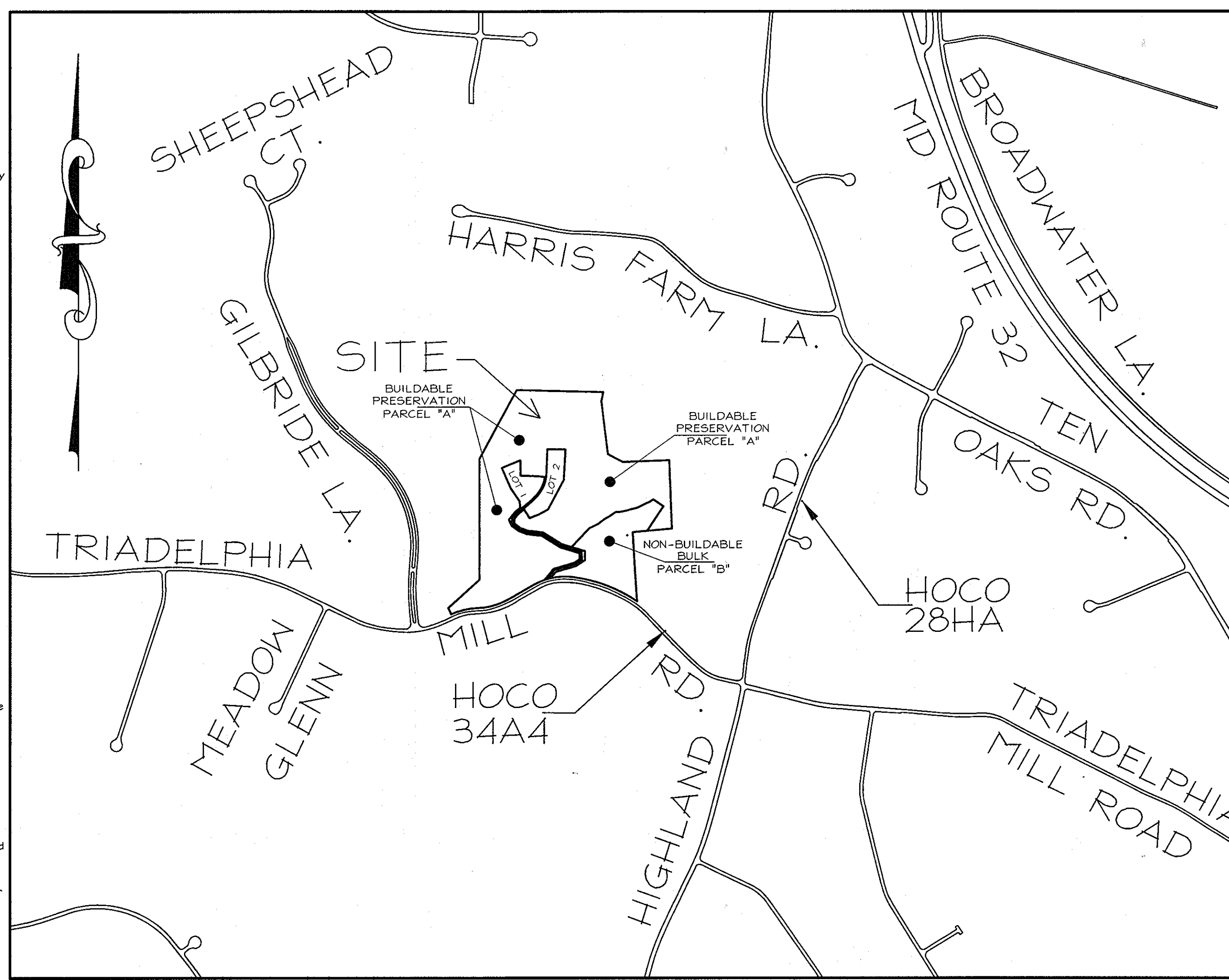


GENERAL NOTES

- This project is in conformance with the latest Howard County Standards unless waivers have been approved.
- The contractor shall notify "Trio Utility" at 1-800-257-7777 at least forty-eight (48) hours prior to any excavation work being done.
- The contractor shall notify the Department of Public Works/Bureau of Engineering /Construction Inspection Division at 410-313-1800 at least five (5) working days prior to the start of work.
- The topography shown on this plan is taken from a previously approved Percolation Certification Plan prepared by NJR & Associates dated 5/14/05 and signed by the County Health Officer on 8/8/05. Topography shown is at two foot contour intervals. The topography within the stream valleys has been amended to reflect field run surveys of January 2010 prepared by LDE, Inc. and merged with topography as described above.
- Soils data shown based on the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey - Version 5, Sept 21, 2006 - Howard County.
- The boundary shown herein is based on a field run monumented Boundary Survey performed by Fitzroy Bertrand and Real Estate Surveyors, LLC, on or about July 29, 1999 and updated by NJR & Associates, Inc. on 8/8/05.
- These coordinates are based on NAD 83, Maryland State Plane Coordinate System, as projected from Howard County control stations: Station 28HA Station 34AA
- Dead Reference: Liber 12245, Folio 274
Plot Reference: Plot # 14436 - 14437
- Project Background Information:
Location: Clarksville, Maryland (Zip Code 21029)
Subdivision Name: HEDGEROW FARM
Site Address: 13550 Triadelphia Mill Road
Tax Map: Map 28
Parcel: 64
Existing Zoning: RR-DEO (Residential: Single District)
Election District: 5th
Total Tract Area: 33,1836 Acres +/-
Number of Proposed Lots: 3 Residential & 1 Bulk (2 Buildable Cluster Lots / 1 Buildable Preservation Parcel and 1 Non-Buildable Bulk Parcel)
DPZ Reference Numbers: F00-58, F00-59, WPO0-65, F01-B1, WPO6-58, F 07-44, ECP 10-015, WPI0-172
- Limit of disturbance: 0.6482 ac total
- Subject property is zoned RR-DEO per 2/02/2004 Comprehensive Zoning Plan and per the Comp Lite Zoning Regulations effective on 7/28/06.
- BEL denotes Building Restriction Line. ESB denotes Environmental Setback
- All areas shown on this plan are +/-, more or less.
- For flag or pipestem lots, refuse collection, snow removal and road maintenance are provided to the junction of the flag or pipestem or road right-of-way line and not onto the pipestem lot driveway. Refuse collection and recycling collection for all lots and parcels shall be at Triadelphia Mill Road within 5' of the paved roadway.
- Driveway(s) shall be provided prior to residential occupancy to insure safe access for fire and emergency vehicles per the following minimum requirements as allowed by Design Manual Waiver approved by the Department of Planning & Zoning on July 8, 2010. See Note 45.
a) Width - 12' (6 feet serving more than one residence).
b) Surface - 6 inches of compacted crusher run base with tar and chip coating. (1/2" Min.)
c) Geometry - Maximum 15% grade, with the durable and sustained grade of 8%. Maximum 10% grade change and minimum of 45 foot turning radius.
d) Structures (culverts/bridges) Capable of supporting 25 gross tons (H25 loading).
e) Drainage Elements - Capable of safely passing 100 year flood with no more than 1 foot depth over driveway surface.
f) Structure Clearances - minimum 12 feet.
g) Maintenance sufficient to ensure all weather use. Where one (1) driveway serves more than one (1) lot, a house number sign must be placed at each lot entrance and a range of street address house numbers sign where the common driveway intersects with the main road.
- A maintenance agreement is required for the shared driveway for Lots 1, 2, Buildable Preservation Parcel "A". The maintenance agreement will be recorded concurrently with the plat. The shared driveway will be maintained by the owners of Lots 1, 2 and Buildable Preservation Parcel "A".
- The pipestem for Lot 1 is 1006 feet +/- long, Buildable Preservation Parcel "A" is 1119 feet +/- long and the pipestem for Lot 2 is 982 feet +/- in length. All pipestems meet Section 16.120(b)(6)(i) of the Subdivision Regulations.
- The environmental features which currently exist onsite are floodplain, steep slopes, wetlands, wetland buffers, streams and their bank buffers. This project does not disturb any steep slopes which are greater than 20,000 square feet of on-site and off-site contiguous area, wetlands, wetland buffers, streams and stream bank buffers with the exception of the floodplain and buffer areas associated with driveway stone wall extensions.
- The Wetland study for this property (Thaler Estates / F00-59) was originally conducted by I.P.D.S. dated September, 1999 and January, 2000. LDE Inc. redelineated the wetland areas as part of Thaler Estates (F01-B1) dated August, 2005 and confirmed the limit of wetlands for this project on January, 2010.
- Landscaping for Lots 1, 2, Buildable Preservation Parcel "A" and Non-Buildable Bulk Parcel "B" is provided in accordance with a certified Landscape Plan on file with this plan.
- This plat complies with the requirements of Section 16.1200 of the Howard County Code for Forest Conservation by RETENTION of 11.34 acres of forest in existing easements # 2,4,5,7,8,9,10 and 10 and Non easement credit areas located on Lot 2 (F00-59) and Lot 6 (F01-B1) Thaler Estates, 1.18 acres of reforestation in existing easements #1 and #3 Thaler Estates (F00-59) and 3.26 acres of reforestation in existing easement #6 Thaler Estates(F00-59).
- The Forest Conservation Easements have been established to fulfill the requirements of Section 16.1200 of the Howard County Code and Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easements; however, Forest Management Practices as defined in the deed of Forest Conservation Easement are allowed.
- This subdivision plan is subject to the amended Fifth Edition of the Subdivision and Land Development Regulations per Council Bill No. 45-2003 effective October 2nd, 2003. Development or construction on these lots must comply with setback and buffer regulations in effect at the time of submission of the site development plan, waiver petition application or building permit applications.
- Stormwater management for Lot 1 is provided by use of Environmental Site Design by use of permeable surface and sheet flow to conservation area. Stormwater management for Lot 2 and Buildable Preservation Parcel "A" is exempt. No new impervious areas are proposed on each of these lots/parcels.
- These areas designate a private sewage easement of at least 10,000 square feet as required by the Maryland Department of the Environment for individual sewage disposal. (COMAR 26.04.03) Improvements of any nature in this area are restricted until public sewage is available. These easements shall become null and void upon connection to a public sewage system. The County Health Officer shall have the authority to grant variances for encroachments into the private sewage easement. Resurfacing of a modified sewage easement shall not be necessary.
- The lots shown herein comply with the minimum lot area and ownership width as required by the Maryland Department of the Environment.
- Existing wells, septic systems, and sewage disposal areas within 100' of the property and those wells within 200' down gradient of existing or proposed septic systems or sewage disposal areas have been shown.
- All wells shall be drilled prior to final plat recordation. It is the developer's responsibility to schedule the well drilling prior to final plat submission. It will not be considered "government delay" if the well drilling holds up Health Department signatures of the record plat.
- Any changes to a private sewage area shall require a revised percolation certification plan.
- No grading, removal of vegetative cover or trees, paving and new structures shall be permitted within the limits of wetlands, stream(s), or their required buffers, floodplain and forest conservation easement areas, with the exception of the floodplain and buffer areas associated with driveway stone wall extensions.
- The existing septic system presently used by the existing dwelling, #13550, shall be abandoned and a new septic system installed for Lot 2. The existing hand dug well located on Lot 2 and the existing well located within the existing driveway shall be abandoned by a licensed well driller and the abandonment report shall be forwarded to the Health Department prior to final plat signature approval. The existing septic system presently used by the garage/exercise room on Lot 2 shall be abandoned and the effluent line from this structure shall be tied into the new septic system for Lot 2, noting the line from the existing well west of the existing barns which currently connects to the existing dwelling, #13550, shall be rerouted to the principal residence (pool house w/ addition) on Buildable Preservation Parcel "A" prior to final plat signature approval.
- There are existing dwellings and structures located on Buildable Preservation Parcel "A" and Lot 2 to remain. No new buildings, extensions or additions to the existing dwellings and structures are to be constructed at a distance less than the Zoning Regulation requirements.
- Existing utilities are based on field surveys and/or plans of public record.
- A Floodplain Study is part of this plan submission and amends the previously plotted floodplain shown on Plat # 14436. The Floodplain Study amendment was approved by the Department of Planning & Zoning October 2010.
- Sight Distance study for this project was prepared by LDE, Inc., April 2010 and approved by the Department of Planning & Zoning October 2010.
- All construction shall be in accordance with the latest Standards and Specifications of Howard County Design Manual Vol. IV and current MSHA Standards & Specifications if applicable.
- The property is listed in the Historic Sites Inventory as HQ-171 known as 'Hedge Row' or 'Left Over'. The subdivision proposal was presented to the Historic District Commission on 8/10/10 and received advisory approval.
- The public 100 year floodplain, drainage & utility easement will be owned and maintained by the owner of Buildable Preservation Parcel "A". In accordance with Section 16.115.b.2.ii of the subdivision regulations, the owner grants Howard County a perpetual easement for right of entry.
- A Letter of Exemption Application has been filed with the Maryland Department of the Environment for the repair work to the existing driveway stone wall extensions located within the 100 year floodplain and wetland buffer.
- In accordance with Section 105.E.I.C. of the Howard County Zoning Regulations, the Health Department supports the recommendation to increase the maximum lot size of Lot 2 to a maximum of 60,000 square feet. (The 60,000 square feet maximum lot size does not include the pipestem area).
- The owner certifies that to the best of his knowledge, there are no cemetery sites or burial grounds on the property to be subdivided.
- Upon building permit review the septic systems for all proposed structures and/or existing structure expansions shall be re-evaluated to determine sufficient system capacity.
- This project is subject to WPI-10-172 from the Howard County Subdivision and Land Development Regulations. On October 12, 2010, the Planning Director approved the request to waive Subsections 16.120(b)(3)(ii), 16.120(a)(1)(iv) and 16.144(b) of the Howard County Code. Waiver approval allows environmental features to be located on lots less than 10 acres in size, waives the requirement that the developer provide road improvements and waives the requirement that a sketch plan or preliminary subdivision plan be submitted for the subdivision referenced Waiver approval is subject to the following conditions:
1. Petitioner shall redesignate Lot 2 of Hedgerow Farm, Lots 1 - 3 as "Buildable Preservation Parcel "A". Buildable Preservation Parcel "A" shall have an area sufficient to maintain the base density of the proposed subdivision given the two cluster lots proposed and to support Buildable Preservation Parcel "A" (minimum 10 Acres).
2. Petitioner shall designate the remaining area of the subdivision not needed to support Buildable Lots 1 and 2 and Buildable Preservation Parcel "A" as Non-Buildable Bulk Parcel "B". At the time of the resubdivision of Non-Buildable Bulk Parcel "B" into two additional cluster lots located on the east side of Lot 3 (future lots 4 & 5 as depicted on waiver exhibit "Percolation Certification Plat, Hedgerow Farm, Lots 4 & 5"), the remaining area of Non-Buildable Bulk Parcel "B" shall be placed into a non-buildable preservation parcel and shall be designated as "Non-Buildable Preservation Parcel "C".
3. Petitioner shall identify any and all areas of existing forest conservation easements which will no longer qualify toward satisfying the forest conservation obligations of Thaler Estates, Plat Nos. 14436 - 14437, (F 00-059). Any forest conservation deficit shall be corrected by the addition of new forest conservation easements or augmentation of existing easements
4. Petitioner shall obtain all Federal, State and local permits required for activities in regulated areas.
5. The Environmental Concept Plan (ECP10-015) review was based on ECP checklist requirements. Zoning Regulations and Subdivision and Land Development Regulations have been evaluated and approved under this final plan submission. Proposed activities within the environmental buffers were determined essential or necessary disturbance per Subsection 16.116.c of the Subdivision and Land Development Regulations.
6. Under ECP 10-015, On July 8, 2010, the Development Engineering Division approved the request to waive Design Manual, Volume III, Section 2.6.B which requires that a 16' wide shared use driveway be provided and Section 4.3.1.a.2 which requires that when a residential driveway crosses a floodplain, a public access place must be provided, based on the justification provided by LDE in their letter:
1. a letter dated 12/15/09 from the Howard County Department of Fire and Rescue Services approving with conditions the use of the existing driveway for access to the proposed three lots
2. the granting of the requested waiver will not impact the County's infrastructure systems



