



**MONTGOMERY COUNTY PLANNING DEPARTMENT**  
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

**Item #**  
**MCPB 11/30/06**

**MEMORANDUM**

**DATE:** November 17, 2006  
**TO:** Montgomery County Planning Board  
**VIA:** Rose Krasnow, Chief *RK*  
Michael Ma, Supervisor *Ma*  
Development Review Division  
**FROM:** Joshua C. Sloan *JS*  
Development Review Division  
(301) 495-4597



**REVIEW TYPE:** Site Plan Review  
**CASE #:** 820050420  
**PROJECT NAME:** The Towns of Boland Farm

**APPLYING FOR:** Approval of 22 dwelling units on 3.87 acres  
**REVIEW BASIS:** Div. 59-C-1.393. Development Approval Procedures Under the Optional Method of Development  
**ZONE:** R-200/TDR-8  
**LOCATION:** On Frederick Road, 200 feet northwest of the intersection with Darnestown-Germantown Road  
**MASTER PLAN:** Germantown

**APPLICANT:** GBI Corporation  
**FILING DATE:** June 23, 2005  
**HEARING DATE:** November 30, 2006

**STAFF RECOMMENDATION:** Approval of Site Plan 820050420 for 22 one-family attached units, on 3.87 acres; approval of a waiver for 2/3 TDR requirement. All site development elements as shown on "The Towns of Boland Farm" plans stamped by the M-NCPPC on November 8, 2006 shall be required except as modified by the following conditions:

1. Preliminary Plan Conformance

The proposed development shall comply with the conditions of approval for Preliminary Plan 120050260 as listed in the Planning Board opinion dated November 8, 2006 [Appendix A].

2. Environmental

The applicant shall comply with the following conditions of approval from M-NCPPC-Environmental Planning in the memorandum dated November 13, 2006 [Appendix B]:

- a. The applicant shall comply with the conditions of approval of the final forest conservation plan. The applicant shall satisfy all conditions of approval before recording of the record plat(s) or MCDPS issuance of erosion and sediment control permits. Conditions include but are not limited to:
  - i. Applicant to construct a split rail fence along the northern and western conservation easement lines.
  - ii. Applicant to plant the afforestation area with 1 ½ inch to 2-inch caliper trees.
- b. Prior to release of the first building permit for the subdivision, the following items must be met:
  - i. There shall be certification from an acoustical engineer that the building shells for residential dwelling units are designed to attenuate projected exterior noise levels to an interior level of no more than 45 dBA, Ldn. Any subsequent changes in building shell materials or coverage that may affect acoustical performance shall be approved by an acoustical engineer prior to implementation.
  - ii. The builder shall, in writing, commit to construct the residential units in accordance with the acoustical specifications identified by the acoustical engineer.
- c. The applicant shall document the long-term effectiveness of similar board-on-board noise walls. If the long-term effectiveness cannot be documented to the satisfaction to Environmental Planning, the applicant shall construct a noise wall of a solid material that will not be subject to shrinkage or weathering.

3. Transfer Development Rights (TDRs)

Prior to recording of plat, the applicant shall provide verification that fifteen (15) TDRs have been acquired for the proposed development.

4. Lighting

- a. Applicant shall ensure that all light fixtures shall be full cut-off fixtures.
- b. Applicant shall ensure that deflectors are installed on all fixtures causing potential glare or excess illumination, especially on the perimeter fixtures abutting the adjacent residential properties.
- c. Applicant shall ensure that illumination levels shall not exceed 0.5 footcandles (fc) at any property line abutting county roads or adjacent residential properties.
- d. Applicant shall install light fixtures on poles not to exceed twelve (12) feet including the mounting base.

5. Recreation Facilities

Although recreation facilities are not required for this development, the applicant shall provide a tot lot and sitting area in accordance with M-NCPPC Recreation Guidelines.



6. Stormwater Management

The proposed development is subject to the Stormwater Management Concept approval conditions dated March 3, 2005 [Appendix C] unless amended and approved by the Montgomery County Department of Permitting Services.

7. Development Program

Applicant shall construct the proposed development in accordance with a Development Program. The Development Program shall be reviewed and approved by M-NCPPC staff prior to approval of the certified site plan. The Development Program shall include a phasing schedule as follows:

- a. Street tree planting shall progress as street construction is completed, but no later than six months after completion of the units adjacent to those streets.
- b. Community-wide pedestrian pathways and recreation facilities shall be completed prior to issuance of the 17<sup>th</sup> building permit.
- c. Landscaping associated with each building shall be completed as construction of each facility is completed.
- d. Pedestrian sidewalks along Frederick Road shall be completed prior to issuance of final building permit.
- e. Prior to issuance of the first building permit, the applicant shall enter into a covenant with Montgomery County Department of Public Works and Transportation and Maryland-National Capital Park and Planning Commission to construct a connection between "Private Street A" and Millennium Court when the adjoining property, Part of Lot 62, is developed.
- f. Clearing and grading shall correspond to the construction phasing, to minimize soil erosion.
- g. Phasing of dedications, stormwater management, sediment/erosion control, recreation, or other features.

8. Clearing and Grading

No clearing or grading prior to M-NCPPC approval of certified site plan.

9. Certified Site Plan

Prior to approval of certified site and landscape/lighting plans the following revisions shall be included and/or information provided, subject to staff review and approval:

- a. Development program, inspection schedule, and Site Plan Opinion.
- b. Limits of disturbance.
- c. Methods and locations of tree protection.
- d. Forest Conservation easement areas.
- e. Note stating the M-NCPPC staff must inspect tree-save areas and protection devices prior to clearing and grading.
- f. Location of outfalls away from tree preservation areas.

## SITE PLAN REVIEW ISSUES

### I. Waiver Request for Zoning Ordinance Regulation 59-C-1.393(b): Development Approval Procedures Under the Optional Method of Development.

Section 59-C-1.393(b) of the Zoning Ordinance states:

Such a preliminary plan [submitted in accordance with the subdivision regulations contained in Chapter 50 of the County Code] must include at least two-thirds of the number of development rights permitted to be transferred to the property under the provisions of the applicable master plan approved by the district council. However, upon a finding by the planning board that for environmental or compatibility reasons it would be desirable to permit a lower density, the two-thirds requirement may be waived.

#### Applicant's Position

In a later dated October 26, 2006 [Appendix D], the applicant argues that the two-thirds requirement would result in the purchase of a TDR that cannot be used (Appendix B). In the approved preliminary plan, 24 dwelling units were approved with sixteen (16) TDRs based on the following formula:

Base Density	=	8 dwelling units (d.u.s)*
Proposed Density	=	24 d.u.s
Required TDRs	=	16 TDRs
Required 2/3 TDRs	=	16 TDRs

Although there is an error in this formula (see Staff's Analysis), the two-thirds requirement is met. During the course of the site plan review, the application has reduced the number of proposed dwelling units to the current number of 22. The applicant is of the opinion that the calculation for required TDRs is as follows:

Maximum Density	=	30 d.u.s
Base Density	=	8 d.u.s*
Proposed Density	=	22 d.u.s
Required 2/3TDRs	=	15 TDRs

\*The assumption here is that the R-200 base zone, with a minimum lot size of 20,000 square feet would permit 8.43 (rounded down to 8) dwelling units, i.e., 3.87 acres multiplied by 43,560 square feet per acre = 168,577 square feet, then divided by the 20,000 square feet minimum lot size = 8.43 dwelling units per acre.

The calculation as detailed in the Staff's Analysis would result in a Required 2/3 TDRs of sixteen (16). The applicant's request for waiver of this requirement is summarized below:

"Even if we agree that the base r-200 zoning would permit only 7 units to be constructed, we are proposing a total of 22 units which means that **15** of those units must be constructed with TDRs. **We are proposing the purchase of 15**



**TDRs.** The requested waiver would simply make it unnecessary to purchase an additional TDR that cannot be used.

Presumably the purpose of the 2/3 requirement is to maintain the integrity of TDR program by maximizing the use of TDRs in areas identified by the master plan as appropriate receiving areas. However, in this case, there is a small enclave of existing single family detached dwelling units abutting the subject property (that is otherwise surrounded with much higher intensity land uses), and the 100 foot setback from that single family community that is required for reasons of compatibility makes it very difficult to maximize the number of units allowed using TDRs."

### Community Position

The community has made no comment on this subject.

### Staff Analysis/Position

Staff supports the request for waiver based on the paragraphs quoted above as well as due to the fact that further increasing density on this site would encroach either on the Proposed Conservation Easement or the recreation facilities provided on site. That being said, we offer the following calculations for the record to establish that 16 TDRs would usually be required for such a development.

The preliminary plan TDR calculation includes an error, as the Base Density should be 7 dwelling units and the Maximum Density should be 30 dwelling units. In either case, though, the net result of Required TDRs remains 16 and the 2/3 requirement is satisfied.

In the case of the subject Site Plan, the TDR calculation is correctly determined as follows:

Maximum Density:	3.87 acres	x	8 TDR density	=	30 d.u.s
Base Density:	3.87 acres	x	2 (R-200 base factor)	=	7 d.u.s
Additional TDR Density Allowed	30 d.u.s	-	7 d.u.s	=	23 d.u.s
Minimum Required TDRs	23 d.u.s	x	2/3 requirement	=	16 d.u.s

The question at hand is whether the R-200 zoning base sets the Base Density at seven (7) or eight (8) dwelling units. Staff has traditionally used a formula to determine zoning base factors equal to the Standard Method MPDU Density Allowed (59-C-1.622) divided by 1.22, the maximum density bonus allowed (25A-5(c)(3)).

## II. Waiver of Setback

Due to the use of the optional method for TDR development recommended by the Master Plan and for which the property is zoned, the applicant has followed the special regulations set forth in Section 59-C-1.39 of the Zoning Ordinance. One requirement of this type of development is the use of PD zone setbacks in order to address issues of compatibility. Section 590C-7.15, which addresses the issue of compatibility in the PD zone, provides that:

- (b) In order to assist in accomplishing compatibility for sites that are not within, or in close proximity to a Central Business District or Transit Station Development Area, the following requirements apply where a planned development zone adjoins land for which the area master plan recommends a one-family detached zone:
  - (1) No building other than a one-family detached residence can be constructed within 100 feet of such adjoining land.
- (c) A waiver of the requirement of paragraph (b)(1) may be permitted if:
  - (1) The area master plan recommends other than a one-family detached use for the property immediately adjoining the area where the waiver is to occur; and
  - (2) The immediately adjoining property will not be adversely affected by the waiver for present and future use.

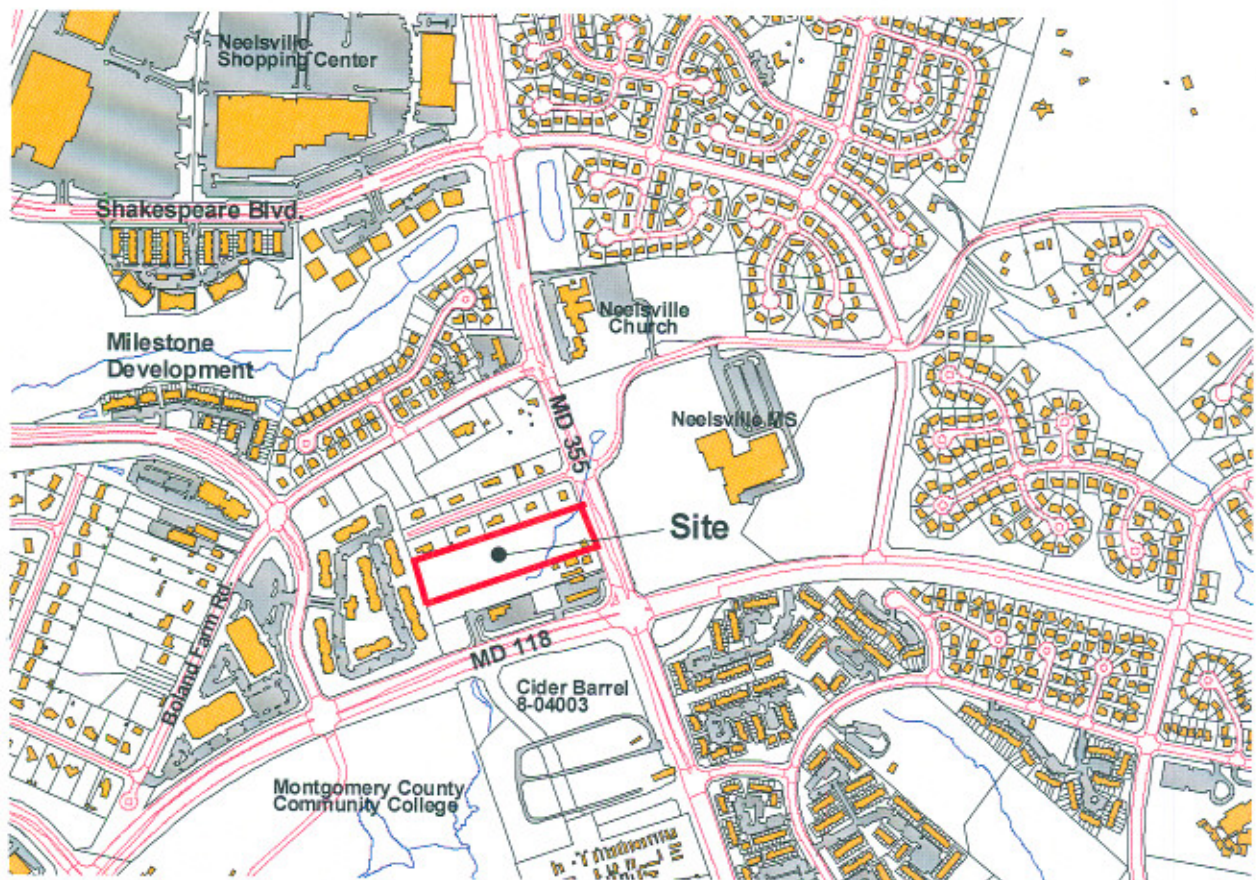
The approval of Preliminary Plan 120050260 granted a waiver of this required 100 feet setback from adjacent one-family detached zones. Unfortunately, it erroneously recorded a proposed setback of 45 feet, whereas the scaled plan located buildings at 43 feet. While it is appropriate to grant the waiver of such a setback requirement at the time of preliminary plan, it is not necessary to establish the setback to a particular number of feet; this should be determined during the site plan review. In order to correct this situation, staff recommends that the proposed waiver of the 100 feet setback requirement be upheld and that the proposed setback of 41 feet be established for the subject site plan.



