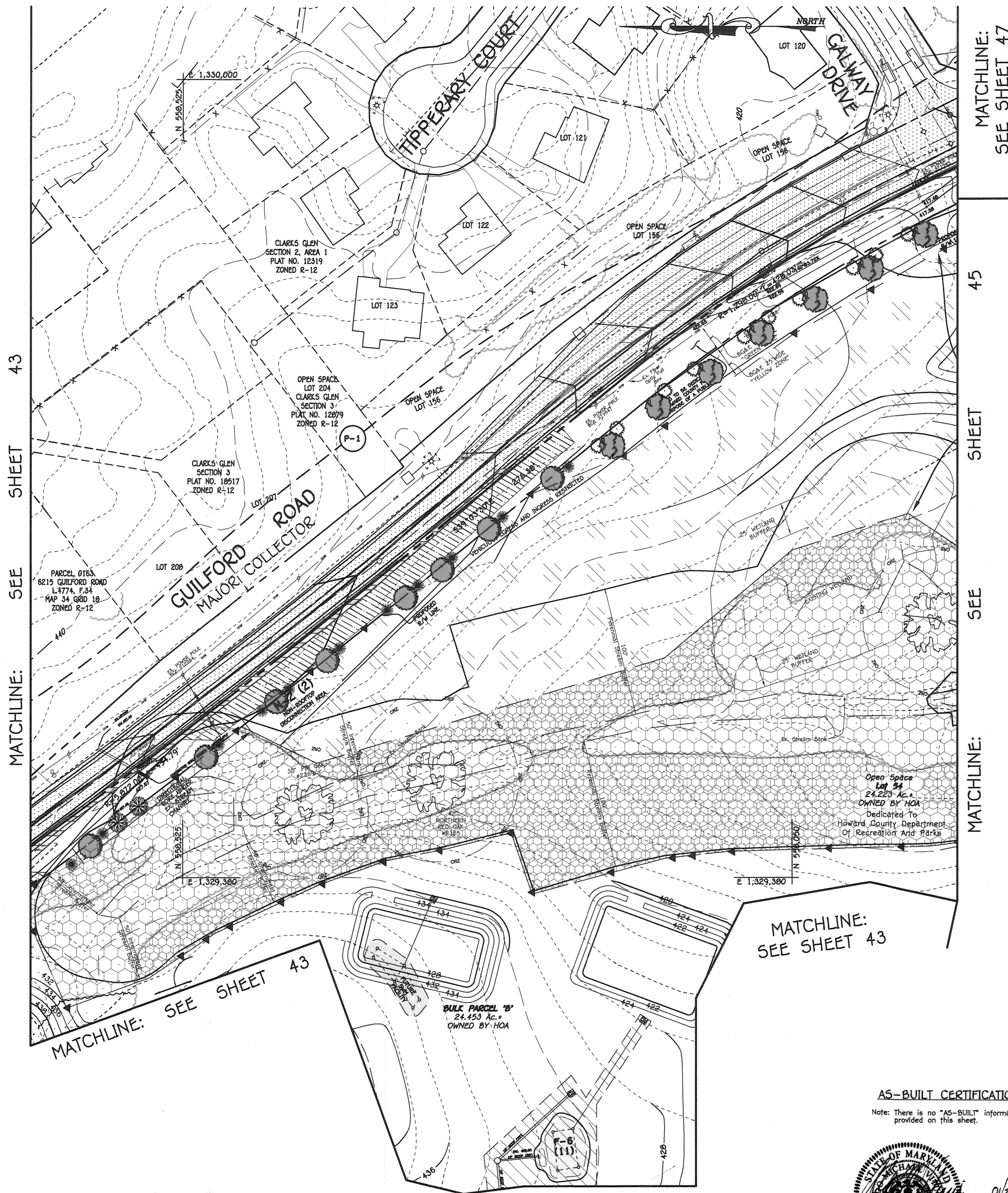
**OWNERS**  
 TERRY RAY - CLAREVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818) - 365-3697

**DEVELOPER**  
 BECKER HOMES, LLC  
 8905 GUILFORD ROAD - SUITE 210  
 COLUMBIA, MARYLAND 21046  
 (703) - 894-0182

STREET TREE AND LANDSCAPE PLAN  
**ENCLAVE AT RIVER HILL**  
 PHASE 1  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 08 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 45 OF 58 F-15-110

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

LEGEND	
SYMBOL	DESCRIPTION
	EXISTING CONTOUR OF INTERNAL
	EXISTING CONTOUR OF EXTERNAL
	PROPOSED CONTOUR OF INTERNAL
	PROPOSED CONTOUR OF EXTERNAL
	SPOT ELEVATION
	PROPOSED STORM DRAIN PIPE
	PROPOSED SEWER
	PROPOSED WATER
	PROPOSED ROAD WIDENING
	NEW CREDIT OPEN SPACE
	LIMIT OF DISTURBANCE
	SURFACE SOIL TYPES
	SELF PROTECTION
	15-24% SLOPES
	25% OR GREATER SLOPES
	1' SOILS
	12' SOILS
	ROCK/SOIL
	WETLANDS
	100 YEAR FLOODPLAIN
	STREAM BUFFER
	DRAINAGE DIVIDE
	NON-ADJACENT INTERSECTION (N-2)
	SMALL 10-15' TYPICAL
	800 RETENTION FACILITY (F-6) OR (F-5) AS NOTED
	SPECIMEN TREE (TO BE REMOVED)
	PUBLIC WATER, SEWER & UTILITY EASEMENT
	RECREATIONAL OPEN SPACE
	USE IN COMMON ACCESS EASEMENT
	EXISTING EASEMENT (L, L&W, P, P&T)
	FOREST CONSERVATION EASEMENT RETENTION AREA OUTSIDE P&T
	FOREST CONSERVATION EASEMENT PLANTING AREA
	FOREST CONSERVATION EASEMENT NON-RETENTION AREA INSIDE P&T
	STREET TREES
	PERIMETER LANDSCAPING



REVISIONS		
NO.	DESCRIPTION	DATE
1	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17

Approved: Department Of Planning And Zoning  
*T. Mark Hicks* 5/10/17 Date  
 Chief, Division Of Land Development

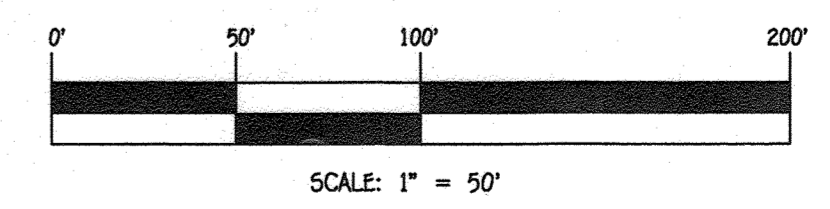
Chief, Development Engineering Division  
*[Signature]* 5/1/17 Date  
 Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways  
*[Signature]* 5/22/17 Date

AS-BUILT CERTIFICATION  
 Note: There is no "AS-BUILT" information provided on this sheet.



05/22/17  
 Date



REPLACEMENT SHEET  
 STREET TREE AND LANDSCAPE PLAN

ENCLAVE AT RIVER HILL  
 PHASE 1

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 46 OF 58 F-15-110

LANDSCAPE DEVELOPER'S CERTIFICATE  
 I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

*[Signature]*  
 Name

7/12/17  
 Date



PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

*[Signature]*  
 FRANK MANALANG II

7/12/17  
 Date

DEVELOPER  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 250  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

OWNERS  
 TERNEY FARMS - CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PKE.  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2995

