# JACKSON WOODS

*A Residential Subdivision*

Located in

Middleway District, Jefferson County WV

# Community Impact Statement

**Prepared for**

**The Jefferson County Planning Commission**

**Charles Town, West Virginia**

**November 17, 2006**

**Prepared by**

**Dewberry**

**Ranson, West Virginia**

## SUMMARY

# Jackson Woods Residential Subdivision

The Jackson Woods Residential subdivision is a twelve lot residential cluster subdivision located a little more than a mile from the Leetown Pike near the intersection of Hite Road and Jefferson Orchard Road. All the lots will be between two and three acres in size. Single-family homes will be the only permitted use on these lots. All lots will be served by asphalt-paved roads ending in cul-de-sacs built to County standards. Each lot will have an individual well and sewage disposal system.

The development is located on a 195+ acres parcel. Approximately 47.4 acres will be used to create the subdivision, the parkland and its roads. A 10.6 acre park will be provided to preserve existing woodlands and to serve as a community area for the residents. The residue will eventually contain three parent to child parcels (approximately 29.6 acres), served by the same entrance road as the subdivision. These parcels will range in size from over eight acres to ten + acres. The remaining land (residue) containing 118.7 acres will stay in farm or open space use.

Children residing in the development will attend North Jefferson Elementary School, Shepherdstown Middle School and the Jefferson High School complex at Shenandoah Junction. The proposed development will have little impact upon existing roads due to its small size.

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## General Description

**1. Name, address of Owner/Developer**

**Owner and Developer:**

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336 Rosemont Way
Charles Town WV 25414
Telephone: 304 725 2465

**2. Name, Address of Contact Person(s)**

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**3. Tract Size, Shape, Location**

**Size:**

The site proposed for the subdivision is Parcel 2 on Map 9 in Middleway District, recorded at DB 1004/P39 and according to the tax map, the parcel contains 195.71 acres. This parcel was enlarged in 1995 by a portion of Parcel 1, Middleway District, Map 10 that contained 73+ acres and was merged into Parcel 2, Middleway District Map 9 that at that time (1995) contained 122.38 acres.

See Exhibit 1 Site location at page 40 and Exhibit 1A for tax map information at page 41

**Shape:**

The parcel is roughly rectangular. The southern boundary is Hite Road (WV Route 1/4), a graveled road in front of the site starting at its intersection with Jefferson Orchards. The southwest corner of the property is located approximately 150 ft. from the intersection of Hite Road and Jefferson Orchard Road (WV Route 15/1)

**Location:**

The intersection closest to the proposed entrance to Jackson Woods is Jefferson Orchard Road (WV 15/1) and Hite Road (WV 1/4) located approximately 500 to 600 ft. to the west of the proposed entrance.

**Method of Subdivision:**

The site is in the Rural District. It is surrounded by industrial and farming uses with a few residences located along Hite Road. According to the Zoning Ordinance, it can be developed in several ways as shown below *(unless otherwise stated references are to the Zoning Ordinance)*:

- Section 5.7(d) 1: Into 3 acre or larger single family residential lots with individual wells and septic tanks. One lot can be developed for every 15 acres of land area.
- Section 5.7(d) 2: Into 40,000 sq. ft. to 3 acre single family residential lots with individual wells and septic tanks. One lot can be developed for every 10 acres of land area.
- Section 5.7(d) 3: A lot that was of record as of Oct. 5, 1988 may create 3 lots (including the residue) during any five year period.
- Section 2.1 b. of the Subdivision Ordinance exempts from subdivision regulations parent to child parcels that do not create more than one residue and Section 5.7(a) 3 of the Zoning Ordinance allows single family dwellings.

Below is a table indicating the Development Rights of this parcel:

Table indicating Development Rights

| **Parcel No.** | **Acreage 1988 per tax map & deeds** | **Acreage 2006 by survey** | **Development rights under cluster provision Section5.7(d) 2 (acreage /10)** | **Development rights under 1 lot for every 15 acres provision Section 5.7(d) 1 (acreage/15)** | **Notes** | **Lots proposed** |
|---|---|---|---|---|---|---|
| **P/O 1, Map 10, Middleway District** | 299 acres in parcel 1 (the Hite Tract) Note: 199 acres sold to the Federal government 1997 minus the following: 1 acre in 1894, 1 to 1.5 acres in 1980, 74.8 acres (P/O 1) sold & merged into parcel 2 in 1995, 10 acres in 1997 | 73.33 Note: 1.487 acres conveyed in July 2004 from merger parcel | N/A Parcel adds no development rights to the parcel it is merged into | N/A Parcel adds no development rights to the parcel it is merged into | Applicant intends to eventually create 3 parent to child parcels from a portion of the residue. These parcels do not count towards development rights | |
| **2, Map 9, Middleway District** | 121.47 | 197.197 includes merger parcel | 12 (original parcel of 121.47 acres /10) + a residue | 8 plus a residue (original parcel of 121.47 acres /15) + a residue | The residue parcel retains the right to one residential unit on the residue parcel | 12 + residue |
| **Total** | | **197.197** | **12 + a residue** | **8 plus a residue** | | **12 + residue** |

The developer/owner has chosen to develop the parcel in accordance with Section 5.7 (d) 2 of the Zoning Ordinance. The table on the prior page explains the development rights for the parcel in accordance with Section 5.7(d). The columns, hi-lited in maize, indicate the number of lots allowed under Section 5.7(d) 2 of the Zoning Ordinance:

See Exhibit I for Site Location at page 40

**4. Project Design**

The Jackson Woods Subdivision consists of 12 lots located in the southwest portion of the existing parcel to be developed as a single family residential cluster subdivision with individual on lot wells and septic systems.