**PROJECT DESCRIPTION:** Site Vicinity

The subject property is located on Frederick Road (MD 355), 200 feet northwest of Darnestown-Germantown Road (MD 118). Present access into the property is a gravel driveway from MD 355, approximately 350 feet north of the intersection with MD 118. The existing intersection of these two major roads is signalized. The site proposes one access point from MD 355. This access is a right-in/right-out only approximately 400 feet north of the intersection with Route 118.

Bounding the subject property to the north are five (5) one-family detached homes on Collins Drive within the R-200 zone. The adjoining land to the west is zoned R-20 and contains a complex of three-story multi-family apartment buildings. Directly south of the subject property is a two acre lot zoned R-200/TDR-8 on which is located a one-family structure and accessory buildings that are used for a non-conforming business purpose. South of that lot are several commercial buildings on land zoned C-3; these are a fast-food restaurant, a car wash, and a filling station/convenience store on MD 118. To the east and across MD 355 is Neelsville Middle School, which is on land zoned R-200.



Site Vicinity Map



## PROJECT DESCRIPTION:

### Site Description

The subject site is 3.87 acres in size and is laid-out in a rectangular fashion (approximately 200 feet by 845 feet) with the narrow end fronting on Frederick Road (MD 355). The property is located within the R-200/TDR-8 zone and currently contains one (1) abandoned one-family detached home and a partially collapsed shed. The topography of the site slopes away from MD 355 and drops approximately 20 feet to a drainage swale located roughly in the first quarter of the site. The site then slowly rises 30 feet to a high point at the northwest corner of the site. The site is currently wooded with a mix of red maple (*Acer rubrum*), silver maple (*Acer saccharinum*) and black locust (*Robinia pseudoacacia*) with a thin to moderate shrub layer. Although native trees form the canopy of the forest area, species diversity is low, invasive/exotic flora dominates the shrub and herbaceous layers, and the small forest fragment does not connect with any larger contiguous forest area.



Aerial view of project site and surrounding areas.





Oblique aerial view of project from the east.



View along southern boundary of project site looking toward Frederick Road (MD 355).





View looking south out of project site toward the car wash and Burger King.

#### **PROJECT DESCRIPTION:**      Proposal

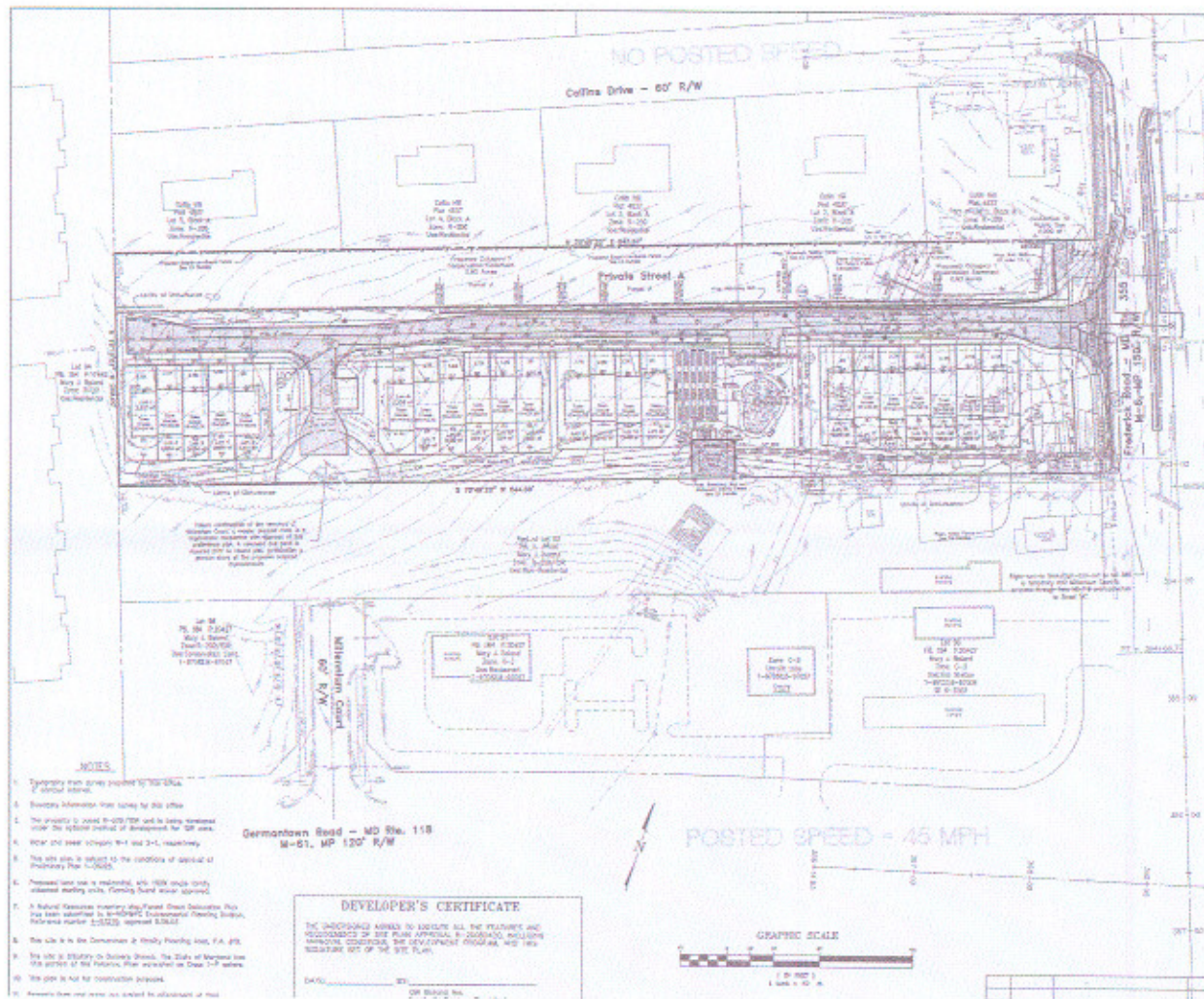
The application requests approval for twenty-two (22) one-family attached units. This is two less than the original application for twenty-four (24) one-family attached units, which was approved by the preliminary plan, due to revisions during the Development Review Committee and Site Plan review processes. The site plan locates the 22 units a minimum of 108 feet from the rear lot lines of the adjacent one-family detached homes along Collins Drive to the north. This is in accordance with the setbacks as prescribed by the PD. Alternatively, the setbacks to the south vary from 41 feet to 50 feet, which is a departure from the prescribed PD zone setbacks as discussed in "Waiver of Setback" section above.

According to the Germantown Master Plan, there is to be an arterial road access to the property from Millennium Court, which is partially built to the edge of the adjacent property (Lot 62) south of the subject property. This will connect to the interior Private Street "A", which runs east-west within the subject property. A 4-foot sidewalk runs parallel to this private street in front of the dwelling units and is connected to sidewalks and a Class I bikeway along the frontage of the property within the right-of-way for MD 355.

Open space, green space and recreation facilities are provided on site. A Category 1 Forest Conservation Easement protects a wooded area comprising 0.93 acres along the northern edge of the subject property. A retaining wall with a safety fence encloses much of this area and retains the grade necessary for the private street. At the interior of the subject site is a proposed tot-lot and sitting area for community use, which is connected to interior sidewalks with a 4-wide



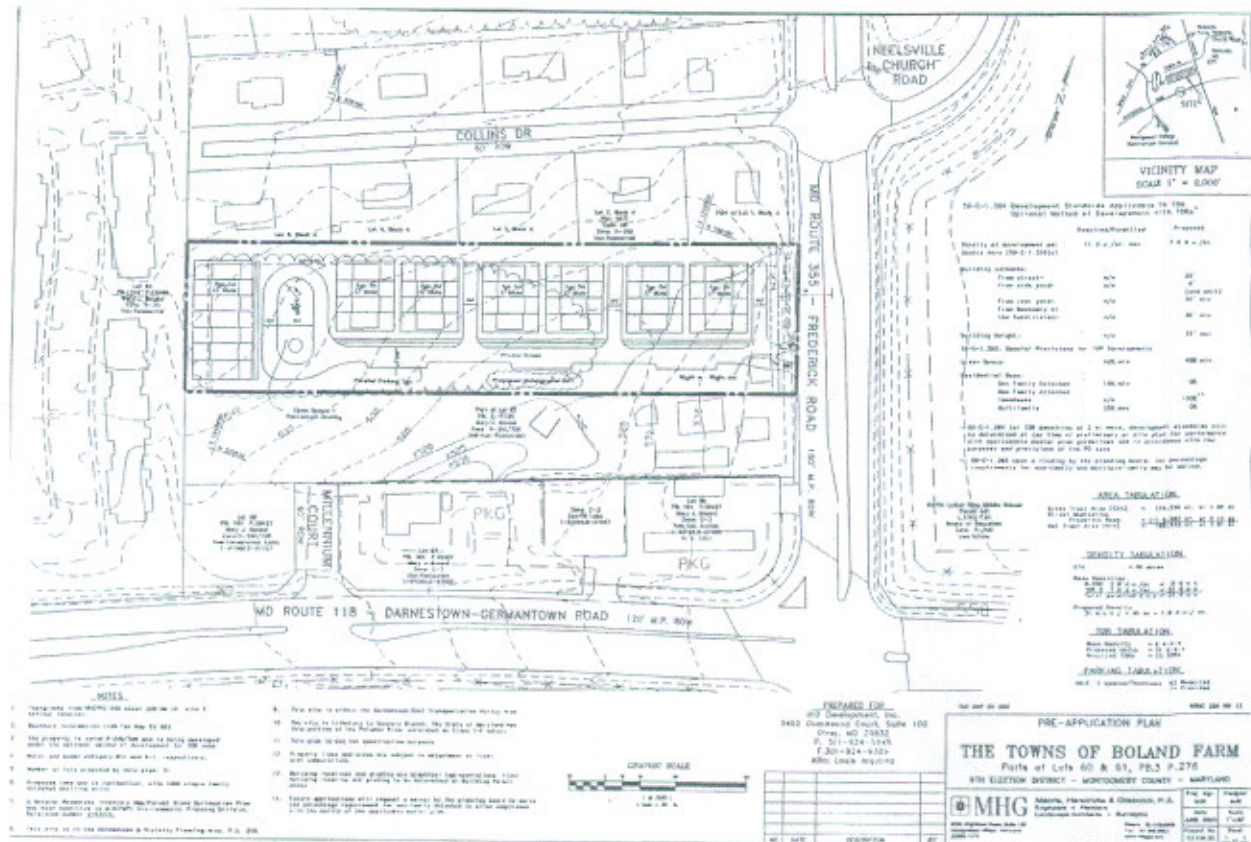
sidewalk. Landscaping and lighting is provided throughout for safety, functionality, and aesthetics.