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET





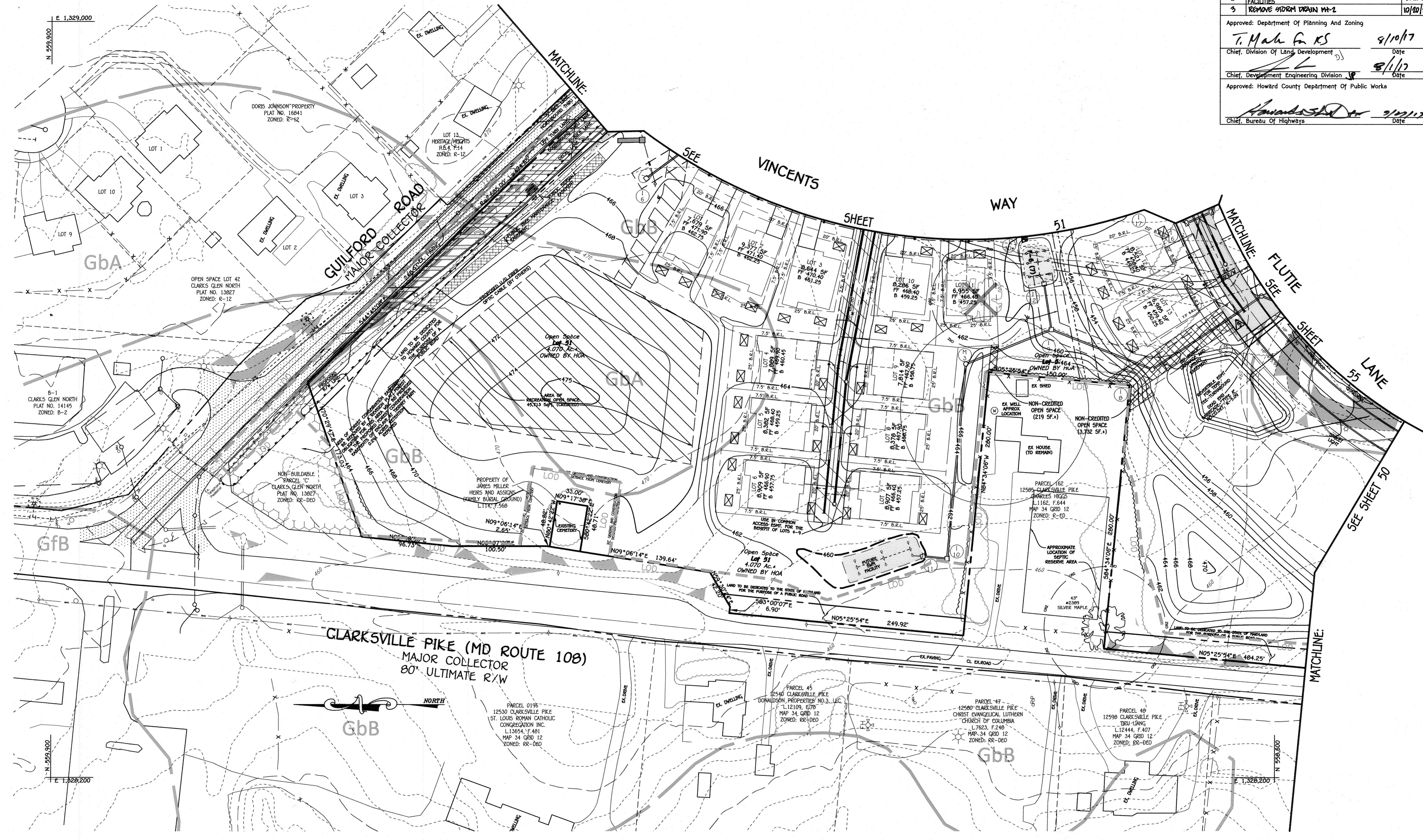


LEGEND	
SYMBOL	DESCRIPTION
(Symbol)	EXISTING CONTOUR 2' INTERVAL
(Symbol)	EXISTING CONTOUR 10' INTERVAL
(Symbol)	PROPOSED CONTOUR 10' INTERVAL
(Symbol)	PROPOSED CONTOUR 2' INTERVAL
(Symbol)	SPOT ELEVATION
(Symbol)	PROPOSED STORM DRAIN PIPE
(Symbol)	PROPOSED SEWER
(Symbol)	PROPOSED WATER
(Symbol)	PROPOSED ROAD WIDENING
(Symbol)	NON-CREDIT OPEN SPACE
(Symbol)	LINE OF DETOURANCE
(Symbol)	SUPER SILT FORCE
(Symbol)	SILT FORCE
(Symbol)	15-24% SLOPES
(Symbol)	25% OR GREATER SLOPES
(Symbol)	1" SOILS
(Symbol)	12" SOILS
(Symbol)	BROWALZ SOILS
(Symbol)	METLANDS
(Symbol)	100 YEAR FLOODPLAIN
(Symbol)	STREAM BUFFER
(Symbol)	DRAINAGE DIVIDE
(Symbol)	NON-SOFTTOP DISCONNECTION (N-2)
(Symbol)	DEWELL (D-2) TYPICAL
(Symbol)	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
(Symbol)	SPECIMEN TREES (TO BE REMOVED)
(Symbol)	PUBLIC WATER, SEWER & UTILITY BASINMENT
(Symbol)	RECREATIONAL OPEN SPACE
(Symbol)	USE IN COMMON ACCESS EASEMENT
(Symbol)	EXISTING BGAZ EASEMENT (L13087, F477)
(Symbol)	FOREST CONSERVATION EASEMENT RETENTION AREA OUTSIDE F.P.
(Symbol)	FOREST CONSERVATION EASEMENT PLANTING AREA
(Symbol)	FOREST CONSERVATION EASEMENT PLANTING AREA TREE DUNE F.P. 4' & 4'
(Symbol)	FOREST CONSERVATION EASEMENT NON-RETENTION AREA INSIDE F.P.
(Symbol)	STREET TREES
(Symbol)	ON-SITE STORAGE/LIMIT OF FOREST CONSERVATION EASEMENT

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT EASEMENTS	10/3/16
2	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17
3	REMOVE STORM DRAIN #4-2	10/20/17

Approved: Department of Planning and Zoning  
*T. Mah* for *KS* 9/10/17  
 Chief, Division of Land Development Date

Approved: Department of Public Works  
*Howard* 9/11/17  
 Chief, Bureau of Highways Date

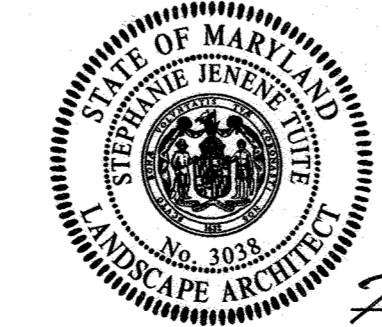
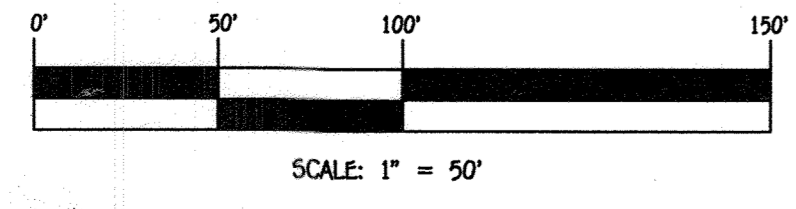


PLAN  
 SCALE: 1" = 50'

AS-BUILT CERTIFICATION  
 Note: There is no "AS-BUILT" information provided on this sheet.

REPLACEMENT SHEET  
 FOREST CONSERVATION PLAN  
 ENCLAVE AT RIVER HILL  
 PHASE 1  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 49 OF 58 F-15-110

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2899



MD DNR QUALIFIED PROFESSIONAL  
*Stephanie J. Tuttle* 7/12/17  
 STEPHANIE J. TUTTLE RLA DATE

DEVELOPER  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

OWNERS  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-305-3697



01/20/22  
 Date

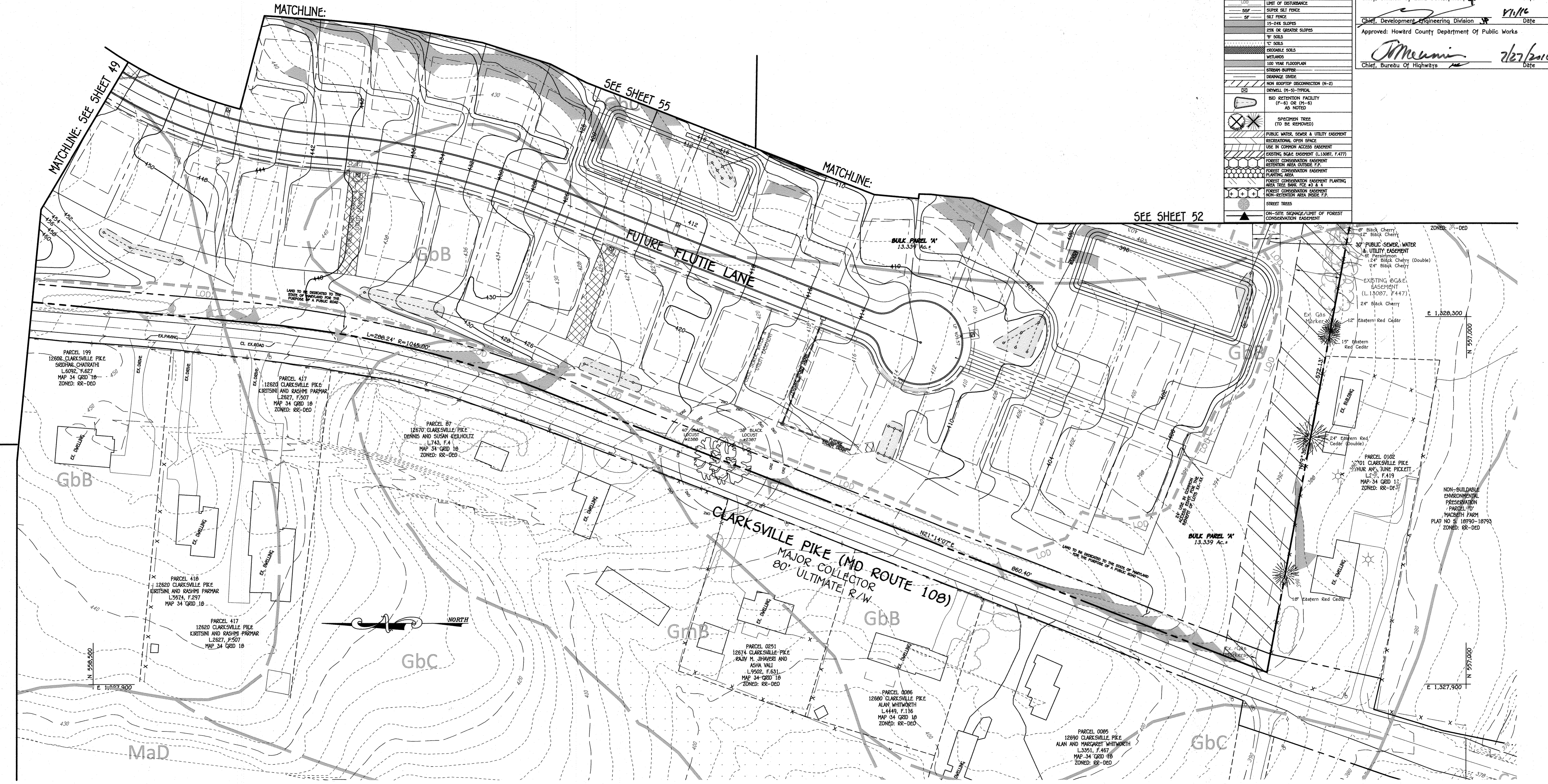
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

LEGEND	
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
X 362.2	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED SEWER
---	PROPOSED WATER
---	PROPOSED ROAD WIDENING
---	NON CREDIT OPEN SPACE
---	LIMIT OF DISTURBANCE
---	SUPER SALT FORCE
---	SALT FORCE
---	15-24% SLOPES
---	25% OR GREATER SLOPES
---	3' SOILS
---	1' SOILS
---	ERODIBLE SOILS
---	100 YEAR FLOODPLAIN
---	STREAM BUFFER
---	DRAINAGE DITCH
---	NON ROOFTOP RECREATION (N-R)
---	REVELL (R)-3-TYPICAL
---	BIO RETENTION FACILITY (F-6) OR (M-6)
---	NO NOTE
---	SPECIMEN TREES (TO BE REMOVED)
---	PUBLIC WATER, SEWER & UTILITY EASEMENT
---	RECREATIONAL OPEN SPACE
---	USE IN COMMON ACCESS EASEMENT
---	EXISTING SCALE EASEMENT (L13087, F447)
---	FOREST CONSERVATION EASEMENT RETENTION AREA OUTSIDE F.P.
---	FOREST CONSERVATION EASEMENT PLANTING AREA
---	FOREST CONSERVATION EASEMENT PLANTING AREA TREE BANK, FZ 2.3 & 4
---	FOREST CONSERVATION EASEMENT NON-RETENTION AREA INSIDE F.P.
---	STREET TREES
---	ON-SITE STORAGE/LIMIT OF FOREST CONSERVATION EASEMENT

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED OWNER & DEVELOPER	7/15/17

Approved: Department Of Planning And Zoning  
*Met Blalock* 8-3-16  
 Chief, Division Of Land Development  
 Date

Approved: Howard County Department Of Public Works  
*J. McLean* 7/27/2016  
 Chief, Bureau Of Highways  
 Date



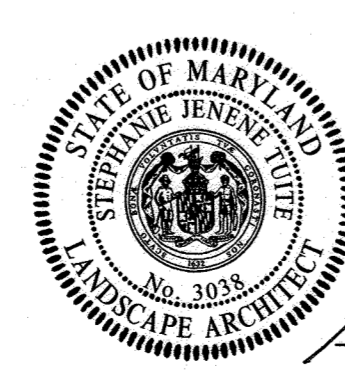
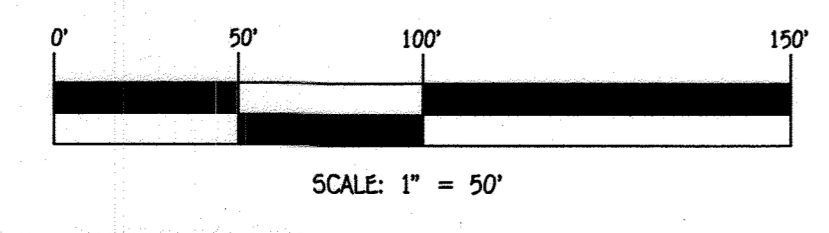
PLAN  
SCALE: 1" = 50'

AS-BUILT CERTIFICATION  
 Note: There is no "AS-BUILT" information provided on this sheet.