LOCATION MAP

Scale: 1" = 600'

**SUPPLEMENTAL PLANS
HEDGEROW FARM**

LOT 1, 2, Buildable Preservation Parcel "A" and Non-Buildable Bulk Parcel "B"

**A RESUBDIVISION OF
LOT 1, THALER ESTATES, PLAT #14436**

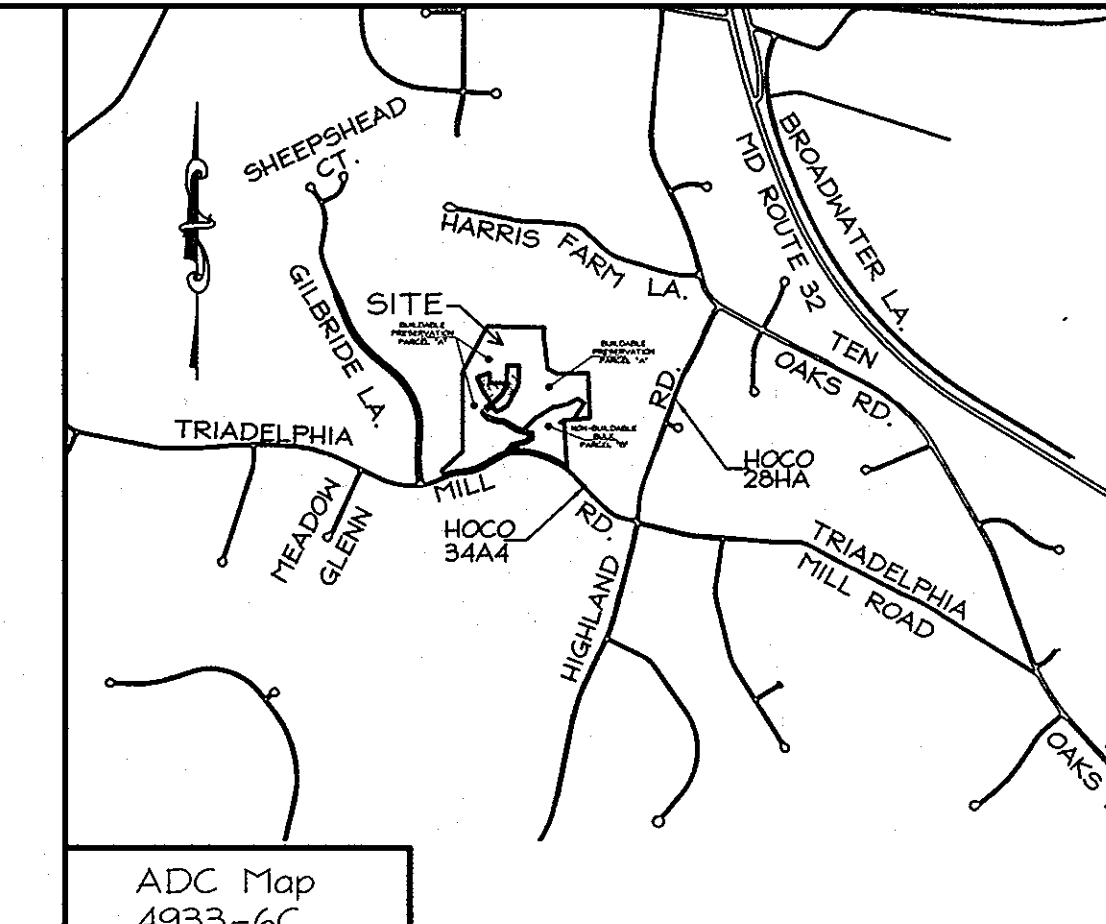
Tax Map 28 Grid 20 Parcel 64
5th Election District - Howard County, Maryland
Zoned RR-DEO

GENERAL NOTES (cont)

- The underground storage tank (UST) located on this property was removed on September 26, 2000. The Department of the Environment Waste Management Administration, Oil Control Program issued a Certificate of Closure, dated October 31, 2000 for the Facility No. 001875.
- The purpose of Buildable Preservation Parcel "A" is the preservation of the remaining property residue which will house the pool, barns and pastures of the historic properties, known as "Left Over", "Left Over" or "Hedgerow". The purpose of Non-Buildable Bulk Parcel "B" is the reservation of the land for the future Buildable Preservation Parcel.
- Buildable Preservation Parcel "A" is encumbered by an easement agreement with HEDGEROW FARM Homeowners Association Inc. and Howard County, Maryland. This agreement prohibits further subdivision of this parcel, outlines the maintenance responsibilities of their owners and enumerates the uses permitted on the parcel. Buildable Preservation Parcel "A" will be owned by HEDGEROW FARM, LLC.
- The public 100 year floodplain, drainage & utility easement will be owned and maintained by HEDGEROW FARM, LLC. In accordance with Section 16.115.b.2.ii of the subdivision regulations, the owner grants Howard County a perpetual easement for right of entry.

BENCHMARKS:

- Howard County Control Station 28HA
NAVD 29 Elevation = 589.708'
NAD 83 Coordinates: N565347.937, E1319266.269
Standard stamped disc set on a 3' deep column of concrete located on the Northeast side of Highland Road just north of Angus Ct, 14.2' off edge of paving, 29.0' from GTE Pole #334368.
- Howard County Control Station 34AA
NAVD 29 Elevation = 561.105'
NAD 83 Coordinates: N564468.943, E1318257.375
Standard stamped disc set on a 3' deep column of concrete located on the South side of Triadelphia Mill Rd, 7.4' from the edge of pavement, 57.2' east from C&P pole and 22' west from a post from a gas pipeline right of way.



VICINITY MAP
SCALE: 1" = 2000'

INDEX OF SHEETS	
No.	Description
1	Cover Sheet
2	Supplemental Plan, Forest Conservation Plan & Soils Map - Overall
3	Supplemental, Grading & Landscape Plan
4	Supplemental Plan - Miscellaneous Details
5	Supplemental Plan - Use-In-Common Driveway Details

DENSITY SUMMARY

- Gross Area: 33,1836 Ac ±
- Area of 100 Year Floodplain: 2,8081 Ac ±
- Area of Steep Slopes: 1,0437 Ac ±
- Net Area of Property: 29,3318 Ac ±
- By Right Density: 33,1836 Ac / 4.25 = 7.8 or 7 Units
- The Owner Proposes: 2 Cluster Lots and 1 Buildable Preservation Parcel 1 Non-Buildable Bulk Parcel

MINIMUM LOT SIZE TABULATION			
LOT NO.	GROSS AREA	PIPESTEM	MINIMUM LOT SIZE
1	1.2264 AC	0.1711 AC	1.0553 AC
Buildable Preservation Parcel "A"	25.4569 AC	0.2105 AC	25.2464 AC
2*	1.5797 AC	0.2403 AC	1.3394 AC

* SEE NOTE #40 THIS SHEET

LEGEND

- SBB 75' STREAM BANK BUFFER
- W 25' EX. LIMITS OF NON-TIDAL WETLANDS
- WB 25' WETLAND BUFFER
- FP 100 YEAR FLOODPLAIN LIMITS
- Private Access, Drainage & Utility Easement
- Private Stormwater Management Credit Easement
- Existing Forest Conservation Easement
- 520--- EXISTING 10' CONTOURS
-522..... EXISTING 2' CONTOURS
- 520 PROPOSED 10' CONTOURS
- 522 PROPOSED 2' CONTOURS
- P PROPOSED PRIMARY WELL SITE
- A PROPOSED ALTERNATE WELL SITE
- ⊗ EXISTING WELL TO BE ABANDONED
- Proposed Sewage Disposal Easement
- Existing Sewage Disposal Easement
- BRL BUILDING RESTRICTION LINE
- Proposed Dwelling
- EX. STREAM
- EX. TREELINE
- Soil Boundary
- PERCOLATION TEST PASSED
- PERCOLATION TEST FAILED
- SLOPES 25% OR GREATER
- OVERHEAD UTILITY LINES

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 12-15-10
DATE
Chief, Division of Land Development 12-15-10
DATE

REVISIONS

No.	By	Date	Description

LDE Inc.
Engineers, Surveyors, Planners
9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)556-3424 - FAX(410)715-9340

DESIGNED	BDB	COVER SHEET	SCALE
EDS	EDS	HEDGEROW FARM	AS NOTED
DRAWN	MDL	LOT 1, 2, Buildable Preservation Parcel "A" and Non-Buildable Bulk Parcel "B"	DRAWING
LDE	LDE	A RESUBDIVISION OF	1 of 5
CHECKED	BDB	LOT 1, THALER ESTATES, PLAT #14436	JOB NO.
		13550 Triadelphia Mill Road - RR-DEO Zoning	09-009
		Tax Map 28 Grid 20 Parcel 64	FILE NO.
		5th Election District - Howard County, Maryland	F11-022
		Previous Submittals: F00-58, F00-59, WPO-65, F01-B1, WPO6-58, F 07-44	
		ECP10-015, WPI-10-172	
DATE	12/2010	OWNER/DEVELOPER: Hedgerow Farm LLC 13803 Lakeside Drive Clarksville, MD 21029-1025 (301)802-1051	

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM FULLY LICENSED UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184.