## Prior Approvals

### Pre-Preliminary Plan

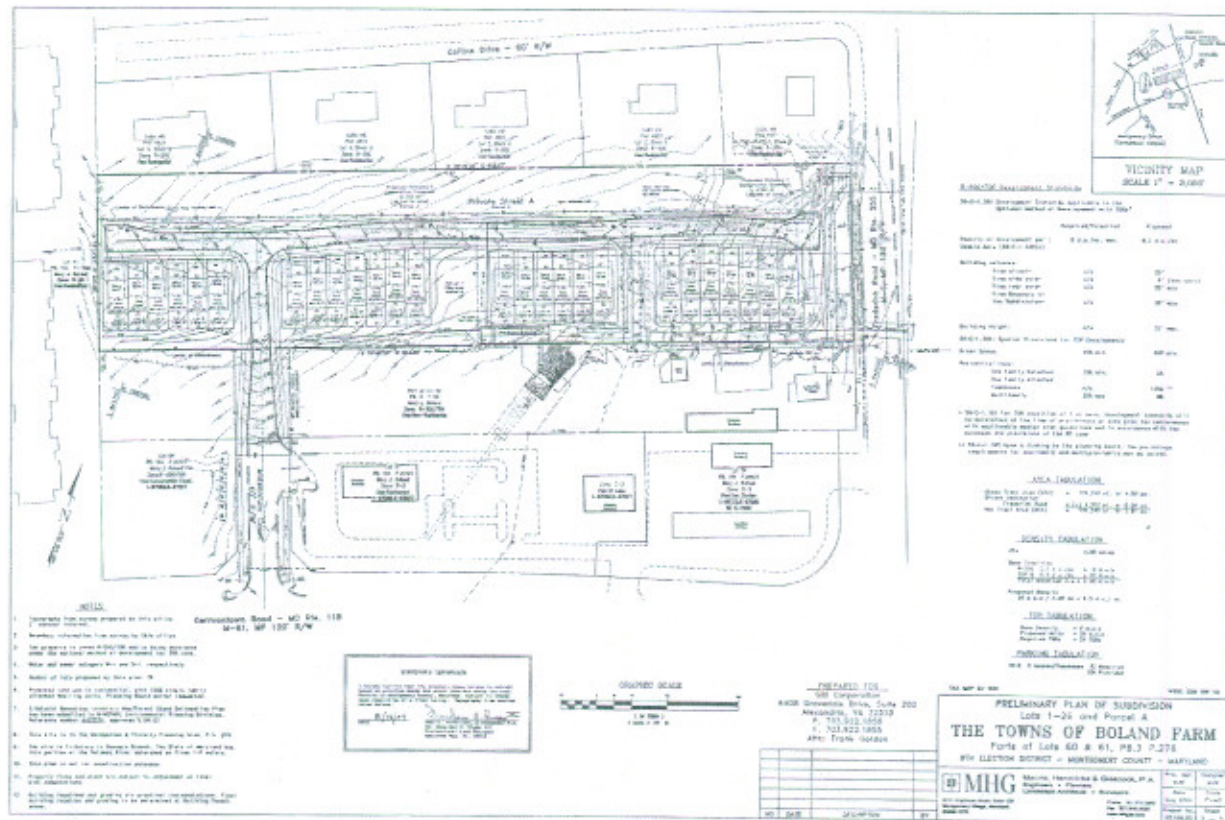
Pre-Preliminary Plan 720030540 (formerly 7-03054) was presented to the Development Review Committee for comment on June 30, 2003.



Original Pre-Preliminary Plan



Preliminary Plan 120050260 (formerly 1-05026) was approved on November 8, 2005 for 24 one-family attached dwelling units in the R-200/TDR-8 zone.



Original Preliminary Plan (modified by opinion)



## ANALYSIS: Conformance to Development Standards

PROJECT DATA TABLE (R-200/TDR 8 Zone)

Development Standard	Permitted/ Required	Proposed for Approval
Min. Tract Area (ac.):	n/a	3.87
Net Site Area after Dedication (ac.):	n/a	3.70
Max. Density of Development (d.u./ac.)		
Per Zoning Ordinance	2	5.7
Per Master Plan	8	5.7
Number of Dwelling Units (d.u.)		
Attached Unit	30	22
Minimum Green Area (%)	40	60
Residential Uses		
One-Family Detached (%)	15	0 <sup>1</sup>
One-Family Attached (%)	80	100 <sup>2</sup>
Min. Building Setbacks (ft.)		
From public right-of-way	n/a	25'
Front yard	n/a	20'
Side yard	n/a	6' (end unit)
Rear yard	n/a	20'
From adjacent one-family detached zone	100'	41' <sup>3</sup>
Min. Lot Size (sf.)	n/a	1,800
Min. Lot Width at Existing or Proposed Street Line (ft.):	n/a	22'
Max. Lot Coverage (%):	n/a	49
Max. Building Coverage of Net Tract Area (%)	n/a	13
Max. Building Height (ft.):	n/a	35 <sup>4</sup>
Parking Spaces		
Attached units	44	52

<sup>1</sup> Waiver of requirement for 15% one-family detached units according to 59-C-1.395 was granted with approved Preliminary Plan 120050260.

<sup>2</sup> Ibid.

<sup>3</sup> Waiver of requirement for 100' setback according to Zoning Ordinance section 59-C-7.15(c) was granted with approved Preliminary Plan 120050260.

<sup>4</sup> Building height measurement points for each unit are located on site plan.



## RECREATION CALCULATIONS<sup>5</sup>

### Demand Points

Housing Type	Number of Units	D1 Tots 0 to 4	D2 Children 5 to 11	D3 Teens 12 to 17	D4 Adults 18 to 64	D5 Seniors 65+
TH	22	3.74	4.84	3.96	28.38	1.54
		4.00	5.00	4.00	29.00	2.00

### On-Site Supply Values

Recreation Facility	Quantity Provided	D1 Tots 0 to 4	D2 Children 5 to 11	D3 Teens 12 to 17	D4 Adults 18 to 64	D5 Seniors 65+
Tot Lot	1	9.00	2.00	0.00	4.00	1.00
Picnic/Sitting	1	1.00	1.00	1.50	5.00	2.00
		10.00	3.00	1.00	9.00	3.00

### Off-Site Supply Values

Recreation Facility	Quantity Provided	D1 Tots 0 to 4	D2 Children 5 to 11	D3 Teens 12 to 17	D4 Adults 18 to 64	D5 Seniors 65+
Open Play Area I	1	6.00	9.00	12.00	30.00	2.00
Multipurpose Court	4	12.00	40.00	60.00	40.00	10.00
Tennis	4	0.00	6.00	42.00	96.00	4.00
Soccer - Regulation	1	2.00	15.00	20.00	40.00	2.00
Baseball - Regulation	2	4.00	30.00	40.00	80.00	4.00
Baseball - Junior	1	2.00	15.00	15.00	30.00	2.00
Pedestrian System	1	0.40	1.00	0.80	13.05	0.90
	total:	26.00	116.00	189.00	329.00	24.00
	35%:	9.10	40.60	66.15	115.15	8.40
	35% of total:	5.38	1.62	0.54	4.85	1.62
	allowed off-site supply:	5.38	1.62	0.54	4.85	1.62

### Adequacy of Recreation Facilities

	D1 Tots 0 to 4	D2 Children 5 to 11	D3 Teens 12 to 17	D4 Adults 18 to 64	D5 Seniors 65+
Supply:	15.38	4.62	1.54	13.85	4.62
Demand:	4.00	5.00	4.00	29.00	2.00
% of Total Demand:	384.62%	92.31%	38.46%	47.75%	230.77%
80% Demand:	3.20	4.00	3.20	23.20	1.60
Difference must be 0 or greater:	12.18	0.62	(1.66)	(9.35)	3.02

<sup>5</sup> Recreation facilities are not required for subdivisions with less than 25 one-family homes but are provided in this project for the least mobile members of the community.



## ANALYSIS:

### Conformance to Master Plan

This property is directly discussed as part of Analysis Area No. NE-6 in Table 16 and on pages 83-84 of the Germantown Master Plan, Approved and Adopted July 1989. The Zoning and Highway Plan proposes an arterial road providing access to this site from MD 118. The subject Site Plan addresses this proposal as discussed in the Vehicular Circulation below.

The land use recommendation for this property is R-200/TDR-8 with a base density of 8 units per acre. The base zone of R-200 reflects the density of the adjoining Collins Drive residences. Achieving the TDR recommendations precludes development of one-family detached units. The Master Plan concludes, "This area is also suitable for special exception uses".<sup>6</sup> And these special exception uses are subject to guidance for buffering, parking, lighting, etc. as determined necessary during the site plan review.

This application conforms to the recommendations of the master plan in that it provides a residential transition from the C-1 zone on MD 118 to the single-family detached residences on Collins Drive.

### Local Area Transportation Review

No LATR requirement was identified at the time of Preliminary Plan review based on the Adequate Public Facilities test.

### Vehicular Circulation

As mentioned in the Project Description, Millennium Court is stubbed from Germantown Road (MD 118) between Lots 98 and 97 in the C-3 zone up to the edge of the R-200/TDR-8 property that contains the non-conforming business use. A private street, "Private Street A", is shown constructed through the subject property from a right-in/right-out intersection with Frederick Road (MD 355) and terminates at a turn around on the western edge of the subject property. This intersection with Frederick Road (MD 355) is accompanied by the following note:

Right-turn-in from/right-turn-out to MD 355 is temporary until Millennium Court is extended through from MD 118 and connected to Street "A".

A "T"-intersection in line with Millennium Court is included and a stub to the future roundabout that will connect to Millennium Court is provided with the following note on the plan:

Future construction of the terminus of Millennium Court, a master planned road, is a requirement associated with approval of [the] preliminary plan. A covenant and bond is required prior to the record plat to establish a pro-rata share of the proposed required improvements.

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<sup>6</sup> Germantown Master Plan, M-NCPPC, July 1999, page 84.



The applicant has made numerous attempts to purchase the right-of-way from the southern adjacent property owner to construct the necessary through-street connection, but the two property owners have failed to reach an agreement. Staff has assumed that if or when the adjoining lot to the south of the Subject Property is further subdivided or otherwise improved, the obligations to that property owner will be to dedicate and build the southern half of the roundabout for access to Germantown Road (MD 118). At this point, the access to Frederick Road (MD 355) will be closed.

### Stormwater Management

During the preliminary plan review process, neighbors to the north of the subject property along Collins Drive expressed concern about possible run-off and potential flooding from the subject site. The application has an approved stormwater management concept and has mitigated this potential issue through the construction of the appropriate storm drain culverts and pipes.

### Pedestrian Circulation

The site is served by a 4-foot concrete sidewalk along the private street as well as to sitting areas around the tot-lot. This sidewalk also connects to a 5-foot sidewalk along the frontage of MD 355 continuing to Collins Drive to the north. Handicap ramps are provided at each curb intersection.

### Environmental

Forest conservation requirements are being satisfied through a combination of an on-site credit for landscaping, on-site reforestation, and off-site mitigation banking. Permanent fencing and signage will be installed around the perimeter of the 0.93 acre Category 1 Forest Conservation Easement.

### Noise Analysis

A Noise Study was performed by Wyle Laboratories and presented in a letter dated May 11, 2005 [Appendix E]. The summary of their findings follows.

“During a site survey in March 2005 noise levels were measured and traffic counts were performed. A computerized Traffic Noise Model (TNM) of the site was developed. The measured sound levels were compared with those output from the computer model (with the traffic counts as the input). The resulting sound levels were generally similar.

The noise model was then used to predict future noise levels on the site with traffic forecasts obtained from the Maryland-National Capital Parks and Planning Commission (M-NCPPC) as the input.

The unmitigated future 60 and 65 db DNL contours are shown in Figure 2 [see Appendix E]. The DNL will not exceed 65 dB in any rear yard. However, the DNL will exceed 60 dB in some rear yards. A proposed six-foot tall noise wall is shown in Figure 3 [see Appendix E]. One acceptable design for the noise walls is shown in Figure 4 [see Appendix E]. The mitigated future 60 and 65 dB

DNL contours are shown in Figure 5 [see Appendix E]. With the proposed noise walls the DNL will not exceed 60dB in any rear yard."

A noise-mitigation fence is proposed in an L-shape around the rear lots of units 20-22 on the eastern end of the development. The condition and maintenance of this fence is subject to the conditions outlined in the Environmental section of the Staff Recommendation above.

#### Drainage & Grading

As noted in the Preliminary Plan Staff Report:

The property contains no wetlands, floodplains or streams, however, there is a notable deeply incised swale that traverses the property that is badly eroded. This swale receives runoff from MD 355 and Collins Drive.

This erosion has been mitigated by a proposed concrete channel at the base of a retaining wall, which is collected in a 42" reinforced concrete pipe. This retaining wall also serves to redirect most of the runoff from MD 355 to stormwater facilities on the southern edge of the site. Due to the size of the retaining wall, which also serves to provide a gradual slope along the internal private street, a safety fence is constructed along the top of the wall. A second retaining wall is proposed around a rip-rap scour hole towards the center of the southern edge of the property.

Water quality and quantity controls are subject to the approved Stormwater Management Concept Plan and conditions enumerated in the Staff Recommendation above. The stormwater management concept consists of on-site channel protection measures via a waiver to the existing Mary Boland Regional pond; on-site water quality control and onsite recharge via an underground sand filter, recharge trenches and rain barrels.

All other grades around the units are adequate for homeowner use.