FOREST CONSERVATION PLAN  
**ENCLAVE AT RIVER HILL**  
 PHASE 1

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 1A AND 1B AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 50 OF 58 F-15-110

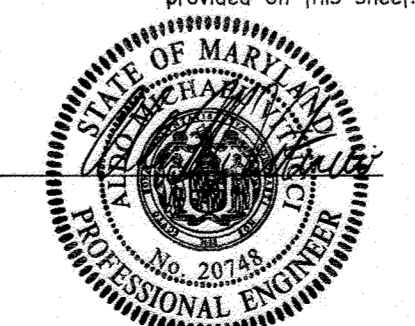
FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CONFIDENTIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 SUITE 200, BALTIMORE, MARYLAND 21142  
 (410) 461-2895



MD DNR QUALIFIED PROFESSIONAL  
*Stephanie J. Tuite* 7/11/16  
 STEPHANIE J. TUITE P.E.  
 DATE

OWNERS  
 TERRY PERRY - CLARKSVILLE LP  
 24151 VENTURE BOULEVARD  
 CALABASO, CALIFORNIA 91302  
 (818) 385-9677

DEVELOPER  
 BEAVER HILLS LLC  
 8925 GUILFORD ROAD - SUITE 270  
 COLUMBIA, MARYLAND 21046  
 (108) - 874 - 0182



THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
X-362.2	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED WATER
---	PROPOSED ROAD WIDENING
---	NON EXIST OPEN SPACE
---	LINE OF OBSTRUCTION
---	SILT FENCE
---	15-24% SLOPES
---	2% OR GREATER SLOPES
---	1" SOILS
---	2" SOILS
---	ERODIBLE SOILS
---	METLANDS
---	100 YEAR FLOODPLAIN
---	DRAINAGE SURFACE
---	DRAINAGE DITCH
---	NON ROOFTOP DISCONNECTION (N-2)
---	SWHELL (N-3)-TYPICAL
---	800 RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	SPECIMEN TREES (TO BE REMOVED)
---	PUBLIC WATER, SEWER & UTILITY EASEMENT
---	RECREATIONAL OPEN SPACE
---	USE IN COMMON ACCESS EASEMENT
---	EXISTING SCALE EASEMENT (L13007, F.477)
---	FOREST CONSERVATION EASEMENT RETENTION AREA OUTSIDE F.P.
---	FOREST CONSERVATION EASEMENT PLANTING AREA
---	FOREST CONSERVATION EASEMENT PLANTING AREA TREE SPAC. F.C. 25 X 1'
---	FOREST CONSERVATION EASEMENT NON-RETENTION AREA INSIDE F.P.
---	STREET TREES
---	ON-SITE SIGNAGE/LIMIT OF FOREST CONSERVATION EASEMENT

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT EASEMENTS	10/3/16
2	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17

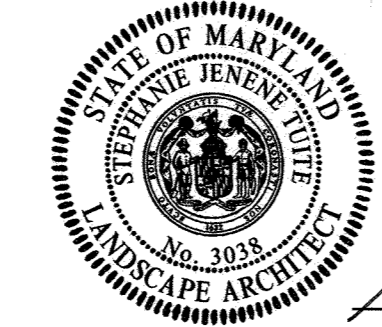
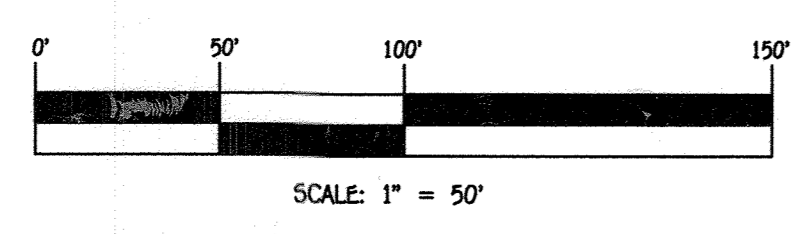
Approved: Department Of Planning And Zoning  
*T. M. H. R. 105* 8/10/17  
 Chief, Division Of Land Development Date

Approved: Howard County Department Of Public Works  
*Howard* 7/20/17  
 Chief, Bureau Of Highways Date



13/03/2017 13:08:08 dwg\F-Plan-Forest Conservation Plan.dwg, Sheet 51, 7/12/2017 7:35:58 PM, L1

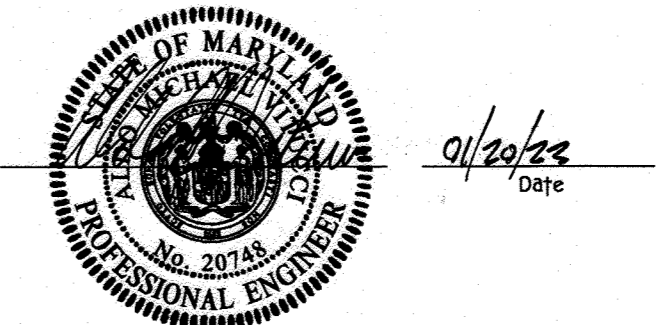
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTONAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 481-2292



MD DNR QUALIFIED PROFESSIONAL  
*Stephanie J. Tuite* 7/12/17  
 STEPHANIE J. TUITE RLX DATE

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-305-3697



**AS-BUILT CERTIFICATION**  
 Note: There is no "AS-BUILT" information provided on this sheet.

**REPLACEMENT SHEET**  
**FOREST CONSERVATION PLAN**  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 00 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 51 OF 58 **F-15-110**

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND FOREST MANAGEMENT EASEMENT	10/19/16
2	REVISED OWNER & DEVELOPER	7/17/17

Approved: Department of Planning And Zoning

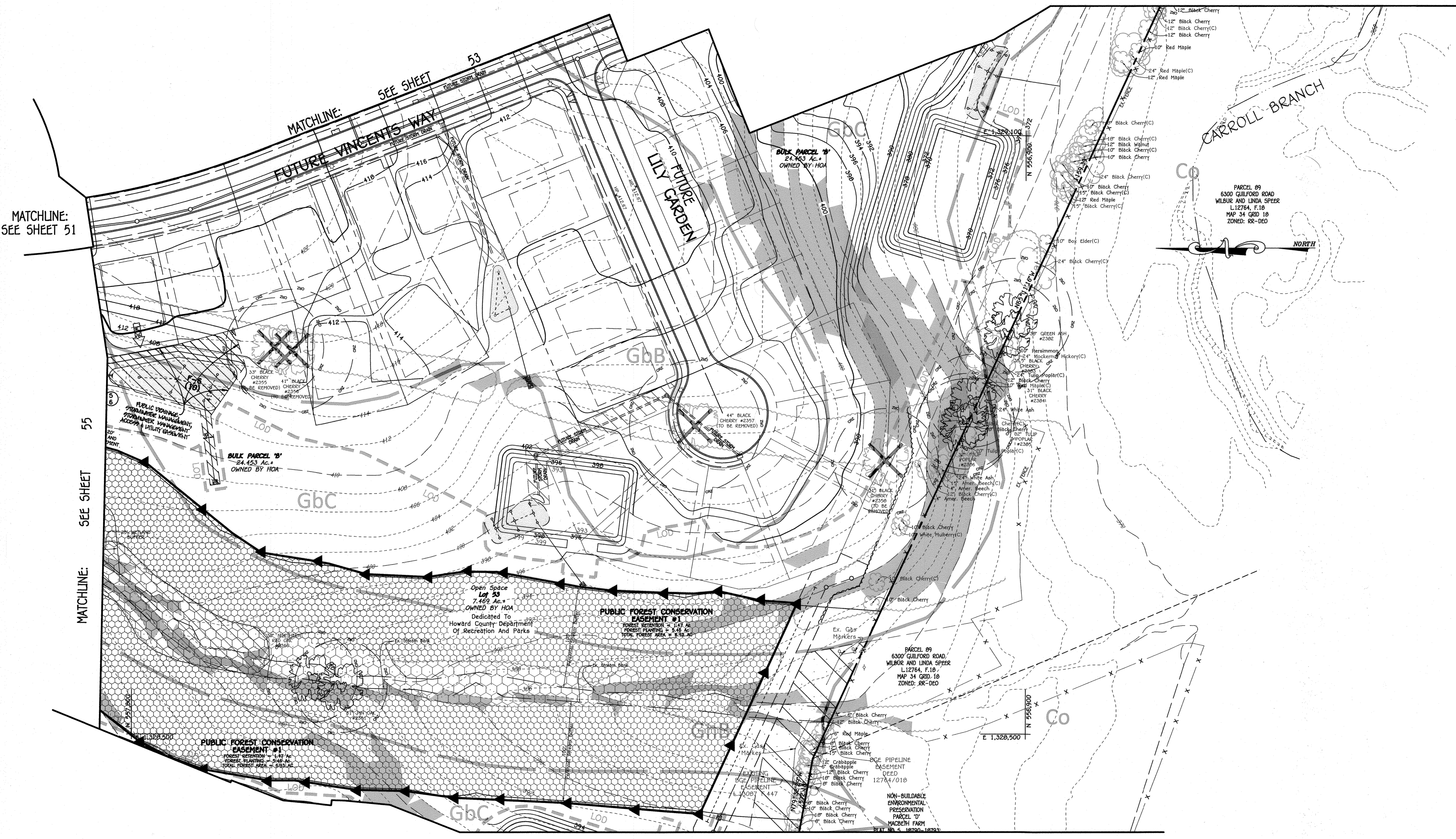
*ret. [Signature]* 8.3.16  
Chief, Division Of Land Development

*[Signature]* 7/17/16  
Chief, Development Engineering Division

Approved: Howard County Department of Public Works

*[Signature]* 7/27/2016  
Chief, Bureau Of Highways

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
X 368.2	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED DRAIN
---	PROPOSED WATER
---	PROPOSED ROAD WIDENING
---	NON CREST OPEN SPACE
---	LIMIT OF DISTURBANCE
---	SUPER SILT FENCE
---	SILT FENCE
---	15-24% SLOPES
---	25% OR GREATER SLOPES
---	1% SOILS
---	2% SOILS
---	3% SOILS
---	4% SOILS
---	5% SOILS
---	6% SOILS
---	7% SOILS
---	8% SOILS
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---	93% SOILS
---	94% SOILS
---	95% SOILS
---	96% SOILS
---	97% SOILS
---	98% SOILS
---	99% SOILS
---	100% SOILS



MATCHLINE: SEE SHEET 51

MATCHLINE: SEE SHEET 55

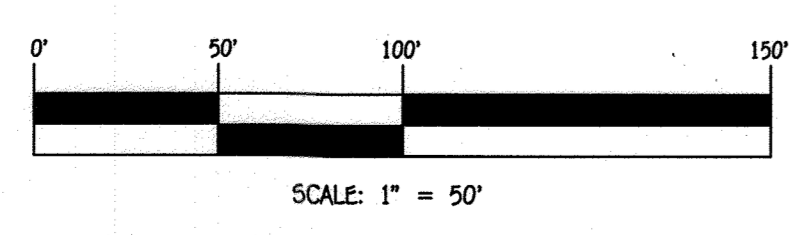
MATCHLINE: SEE SHEET 50

MATCHLINE: SEE SHEET 50

PLAN  
SCALE: 1" = 50'

AS-BUILT CERTIFICATION  
Note: There is no "AS-BUILT" information provided on this sheet.