BRUCE D. BURTON 12/8/10
BRUCE D. BURTON

LEGEND

- MINOR CONTOUR- (2' INTERVAL)
- INDEX CONTOUR- (10' INTERVAL)
- SOILS BOUNDARY
- CL. STREAM/POND
- 100' STREAM BANK BUFFER
- NON TIDAL WETLAND LIMIT
- WETLAND BUFFER
- EXIST. FOREST CONSERVATION EASEMENT
- 100 YR FLOOD PLAIN
- EXISTING DRIVEWAY
- EXISTING TREELINE
- PROPOSED TREELINE
- APPROXIMATE LOCATION EXISTING SEPTIC EASEMENT PLAT 14436
- PROPOSED SEPTIC EASEMENT
- EXISTING WELL
- PROPOSED CONTOURS
- STEEP SLOPES (25% OR GREATER)
- PERC TEST PASSED (7/1/99)
- PERC TEST PASSED (6/14/05)
- PERC TEST FAILED (6/14/05)
- PERC TEST PASSED (12/16/09)
- EXISTING WELL
- PROPOSED PRIMARY WELL
- PROPOSED ALTERNATE WELL

- EASEMENT LEGEND**
- PRIVATE STORMWATER MANAGEMENT CREDIT EASEMENT
 - EXISTING F00-54 FOREST CONSERVATION EASEMENT
 - VARIABLE WIDTH PRIVATE ACCESS, DRAINAGE & UTILITY EASEMENT
 - PUBLIC 100 YEAR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chad Edwards
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 12-15-10

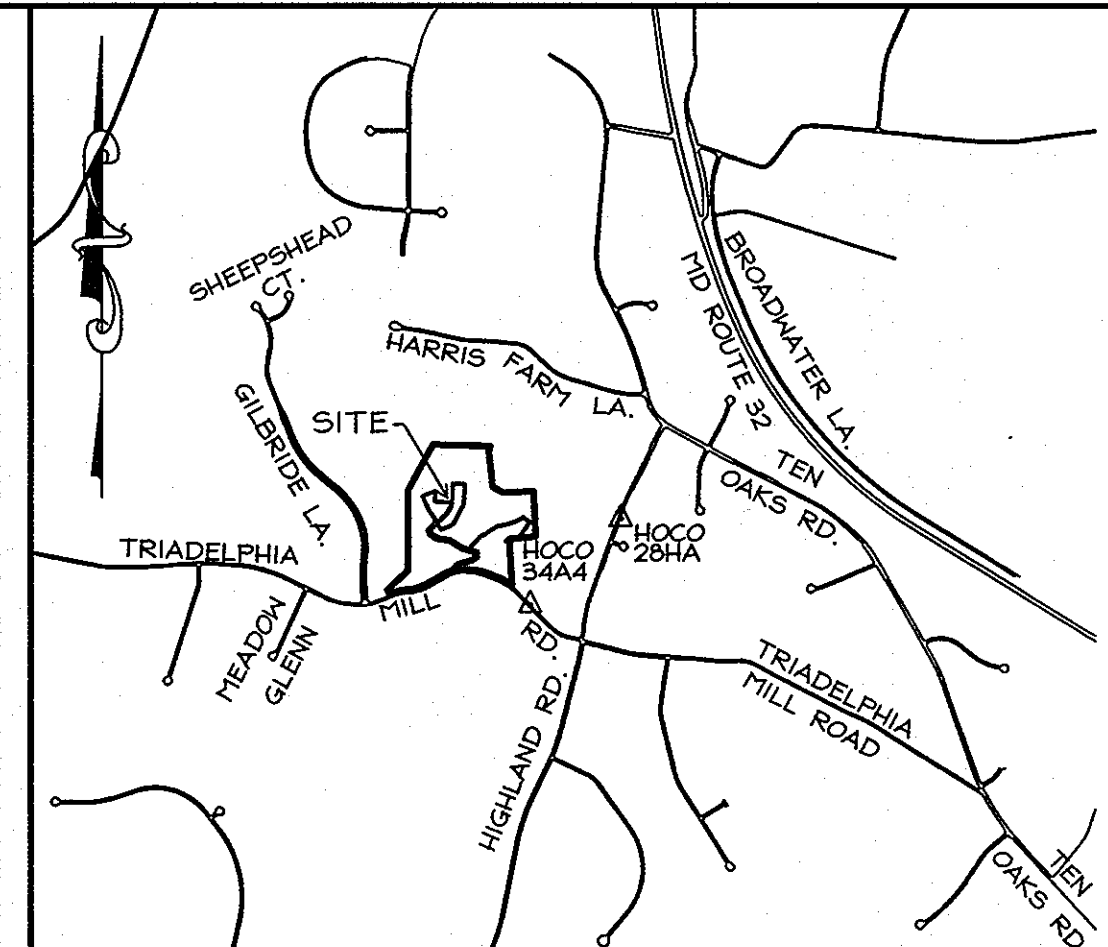
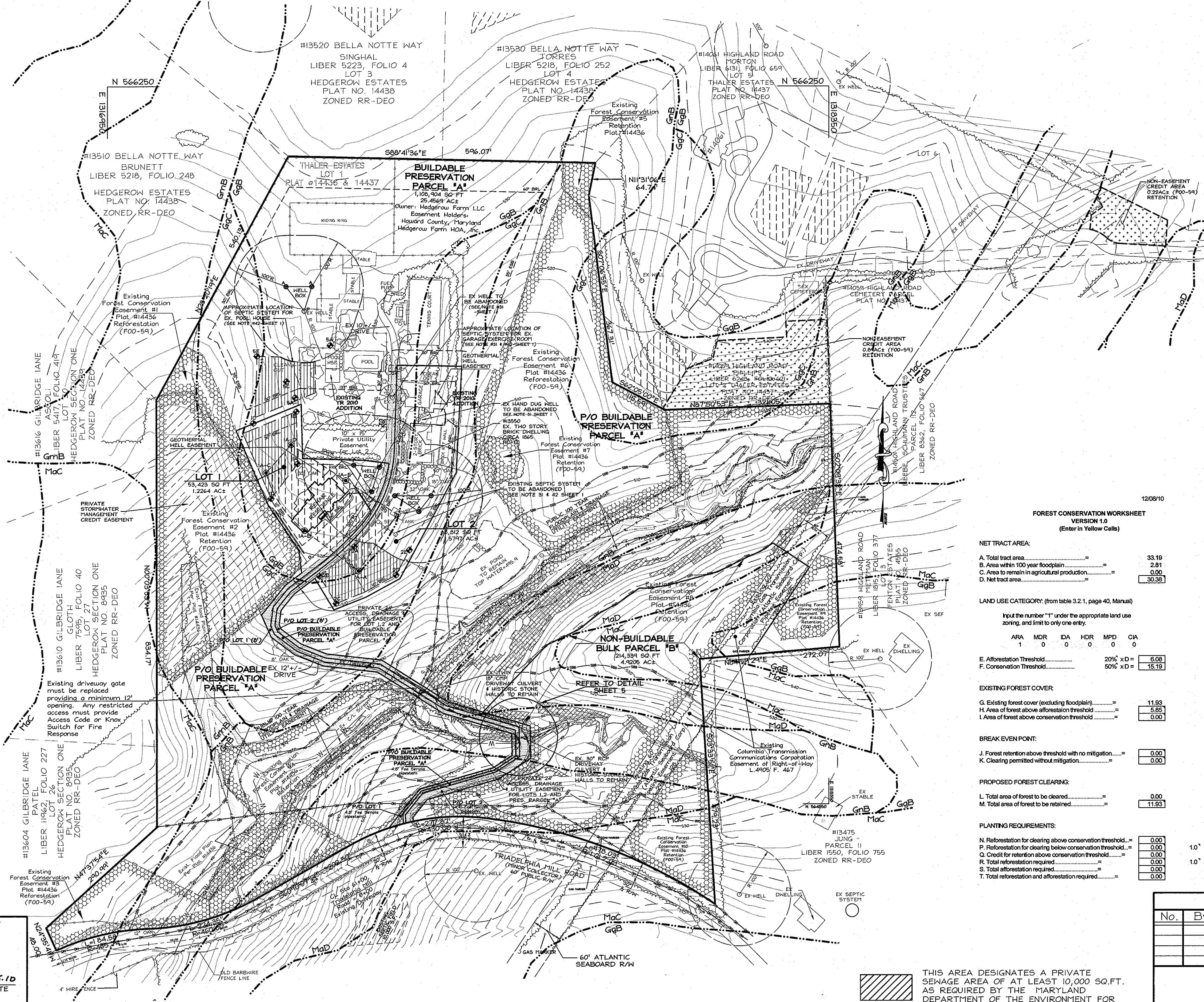
Kate Deane
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 12-15-10

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. 19184, EXPIRES 12/31/11.

SIGNED: *BRUCE D. BURTON* 12/8/10
BRUCE D. BURTON
PROFESSIONAL ENGINEER

NOTES:

1. The existing septic system presently used by the existing dwelling, #13550, shall be abandoned and a new septic system installed for Lot 2. The existing hard dug well located on Lot 2 and the existing well located within the existing driveway shall be properly abandoned by a licensed well driller and the abandonment report shall be forwarded to the Health Department prior to final plot signature approval. The existing septic system presently used by the garage/exercise room on Lot 2 shall be abandoned and the effluent line from this structure shall be tied into the new septic system for Lot 2 noted above. The water line from the existing well west of the existing barn which currently connects to the existing dwelling, #13550, shall be rerouted to the principal residence (pool house w/ addition) on Buildable Preservation Parcel "A" prior to final plot signature approval.
2. There are existing dwellings and structures located on Buildable Preservation Parcel "A" and Lot 2 to remain. No new buildings, extensions or additions to the existing dwelling and structures are to be constructed at a distance less than the Zoning Regulations require.
3. Upon building permit review the septic systems for all proposed structures and/or existing structure expansions shall be re-evaluated to determine sufficient system capacity.



ADC Map 14-A-7 VICINITY MAP SCALE: 1"=2000'

- SOILS LEGEND:**
- GgB - Glenelg Loam, 3 to 8 percent slopes
 - GcC - Glenelg Loam, 8 to 15 percent slopes
 - 4' - 10' depth to bedrock; 10' to water table; slight to severe limitations for sewage disposal fields and homes w/ basements depending on slopes; erosion hazard.
 - GmB - Glenville Silt Loam, 3 to 8 percent slopes
 - GmC - Glenville-Silt Loam, 0 to 8 percent slopes
 - 4' - 10' depth to bedrock; 1.5' to 3' to water table; severe limitations for sewage disposal fields moderate limitations for homes w/ basements depending on slopes; erosion hazard.
 - MaC - Manor Loam, 8 to 15 percent slopes
 - MaD - Manor Loam, 15 to 25 percent slopes
 - 6' - 10' depth to bedrock; 20' to water table; slight to severe limitations for sewage disposal fields and homes w/ basements depending on slopes; erosion hazard.

FOREST CONSERVATION WORKSHEET
(Enter in Yellow Cells)

NET TRACT AREA:

A. Total tract area	33.19
B. Area within 100 year floodplain	2.81
C. Area to remain in agricultural production	0.00
D. Net tract area	30.38

LAND USE CATEGORY (from table 3.2.1, page 40, Manual)

Input the number "1" under the appropriate land use zoning, and limit to only one entry.