#### Sanitation

A final issue raised at the time of preliminary plan review was the fact that the aging septic systems for the existing homes to the north will require a future connection to the sanitary sewer system. The applicant has provided a 20 foot WSSC easement and construction of a sewer stub-out at the low point of the grades on which these homes sit for future public connection to these lots.

#### **FINDINGS: For Site Plan Review**

- 1. The site plan conforms to all non-illustrative elements of a development plan or diagrammatic plan, and all binding elements of a schematic development plan, certified by the Hearing Examiner under Section 59-D-1.64, or is consistent with an approved project plan for the optional method of development, if required, unless the Planning Board expressly modifies any element of the project plan.*



An approved development plan or a project plan is not required for the subject development.

2. *The Site Plan meets all of the requirements of the zone in which it is located.*

The Site Plan meets all of the requirements of the R-200/TDR 8 Zone as demonstrated in the project Data Table above.

3. *The location of the building and structures, the open spaces, the landscaping, recreation facilities, and the pedestrian and vehicular circulation systems are adequate, safe and efficient.*

- a. Buildings

The plan proposes 22 one-family attached dwelling units. The units are arranged along an east-west oriented interior private street, which is flanked on the opposite side by a Forest Conservation Area. A six-foot noise fence is provided around the rear yards of lots 20-22. The building locations are arranged in an adequate, safe, and efficient manner on the site.

- b. Open Spaces

The plan proposes a minimum of 60% green space, comprised of a 0.93 acre forest conservation easement area, a tot-lot, and open space between and around the proposed dwelling units. The open space provided on site is adequate, safe, and efficient for the number of proposed dwelling units and relative to the gross tract area.

- c. Landscaping and Lighting

The proposed landscaping on the site consists of a mix of shade, evergreen and ornamental trees along the private street and along MD 355. Further landscape screening is provided along the southern edge of the property and the northwestern edge of the internal private street. Further landscaping is provided along the foundation of each townhouse and around the tot-lot and sitting areas.

The lighting plan consists of several streetlights on 12-foot poles along the interior streets spaced to provide safe and comfortable pedestrian use at night.

The landscaping and lighting provide for adequate, safe, and efficient use by the homeowners.

d. Recreation

Recreation facilities are not required for this project, but are provided as detailed in the table above. These facilities provide adequate, safe, and efficient opportunities for use by the homeowners.

e. Vehicular and Pedestrian Circulation

Vehicular and pedestrian circulation is safe, adequate and efficient. Access points to the site are to be provided temporarily from MD 355 and, in the future, from Millennium Court.

4. *Each structure and use is compatible with other uses and other Site Plans and with existing and proposed adjacent development.*

The proposed residential development is completely composed of one-family attached dwelling units. They are compatible with surrounding land uses and provide a transition between the adjacent commercial development to the south, multi-family dwelling units to the west, and one-family detached units to the north. Across MD 355 from the site is Neelsville Middle School, which provides additional recreation facilities and open space when the school is not in use.

5. *The Site Plan meets all applicable requirements of Chapter 22A regarding forest conservation, Chapter 19 regarding water resource protection, and any other applicable law.*

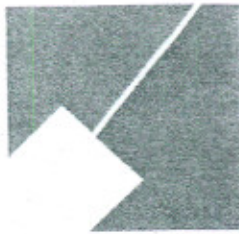
Forest Conservation requirements have been met by the preservation of 0.22 acres of existing forest, the reforestation of 0.71 acres on-site, landscape credit of 0.12 acres for on-site landscaping, and 0.63 acres of off-site forest mitigation banking.

## APPENDICES

- A. Preliminary Plan Opinion
- B. Environmental Planning Staff Report
- C. Department of Permitting Services SWM Concept Approval
- D. Miller, Miller & Canby Request for Two-Thirds TDR Waiver
- E. Noise Study



M-NCPPC



MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING

THE MARYLAND-NATIONAL CAPITAL  
PARK AND PLANNING COMMISSION

8787 Georgia Avenue  
Silver Spring, Maryland 20910-3760  
301-495-4500, www.mncppc.org

Date Mailed:

Action: Approved

Motion of Commissioner Robinson, seconded by Commissioner Bryant, with a vote of 4-0; Chairman Berlage and Commissioners Bryant, Wellington, and Robinson voting in favor. Commissioner Perdue was necessarily absent.

MONTGOMERY COUNTY PLANNING BOARD

OPINION

Preliminary Plan 1-05026

NAME OF PLAN: The Towns of Boland Farms

The date of this written opinion is NOV 08 2005 (which is the date that this opinion is mailed to all parties of record). Any party authorized by law to take an administrative appeal must initiate such an appeal within thirty days of the date of this written opinion, consistent with the procedural rules for the judicial review of administrative agency decisions in Circuit Court (Rule 7-203, Maryland Rules of Court - State).

I. Introduction

On August 4, 2004, GBI Corporation ("Applicant") submitted an application for the approval of a preliminary plan of subdivision of property in the R-200/TDR zone. The original application proposed to create 26 lots on 4 acres of land located on the west side of Frederick Road (MD 355), approximately 200 feet northwest of Darnestown-Germantown Road (MD 118), in the Germantown Master Plan area ("Property" or "Subject Property"). The application was captioned Preliminary Plan No. 1-05026 ("Application" or "Preliminary Plan"). On March 31, 2005, the Preliminary Plan was brought before the Montgomery County Planning Board for a public hearing. At the public hearing, the Montgomery County Planning Board heard testimony and received evidence submitted in the record on the application.

The record for this application ("Record") closed at the conclusion of the public hearing, upon the taking of an action by the Planning Board. The Record includes: the information on the Preliminary Plan Application Form; the Planning Board staff-



generated minutes of the Subdivision Review Committee meeting(s) on the application; all correspondence and any other written or graphic information concerning the application received by the Planning Board or its staff following submission of the application and prior to the Board's action at the conclusion of the public hearing, from the applicant, public agencies, and private individuals or entities; all correspondence and any other written or graphic information issued by Planning Board staff concerning the application, prior to the Board's action following the public hearing; all evidence, including written and oral testimony and any graphic exhibits, presented to the Planning Board at the public hearing.

## **II. SITE DESCRIPTION**

The Subject Property is located on the west side of Frederick Road (Maryland Route 355 or "MD 355"), approximately 200 feet northwest of Darnestown-Germantown Road (Maryland Route 118 or "MD 118"), in the Germantown Master Plan area. The Subject Property consists of a total of approximately four (4) acres in the R-200/TDR-8 zone and is currently occupied by an older single-family structure. Bounding the Subject Property to the north are five single-family detached homes on Collins Drive within the R-200 zone. The land located immediately to the west is zoned R-20 and is improved with multi-family apartment buildings. Immediately south of the Subject Property is a two-acre lot zoned R-200/TDR-8, which is improved by a single-family structure currently used for a non-conforming business purpose. Immediately south of that lot, the land is zoned C-3 and is improved with a Burger King restaurant, a car wash, and a filling station with a convenience store. Maryland Route 355 abuts the Subject Property to the east; beyond MD 355, the Neelsville Middle School is located on R-200 zoned land.

## **III. PROJECT DESCRIPTION**

The Application requests approval of 24 one family attached units. The Property is approximately 4.0 acres in size and is rather long and rectangular in shape. The site has frontage on MD 355, however, the master plan also shows a future access point, Millenium Court. The Preliminary Plan shows that the 24 units are setback 100 feet from the rear lot lines of the adjacent residences to the north along Collins Drive, as prescribed by the PD development standards applicable to this TDR zoned property. The Applicant is requesting a waiver of the 100-foot setback requirement for the southern boundary line, as discussed below.<sup>1</sup>

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<sup>1</sup> On January 30, 2004, the Planning Board considered a pre-preliminary plan for the Subject Property. The applicant demonstrated to Staff and the Planning Board that the standard PD zoning setbacks (100 feet) from adjacent R-200 zoned property would essentially render the property undevelopable. The Applicant sought Board support for a waiver of the 100-foot setback from adjacent residentially **zoned** property as established in the PD development standards. The Applicant intended to proceed to the



Millenium Court was established in the 1989 Germantown Master Plan to provide access not only to the Subject Property, but also to the lot to the south and the C-1 zoned properties along MD 118, in order to eliminate the need for additional points of access to MD 355, an arterial highway. A portion of Millennium Court has been constructed and serves some of the C-1 zoned properties that front on MD 118 to the south of the Subject Property. The intervening lot is currently occupied by a non-conforming business and impedes the ability to extend Millenium to the Subject Property. The Applicant has made numerous attempts to purchase the right-of-way from the adjacent property owner and construct the cul-de-sac on the adjacent piece. However, the two property owners have failed to reach an agreement. Therefore, the State Highway Administration has agreed to allow a temporary right-in/right-out access point on to MD 355. This access point will be closed and eliminated once Millenium Court is constructed and accepted by the County for maintenance.

The Applicant will be required to dedicate and ultimately construct one-half of the cul-de-sac bulb of Millenium Court. The Applicant will be required to dedicate the northern half of the bulb and to work with MCDPWT to record a covenant that assigns a financial obligation to the Applicant or future homeowners for a pro rata share of the construction costs for half of the cul-de-sac. It is assumed that if or when the adjoining lot to the south of the Subject Property is to be further subdivided or otherwise improved, that property owner will be required to dedicate and build the southern half of the bulb for access to MD 118. Again, the intention is that in the future the Subject Property and the adjoining lot to the south of the Subject Property will be required to access Millenium Court and close all access points to MD 355.

The application has an approved stormwater management concept. Neighbors to the north along Collins Drive expressed concerns about the current runoff through their properties from MD 355. Runoff from these properties is released onto the Subject

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Board of Appeals with Planning Board support and seek a waiver to the setback established in the Zoning Ordinance. The Board was reluctant to lend support for binding conditions citing that there was no language in the Zoning Ordinance that offered such a waiver allowance and that the waiver was therefore, a Board of Appeals decision. The Applicant proceeded to the Board of Appeals for a waiver request, which was ultimately denied.

At the January 30, 2004 hearing, the Board was also asked to consider the development mix for the property, which under the TDR zone requires 15% of the units to be single family detached. The pre-preliminary plan requested a waiver to allow for 100% single-family attached units. Staff advised the Board that the issue of development mix was more appropriately addressed as part of the preliminary plan application. Again, the Board did not provide comment on the unit mix stating that they were reluctant to weigh in on an appropriate mix without a determination on the setbacks, forest conservation and compatibility.



Property and conveyed downstream by means of storm drainpipes. Staff testified that the inlets for the storm drain system have been approved by MCDPS and will not create a flooding situation for the neighbors.

The existing homes on Collins Drive have aging septic systems. To provide for the future connection of these homes to the sanitary sewer system, as conditions of approval, Applicant is required to provide a 20 foot WSSC easement at the low point of these homes and to construct the sewer line extension within this easement while the Property is under construction. The WSSC easement passes through a forest conservation easement, which is to be planted soon after completion of these units. It may be a number of years before the Collins Drive residents organize and get connected to the sewer. In that time the trees within the planted easement could become quite large with root systems extending into the easement area. To avoid damage to the trees, it is appropriate to have the Applicant construct the extension while the property is under construction and before the trees are planted. The eventual connection to this sewer stub provided by this Applicant to the residents of Collins Drive will be at their expense or as agreed to by the WSSC.

#### **A. MASTER PLAN**

The Property has been the subject of extensive review for conformance with the Germantown Master Plan, forest conservation, access to a state highway, and adjacent uses. The Germantown Master Plan (1989) designates this property for residential development within the NE-6 analysis area. The analysis area also contains property recommended for commercial use at the corner of MD 118 and MD 355 and the frontage along MD 118.

The land use recommendation for this property is R-200/TDR with a base density of 8 units per acre. The base zone of R-200 reflects the density of the adjoining Collins Drive residences. However, the Master Plan envisions uses other than single-family detached units on this TDR transition area. The Master Plan concludes, "this area is also suitable for special exception uses as transitions between the potential gas station<sup>2</sup> and adjoining residential uses".<sup>3</sup>

Temporary access to the Subject Property is proposed from MD 118. The Master Plan illustrates a cul-de-sac bulb reaching the Subject Property from MD 118. A portion of this facility has been built and named Millenium Court. When Millenium Court is completed, the temporary access to MD 118 should be discontinued to provide safe

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<sup>2</sup> The gas station has subsequently been built, as indicated in the Site Description, above.

<sup>3</sup> Germantown Master Plan, p. 84 (1989).



entrance and egress from Millenium Court and to improve pedestrian conditions along MD 355 by reducing driveway cuts.

This Application conforms to the recommendations of the master plan in that it provides a residential transition from the C-1 zone on MD 118 to the single family detached residences on Collins Drive. It is unknown at this time how the adjacent R-200/TDR property abutting to the south will ultimately develop. The current property owner has not discussed redevelopment of the ongoing non-conforming use. Given its present zoning and proximity to more intensive commercial and residential development, it is unlikely that the adjacent property would develop with single-family detached dwellings.