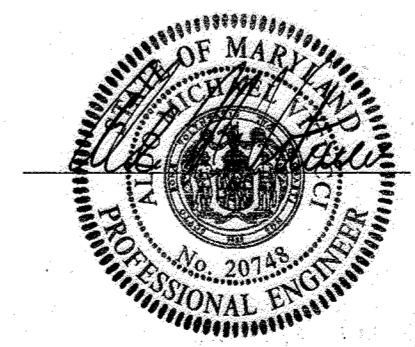
FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
(410) 461-3295



MD DNR QUALIFIED PROFESSIONAL  
*Stephanie J. Tuitt* 7/11/16  
STEPHANIE J. TUITT RLA DATE

OWNERS  
TIERNEY FARMS - CHARLEVILLE LP  
2491 VENDRE BOULEVARD  
CALABASO, CALIFORNIA 91302  
(818) 305-3097

DEVELOPER  
BEAZER HOMES, LLC  
8765 GUILFORD ROAD - SUITE 230  
COLUMBIA, MARYLAND 21046  
(703) - 874-0182



01/24/22  
Date

FOREST CONSERVATION PLAN  
**ENCLAVE AT RIVER HILL**  
PHASE 1  
LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
PREVIOUS HOWARD COUNTY FILES:  
ECP-15-005, PB#409, SP-05-006  
ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
PARCEL NOS.: 00 & 97  
FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: JUNE 24, 2016  
SHEET 52 OF 58 F-15-110

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED RECREATION EASEMENT	10/9/16
2	REVISED OWNER & DEVELOPER	7/5/17

Approved: Department Of Planning And Zoning

*Katschke* 8-3-16  
 Chief, Division Of Land Development (P) Date

*V. J. K.* 7/1/16  
 Chief, Development Engineering Division Date

Approved: Howard County Department Of Public Works

*M. J. M.* 7/27/2016  
 Chief, Bureau Of Highways Date

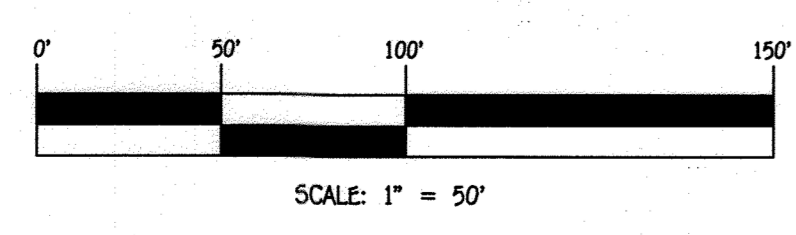


LEGEND	
SYMBOL	DESCRIPTION
(dashed line)	EXISTING CONTOUR 2' INTERVAL
(dashed line)	EXISTING CONTOUR 10' INTERVAL
(dashed line)	PROPOSED CONTOUR 10' INTERVAL
(dashed line)	PROPOSED CONTOUR 2' INTERVAL
(dashed line)	SPOT ELEVATION
(dashed line)	PROPOSED STORM DRAIN PIPE
(dashed line)	PROPOSED SEWER
(dashed line)	PROPOSED WATER
(dashed line)	PROPOSED ROAD WIDENING
(dashed line)	NON CROFT OPEN SPACE
(dashed line)	LIMIT OF DISTURBANCE
(dashed line)	SUPPLY SILL FENCE
(dashed line)	SILT FENCE
(dashed line)	15-25% SLOPES
(dashed line)	25% OR GREATER SLOPES
(dashed line)	1" SOILS
(dashed line)	12" SOILS
(dashed line)	PROBABLE SOILS
(dashed line)	WETLANDS
(dashed line)	100 YEAR FLOODPLAIN
(dashed line)	STORM BUFFER
(dashed line)	DRAINAGE DITCH
(dashed line)	NON ROOFTOP DISCONNECTION (N-2)
(dashed line)	DRYWELL (N-2) TYPICAL
(dashed line)	BIO RETENTION FACILITY (7'-9' OR (4'-6') AS NOTED
(dashed line)	SPECIMEN TREE (TO BE REMOVED)
(dashed line)	PUBLIC WATER, SEWER & UTILITY EASEMENT
(dashed line)	RECREATIONAL OPEN SPACE
(dashed line)	USE IN COMMON ACCESS EASEMENT
(dashed line)	EXISTING ROAD EASEMENT (L13087, F.477)
(dashed line)	FOREST CONSERVATION EASEMENT RETENTION AREA OUTSIDE F.P.
(dashed line)	FOREST CONSERVATION EASEMENT PLANTING AREA
(dashed line)	FOREST CONSERVATION EASEMENT AREA TREE BANK FCE #3 & 4
(dashed line)	FOREST CONSERVATION EASEMENT NON-RETENTION AREA NODE F.P.
(dashed line)	STREET TREES
(dashed line)	ON-SITE SIGNAGE/LIMIT OF FOREST CONSERVATION EASEMENT

PLAN  
SCALE: 1" = 50'

MATCHLINE: SEE SHEET 51

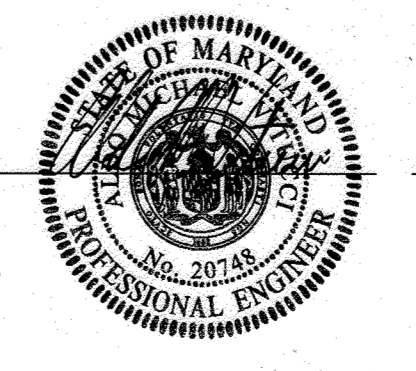
FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 481-3292



MD DNR QUALIFIED PROFESSIONAL  
*Stephanie J. Tuite* 7/11/16  
 STEPHANIE J. TUITE RLA DATE

OWNERS  
 TIBNEY FARMS - CLARKSVILLE, LP  
 2491 VENTURE BULLEARD  
 CALABASAS, CALIFORNIA 91302  
 (818) - 365-3697

DEVELOPER  
 BEAZER HOMES, LLC  
 8905 GUILFORD ROAD - SUITE 210  
 COLUMBIA, MARYLAND 21046  
 (703) - 974-0182



01/24/22  
 Date

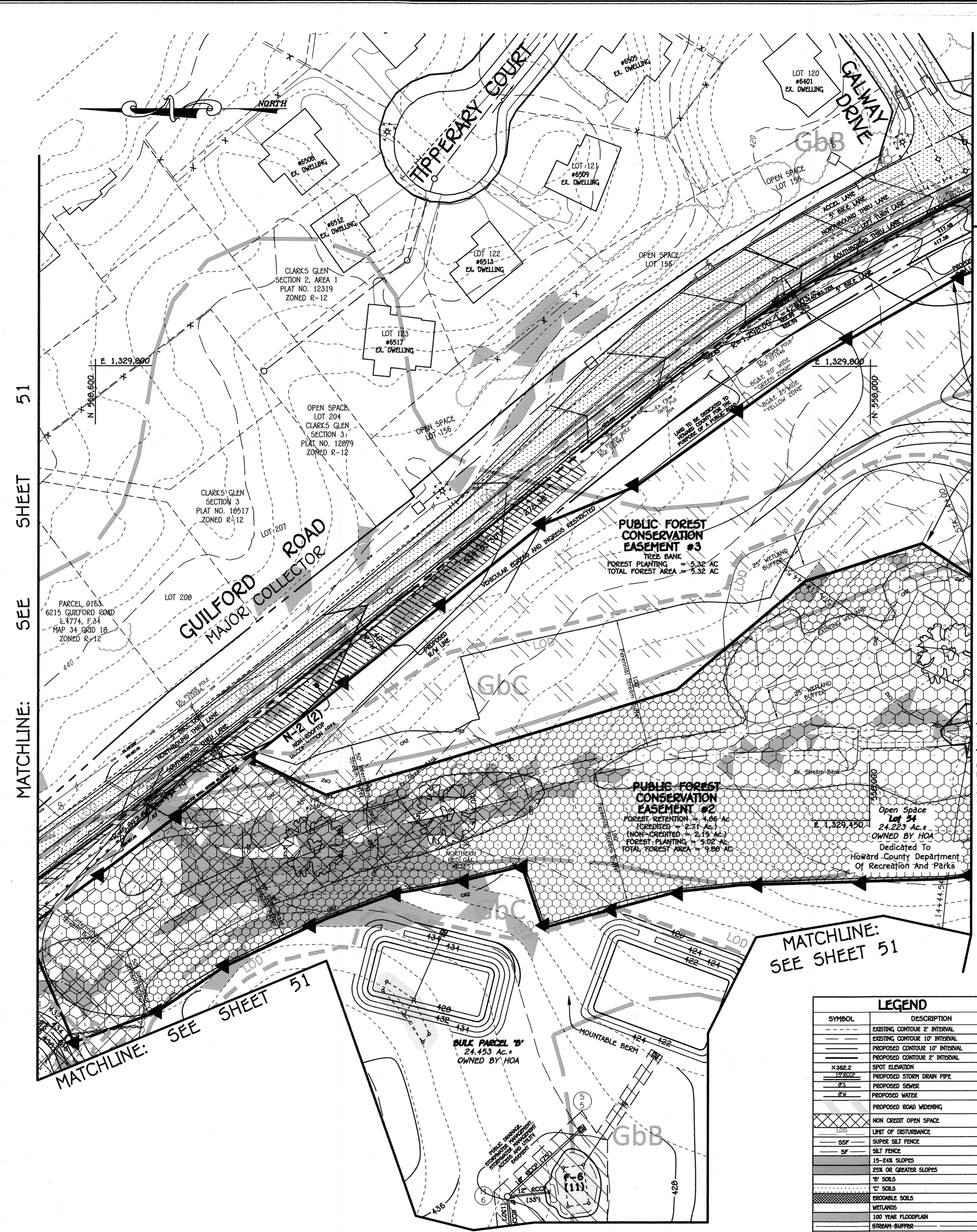
FOREST CONSERVATION PLAN  
**ENCLAVE AT RIVER HILL**  
 PHASE 1  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 1B  
 PARCEL NOS.: 00 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 53 OF 58 F-15-110

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT EASEMENTS	10/3/16
2	REVISE EASEMENT INFORMATION	10/3/16
3	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17