ARA	MDR	DA	HDR	MFD	CA
1	0	0	0	0	0

EXISTING FOREST COVER:

G. Existing forest cover (excluding floodplain)	11.93
H. Area of forest above afforestation threshold	5.85
I. Area of forest above conservation threshold	0.00

BREAK EVEN POINT:

J. Forest retention above threshold with no mitigation	0.00
K. Clearing permitted without mitigation	0.00

PROPOSED FOREST CLEARING:

L. Total area of forest to be cleared	0.00
M. Total area of forest to be retained	11.93

PLANTING REQUIREMENTS:

N. Reforestation for clearing above conservation threshold	0.00
P. Reforestation for clearing below conservation threshold	0.00
Q. Credit for retention above conservation threshold	0.00
R. Total reforestation required	0.00
S. Total afforestation required	0.00
T. Total reforestation and afforestation required	0.00

LAND USE CATEGORY CALCULATION:

1. $\frac{\text{Total Acreage} - \text{Floodplain Area}}{\text{No. of Lots}} = \text{Average Lot Density}$
 $\frac{33.20 - 2.81}{3} = 10.31 \text{ Acres/Lot}$
2. Use "ARA" Land Use Designation

1. The Forest Conservation Easement has been established to fulfill the requirements of Section 16.1200 of the Howard County Code and Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easement; however, Forest Management Practices as defined in the deed of Forest Conservation Easement are allowed.

2. This project complies with the requirements of Section 16.1200 of the Howard County Code for Forest Conservation by RETENTION of 11.34 acres of forest in existing easements # 2, 4, 5, 7, 8, 9, 10 and Non easement credit areas located on Lot 2 (F00-54) and Lot 6 (F01-81) Thaler Estates, 1.18 acres of Reforestation in existing easements #1 and #3 Thaler Estates (F00-54) and 3.26 acres of Reforestation in existing easement #6 Thaler Estates (F00-54).

REVISIONS

No.	By	Date	Description

LDE Inc.

Engineers, Surveyors, Planners
9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX(410)715-3540

DESIGNED BDB EDS	SUPPLEMENTAL PLAN, FOREST CONSERVATION PLAN & SOILS MAP - OVERALL HEDGEROW FARM LOT 1, 2, Buildable Preservation Parcel "A" and Non-Buildable Bulk Parcel "B" A RESUBDIVISION OF LOT 1, THALER ESTATES, PLAT #14436 13550 Triadelphia Mill Road - RR-DEO Zoning Tax Map 28, Grid 20 Parcel 64 5th Election District - Howard County, Maryland Previous Submittals: F00-54, F00-54, WF 00-65, F01-81, WF06-58, F 07-44 ECPI0-015, WF 10-172	SCALE 1"=100'
DRAWN LDE		DRAWING 2 of 5
CHECKED BDB		JOB NO. 09-009
DATE 12/20/10	OWNER/DEVELOPER: Hedgerow Farm LLC 13803 Lakeside Drive Clarksville, MD 21029-1025 (301)802-1051	FILE NO. F11-022

THIS AREA DESIGNATES A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQ.FT. AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT.



FRONT ELEVATION

REHAK RESIDENCE
Peter W. Ratcliffe, AIA

REHAK RESIDENCE - PLAN VIEW
SCALE 1" = 20'

CONSTRUCTION CRITERIA FOR PERMEABLE SURFACES

- Final grading for installation should not take place until surrounding site is stabilized. If this can not be accomplished, runoff from disturbed areas shall be diverted around proposed pavement location.
- Sub soils shall not be compacted. Construction should be performed with lightweight, wide tracked equipment to minimize compaction. Excavated materials should be placed in a contained area.
- Distribution Pipes - N/A.
- Subbase aggregate shall be clean and free of fines. The subbase shall be placed in lifts and lightly rolled according to the specifications (Appendix B.4.)

NOTE:

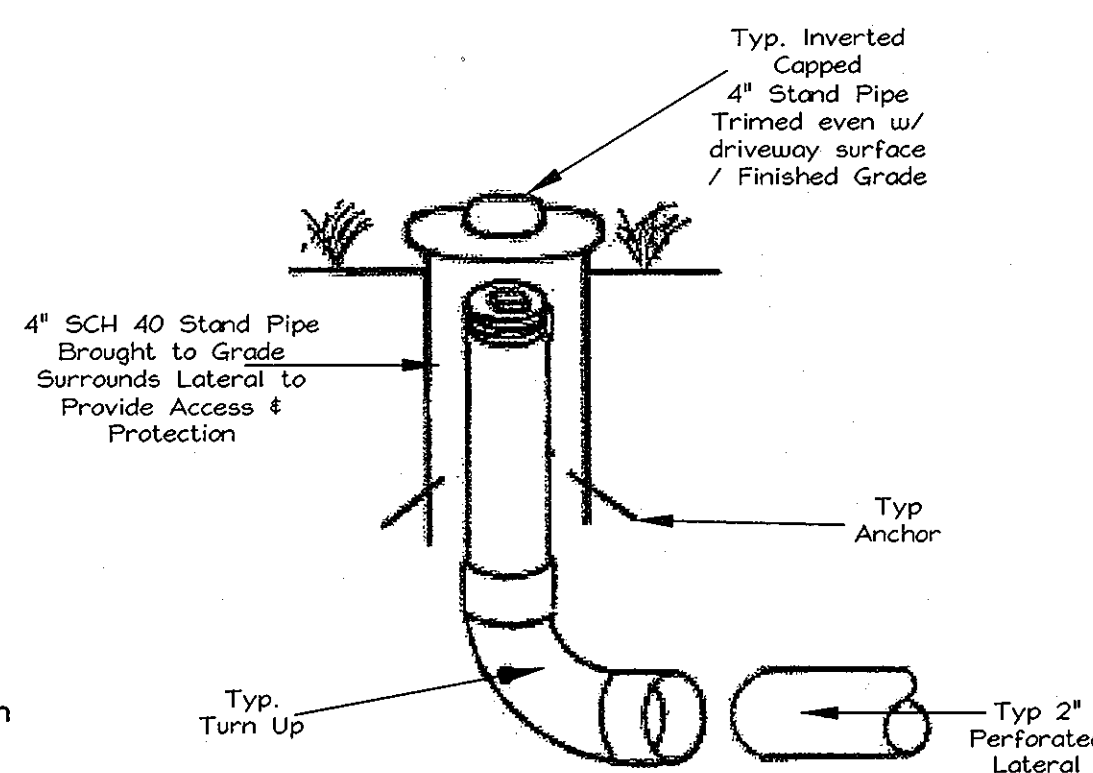
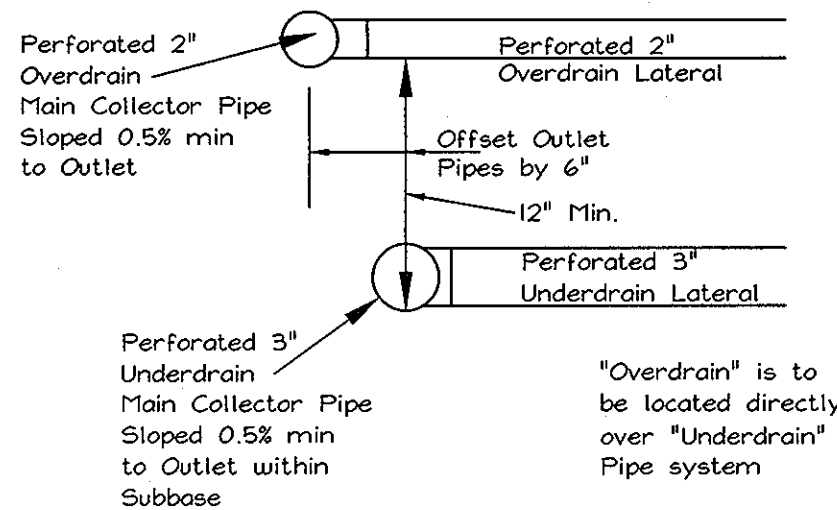
LDE, Inc. provides that listed in Appendix B.4. of the 2000 Maryland Stormwater Design Manual Volume 2 as guidelines to contractor and guidance in the shown overdrain & underdrain system. The contractor shall provide verification that the materials used meet the specifications shown within Appendix B.4.

Per Howard County SWM Seminar Example Packet - April 2010;

"IDE has indicated that ... For residential detached developments with small amounts of impervious areas the impervious areas should be treated at the source using ESD practices. If the ESD practices address the calculated Pe for the site impervious area and the ESD, then the remaining gross areas of the site shall be considered adequate and no further treatment will be required."

No additional management required for Septic Area portion of site.

TYPICAL SECTION OVERDRAIN / UNDERDRAIN LOCATIONS



TYPICAL CLEANOUT 2" OVERDRAIN LATERAL
SCALE: N.T.S.

SOILS LEGEND:

- GgB - Glenelg Loam, 3 to 8 percent slopes
- GgC - Glenelg Loam, 8 to 15 percent slopes
- 4' - 10' depth to bedrock; 10' to water table; slight to severe limitations for sewage disposal fields and homes w/ basements depending on slopes; erosion hazard.
- GnB - Glenville Silt Loam, 3 to 8 percent slopes
- GnB - Glenville-Balle silt loams, 0 to 8 percent slopes
- 4' - 10' depth to bedrock; 1.5' to 3' to water table; severe limitations for sewage disposal fields moderate limitations for homes w/ basements; impeded drainage; seasonal wetness; erosion hazard.
- MoC - Manor Loam, 8 to 15 percent slopes
- MoD - Manor Loam, 15 to 25 percent slopes
- 6' - 10' depth to bedrock; 20' to water table; slight to severe limitations for sewage disposal fields and homes w/ basements depending on slopes; erosion hazard.

SWM LEGEND

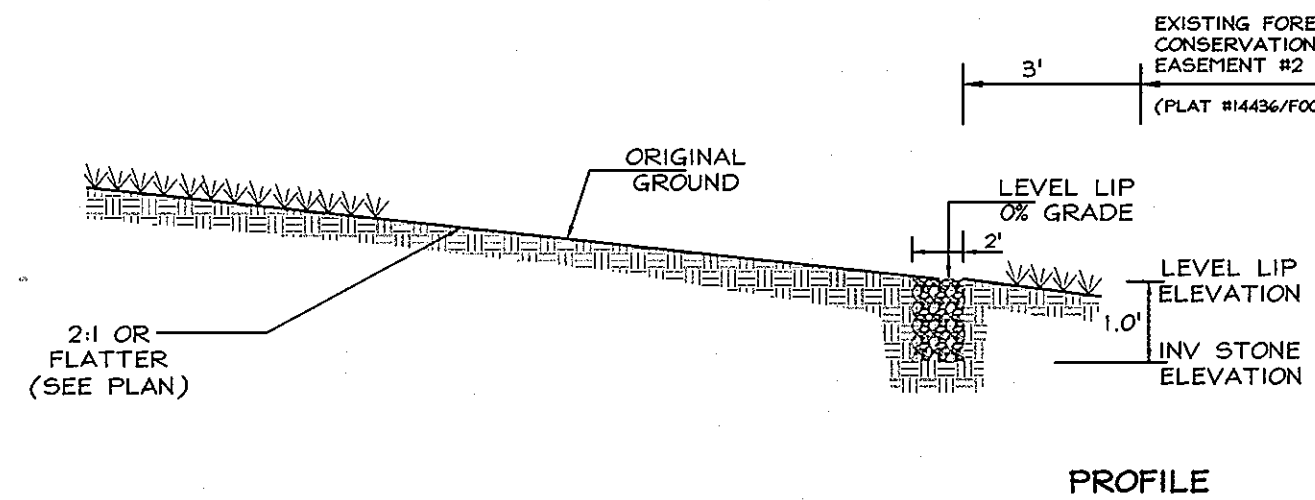
- NON-ROOFTOP DISCONNECTION AREA
- NON-PERMEABLE SURFACE
- EXCLUSION ZONE (SWM PRACTICES NOT PERMITTED)
- PERMEABLE SURFACE

NOTE:

- There are existing dwellings and structures located on Buildable Preservation Parcel "A" and Lot 2 to remain. No new buildings, extensions or additions to the existing dwelling and structures are to be constructed at a distance less than the Zoning Regulations require.