#### **B. WAIVER OF SETBACK**

In order to utilize the TDR development option recommended by the Master Plan and for which the property is zoned, the Applicant must follow the special regulations for optional method development using transferable development rights set forth in Section 59-C-1.39 of the Montgomery County Zoning Ordinance. Section 59-C-1.394 addresses the development standards applicable to the optional method of development. Subparagraph (b) provides that:

*For TDR densities of 3 or more per acre, the lot sizes and other development standards will be determined at the time of preliminary plan and site plan for conformance with applicable master plan guidelines and in accordance with the purposes and provisions of the PD zone, except as may be specified in section 59-C-1.395.*

Accordingly, the setbacks for the PD zone are the applicable setbacks for this proposed development using TDRs. Section 59-C-7.15(b)(1) of the Zoning Ordinance, which addresses the issue of compatibility in the PD zone, provides that

*In order to assist in accomplishing compatibility for sites that are not within, or in close proximity to a central business district or transit station development area, the following requirements apply where a planned development zone adjoins land for which the area master plan recommends a one-family detached zone:*

*(1) No building other than a one-family detached residence can be constructed within 100 feet of such adjoining land.*

Recently, the District Council adopted Zoning Text Amendment ("ZTA") No. 04-15. This ZTA amended the setback waiver provision under Section 59-C-7.15(c)(1). by changing the word "zone" to "use". Section 59-C-7.15(c)(1)-(2) now reads:

*A waiver of the requirement of paragraph (b)(1) may be permitted if:*

- (1) The area master plan recommends other than a one-family detached use for the property immediately adjoining the area where the waiver is to occur; and*
- (2) The immediately adjoining property will not be adversely affected by the waiver for present or future use.<sup>4</sup>*

The Applicant proposes a setback on the southern property line of 45 feet from the proposed unit nearest to the property line along the southern boundary of the Subject Property. As discussed above, the master plan envisions special exception uses or residential development utilizing TDR's on this adjoining property, which currently is being used for non-residential purposes as a non-conforming business. While the underlying zone is R-200, single-family detached dwellings are not a likely or desirable use for the adjoining property due to its location between the subject property and the C-1 zoned property along MD 118. Thus, the waiver will not adversely affect the existing use on the immediately adjoining property, nor any future development of that site.

#### **C. WAIVER OF UNIT MIX**

The Planning Board was asked to consider the Applicant's request to provide 100% townhomes rather than the mix of 85% attached and 15 % detached as specified in Section 59-C-1.395. The use of 100% attached units is compatible with the multi-family units to the west and provides for a good transition between the single family detached units on Collins Drive and the C-1 zone business to the south. Additionally, the waiver of the unit mix contributes to the ability to meet forest conservation requirements on-site. The waiver will allow for the creation of a significant forested area along the northern boundary of the site that will serve as a buffer for the adjacent homes on Collins Drive. This enhances the desirability of the Plan's unit mix from an environmental perspective.

#### **D. TRANSPORTATION**

A traffic study was not required for the property because of the small number of trips that will be generated by the proposed houses. The approval conditions include construction of the temporary access to MD 355 as a right-in/right-out that will be extinguished once Millenium Court is constructed and accepted by the County for

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<sup>4</sup> MONTGOMERY COUNTY CODE Section 59-C-7.15(c)(1)-(2) (emphasis added). Prior to the ZTA, Section 59-C-7.15(c)(1) read: "The area master plan recommends other than a one-family detached zone for the property immediately adjoining the area where the waiver is to occur."



maintenance. The Preliminary Plan will provide safe and adequate access for vehicles and pedestrians.

#### **E. ENVIRONMENTAL**

This plan is using an optional method of development and as such, the forest conservation requirements must be met on-site. The existing on-site forest, while fairly low quality, will be partially preserved and supplemented with additional planting. The preliminary forest conservation plan as approved does meet the forest conservation requirements on-site through forest preservation and afforestation of a significant portion of the northern third of the property.

The property contains no wetlands, floodplains or streams; however, a notable deeply incised swale that traverses the property is badly eroded. This swale receives runoff from MD 355 and Collins Drive. The development of the site will remove this eroded channel and provided for a stabilized conveyance system for the runoff.

#### **IV. SUMMARY OF TESTIMONY AND EVIDENCE IN RECORD**

Development Review Staff ("Staff") recommended approval of the Application in its memorandum dated March 24, 2005 ("Staff Report"). Staff testified at the public hearing, and presenting its findings consistent with the Staff Report as generally summarized above.

Staff testified regarding two minor modifications to Staff's proposed conditions of approval. Condition No. 9 was modified to indicate that that the sewer construction would be subject to WSSC approval, to avoid preempting the determination of WSSC regarding the final sewer design. Condition No. 18 was modified to eliminate language suggesting a predetermined outcome of the required noise analysis.

Staff advised the Board that the Application as conditioned complies with subdivision regulations. Staff recommended Board approval of the waivers sought in the Application and approval of the Preliminary Plan as conditioned.

Applicant appeared at the hearing represented by legal counsel. Counsel for the Applicant stated that the Applicant accepted the Staff recommendation and conditions as modified. Applicant testified regarding discussions with the adjoining property owner to the south of the Property, indicating that the neighboring owner intended continuation of the non-conforming business use at this time as opposed to development.

A representative of a neighboring property owner on Collins Drive testified in opposition to the proposed Preliminary Plan. He expressed concerns regarding privacy and stormwater runoff from MD 355 onto the neighboring property. Staff responded that as the existing runoff came from MD 355, the Applicant had no ability or legal

requirement to rectify any perceived problems created by runoff from the state road. Staff testified that the stormwater plan inlets for the Subject Property would in no way impede runoff flow from the neighboring property.

In response to the neighboring property owner's privacy concerns, the Applicant proffered a privacy fence along the northern perimeter of the Subject Property. The Board accepted the Applicant's proffer and questioned the Applicant regarding landscaping along the proposed fence. Staff indicated that further consideration of landscaping would occur during Site Plan review for the Subject Property.

A letter in the file from an adjacent property owner expressed concerns about a previous rendition of the plan that anticipated ingress and egress for the Subject Property through his property. The plans submitted to, and reviewed by the Planning Board, were revised to show no access through the adjacent property.

No other speakers testified at the public hearing.

#### **V. FINDINGS**

Having given full consideration to the recommendations of its Staff, which the Board hereby adopts and incorporates by reference; the recommendations of the applicable public agencies<sup>5</sup>; the applicant's position; and other evidence contained in the Record, which is hereby incorporated in its entirety into this Opinion, the Montgomery County Planning Board:

- a) Finds, pursuant to MONTGOMERY COUNTY CODE § 50-35(l), that the uncontested evidence of record demonstrates Preliminary Plan No. 1-05026 substantially conforms to the Germantown master plan.
- b) Finds, pursuant to MONTGOMERY COUNTY CODE § 50-35(k), that the uncontested evidence of record demonstrates public facilities will be adequate to support and service the area of the proposed subdivision.
- c) Finds, pursuant to MONTGOMERY COUNTY CODE § 50-29(a)(1), that the uncontested evidence of record demonstrates the size, width, shape, and orientation of the proposed lots are appropriate for the location of the subdivision.

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<sup>5</sup> The application was referred to outside agencies for comment and review, including the Washington Suburban Sanitary Commission, the Department of Public Works and Transportation, the Department of Permitting Services and the various public utilities. All of these agencies recommended approval of the application.



- d) Finds, based on the uncontested evidence of record, that the application satisfies all the applicable requirements of the Forest Conservation Law, Montgomery County Code, Chapter 22A. This finding is subject to the applicable condition(s) of approval.
- e) Finds that the application meets all applicable stormwater management requirements and will provide adequate control of stormwater runoff from the site. This finding is based on the determination by the Montgomery County Department of Permitting Services ("MCDPS") that the Stormwater Management Concept Plan meets MCDPS' standards.
- f) Finds, pursuant to MONTGOMERY COUNTY CODE § 59-C-7.15(c)(1)-(2), that the Application meets the requirements for a waiver of the setback requirement along the southern boundary of the Subject Property. The Board finds that the Germantown Master Plan recommends uses other than a one-family detached use for the property immediately adjoining the area where the waiver is to occur, including special exception uses. The Board also finds that the Plan's proposed setback, consisting of 45 feet from the proposed unit nearest to the property line along the southern boundary of the Subject Property, will not adversely affect the present or future use of the immediately adjoining property.
- g) Finds, pursuant to MONTGOMERY COUNTY CODE § 59-C-1.395, that the Application satisfies the requirements for a waiver of the standard unit mix percentage requirements under that section. The Board finds that the Application's proposed unit mix of 100% single-family attached units is more compatible with adjacent development, which includes multi-family housing and commercial uses. The Board further finds that the development is more desirable for environmental reasons, as the proposed unit mix more readily permits satisfaction of the required forest conservation requirements on-site due to the particular shape of the Subject Property.
- h) Finds that any objection concerning a substantive issue that was not raised prior to the closing of the Record is waived.

## VI. CONDITIONS OF APPROVAL

The Board finds, based on evidence of record (including staff memoranda and testimony), that the waivers requested in Preliminary Plan No. 1-05026 satisfy the requirements of Montgomery County Code Chapter 59. Having so found, the Planning Board approves the waivers requested in Preliminary Plan No. 1-05026.

Finding Preliminary Plan No. 1-05026 in accordance with the purposes and all applicable regulations of Montgomery County Code Chapter 50, the Planning Board approves Preliminary Plan No. 1-05026, subject to the following conditions:

- 1) Approval under this preliminary plan is limited to a maximum of 24 single family attached dwelling units.
- 2) Dedication only at this time for the Millenium Court cul-de-sac. Applicant to dedicate one-half of the cul-de-sac on the Subject Property.
- 3) Prior to recordation of plat, coordinate with MCDPWT to record a covenant for future construction of the portion of Millenium Court on the Subject Property.
- 4) Compliance with the conditions of approval for the preliminary forest conservation plan. The applicant must satisfy all conditions prior to recording of plat(s) or MCDPS issuance of sediment and erosion control permits.
- 5) Record plat to reflect a Category I easement over all areas of stream valley buffers and forest conservation.
- 6) Record plat to reference the Common Open Space Covenant recorded at Liber 28045 Folio 578 ("Covenant"). Applicant shall provide verification to Commission staff prior to release of final building permit that Applicant's recorded HOA Documents incorporate by reference the Covenant.
- 7) Access and improvements as required to be approved by MCDPWT prior to recordation of plat(s) and MDSHA prior to issuance of access permits.
- 8) The applicant shall dedicate all road rights-of-way shown on the approved preliminary plan to the full width mandated by the Germantown Master Plan unless otherwise designated on the preliminary plan.
- 9) Applicant to construct the sewer connection within the 20 ft. WSSC easement to the rear lot line of adjacent Lot 2, Block A, Collin Hill Subdivision, subject to WSSC approval, in order to minimize future impact to the forest conservation easement.
- 10) Access to MD 355 to be a right-in/right-out configuration to be closed once Millenium Court is constructed and accepted for maintenance by MCDPWT.
- 11) Record plat to contain a note, "Vehicular access to MD 355 is temporary and is to be closed once Millenium Court is constructed and accepted for maintenance by Montgomery County."



- 12) Compliance with the conditions of approval of the MCDPS stormwater management approval dated, November 19, 2004.
- 13) Compliance with conditions of MCDPWT letter dated March 21, 2005 unless otherwise amended.
- 14) Record plats to reflect the serialized TDR's that have been purchased for this site.
- 15) Final number of TDR's, number of units, unit location, sidewalks, bikepaths and open space amenities will be determined at site plan.
- 16) No clearing, grading or recording of plats prior to signature set approval.
- 17) A landscape and lighting plan must be submitted as part of the site plan application for review and approval by technical staff.
- 18) At the time of Site Plan, applicant to prepare and submit a noise analysis for current and 20-year future traffic volumes.
- 19) The Adequate Public Facilities review (APFO) for this project will remain valid for 61 months from the date of mailing of the Planning Board's opinion for the Preliminary Plan.
- 20) Other necessary easements.

This Preliminary Plan will remain valid for 36 months from its Initiation Date (as defined in Montgomery County Code Section 50-35(h), as amended). Prior to the expiration of this validity period, a final record plat for all property delineated on the approved preliminary plan must be recorded among the Montgomery County Land Records or a request for an extension must be filed.

\* \* \* \* \*

[CERTIFICATION OF BOARD VOTE ADOPTING OPINION ON FOLLOWING PAGE]

MF 10/21/05  
Approved for legal sufficiency  
M-NCPPO Office of General Counsel

**CERTIFICATION OF BOARD VOTE ADOPTING OPINION**

At its regular meeting, held on **Thursday November 3, 2005**, in Silver Spring, Maryland, the Montgomery County Planning Board of The Maryland-National Capital Park and Planning Commission, on the motion of **Commissioner Bryant, seconded by Commissioner Robinson, with Chairman Berlage, and Commissioners Bryant, Wellington, and Robinson** voting in favor of the motion, **ADOPTED** the above Opinion which constitutes the final decision of the Planning Board and memorializes the Board's findings of fact and conclusions of law for **Preliminary Plan 1-05026, The Towns of Boland Farms.**

A handwritten signature in cursive script, appearing to read "M. Clara Moise", written over a horizontal line.