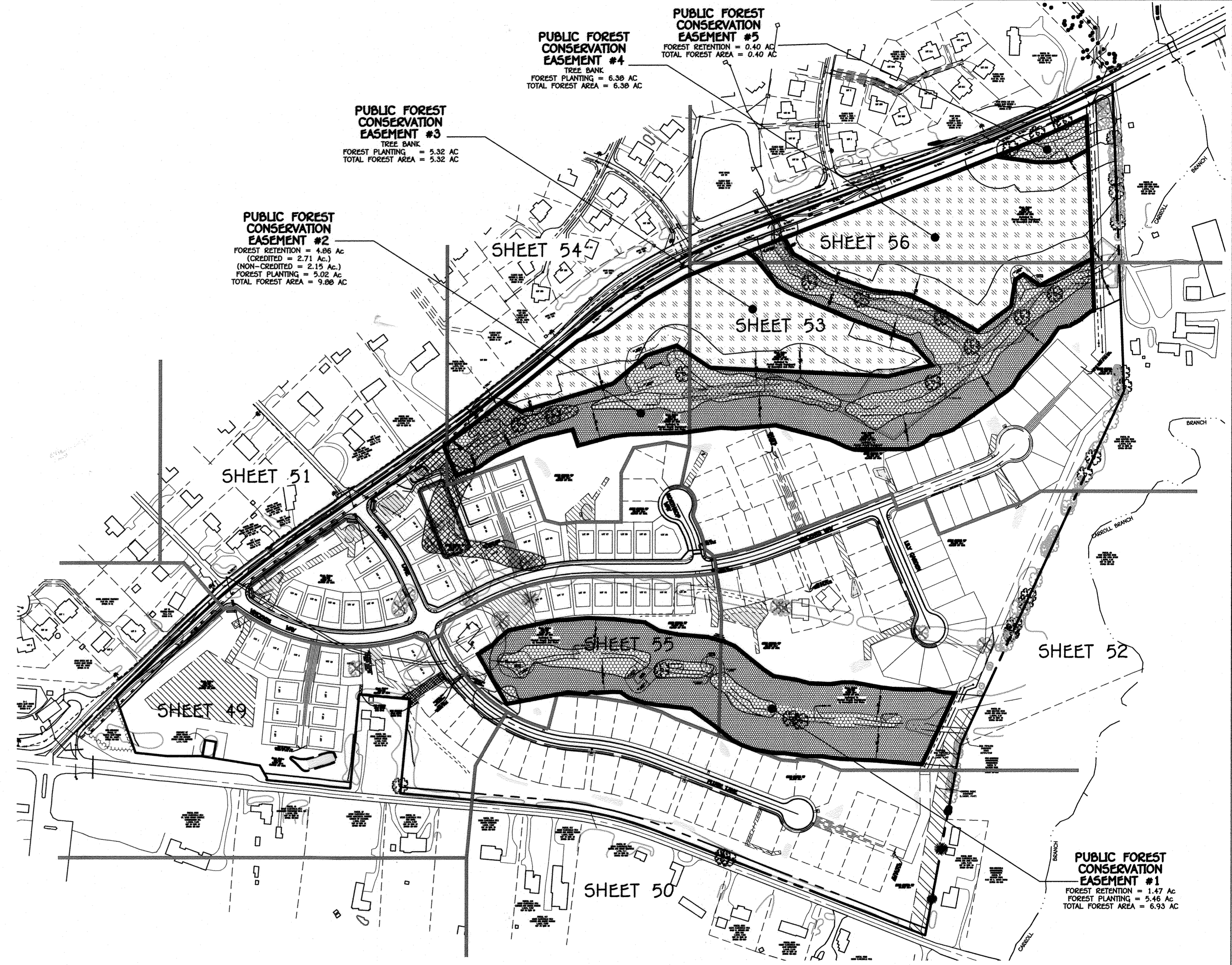
Approved: Department of Planning And Zoning  
*T. Mark Fink* 5/10/17  
 Chief, Division Of Land Development Date

Approved: Department of Public Works  
*Howard County* 5/10/17  
 Chief, Bureau Of Highways Date



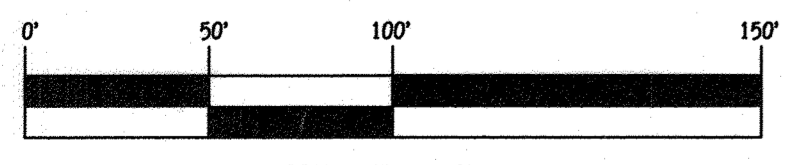
MATCHLINE:  
SEE SHEET 56

51 SHEET SEE MATCHLINE: 53 SHEET



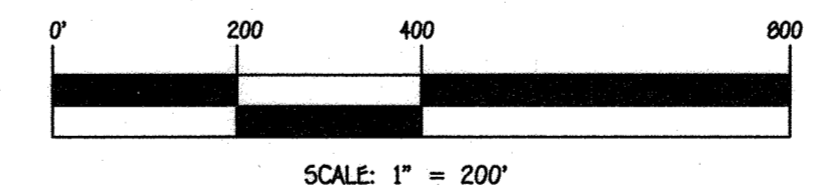
FOREST CONSERVATION SHEET KEY PLAN  
SCALE: 1" = 200'

LEGEND	
SYMBOL	DESCRIPTION
(Symbol)	EXISTING CONTOUR 2' INTERVAL
(Symbol)	EXISTING CONTOUR 10' INTERVAL
(Symbol)	PROPOSED CONTOUR 10' INTERVAL
(Symbol)	PROPOSED CONTOUR 2' INTERVAL
(Symbol)	SPOT ELEVATION
(Symbol)	PROPOSED STORM DRAIN PIPE
(Symbol)	PROPOSED SEWER
(Symbol)	PROPOSED WATER
(Symbol)	PROPOSED ROAD MIDDING
(Symbol)	NON CREDIT OPEN SPACE
(Symbol)	LIMIT OF DISTURBANCE
(Symbol)	SUPER SILT FENCE
(Symbol)	SILT FENCE
(Symbol)	15-40% SLOPES
(Symbol)	20% OR GREATER SLOPES
(Symbol)	'D' SOILS
(Symbol)	'C' SOILS
(Symbol)	POORABLE SOILS
(Symbol)	WETLANDS
(Symbol)	100 YEAR FLOODPLAIN
(Symbol)	STREAM BUFFER
(Symbol)	ORANGE DOME
(Symbol)	NON SCOTOP RECONNECTION (H-2)
(Symbol)	ORWELL (H-3)-TYPICAL
(Symbol)	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
(Symbol)	SPRING TREE (TO BE REMOVED)
(Symbol)	PUBLIC WATER, SEWER & UTILITY EASEMENT
(Symbol)	RECREATIONAL OPEN SPACE
(Symbol)	USE IN COMMON ACCESS EASEMENT
(Symbol)	EXISTING SIGA EASEMENT (L13087, F.477)
(Symbol)	FOREST CONSERVATION EASEMENT RETENTION AREA OUTSIDE F.P.
(Symbol)	FOREST CONSERVATION EASEMENT PLANTING AREA
(Symbol)	FOREST CONSERVATION EASEMENT PLANTING AREA TREE BANK, F.S. & F.
(Symbol)	FOREST CONSERVATION EASEMENT RETENTION AREA INSIDE F.P.
(Symbol)	STREET TREES
(Symbol)	ON-SITE STORAGE/LIMIT OF FOREST CONSERVATION EASEMENT



SCALE: 1" = 50'  
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENAL SQUARE OFFICE PARK • 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2825

MD DNR QUALIFIED PROFESSIONAL  
*Stephanie J. Tuttle* 7/12/17  
 STEPHANIE J. TUTTLE RLA DATE



SCALE: 1" = 200'

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP.  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-365-3697

**A5-BUILT CERTIFICATION**  
 Note: There is no "A5-BUILT" information provided on this sheet.  
*o/20/17*  
 DATE

**REPLACEMENT SHEET  
 FOREST CONSERVATION PLAN  
 ENCLAVE AT RIVER HILL  
 PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: A5 SHOWN DATE: JUNE 24, 2016  
 SHEET 54 OF 58 **F-15-110**

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

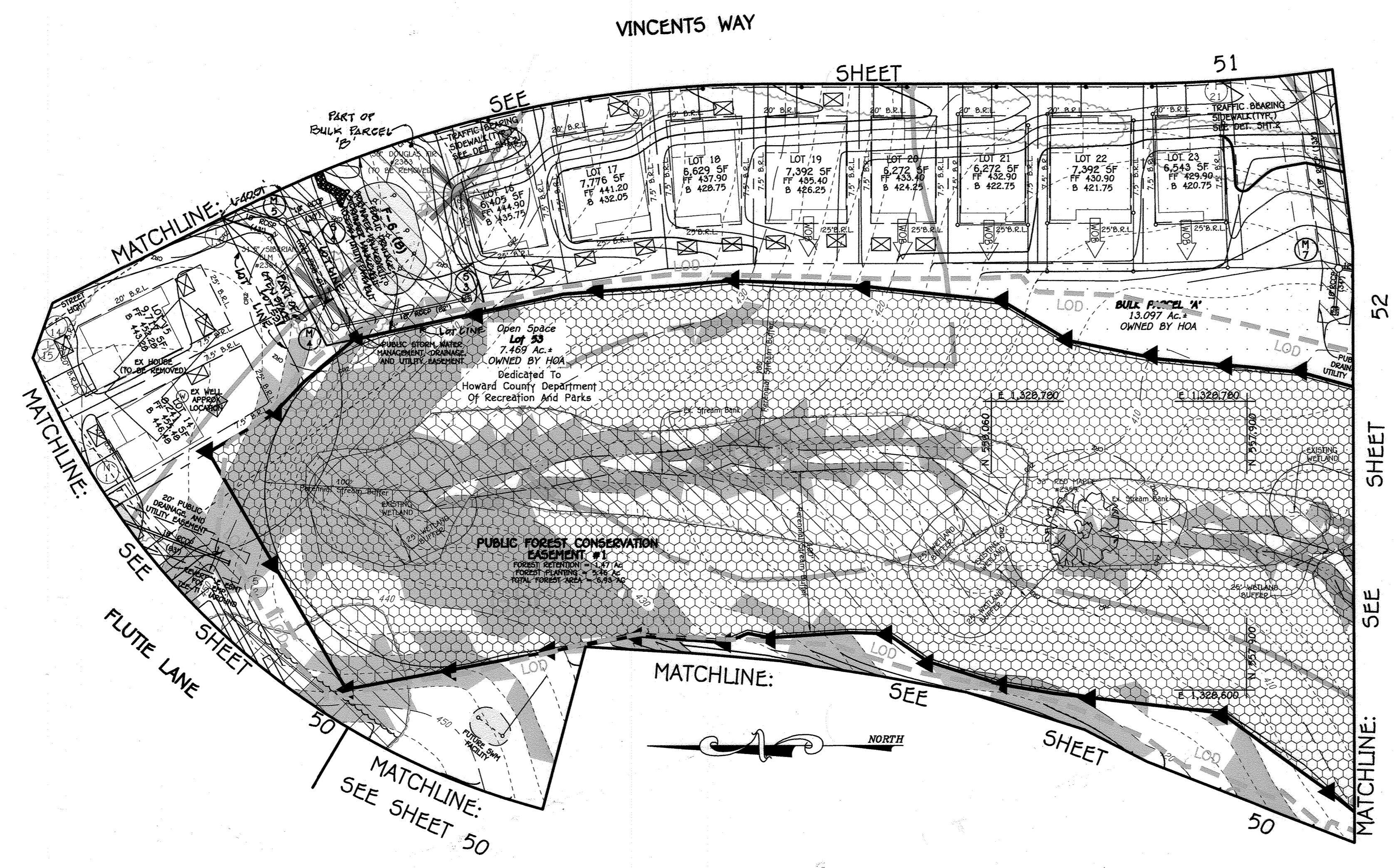
SYMBOL	DESCRIPTION
- - - -	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
- - - -	PROPOSED CONTOUR 2' INTERVAL
- - - -	PROPOSED CONTOUR 10' INTERVAL
X362.2	SPOT ELEVATION
---	PROPOSED STORM DRAIN PIPE
---	PROPOSED SEWER
---	PROPOSED WATER
---	PROPOSED ROAD WIDENING
XXXXXX	NON-CREST OPEN SPACE
---	LIMIT OF DISTURBANCE
---	SUPER SILT FENCE
---	SILT FENCE
---	15-24% SLOPES
---	25% OR GREATER SLOPES
---	1" SOILS
---	12" SOILS
---	PROBABLE SOILS
---	METLANDS
---	100 YEAR FLOODPLAIN
---	STREAM BUFFER
---	DRAINAGE DIVIDE
---	NON-ROOFTOP DISCONNECTION (N-2)
---	DITCHES (N-3)-TYPICAL
---	BIO-RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	SPECIMEN TREES (TO BE REMOVED)
---	PUBLIC WATER, SEWER & UTILITY EASEMENT
---	RECREATIONAL OPEN SPACE
---	USE IN COMMON ACCESS EASEMENT
---	EXISTING EASEMENT (L.13087, F.477)
---	FOREST CONSERVATION EASEMENT RETENTION AREA OUTSIDE F.P.
---	FOREST CONSERVATION EASEMENT PLANTING AREA
---	FOREST CONSERVATION EASEMENT PLANTING AREA TREE BANK FCE AS & F
---	FOREST CONSERVATION EASEMENT NON-RETENTION AREA INSIDE F.P.
---	STREET TREES
---	ON-SITE SEQUENCE/LIMIT OF FOREST CONSERVATION EASEMENT