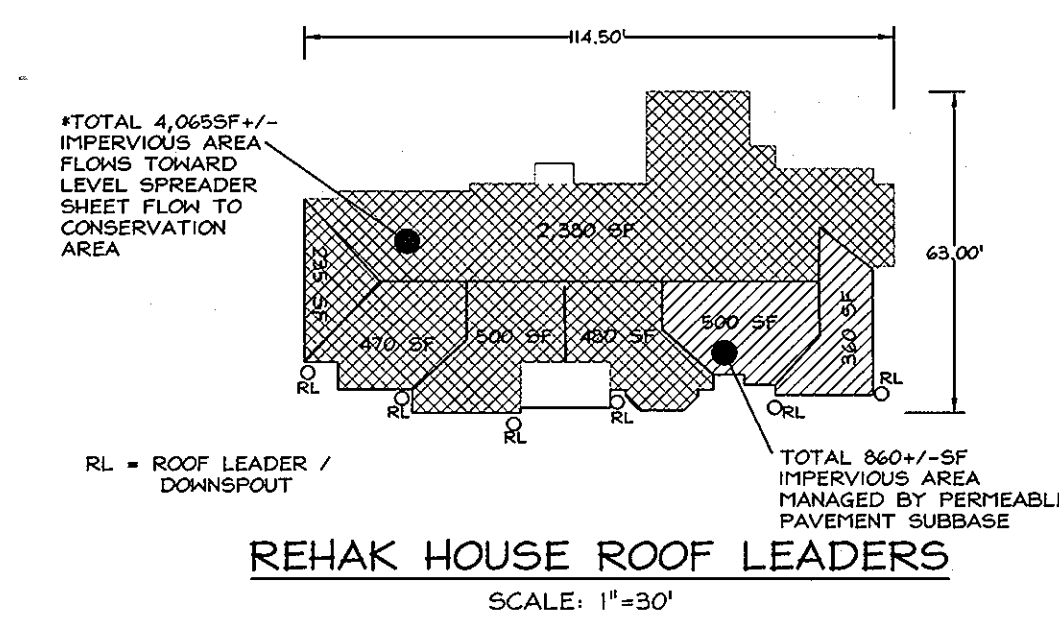
MAINTENANCE CRITERIA FOR SHEET FLOW TO CONSERVATION AREA

CONSERVATION AREAS SHALL REMAIN UNMANAGED OTHER THAN ROUTINE DEBRIS REMOVAL AND REPAIRING AREAS OF CONCENTRATED FLOW. INVASIVE AND NOXIOUS PLANT REMOVAL AND BI-ANNUAL MOWING FOR MEADOW AREAS MAY BE NEEDED.



LEVEL SPREADER NUMBER	TOP STONE ELEV	INV STONE ELEV	LEVEL LIP ELEV
1	520.1	519.1	520.1

LEVEL SPREADER (Sheet Flow to Conservation Area)



REHAK HOUSE ROOF LEADERS
SCALE: 1" = 30'

INSPECTION CHART FOR PERMEABLE SURFACES

STAGE	Engineer's Approval	
	Initials	Date
1. Inspection of excavation to subgrade. Surrounding site shall be stabilized.		
2. Inspection during placement and backfill of the drainage distribution system. (See Appendix B.4.)		
3. Inspection during placement of subbase material. Aggregate shall be clean, washed and free of fines with a porosity (n) of 30%. Material shall be placed in lifts and lightly rolled according to the specifications (See Appendix B.4.)		
4. Inspection during placement of surface material conforming to specifications found in Appendix B.4.		
5. Inspection upon the completion of final grading & establishment of permanent stabilization.		

Please notify certifying engineer 48 hours prior to commencing construction

Engineer's Name: LDE, Inc.
Phone Number: 410-715-1070

MAINTENANCE CRITERIA FOR PERMEABLE SURFACES

- PAVEMENTS SHOULD BE USED WHEN REGULAR MAINTENANCE CAN BE PERFORMED TO ENSURE LONG TERM PERFORMANCE.
- MAINTENANCE TO INCLUDE, SWEPT AND VACUUMING TO REMOVE SEDIMENT ACCUMULATION TO ENSURE SURFACE POROSITY. SWEEEPING SHOULD BE COMPLETED TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. DO NOT USE COMPRESSED AIR OR WASHING SYSTEMS.
- DRAINAGE PIPES, INLETS, STONE EDGES AND ANY OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE SHOULD BE CLEANED REGULARLY.
- AVOID TRUCKS FROM TRACKING AND SPILLING MATERIALS WHICH CAN BE GROUND INTO THE PERMEABLE PAVEMENT.
- DEICERS SHOULD BE USED IN MODERATION. DEICERS SHALL BE NON TOXIC AND ORGANIC. FLOWING SHALL BE DONE CAREFULLY WITH BLADES SET 1" HIGHER THAN NORMAL. SNOW PILE SHALL NOT BE PLACED ON THE PERMEABLE PAVEMENT.

B.4.B Specifications for Permeable Surfaces

These specifications include information on acceptable materials for typical applications and are not exclusive or limiting.

1. Pervious Concrete Specifications

Design Thickness - Pervious concrete applications shall be designed so that the thickness of the concrete slab shall support the traffic and vehicle types that will be carried. Applications may be designed using either standard pavement procedures (e.g., AASHTO, ACI 325.9R, ACI 330R) or using structural values derived from flexible pavement design procedures.

Mix 4 Installation - Traditional Portland cements (ASTM C 150, C 1157) may be used in pervious concrete applications. Phosphorus admixtures may also be used. Materials should be tested (e.g., trial batching) prior to construction so that critical properties (e.g., setting time, rate of strength development, porosity, permeability) can be determined.

Aggregate - Pervious concrete contains a limited fine aggregate content. Commonly used gradations include ASTM C 33 No. 67 (3/4 in. to No. 4), No. 3 (3/8 in. to No. 16) and No. 89 (3/8 in. to No. 50) sieves. Single-sized aggregate (up to 1 inch) may also be used.

Water Content - Water-to-cement ratios between 0.27 and 0.30 are used routinely with proper inclusion of chemical admixtures. Water quality should meet ACI 308. As a general rule, potable water should be used although recycled concrete production water meeting ASTM C 94 or AASHTO M 157 may also be used.

Admixtures - Chemical admixtures (e.g., retarders or hydration-stabilizers) are used to obtain special properties in pervious concrete. Use of admixtures should meet ASTM C 494 (chemical admixtures) and ASTM C 260 (air-entraining admixtures) and closely follow manufacturer's recommendations.

Base Course - The base course shall be AASHTO No. 3 or 4 course aggregate with an assumed open pore space of 30% (α = 0.30).

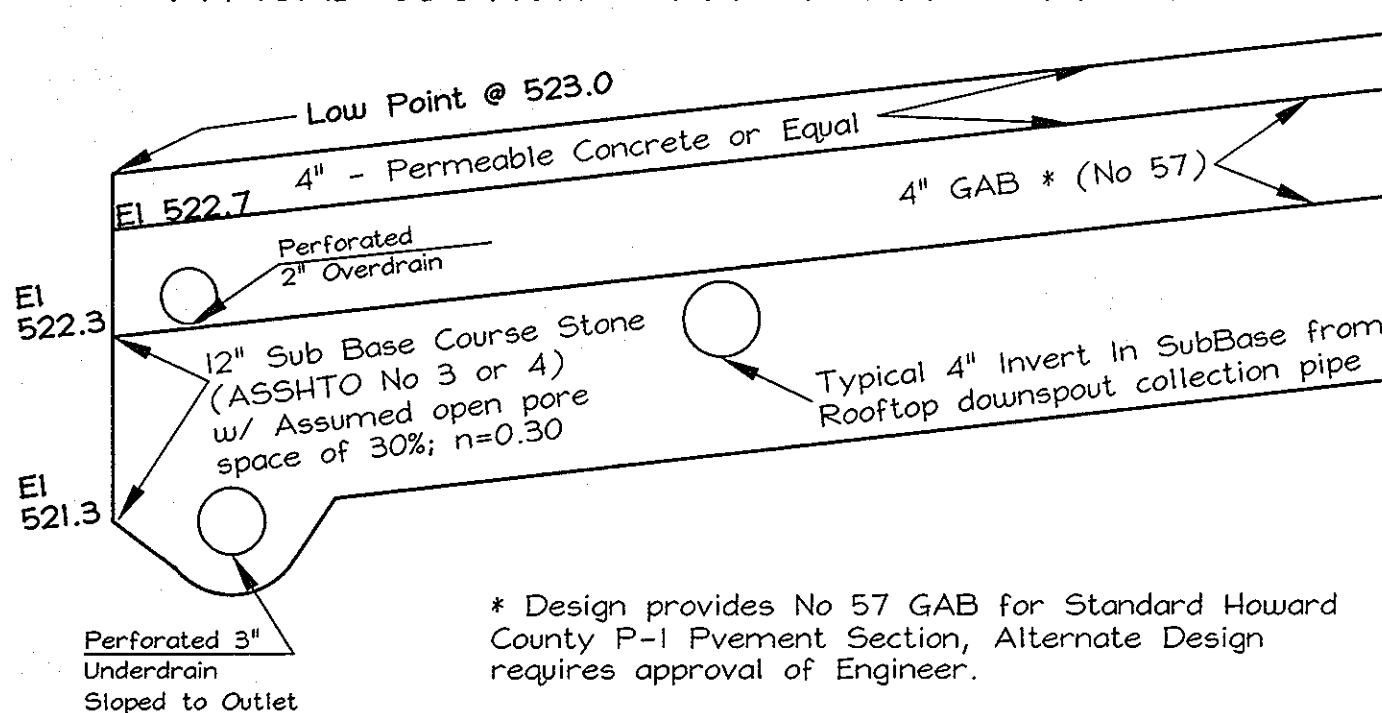
2. Permeable Interlocking Concrete Pavements (PICP)

Paver Blocks - Blocks should be either 3 in. or 4 in. thick, and meet ASTM C 936 or CSA A231.2 requirements. Applications should have 20% or more (40% preferred) of the surface area open. Installation should follow manufacturer's instructions, except that infill and base course materials and dimensions specified in this Appendix shall be followed.

Infill Materials and Leveling Course - Openings shall be filled with ASTM C-33 graded sand or sandy loam. PICP blocks shall be placed on a one-inch thick leveling course of ASTM C-33 sand.

Base Course - The base course shall be AASHTO No. 3 or 4 course aggregate with an assumed open pore space of 30% (α = 0.30).

TYPICAL SECTION - PERMEABLE SURFACES

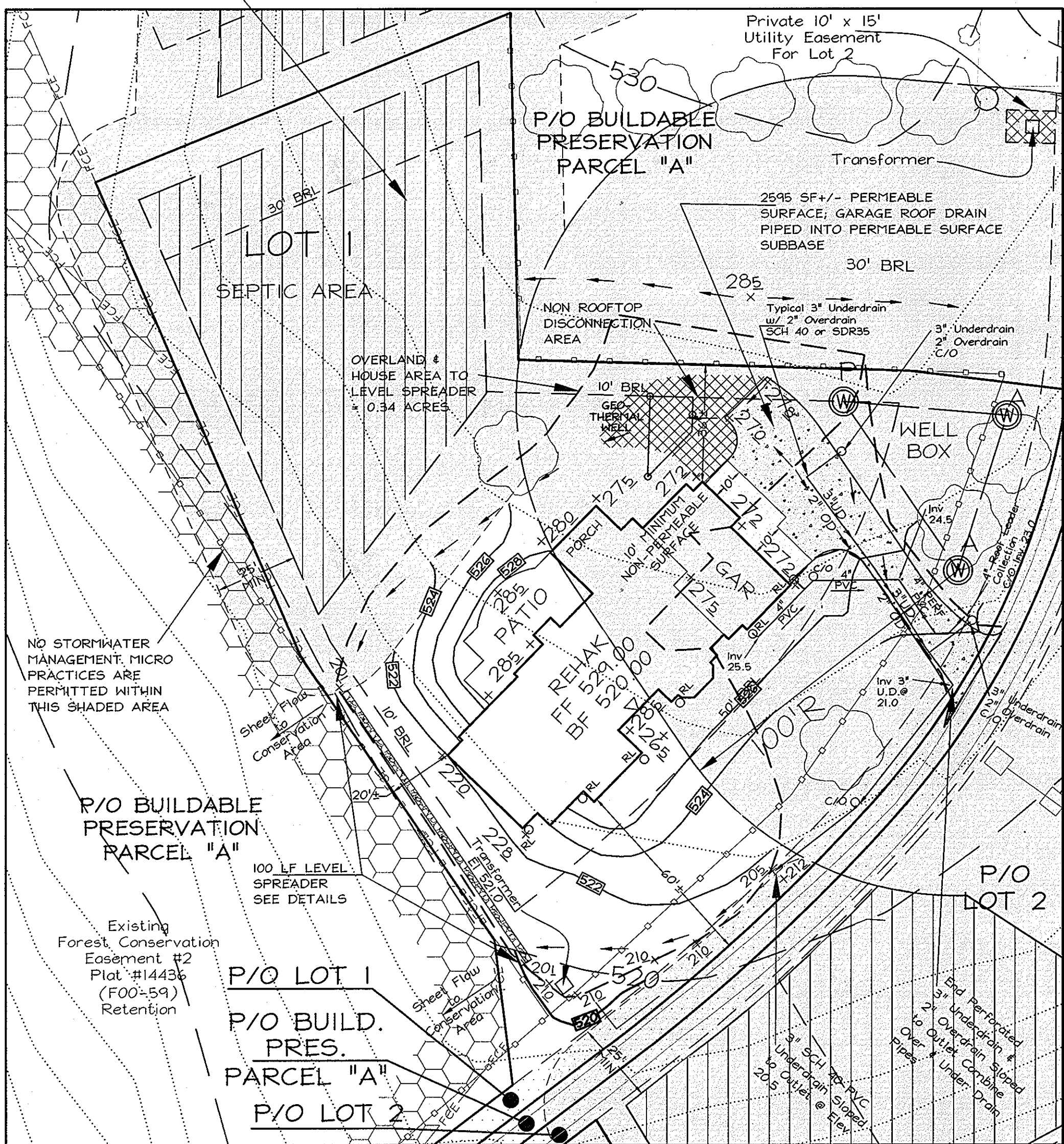


* Design provides No 57 GAB for Standard Howard County P-1 Pavement Section, Alternate Design requires approval of Engineer.