Certification As To Vote of Adoption  
M. Clara Moise, Technical Writer





**THE MARYLAND-NATIONAL CAPITAL PARK AND  
PLANNING COMMISSION**

**Department of Planning, Montgomery County, Maryland**  
8787 Georgia Avenue, Silver Spring, Maryland 20910

**MEMORANDUM**

TO: Josh Sloan, Development Review

FROM: Mark Pfefferle, Environmental Planning *mp*

DATE: November 13, 2006

SUBJECT: Site Plan 820050120  
The Towns of Boland Farm

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The Environmental Planning staff reviewed the site plan referenced above. Staff recommends Planning Board approval of the site plan with the following conditions.

1. The applicant shall comply with the conditions of approval of the final forest conservation plan. The applicant shall satisfy all conditions of approval before recording of the record plat(s) or MCDPS issuance of a erosion and sediment control permits. Conditions include but are not limited to:
  - a. Applicant to construct a split rail fence along the northern and western conservation easement lines.
  - b. Applicant to plant the afforestation area with 1 ½ inch to 2-inch caliper trees.
2. Prior to release of the first building permit for the subdivision, the following items must be met:
  - a. There shall be certification from an acoustical engineer that the building shell for residential dwelling units are designed to attenuate projected exterior noise levels to an interior level of no more than 45 dBA, Ldn. Any subsequent changes in building shell materials or coverage that may affect acoustical performance shall be approved by an acoustical engineer prior to implementation.
  - b. The builder shall, in writing, commit to construct the residential units in accordance with the acoustical specifications identified by the acoustical engineer.
3. Applicant shall either document the long-term effectiveness of similar board-on-board noise walls. If the long-term effectiveness cannot be documented to the satisfaction to Environmental Planning, the applicant shall construct a noise wall of a solid material that will not be subject to shrinkage or weathering.

## **Background**

The 4.04-acre property is located near the intersection of Germantown Road (MD Rte. 118) and Frederick Road (MD Rte. 355) and within the Great Seneca Creek watershed. The applicant is proposing to construct 22 townhouses, stormwater management facilities, and other necessary infrastructure on the subject site. There is one existing structure on the property but it will be demolished as part of the development. The property is zoned R-200 and designated as a TDR receiving area. The property is subject to the forest conservation law and is impacted by vehicle traffic

## **Environmental Constraints**

Natural Resource Inventory/Forest Stand Delineation 4-003270 was approved on May 9, 2003. The approved NRI/FSD indicates that there are no streams, wetlands, floodplains, environmental buffers, hydric soils, erodible soils, or steep slopes on the subject site.

## **Forest Conservation**

There is 1.94-acres of existing forest on the subject site. Since the application is zoned single-family residential and the applicant is proposing to utilize TDRs on site, the plan must comply with Section 22A-12(f)(1) of the Montgomery County code, which requires a minimum amount of forest onsite. This section of the code states "*Any site develop in agricultural and resource areas, any planned unit development, any site developed under cluster or other optional method of development in a one-family residential zone, and any wavier from a zoning requirement for environmental reasons, must include a minimum amount of forest on-site as part of meeting its total forest conservation requirements.*" The preliminary plan of subdivision and the preliminary forest conservation plan both indicate that the applicant will meet this requirement onsite by saving 0.22-acres of forest and planting 0.71-acres of forest onsite. The applicant will meet the remaining planting requirements through 0.12-acres of onsite landscape planting and a fee-in-lieu payment for 0.63-acres.

Partial removal of the existing forest and planting to meet the forest conservation threshold onsite is within the provisions of the law. In addition, the forest removal allows for the non-native and invasive plant materials to be removed at the same time. The new planting area requires the applicant to enter into a maintenance and management agreement with M-NCPPC to protect the planted material. The maintenance and management agreement requires the control of non-native and invasive plants, which would result in a better forest in the long run.

Environmental Planning requests a Planning Board condition of approval requiring the applicant to construct a split rail fence along the northern and western edges of the conservation easement. This is to help delineate the conservation easement for the adjoining property owners.

## **Noise**

The applicant retained the services of an acoustical engineer to prepare and submit a noise



analysis as required by a condition of the preliminary plan of subdivision. The noise analysis revealed that the proposed residential units nearest MD 355 would be impacted by current and future noise generated from vehicle traffic along MD 355 with noise levels ranging from 65 and 70 dBA Ldn.

The applicants' noise consultant indicates that interior noise levels can be reduced by typical residential construction techniques, however, because of the high noise levels on the top floor, the noise consultant indicates that it is necessary to evaluate interior noise levels after the architectural drawings are available to determine if the interior noise levels meet the interior noise guideline of 45 dBA Ldn. Environmental Planning requests a condition of the site plan requiring a certification from an acoustical engineer indicating that the interior noise levels will not exceed 45 dBA Ldn. Environmental Planning also requests a second noise condition that requires the builder to provide written confirmation that they will construct the residential units according to any findings/recommendations of the acoustical engineer.

The noise consultant is proposing a noise barrier to mitigate exterior noise levels below 60 dBA Ldn along the impacted properties. The consultant's report proposes a noise barrier along the side and back property line of lot 22, and along the back property line of lots 20 and 21. The consultant recommends a six-foot tall wood board-on-board noise fence. It is Environmental Planning and the Site Plan Inspectors experience that the effectiveness of board-on-board noise fences are compromised with age. The shrinking, swelling, and cracking of the wood creates gaps, which allows noise to enter the protected area negating the effectiveness of the technique. Environmental Planning recommends that the noise fence be constructed with a solid material such as bricks, cement board etc. Environmental Planning would allow the applicant use the board-on-board fencing only if they can provide documentation that board-on-board noise walls are performing as well now as when first installed.

### **Recommendations**

Environmental Planning recommends approval of the site plan with the conditions noted above.



DEPARTMENT OF PERMITTING SERVICES

Douglas M. Duncan  
County Executive

March 3, 2005

Robert C. Hubbard  
Director

Mr. Kenneth Jones  
Macris, Hendricks and Glascock  
9220 Wightman Road, Suite 120  
Montgomery Village, MD 20886

Re: Stormwater Management **CONCEPT** Request  
for Boland Farms  
Preliminary Plan #: Pending  
SM File #: 213970  
Tract Size/Zone: 3.78 acres/R-200 TDR 8  
Total Concept Area: 3.36 acres  
Lots/Block: 60 & 61  
Parcel(s): N/A  
Watershed: Great Seneca Creek

Dear Mr. Jones:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above mentioned site is **acceptable**. The stormwater management concept consists of on-site channel protection measures via a waiver to the existing Mary Boland Regional pond; on-site water quality control and onsite recharge via an underground sand filter, recharge trenches and rain barrels.

The following **items** will need to be addressed **during** the detailed sediment control/stormwater management plan stage:

1. Prior to permanent vegetative stabilization, all disturbed areas must be topsoiled per the latest Montgomery County Standards and Specifications for Topsoiling.
2. A detailed review of the stormwater management computations will occur at the time of detailed plan review.
3. An engineered sediment control plan must be submitted for this development.
4. All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 is required.

This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this





office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact William Campbell at 240-777-240-777-6345.

Sincerely,



Richard R. Brush, Manager  
Water Resources Section  
Division of Land Development Services

RRB:dm

cc: R. Weaver  
S. Federline  
SM File # 213970

QN -waived; Acres: 3.36  
QL - onsite; Acres: 3.36  
Recharge is provided

LAW OFFICES

**MILLER, MILLER & CANBY**

CHARTERED

200-B MONROE STREET  
ROCKVILLE, MARYLAND 20850

(301) 762-5212  
FAX (301) 762-6044

SWCARTER@MMCANBY.COM



JAMES R. MILLER, JR.  
PATRICK C. MCKEEVER  
JAMES L. THOMPSON  
LEWIS R. SCHUMANN  
JODY S. KLINE  
ELLEN S. WALKER  
MAURY S. EPNER  
JOSEPH P. SUNTUM  
SUSAN W. CARTER  
ROBERT E. GOUGH  
GLENN M. ANDERSON\*  
DONNA E. McBRIDE  
MICHAEL G. CAMPBELL  
SOO LEE-CHIO  
\*Licensed in Maryland and Florida

October 26, 2006

Montgomery County Planning Board  
Maryland-National Capital Park and Planning Commission  
8787 Georgia Avenue  
Silver Spring, MD 20910

RE: The Towns at Boland Farm  
Site Plan Application No. 82005042  
(Preliminary Plan Application 1-05026)  
Request for Waiver of 2/3 TDR Requirement

Dear Chairman Hanson and Members of the Planning Board:

I am writing to you on behalf of the applicant in the above-referenced matter to request a waiver of the requirement that the proposed plan for the subject property include at least two-thirds of the number of development rights permitted to be transferred to the property under the provisions of the applicable master plan. This waiver is requested pursuant to Section 59-C-1.393 (b) of the Zoning Ordinance which provides as follows:

*"(b) Such a preliminary plan must include at least two-thirds of the number of development rights permitted to be transferred to the property under the provisions of the applicable master plan approved by the district council. However, upon a finding by the planning board that for environmental or compatibility reasons it would be desirable to permit a lower density, the two-thirds requirement may be waived."*

The subject property consists of approximately 3.87 acres located in the R-200/TDR zone (described in the earlier preliminary plan approval as approximately 4.0 acres). The 1989 Germantown Master Plan recommends a TDR density of 8 units/acre for this location. The initial application for preliminary plan approval sought the creation of 26 lots. The number of proposed lots was subsequently reduced and the preliminary plan of subdivision was approved with 24 lots. At that time, the TDR tabulation noted on the plan was as follows:



Base Density = 8 d.u.s  
Proposed Density = 24 d.u.s  
Required TDRs = 16 TDRs  
Required 2/3 TDRs = 16 TDRs

Accordingly, no waiver of the 2/3 requirement was necessary at that time as the requirement was satisfied with the provision of 24 dwelling units and 16 TDRs.

However, the proposed site plan has further reduced the proposed number of units from 24 dwelling units down to 22 dwelling units. This reduction in the number of proposed units has been made to further address issues of compatibility while also accommodating the required improvements to Millenium Drive. The subject property is somewhat unique insofar as it is a very long, narrow tract of land. The developable area is constrained by the fact that projects with TDR densities of three or more units per acre must adhere to "compatibility" requirements of the Planned development ("PD") zone, including the requirement of Section 59-C-7.15(b)(1) that "[n]o building other than a one family detached residence can be constructed within 100 feet of such adjoining land." The land to the north is zoned R-200 and is developed with eight single family detached homes located along Collins Drive. Accordingly, the proposed units have been located at least 100 feet from these lots in order to address requirements of compatibility and a forest conservation easement has been proposed for this area which will provide for additional screening.

In calculating the 2/3 TDR requirement, Staff has first determined that the base zoning of 2 units per acre (2 x 3.87 acres) = 7.74 dwelling units (rounded down to 7.0 units permitted under the base R-200 zoning). (We are of the opinion that the R-200 base zoning, with a minimum lot size of 20,000 s.f., would actually permit 8.43 units (rounded down to 8.0 units) permitted in accordance with the base zoning, but Staff has rejected this approach.)

Second, Staff has determined that the maximum number of lots possible using a TDR density of 8 units/acre would result in a theoretical maximum of 30 units. (TDR density of 8 units/acre x 3.87 acres = 30.87 rounded down to 30 units.)

Third, subtracting the base density (7 units) from the maximum theoretical density of 30 units, the result is 23 dwelling units. (Note here that we are proposing only 22 units.) 23 units x 2/3 requirement = 15.33 TDRs (rounded up to 16 TDRs).

Even if we agree that the base R-200 zoning would permit only 7 units to be constructed, we are proposing a total of 22 units which means that **15** of those units must be constructed with TDRs. **We are proposing purchase of 15 TDRs.** The requested waiver would simply make it unnecessary to purchase an additional TDR that cannot be used.

Presumably the purpose of the 2/3 requirement is to maintain the integrity of TDR program by maximizing the use of TDRs in areas identified by the master plan as appropriate receiving areas. However, in this case, there is a small enclave of existing single family detached dwelling units abutting the subject property (that is otherwise surrounded with much higher intensity land uses), and the 100

foot setback from that single family community that is required for reasons of compatibility makes it very difficult to maximize the number of units allowed using TDRs.

Thank you for your attention to this waiver request. We intend to appear at the public hearing and will be available to respond to your questions.