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD PUBLIC DRAINAGE AND STORMWATER MANAGEMENT ELEMENTS	10/9/16
2	REMOVED OWNER & DEVELOPER	7/5/17

Approved: Department Of Planning And Zoning  
*Keith Shubert* 8.3.16  
 Chief, Division Of Land Development 00 Date

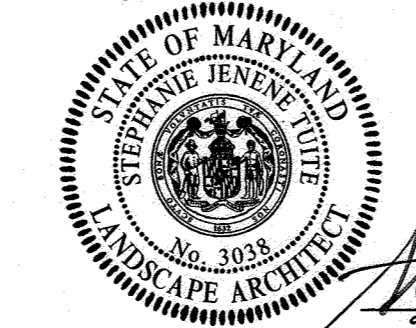
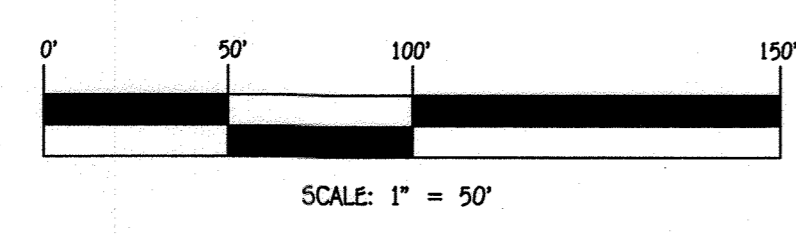
Approved: Development Engineering Division  
*JR* 8/1/16  
 Chief, Development Engineering Division 00 Date

Approved: Howard County Department Of Public Works  
*Melvin* 7/27/2016  
 Chief, Bureau Of Highways 00 Date



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

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 451 - 2995



MD DNR QUALIFIED PROFESSIONAL  
*Stephanie J. Tuite*  
 STEPHANIE J. TUITE RLA DATE

**OWNERS**  
 TIERNEY PARKS - CHARLEVILLE, LP  
 24191 VENTURE BOULEVARD  
 OLABASKA, CALIFORNIA 91302  
 (618) - 365 - 9097

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8936 GUILFORD ROAD - SUITE 870  
 COLUMBIA, MARYLAND 21046  
 (703) - 894 - 0102



*a/j/2016*  
 Date

**FOREST CONSERVATION PLAN**  
**ENCLAVE AT RIVER HILL**  
**PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
 AND BULK PARCELS "A" AND "B" AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES:  
 ECP-15-005, PB#409, 5P-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 55 OF 58 **F-15-110**

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

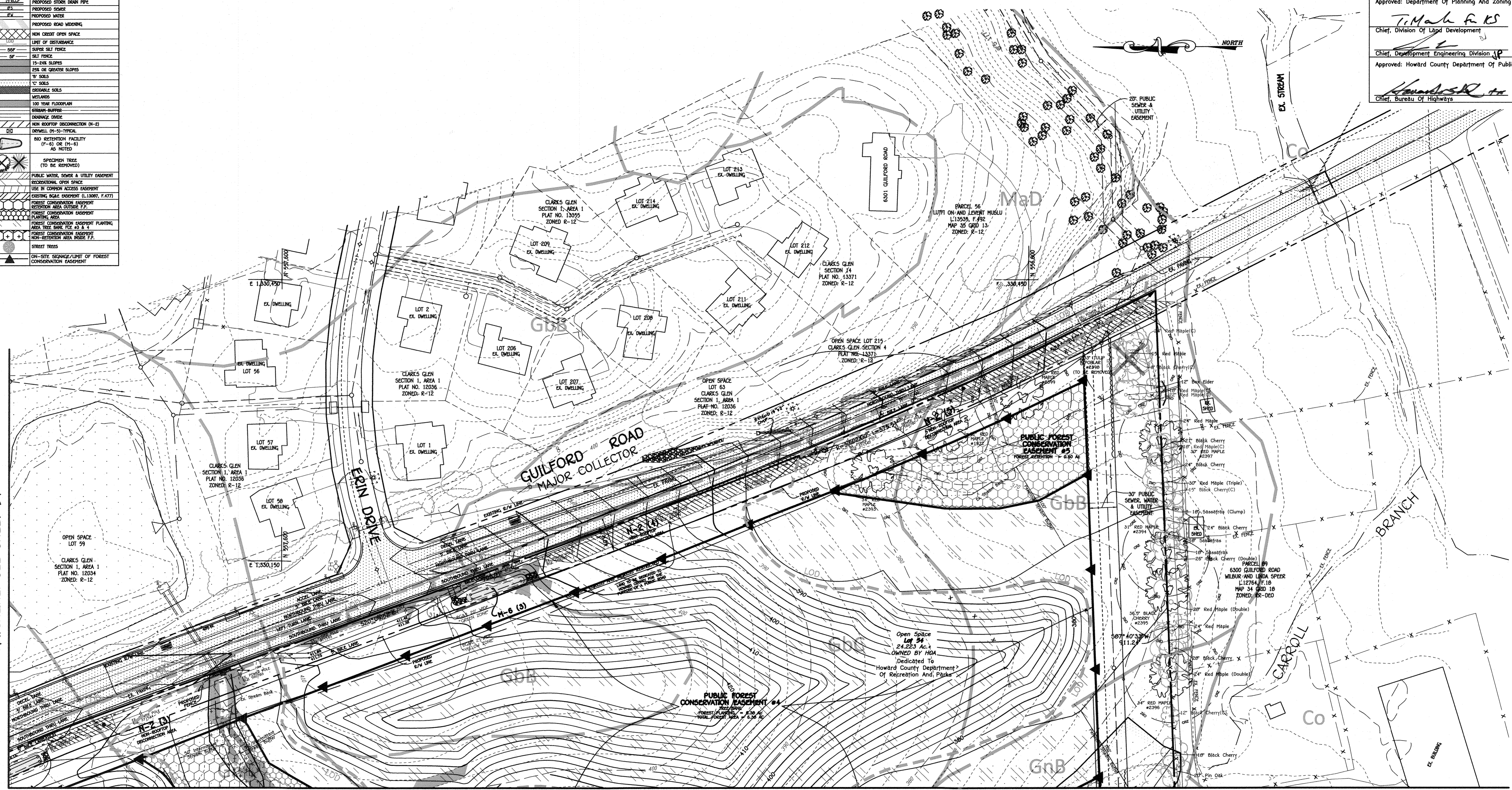
LEGEND	
SYMBOL	DESCRIPTION
(Symbol)	EXISTING CONTOUR 2' INTERVAL
(Symbol)	EXISTING CONTOUR 10' INTERVAL
(Symbol)	PROPOSED CONTOUR 10' INTERVAL
(Symbol)	PROPOSED CONTOUR 2' INTERVAL
(Symbol)	SPOT ELEVATION
(Symbol)	PROPOSED STORM DRAIN PIPE
(Symbol)	PROPOSED SEWER
(Symbol)	PROPOSED WATER
(Symbol)	PROPOSED ROAD MARKING
(Symbol)	NON CREDIT OPEN SPACE
(Symbol)	LIMIT OF DISTURBANCE
(Symbol)	SURVEY SILENT FENCE
(Symbol)	SILT FENCE
(Symbol)	15-24% SLOPES
(Symbol)	25% OR GREATER SLOPES
(Symbol)	1" SOILS
(Symbol)	12" SOILS
(Symbol)	ERODIBLE SOILS
(Symbol)	WETLANDS
(Symbol)	100 YEAR FLOODPLAIN
(Symbol)	GRASSY BUFFER
(Symbol)	DRAINAGE DITCH
(Symbol)	NON SCOOPUP DISCONNECTION (N-2)
(Symbol)	DRYWELL (H-5)-TYPICAL
(Symbol)	BIO RETENTION FACILITY (F-6) OR (H-6)
(Symbol)	AS NOTED
(Symbol)	SPECIMEN TREE (TO BE REMOVED)
(Symbol)	PUBLIC WATER, SEWER & UTILITY EASEMENT
(Symbol)	RECREATIONAL OPEN SPACE
(Symbol)	USE IN COMMON ACCESS EASEMENT
(Symbol)	EXISTING SCALE EASEMENT (L13007, F477)
(Symbol)	FOREST CONSERVATION EASEMENT SECTION 1, AREA 1, PLAT NO. 12036
(Symbol)	FOREST CONSERVATION EASEMENT PLANTING AREA
(Symbol)	FOREST CONSERVATION EASEMENT PLANTING AREA TREE BANK P.C. #3 & 4
(Symbol)	FOREST CONSERVATION EASEMENT NON-RETENTION AREA INSIDE P.P.
(Symbol)	STREET TREES
(Symbol)	ON-SITE SEWAGE/LIMIT OF FOREST CONSERVATION EASEMENT

REVISIONS		
NO.	DESCRIPTION	DATE
1	UPDATE GUILFORD ROAD AND SUPPORTING FACILITIES	5/2/17

Approved: Department Of Planning And Zoning  
*T. Mahoney* 8/10/17  
 Chief, Division Of Land Development Date