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER IN THE LANDS OF THE STATE OF MARYLAND, LICENSE NO. 19184.

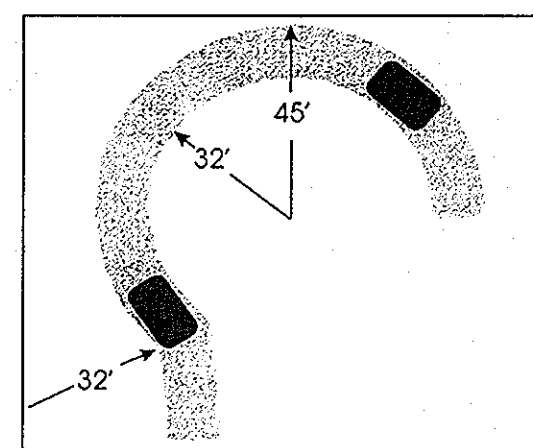
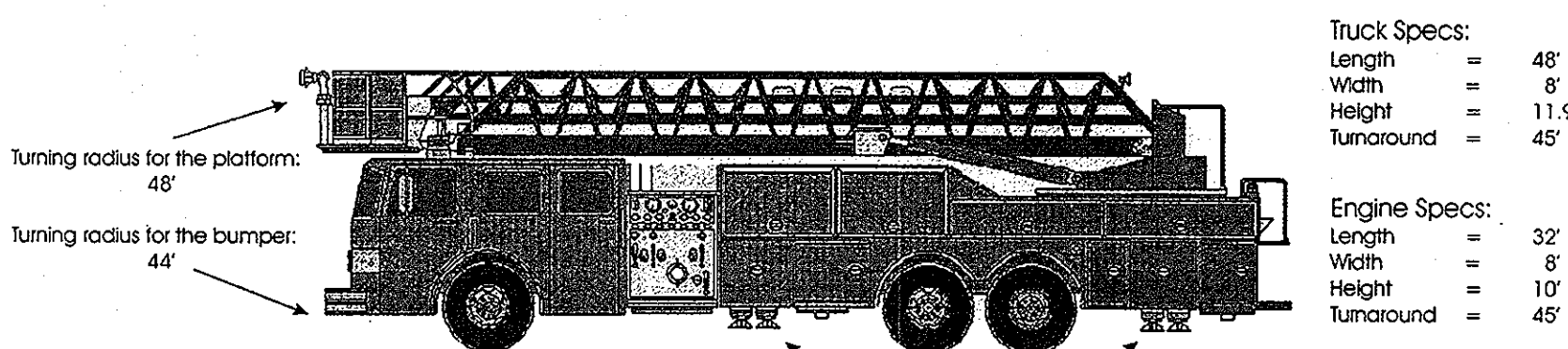
BRUCE D. BURTON
12/8/10

NOTE: THE STORMWATER MANAGEMENT DESIGN SHOWN WITH THIS PLAN PROVIDES COMPLIANCE WITH ENVIRONMENTAL SITE DESIGN AS REQUIRED BY 5/5/10. FINAL DESIGN OF ALL STORMWATER CONTROLS AND FEATURES SHALL BE PROVIDED PRIOR TO BUILDING PERMIT ISSUANCE.

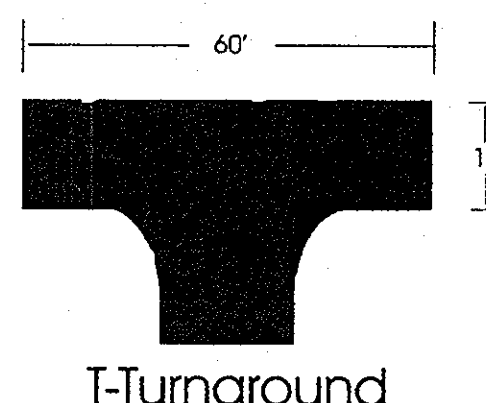


SHEET FLOW CONSERVATION AREA / PERMEABLE SURFACE
PLAN VIEW - 1" = 30'

Fire Engine and Truck Requirements
Turning Radius, Turnarounds, and Ambulance Height



Turning Radius



T-Turnaround

Ambulance Requirement: Height = 10'

Ground Clearance: Truck = 9-1/2", Engine = 7", Ambulance = 5"

NOTE: REFER TO SHEET 5 FOR TURNING ANALYSIS OF EXISTING DRIVEWAY'S CRITICAL CURVE

MINIMUM FIRE DEPARTMENT "DRIVEWAY" REQUIREMENTS

N.T.S. SHEET FLOW TO CONSERVATION AREA

STAGE	Engineer's Approval	
	Initials	Date
1. Buffer/FCE clearly marked along Lot 1 to ensure no disturbance.		
2. Prior to Use & Occupancy, verify area measurements to level spreaders		
3. Prior to Use & Occupancy, verify permanent stabilization has been established		

Please notify certifying engineer 48 hours prior to commencing construction

Engineer's Name: LDE, Inc.
Phone Number: 410-715-1070

Level Spreader - Sequence of Construction

- Once the individual house has been constructed and the final lot grading is complete, contact the LDE, Inc./certifying professional engineer/professional land surveyor (LDE, Inc. 410-715-1070). Once the certifying professional has given his/her approval proceed as follows:
- Construct Level Spreader and connect downspout conveyance pipes per details herein under supervision of the certifying professional.

OPERATION AND MAINTENANCE SCHEDULE FOR LEVEL SPREADERS

- LEVEL SPREADERS shall be installed after the contributing site has been stabilized unless filter fabric is placed over the device immediately after construction to divert sediment from entering the device.
- After the site has been stabilized and with the inspector's approval, the fabric may be removed.
- Maintenance shall be performed on a level spreader by the lot / homeowner when sediment is visually apparent within the stone voids. The portion of the stones that are affected shall be removed and replaced by the lot / homeowner with clean stone.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
12-15-10
Chief, Division of Land Development
12-15-10