Very truly yours,

MILLER, MILLER & CANBY

  
Susan W. Carter

SWC/dlt

cc: Joshua Sloan  
Michael Ma  
Cathy Conlon  
Rich Weaver  
Frank Gordon  
Vic Bryant





RECEIVED

MAY 18 2005

May 11, 2005

J/N 52178

Mr. Frank Gordon  
GBI Corporation  
6408 Grovedale Drive, Suite 202  
Alexandria, Virginia 22310

Reference: The Towns of Boland Farm Noise Study

Mr. Gordon:

This letter describes the outdoor noise level analysis for the Towns of Boland Farm townhouse project located along Frederick Road (Maryland Route 355) and Germantown Road (Maryland Route 118) in Montgomery County, Maryland. Our analysis was based on the Towns of Boland Farm Preliminary Plan of Subdivision Lots 1-24 and Parcel A prepared by Macris, Hendricks & Glascock, P.A. dated March 24, 2005. This plan shows the pavement of Route 355, existing ground elevations on the site, existing building locations, and proposed townhouse locations and elevations.

### **Executive Summary**

During a site survey in March 2005 noise levels were measured and traffic counts were performed. A computerized Traffic Noise Model (TNM) of the site was developed. The measured sound levels were compared with those output from the computer model (with the traffic counts as the input). The resulting sound levels were generally similar.

The noise model was then used to predict future noise levels on the site with traffic forecasts obtained from the Maryland-National Capital Parks and Planning Commission (M-NCPPC) as the input.

The unmitigated future 60 and 65 dB DNL contours are shown in Figure 2. The DNL will not exceed 65 dB in any rear yard. However, the DNL will exceed 60 dB in some rear yards. A proposed six-foot tall noise wall is shown in Figure 3. One acceptable design for the noise walls is shown in Figure 4. The mitigated future 60 and 65 dB DNL contours are shown in Figure 5. With the proposed noise walls the DNL will not exceed 60 dB in any rear yard.

## 1.0 Existing Noise Levels

### 1.1 Measured Noise Levels

In order to validate the results of the noise model (see section entitled TNM calibration below) noise levels were measured at two locations on the site continuously from 7:30 p.m. on Tuesday April 19, until 6 p.m. on Monday April 25, 2005.

The sound level meters were Larson Davis Laboratories type 820 integrating sound level meters programmed to report average, maximum, and minimum sound levels during five-minute intervals. The sound level meters were placed at the locations designated M1 and M2 in Figure 1. The sound level meter microphones were between five and six feet above the ground.

Average sound levels during each one-hour interval were calculated from the measurement data. The Day-Night Average Sound Levels (DNL or Ldn) were also calculated. DNL is the noise metric used by Montgomery County to assess the compatibility of proposed land uses along highways. The DNL is a weighted average noise level calculated based on the average noise level over a 24-hour calendar day, with a 10-decibel (dB) penalty added to noise from 12 a.m. to 7 a.m. and from 10 p.m. to midnight. Typically, this term is written "DNL" in narrative form, and Ldn in equation form. Tables 1, 2, and 3 present the measured sound levels.

Table 1. Measured DNL, dB

Day, Date	M1	M2
Wednesday April 20	64.1	65.3
Thursday April 21	63.9	65.3
Friday April 22	66.1	68.2
Saturday April 23	63.6	65.7
Sunday April 24	60.6	62.5

Table 2. Measured Loudest-Hour Average Sound Level, dB

Day, Date	M1	M2
Wednesday April 20	63.5	64.6
Thursday April 21	62.9	64.8
Friday April 22	66.0	68.1
Saturday April 23	64.4	67.5
Sunday April 24	60.9	62.9



Table 3. DNL Minus Loudest-Hour Average Sound Level, dB

Day, Date	M1	M2
Wednesday April 20	0.6	0.7
Thursday April 21	1.0	0.5
Friday April 22	0.1	0.1
Saturday April 23	-0.8	-1.8
Sunday April 24	-0.3	-0.4

### 1.2 Discussion of Measured Noise Levels

We obtained hourly weather data from the National Weather Service for Reagan National Airport during the site survey.

The following precipitation was reported:

- Mist and haze were reported between 1 and 9 a.m. on April 20.
- Light rain, rain, and mist were reported between 12 and 3:30 p.m. on April 21.
- Light rain and mist were reported between 2 and 8:30 a.m., and between 2 p.m. and midnight on April 22.
- Light rain and mist were reported between 12 and 9 a.m. on April 23.
- Light rain, rain, and thunderstorms were reported between 3:30 and 8:30 p.m. on April 23.
- Light rain was reported briefly at 1 and 9 a.m. on April 24.
- Light rain was reported briefly at 1 am on April 25.

Winds exceeded 10 knots at the following times:

- Between 3 and 6 p.m. on April 20 – 10-12 knots from the SW to WNW
- Between 2 and 3 a.m. on April 21 – 10-16 knots from the NW
- Between 7 a.m. and 3 p.m. on April 21 – 9-15 knots from the N to NE
- Between 8:30 a.m. and 4 p.m. on April 23 – 7-31 knots from the SE to SW
- Between 8 p.m. and midnight on April 23 – 9-19 knots from the W to NW
- Between 12 and 4 a.m. on April 24 – 11-19 knots from the NW
- Between 9 a.m. and 4 p.m. on April 24 – 4-18 knots from the S to W
- Between 7 a.m. and 3 p.m. on April 25 – 10-26 knots from the W to NW

There were no clear indications that the measured sound levels were significantly affected by weather on weekdays. The predominant source of noise on the site was highway traffic.

It can be seen from Table 3 that the weekday DNL during the survey was between 0.1 dB and 1.0 dB higher than the loudest-hour average sound level. Based on

these data, we assumed that the DNL in the future would be approximately 1 dB higher than the loudest-hour average sound level.

## 2.0 Existing Traffic Conditions

### 2.1 Traffic Counts

In order to compare the output of the noise model with the measured sound levels traffic volumes were counted during the site survey. Traffic volumes were counted during one five-minute interval for each direction of traffic on Routes 118 and 355 between 7:55 and 8:15 p.m. on Tuesday April 19, 2005, and during two five-minute intervals between 7:10 and 7:40 a.m. on Monday April 25, 2005.

We determined the approximate hourly traffic volumes based on these counts. The approximate hourly volumes for automobiles, medium trucks (cargo vehicles with six wheels and two axles), heavy trucks (cargo vehicles with three or more axles), buses, and motorcycles are presented in Table 4.

Table 4. Approximate Existing Evening and Morning Rush Hourly Traffic Volumes

Date	Lanes	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
Apr 19 Evening	Route 355 Southbound	2,028	48	24	0	12
	Route 355 Northbound	432	0	0	24	0
	Route 118 Eastbound	1,080	12	0	0	0
	Route 118 Westbound	996	12	0	0	0
Apr 25 Morning	Route 355 Southbound	1,986	6	0	42	0
	Route 355 Northbound	876	18	0	60	0
	Route 118 Eastbound	564	6	0	18	0
	Route 118 Westbound	960	12	6	0	0

### 2.2 Traffic Speed

The posted speed limits are 45 mph each direction on Routes 118 and 355. We estimated the prevailing speed by driving by the site with the flow of traffic during the traffic counts. The prevailing speeds were 30 to 35 mph on each road on April 19, and 40 mph on April 25. All of these speeds are below the posted speed limit due to traffic signals.

## 3.0 TNM Calibration

The Federal Highway Administration's (FHWA) Traffic Noise Model (TNM) version 2.5 software is used to predict noise levels near highways. Input parameters include



three-dimensional coordinates of the roadway, evaluation points, and noise barriers (including existing and proposed barriers such as retaining walls, noise walls, and buildings); the hourly number and speed of automobiles, medium trucks, heavy trucks, buses, and motorcycles; pavement type and road width; ground type; ground elevation in selected locations; and the location of traffic flow control devices. The primary output from TNM is the hourly average sound level.

Each direction of Routes 118 and 355 was modeled in TNM as a 24-foot wide road. In accordance with Federal Highway Administration (FHWA) guidance the pavement type was modeled as "average." This is conservative, since the observed existing pavement is the quieter Dense-Graded Asphaltic Concrete (DGAC). We obtained existing elevations of Route 355 and the ground at the sound level meters from the site plan. Elevations of Route 118 were estimated. Shielding provided by the existing buildings on the adjacent site was also included.

TNM was run using the traffic volumes presented in Table 4 for the morning rush-hour period on April 25, using a speed of 40 mph for both roads. In order to validate the TNM case, the noise levels measured along Route 355 during the traffic counts were compared with the TNM output. Table 5 presents the results.

Table 5. Comparison of TNM Output and Measured Sound Levels, dB

	M1	M2
TNM Output	63.4	65.2
Measured Sound Level	62.9	64.1
TNM Minus Measured	+0.5	+1.1

It can be seen from Table 5 that the output from TNM at the measurement locations was between 0.5 and 1.1 dB above the measured sound levels. These differences are within the accuracy of the computer model. With this good and slightly conservative agreement TNM can confidently be used to predict noise levels elsewhere on the site and with different traffic conditions.

#### 4.0 M-NCPPC Policy Plan Requirements

The Maryland-National Capital Parks and Planning Commission (M-NCPPC) reviews noise studies prepared regarding the compatibility of land uses along highways in Montgomery County. Per conversations with M-NCPPC staff we understand that they use the Staff Guidelines for the Consideration of Transportation Noise Impacts in Land Use Planning and Development dated June 1983. The map in these guidelines shows that the site is within the zone where the 60 dBA Ldn criterion applies for residential areas. However, that map is for general reference purposes only, and is dated 1983. The guidelines state that the 65 dBA Ldn criterion applies



"in the urban ring, freeway and major highway corridor areas, where ambient levels are such that application of a stricter guideline would be infeasible or inequitable." Route 355 could be considered a "major highway." Therefore, it is not completely clear which criterion applies.

Noise impacts should be projected for at least 20 years in the future in usable areas of rear yards. The goal indoors is 45 dBA Ldn.

### 5.0 Future Traffic Conditions

We obtained projected Average Daily Traffic (ADT) volume and afternoon peak-hour traffic volume forecasts from M-NCPPC for the year 2030. The afternoon peak-hour traffic volume forecasts are 2,150 northbound and 1,700 southbound on Route 355, and 950 eastbound and 800 westbound on Route 118.

Measured noise levels along Route 355 were generally higher in the morning and afternoon. This is likely because the southbound lanes, which are closer to the site, have more traffic than the northbound lanes in the morning. We assumed that the future morning peak hour traffic volumes would be the same as those in the afternoon, except with the traffic volumes going the opposite direction.

Based on the traffic counts we assumed that traffic on Route 355 during the future loudest hour would consist of 1.5% medium trucks, 1% heavy trucks, 5% buses, and 0.5% motorcycles. For Route 118 we assumed traffic would consist of 1.5% medium trucks, 0.5% heavy trucks, 1% buses, and 0.5% motorcycles.

To be conservative we assumed that traffic in the future would travel faster than was observed during the traffic counts. A speed of 45 mph was used for all lanes of Routes 118 and 355.

The resulting projected traffic volumes are presented in Table 6.

**Table 6. Approximate Future Loudest-Hour Traffic Volumes**

Lanes	Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles
Route 355 Southbound	1,978	32	22	108	11
Route 355 Northbound	1,564	26	17	85	9
Route 118 Eastbound	772	12	4	8	4
Route 118 Westbound	917	14	5	10	5



## **6.0 Unmitigated Future Outdoor Noise Levels**

TNM was run using the traffic volumes in Table 6 and a speed of 45 mph, with receivers located five feet high at various locations on the property, and 27 feet high at the approximate elevation of the top of the second floor windows. Shielding provided by the proposed townhouses was included by modeling the houses as 35-foot tall noise barriers. Otherwise all TNM parameters were the same as for the calibration run.

Figure 2 presents the unmitigated future 60 and 65 dB DNL contours on the property.

## **7.0 Outdoor Noise Mitigation**

It can be seen from Figure 2 that the 65 dB DNL contour will not reach any rear yard. Therefore, no noise barriers are required if 65 dB DNL were considered to be the county criterion. However, it can be seen from Figure 2 that the 60 dB DNL contour will reach some rear yards. To be conservative we have designed a noise barrier to mitigate the DNL in rear yards to 60 dB, in case that criterion is considered to apply. We recommend constructing a six-foot tall wood board-and-batten noise wall in the location shown in Figure 3. Doors in the walls should be acoustically solid. With the proposed noise wall the DNL in rear yards will not exceed 60 dB. One acceptable noise wall construction is shown in Figure 4. Mitigated future DNL contours are shown in Figure 5. The mitigated future 60 dB contour stops at the end of the proposed noise wall, since noise levels in the yards will be less than 60 dB.

## **8.0 Indoor Noise Levels**

Typical residential construction can reduce outdoor noise levels by 20 to 25 dB. The county criterion for indoor noise levels is a DNL of 45 dB. Where the DNL is 65 dB or lower outdoors, no modifications to typical construction are normally required. However, the DNL at the top floors of some of the townhouses will exceed 65 dB; the highest predicted DNL is 69 dB. Therefore, it will be necessary to evaluate noise levels indoors. Once architectural drawings are available we can perform this analysis.

If you have any questions please call me at (703) 415-4550 extension 18.