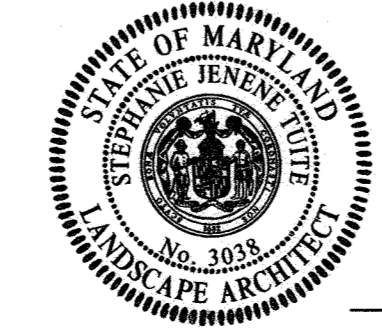
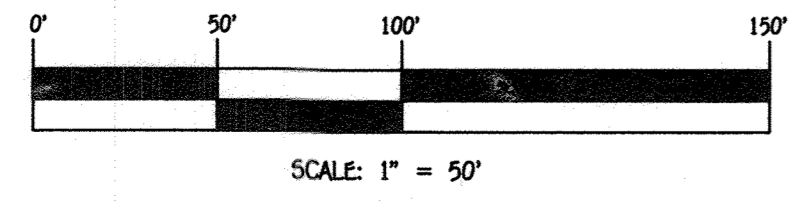
Approved: Howard County Department Of Public Works  
*Howard* 7/27/17  
 Chief, Bureau Of Highways Date

MATCHLINE: SEE SHEET 54



MATCHLINE: SEE SHEET 53

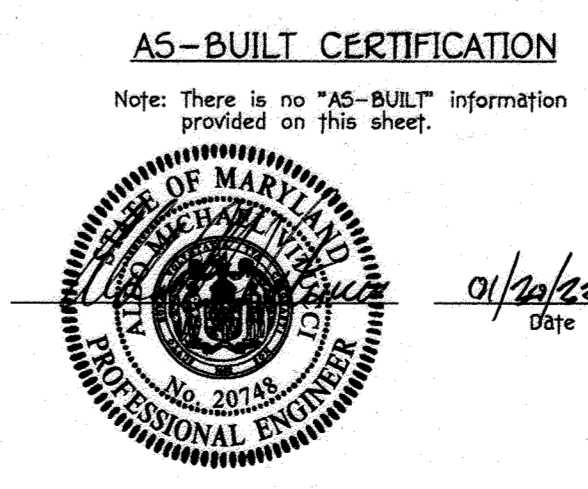
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2895



MD DNR QUALIFIED PROFESSIONAL  
*Stephanie J. Tuite* 7/12/17  
 STEPHANIE J. TUITE RLA DATE

**DEVELOPER**  
 BEAZER HOMES, LLC  
 8965 GUILFORD ROAD - SUITE 290  
 COLUMBIA, MARYLAND 21046  
 (765)-894-0182

**OWNERS**  
 TIERNEY FARMS-CLARKSVILLE, LP  
 24151 VENTURE BOULEVARD  
 CALABASAS, CALIFORNIA 91302  
 (818)-385-3697



AS-BUILT CERTIFICATION  
 Note: There is no "AS-BUILT" information provided on this sheet.

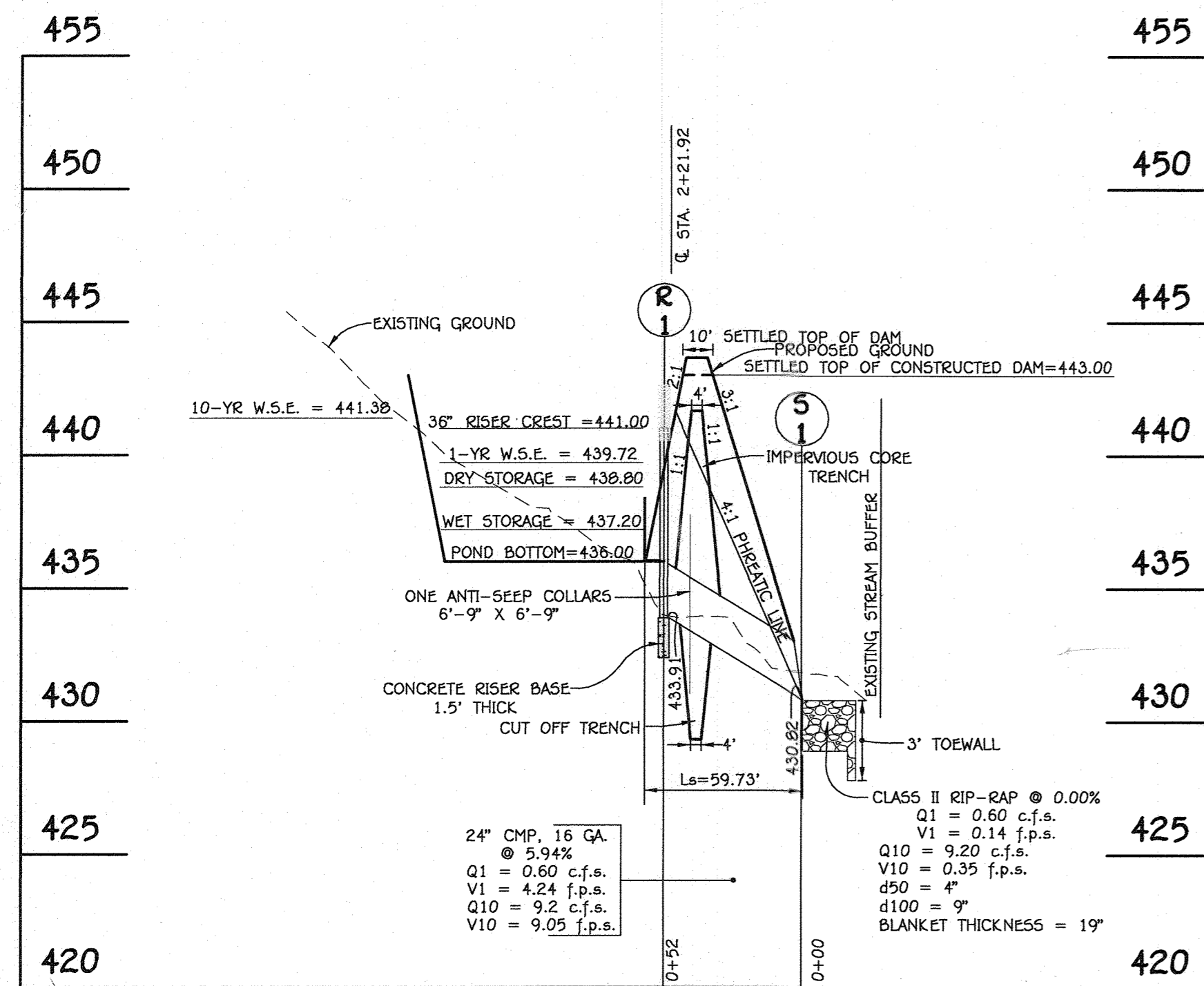
REPLACEMENT SHEET  
 FOREST CONSERVATION PLAN  
**ENCLAVE AT RIVER HILL PHASE 1**  
 LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54 AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
 PREVIOUS HOWARD COUNTY FILES: ECP-15-005, PB#409, SP-05-006  
 ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
 PARCEL NOS.: 88 & 97  
 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: JUNE 24, 2016  
 SHEET 56 OF 58 F-15-110

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

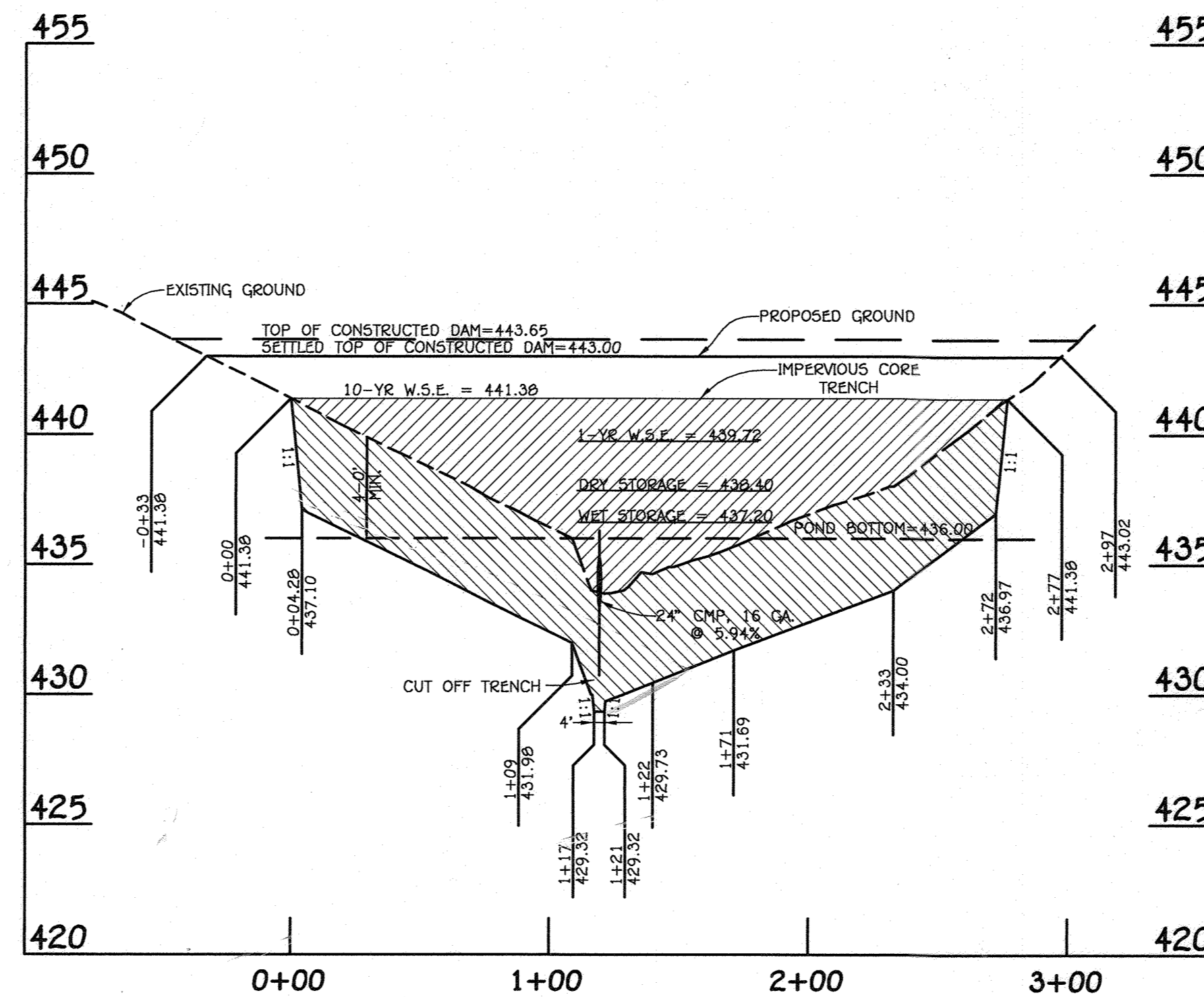
I:\2013\13008\dwg\F-Plan-Forest Conservation Planning\_Sheet 56\_7/13/2017\_8:29:29 AM\_11