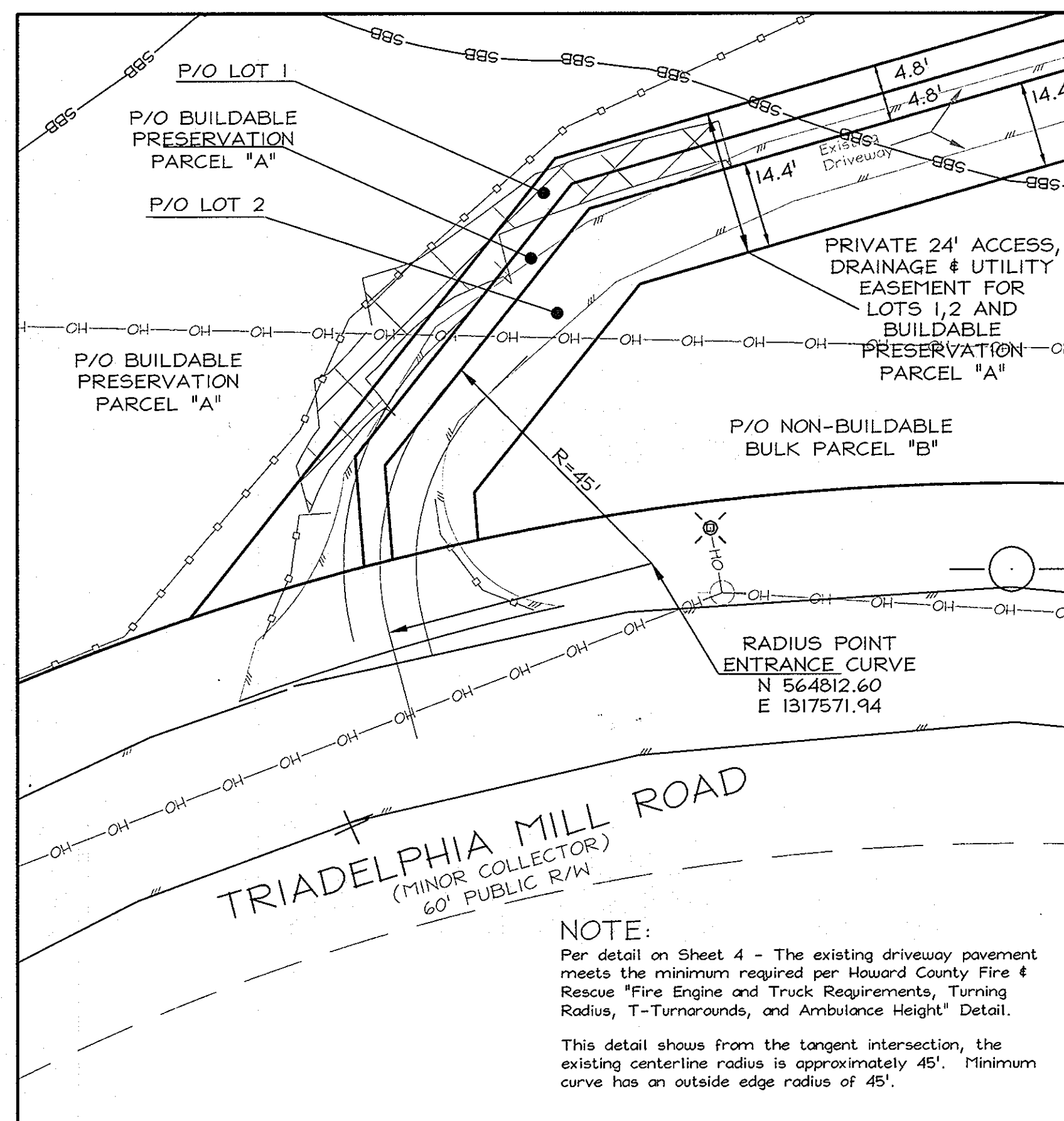
REVISIONS

No.	By	Date	Description

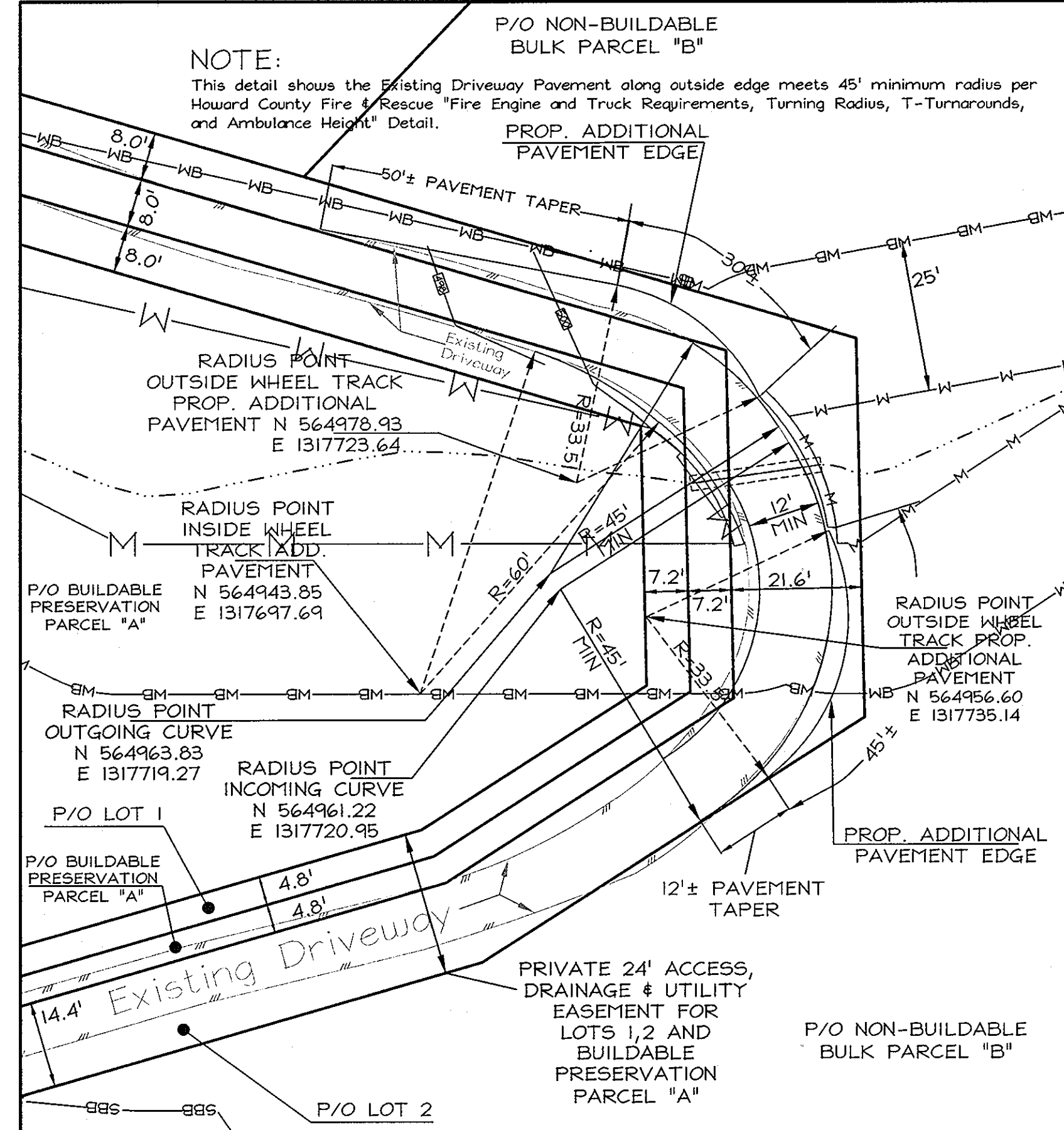
LDE Inc.

Engineers, Surveyors, Planners
9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)556-3424 - FAX(410)715-9540

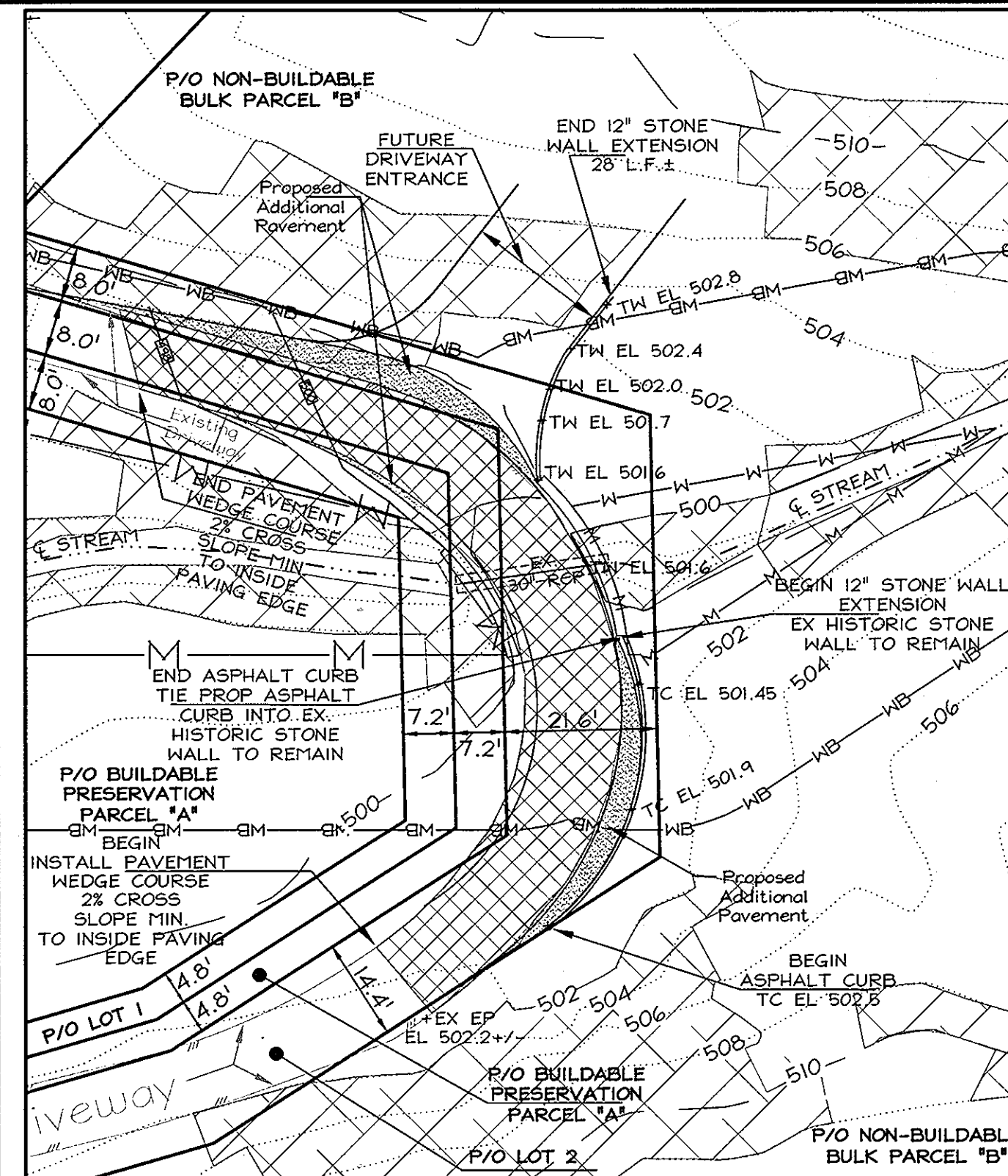
DESIGNED	BDB EDS	SCALE
		AS SHOWN
DRAWN	LDE	CRASHING
		4 of 5
CHECKED	BDB	JOB NO.
		09-009
DATE	12/2010	FILE NO.
		F11-022
OWNER/DEVELOPER:	Hedgerow Farm LLC 13803 Lakeside Drive Clarksville, MD 21029-1025 (301)802-1051	



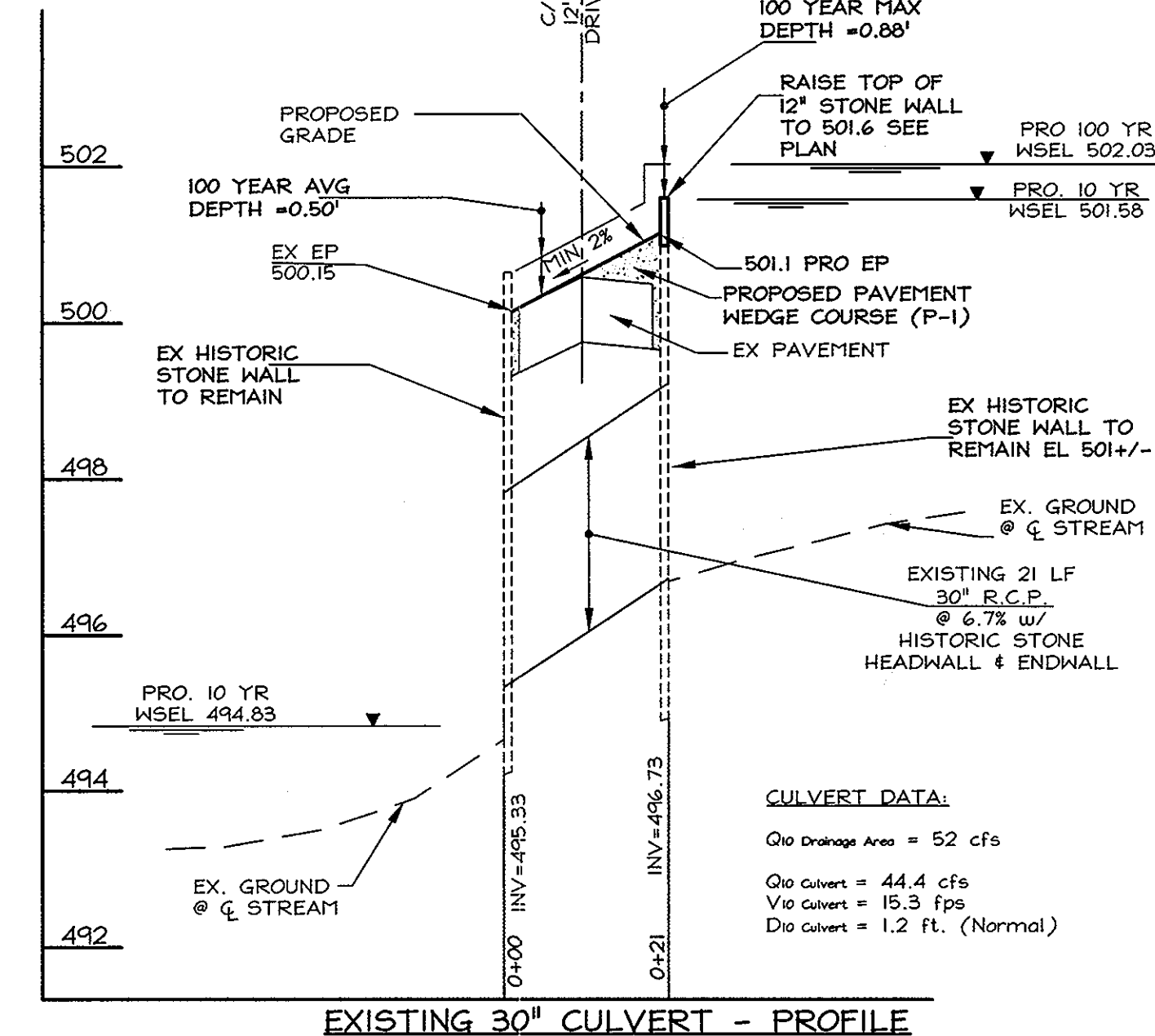
TRIADELPHIA MILL ROAD @ EXISTING DRIVEWAY RADIUS DETAILS
Scale 1" = 20'



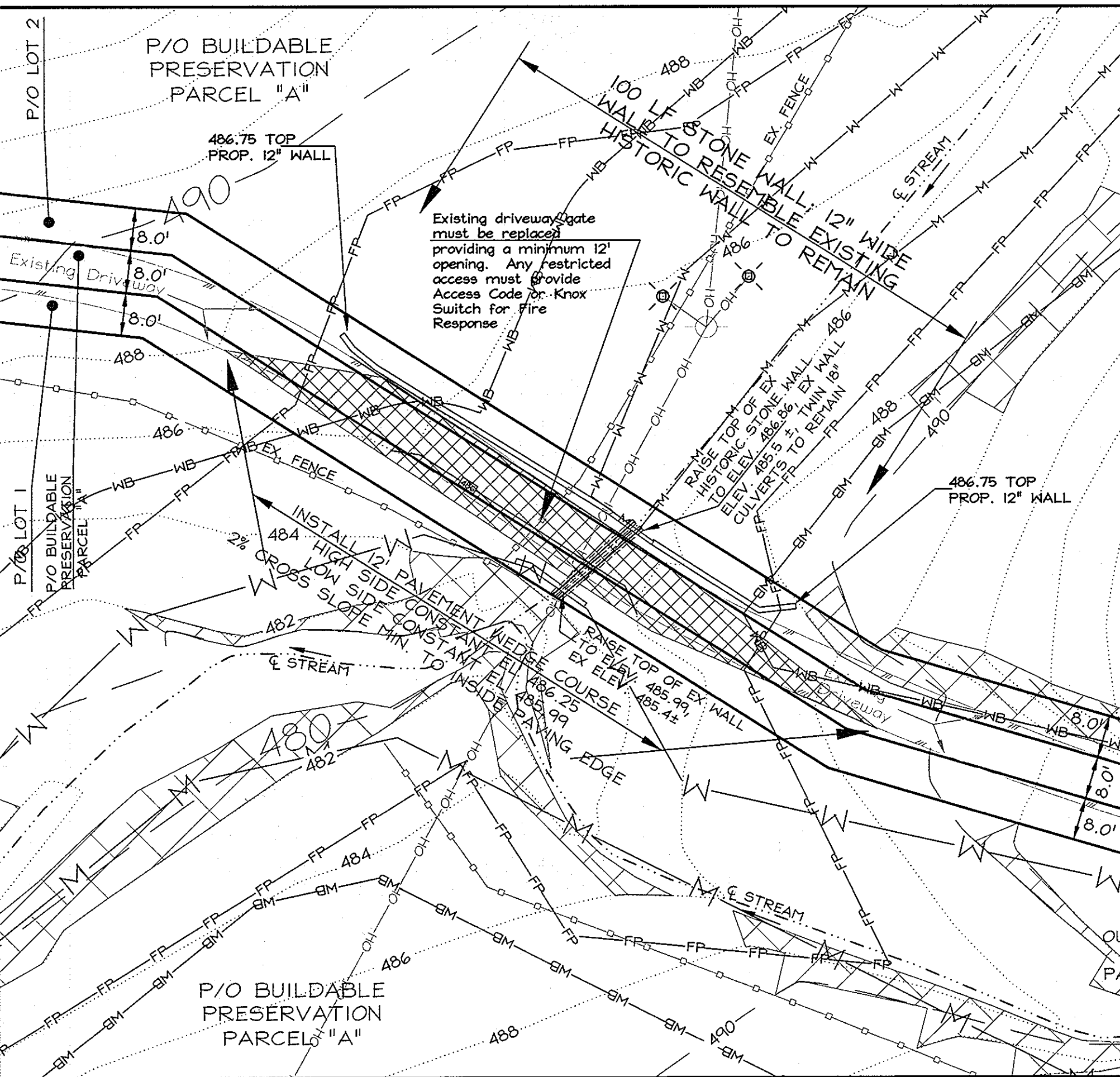
EXISTING & PROPOSED DRIVEWAY RADIUS DETAILS
Scale 1" = 20'