Sincerely,



Gary E. Ehrlich, P.E.  
Senior Acoustical Engineer

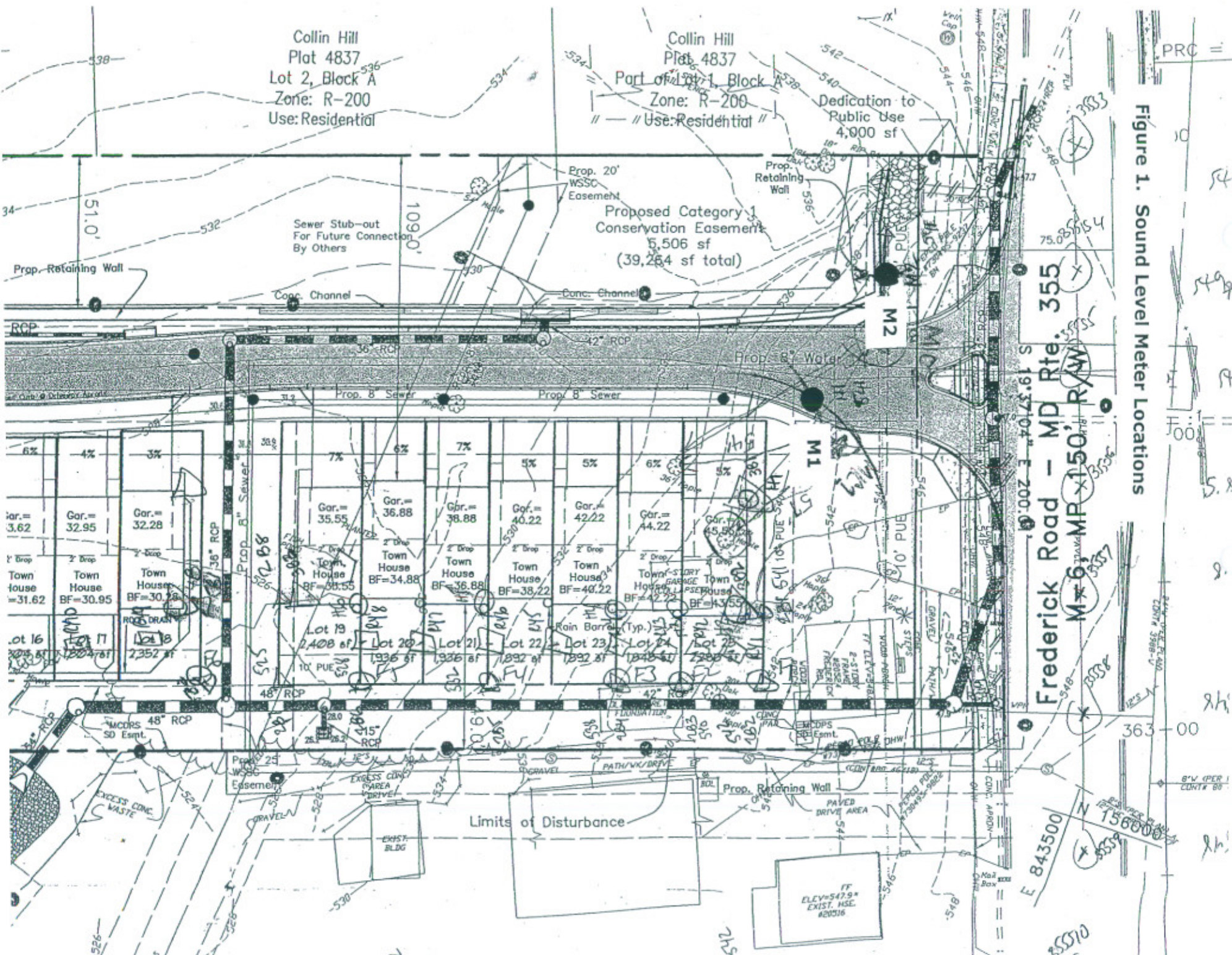


Collin Hill  
Plot 4837  
Part of Lot 1, Block  
Zone: R-200  
Use: Residential

Dedication to  
Public Use  
4,000 sf \

$$PRC =$$

**Figure 1. Sound Level Meter Locations**





Collin Hill  
Plot 4837  
Part of Lot 1, Block A  
Zone: R-200  
Use: Residential

Dedication to  
Public Use  
4,000 sf

$$PRC =$$

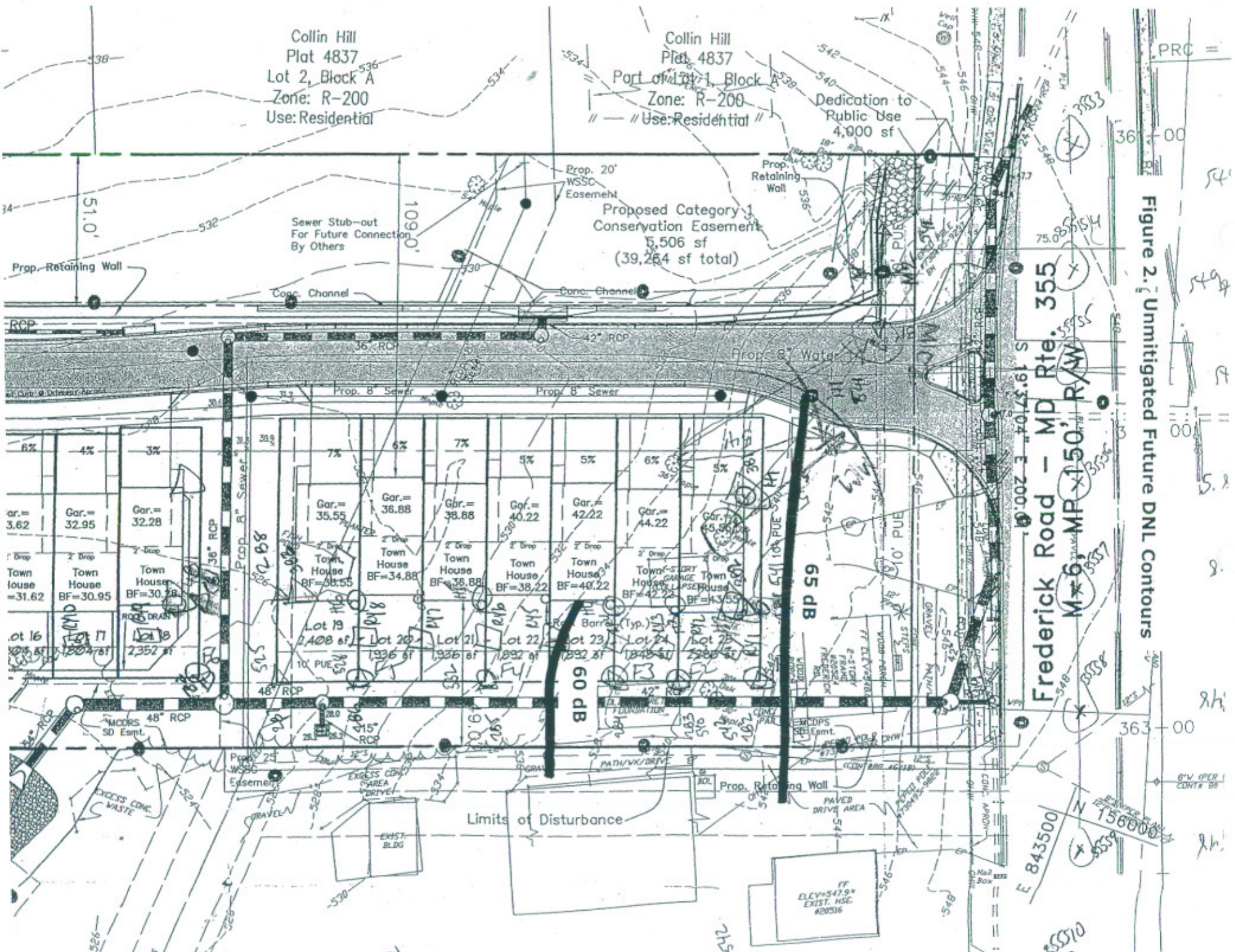
### Figure 2.5 Unmitigated Future DNL Contours

Frederick Road - MD Rte. 355

M-6, MP  $\times 150$ , R/W

843500

5510





Collin Hill  
Plot 4837  
Part of Lot 1, Block 1, Subdiv. 1  
Zone: R-200  
Use: Residential

Frederick Road - MD Rte. 355

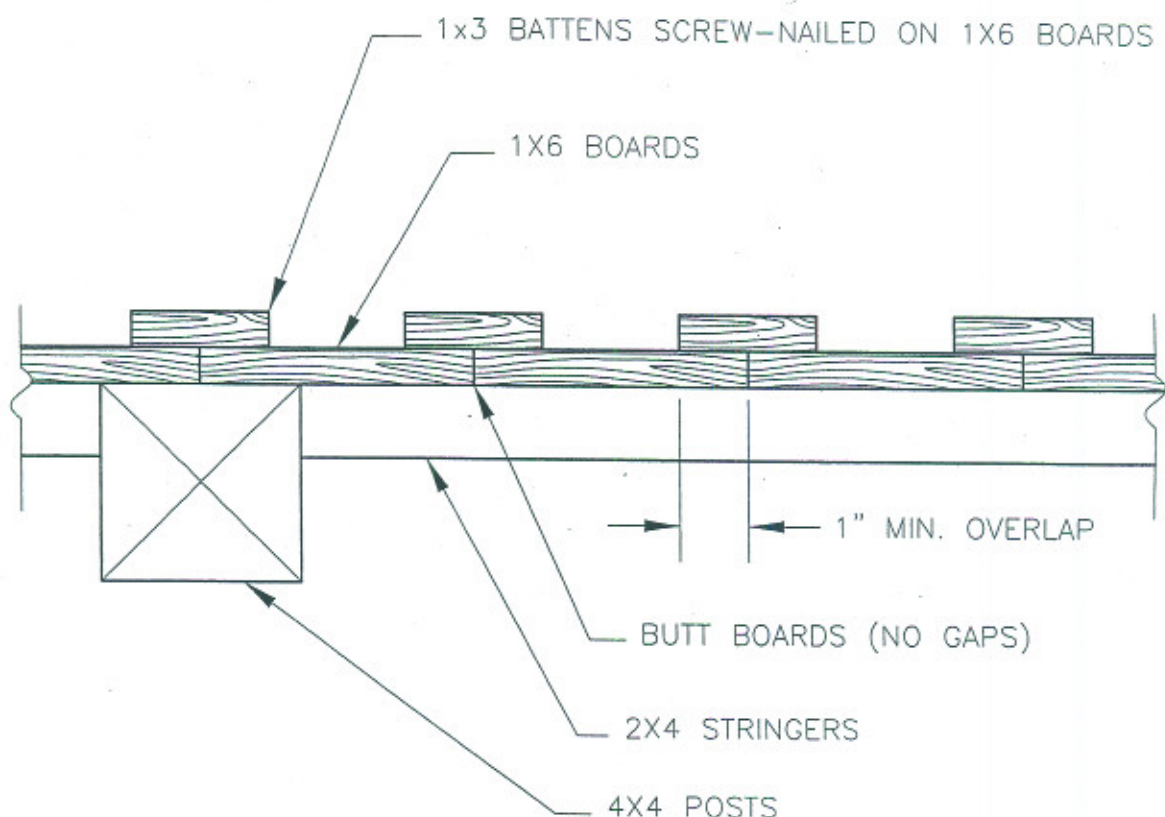
 $M = 6, MP \times 150, P/W$ 

043500

0155



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



NOTES:

A. ENSURE THAT THERE IS NO GAP BETWEEN THE BOTTOM OF THE 1X6 BOARDS AND THE GROUND.. ACCOMPLISH THIS BY:

1. BURYING THE BOARDS IN EARTH, OR
2. INSTALLING GRAVEL, OR
3. LAYING A PRESSURE-TREATED 2X, 4X, OR 6X BOARD AT GRADE AND FASTENING TO THE 1X6 BOARDS

B. IF A GAP IS USED BETWEEN THE 1X6 BOARDS, THE GAP MUST NOT BE MORE THAN 1" AND 1X4 BATTENS MUST BE USED.

**wyle**  
laboratories

Figure 4

# NOISE BARRIER

WYLE LABORATORIES  
ACOUSTICS GROUP

SIZE

A

SHEET

1 OF 1

DWG NO.

2001 JEFFERSON DAVIS HWY. #701  
ARLINGTON, VA 22202

SCALE

$\frac{1}{4}" = 1"$

DATE

06/21/04

DRAWN BY

CWM



Collin Hill  
Plot 4837  
Part of Lot 1, Block  
Zone: R-200  
// Use: Residential //

~~Dedication to  
Public Use  
4,000 sf \~~

Proposed Category 1  
Conservation Easement  
5,506 sf  
(39,264 sf total)

Frederick Road - MD Rte. 355

M-6, MP  $\times 150$ , RY

**Figure 5. Mitigated Future DNL Contours**