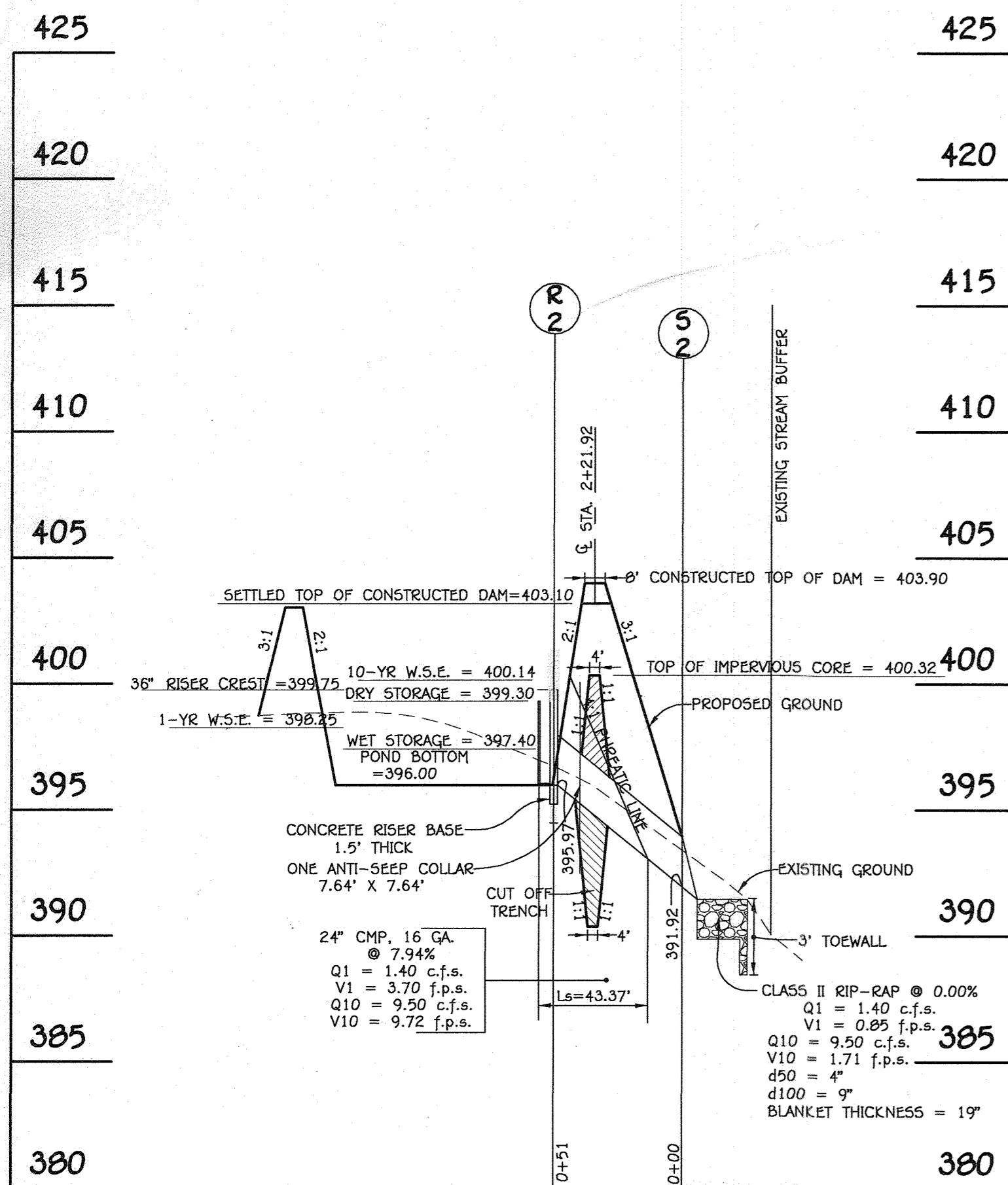




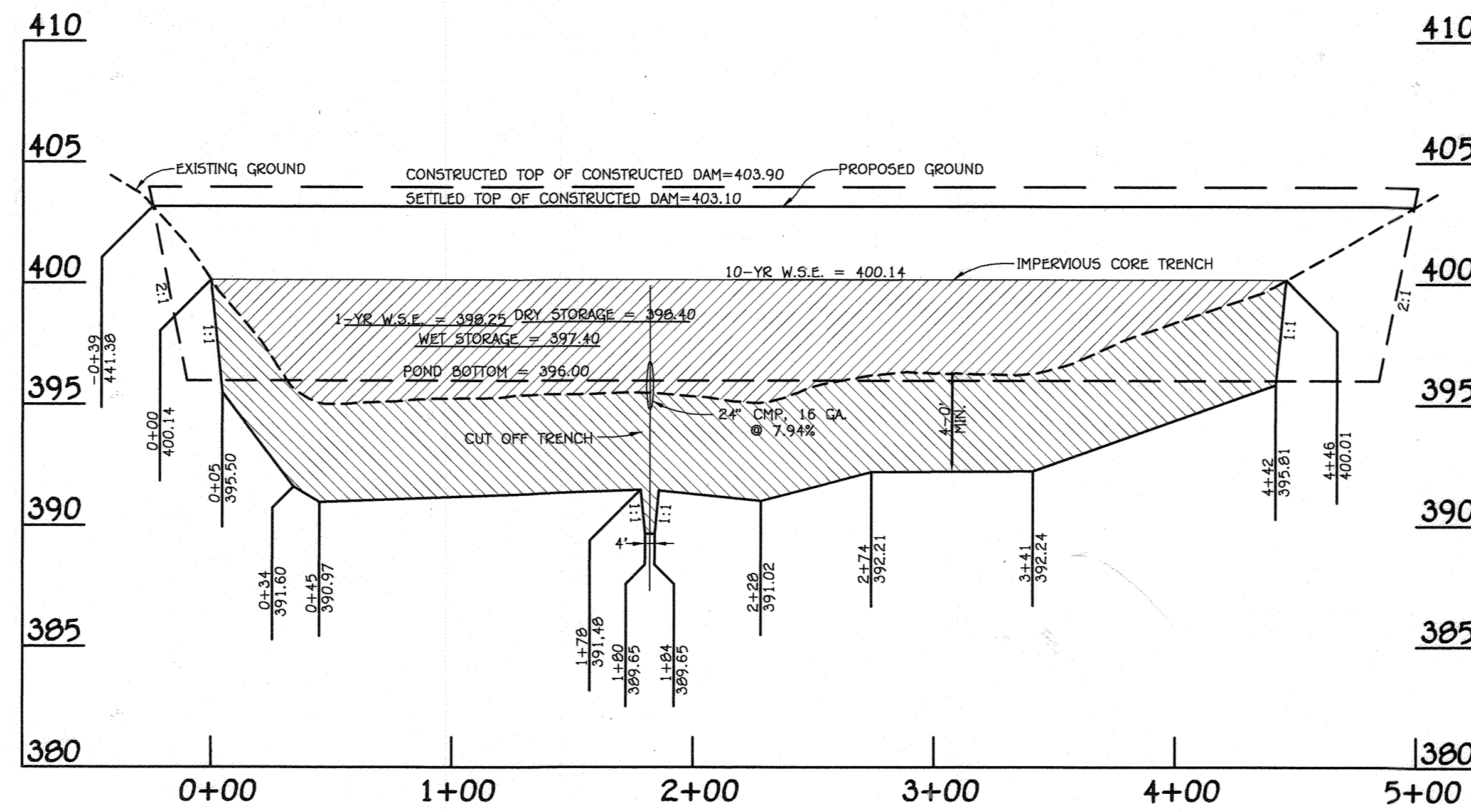
PROFILE CL XSECTION EMBANKMENT SED BASIN NO.1  
SCALE HORZ. 1" = 50'  
VERT. 1" = 5'



PROFILE CL EMBANKMENT SED BASIN NO.1  
SCALE HORZ. 1" = 50'  
VERT. 1" = 5'



PROFILE CL OUTFALL PIPE - BASIN #2  
SCALE HORZ. 1" = 50'  
VERT. 1" = 5'



PROFILE CL DAM - BASIN #2  
SCALE HORZ. 1" = 50'  
VERT. 1" = 5'



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 2/22/19.

*Aldo M. Vitucci*  
ALDO M. VITUCCI P.E. 7/12/17

DEVELOPER

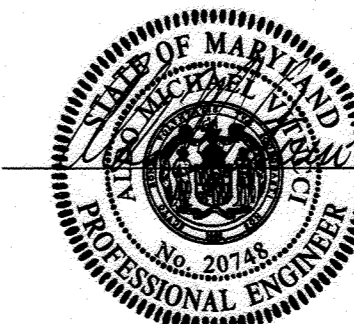
BEAZER HOMES, LLC  
8965 GUILFORD ROAD - SUITE 290  
COLUMBIA, MARYLAND 21046  
(765)-894-0182

OWNERS

TERNEY FARMS-CLARKSVILLE, LP  
24151 VENTURE BOULEVARD  
CALABASAS, CALIFORNIA 91302  
(818)-385-3697

AS-BUILT CERTIFICATION

Note: There is no "AS-BUILT" information provided on this sheet.



*Aldo M. Vitucci*  
Date

REVISIONS		
NO.	DESCRIPTION	DATE
1	UPDATE PROFILES	5/2/17

Approved: Department Of Planning And Zoning

*T. M. ...* 8/10/17  
Chief, Division Of Land Development Date

*[Signature]* 8/1/17  
Chief, Development Engineering Division Date

Approved: Howard County Department Of Public Works

*[Signature]* 7/27/17  
Chief, Bureau Of Highways Date

ENGINEER'S CERTIFICATE  
I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT CONTROL REPRESENTS A PRACTICAL AND FEASIBLE DESIGN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 7/12/17  
Signature Of Engineer Date

DEVELOPER'S CERTIFICATE  
"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

*[Signature]* 7/12/17  
Signature Of Developer Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

*[Signature]* 7/19/17  
Howard Soil Conservation District Date

NOTE:

- NO GRADING MAY BEGIN IN THE AREAS OF THE SEDIMENT BASINS UNTIL THE PIPE MATERIALS (ANTI-SEEP COLLARS, CONCRETE, CMP, ETC ARE ON SITE AND ARE INSTALLED.
- ALL SEDIMENT CONTROLS INTERRUPTED BY STORM DRAIN INSTALLATION ARE TO BE REPAIRED IMMEDIATELY.

REPLACEMENT SHEET  
BASIN PROFILES FOR TSWM  
ENCLAVE AT RIVER HILL  
PHASE 1

LOTS 1 THRU 50, OPEN SPACE LOTS 51 THRU 54  
AND BULK PARCELS 'A' AND 'B' AND FOREST TREE BANK  
PREVIOUS HOWARD COUNTY FILES:  
ECP-15-005, PB#409, SP-05-006  
ZONED R-ED TAX MAP NOS.: 34 GRID NO.: 18  
PARCEL NOS.: 88 & 97  
FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: JUNE 24, 2016  
SHEET 58 OF 58 F-15-110

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