USE-IN-COMMON DRIVEWAY IMPROVEMENT DETAIL
Scale 1" = 20'

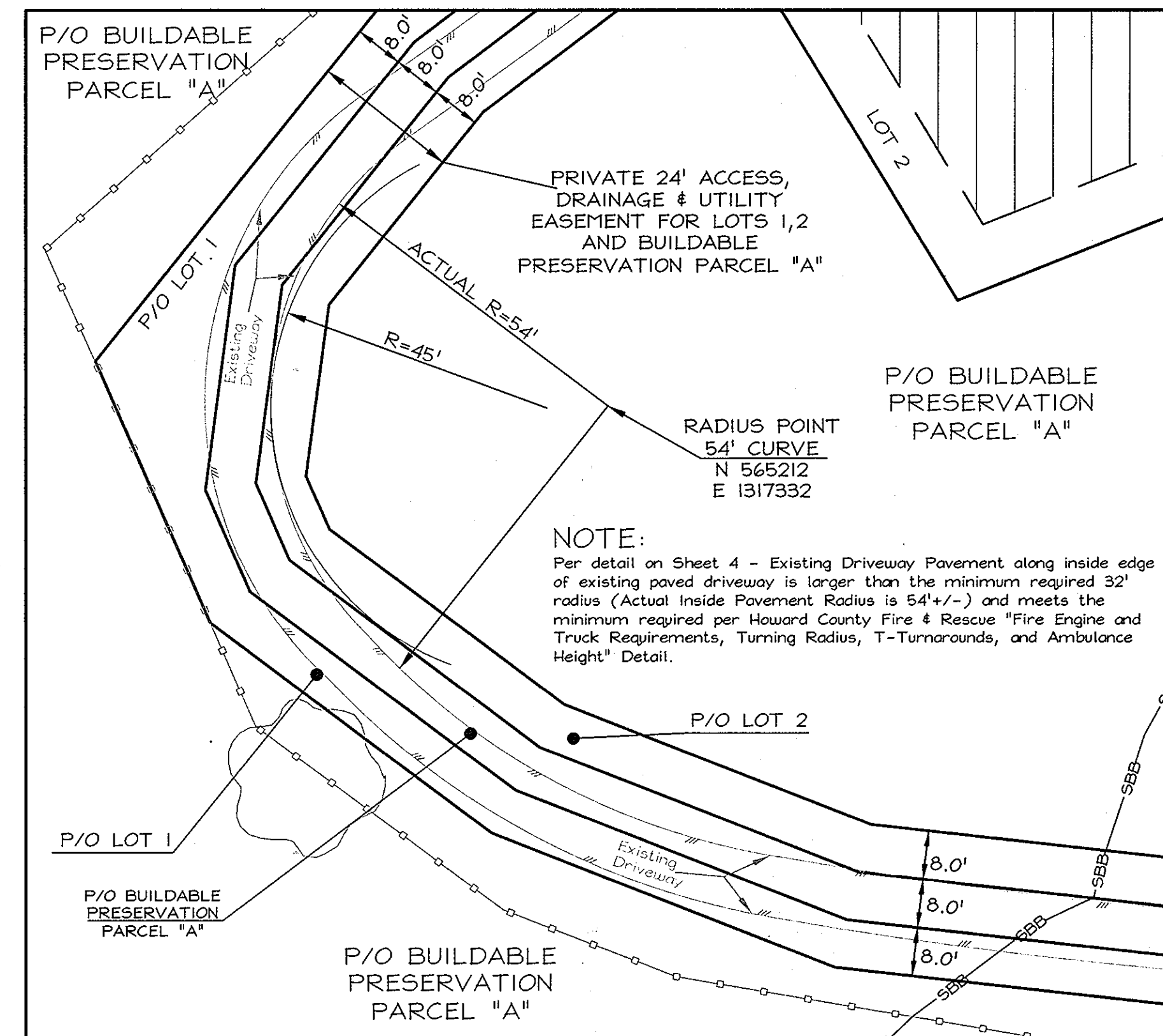


EXISTING 30' CULVERT - PROFILE
SCALE: H: 1" = 20'
V: 1" = 2'

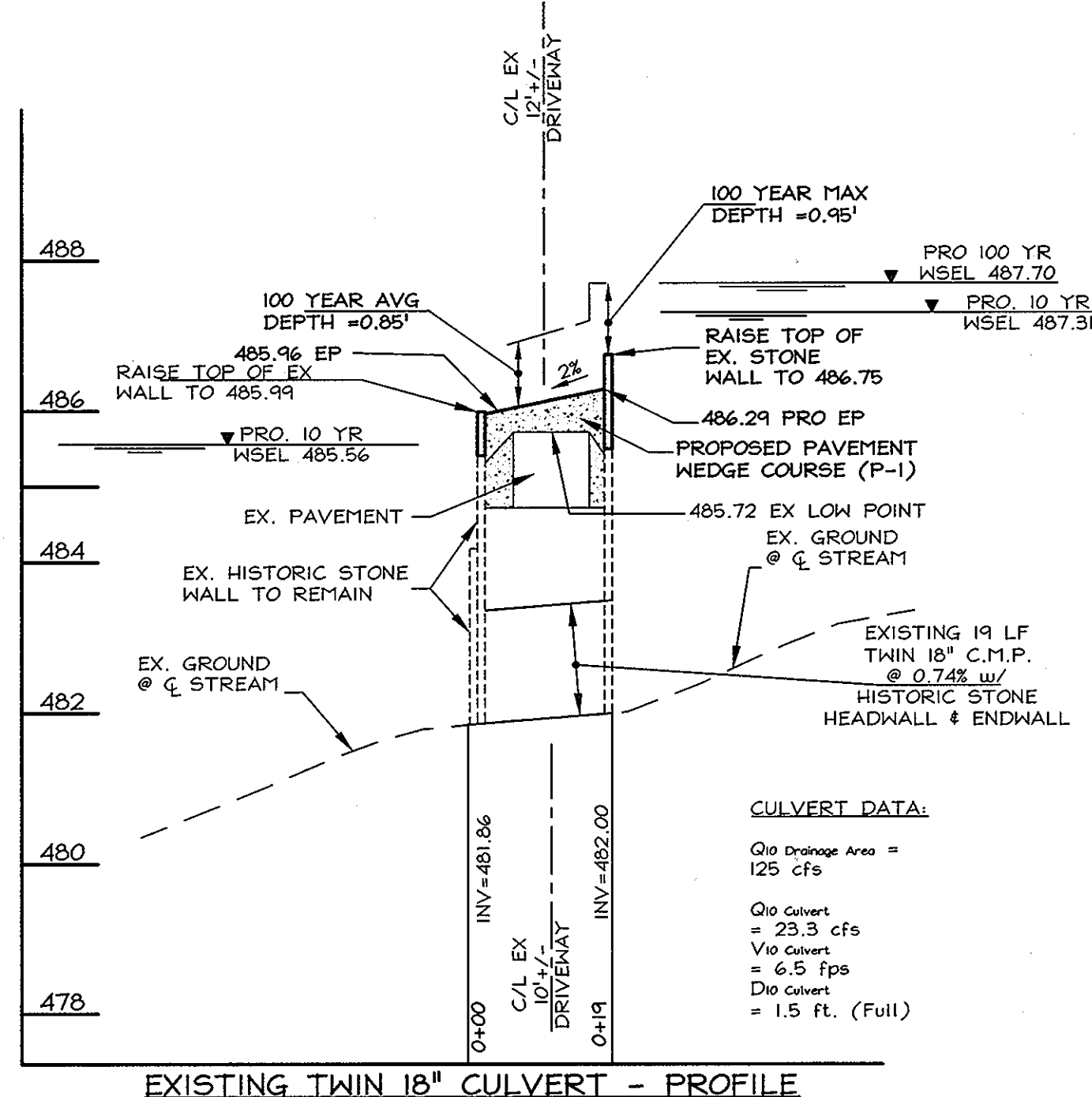


EXISTING USE-IN-COMMON DRIVEWAY IMPROVEMENT DETAIL
Scale 1" = 20'

- ENVIRONMENTAL LEGEND:
- FP—FP— 100 YR Floodplain Easement
 - C/L—C/L— C/L Exist. Stream per Plot #14436
 - S—S— 100' Stream Bank Buffer
 - W—W— Non-Tidal Wetlands
 - NB—NB— 25' Wetland Buffer



EXISTING DRIVEWAY RADIUS DETAILS
Scale 1" = 20'



EXISTING TWIN 18' CULVERT - PROFILE
SCALE: H: 1" = 20'
V: 1" = 2'

SECTION NUMBER	DESCRIPTION	DATE	BY	CHKD	APP'D
P-1	PROPOSED PAVEMENT WEDGE COURSE (P-1)	12-15-10	MS	MS	MS
P-2	PROPOSED PAVEMENT WEDGE COURSE (P-1)	12-15-10	MS	MS	MS
P-3	PROPOSED PAVEMENT WEDGE COURSE (P-1)	12-15-10	MS	MS	MS
P-4	PROPOSED PAVEMENT WEDGE COURSE (P-1)	12-15-10	MS	MS	MS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Michael... 12-15-10
CHIEF, DEVELOPMENT ENGINEERING DIV DATE
Kent... 12-15-10
CHIEF, DIV OF LAND DEVELOPMENT DATE

REVISIONS			
No.	By	Date	Description

LDE Inc. Engineers, Surveyors, Planners 9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045 (410) 715-1070 - (301) 556-3424 - FAX (410) 715-9540			SCALE AS SHOWN
DESIGNED BDB EDS	SUPPLEMENTAL PLAN USE-IN-COMMON DRIVEWAY DETAILS HEDGEROW FARM LOT 1, 2, Buildable Preservation Parcel "A" and Non-Buildable Bulk Parcel "B" A RESUBDIVISION OF LOT 1, THALER ESTATES, PLAT #14436 13550 Triadelphia Mill Road - RR-DEO Zoning Tax Map 28 Grid 20 Parcel 64 5th Election District - Howard County, Maryland Previous Submittals: F00-59, F00-54, WP 00-65, F01-81, WP00-58, F 07-44 ECP10-015, WP 10-172		JOB NO. 09-009
DRAWN LDE	FILE NO. F11-022		SCALE 5 of 5
CHECKED BDB	OWNER/DEVELOPER: Hedgerow Farm LLC 13803 Lakeside Drive Clarksville, MD 21029-1025 (301) 802-1051		DATE 12/2010

F:\03-000\03-009-009 (5) SUP DWG DETAILS.dwg, DWG, 12/19/2010 10:02:25 AM

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. 19844. BRUCE D. BURTON
12/18/10