A park lot will be created preserving existing trees and buffering three future parent to child lots located in the northwestern quadrant of the parcel. Storm water management will be handled through the use of dry ponds, berms and swales within the subdivision and on the residue parcel. Dry ponds will be located on the residue parcel and also within the proposed park. Where required, storm drainage easements for drainage and access will be created. Over half of the existing parcel is to remain in farming and or open space.

The 12 lot subdivision will have lots in the 2 to 3 acre range located in the southwest quadrant of the parcel. The lots will be accessed from the subdivision entrance road (Jackson Woods Drive) that will end in a cul de sac and will eventually be extended to serve the three proposed parent to child lots. A small cul de sac off of the entrance road (Box Elder Court) will serve two of the lots. A 10.6 acre park containing two of the three SWM areas will be created and will separate the subdivision from the proposed parent to child parcels discussed below.

Eventually, the owners will create three parent to child lots for their children. **Though these lots are described and we have taken their impact into account, the parent to child lots are created by right and the information presented does not affect the Community Impact Statement or the subdivision approval process.** The parent to child lots will be located in the northwest quadrant of the parcel and will range in size from just under nine acres to ten + acres. The subdivision road will eventually continue to serve these three lots and will end in a cul de sac.

After creation of the subdivision and the parent to child lots, a 118.7 acre residue will be left located in the two eastern quadrants of the parcel. This land is to be maintained in farming operation. A variance will be sought from the subdivision regulations to allow access to this residue from Hite Road (WV1/4). Accessing the residue parcel from the subdivision roads would require farm machinery to drive through the subdivision to allow continued farming use of the parcel. This use would be incompatible with the proposed residential development.

All lots (except for the parent to child lots and the residue parcel noted above) will face paved roads constructed in accordance with County standards within the required 50 ft. wide right of way. Vehicular access to the 12 lot subdivision will be from Hite Road, a graveled local service road (located within a 30 feet wide right of way) via the one entrance (Jackson Woods Drive) located approximately 500 to 600 ft. from where Hite Road and Jefferson Orchard Road intersect.

1700 linear feet of road and two cul de sacs will serve the 12 lot subdivision and the park. When the three parent to child lots are added an additional 1200 feet of graveled road ending in a cul de sac will be constructed, for a total of 3000+ lineal feet of road to be constructed for access to all the lots. The second cul de sac serving the park will eventually be converted into a circle when the third cul de sac is completed.

Storm water management will be provided on site (within the parkland and on the residue lot) with exact locations to be determined at Preliminary Plat stage. It will generally be handled by the use of dry ponds, swales and berms.

See the Concept Plan located in the rear pocket of the folder.

**5. Number, Approximate Size, Location of Lots**

Each of the 12 lots will have an area of not more than 3 acres. The largest lot will contain 3 acres and the smallest lot will contain just over 2 acres. Average lot size is 2.56 acres for the twelve lots.

The residential lots are located in the northwest corner of the parcel in the area closest to the intersection of Hite road and Jefferson Orchard Road and near the existing house next to the parcel and existing residential development on Jefferson Orchard Road.

The three future parent to child lots will range in size from 8.8 acres to 10.9 acres. Average lot size for these lots is 9.8+ acres. They are located in the northeast quadrant of the parcel and to the east of the twelve lot residential subdivision.

All residential lots will face the interior roads of the subdivision.

One park lot will be created, containing a total of 10.6 acres.

See the Concept Plan located in the rear pocket of the folder.

**6. Topography**

Most of the site is open fields with approximately one quarter of the site being wooded. Currently, the land is being farmed.

Generally, the overall parcel consists of several ridges, running generally southeast to northwest through the site. The low point is located approximately 1200 ft. from Hite Road along the western boundary and is at approximately 548 ft. elevation. The high point is at 600+ ft. midway along the eastern boundary. The site has several hills or hillocks with elevations ranging from 580+ ft. to over 600 ft.

The area to be developed into the subdivision has a low point of 548 ft. within the parkland and its high point is at 585 ft. on a hillock located on Lot 11 near Hite Road. The cul de sac (Box Elder Court) serving Lots 4 and 5 runs along a small ridge located in the approximate middle of the area to be developed.

Major drainage is to the south and west, heading towards Hopewell Run and Opequon Creek. Drainageways on site are generally unclassified and no perennial streams are identified on the USGS Quad for this area.

See Exhibit 2 Topography at page 42.

## 7. Soil and Drainage Characteristics

The soils found at the project site consist primarily of Hagerstown silty clay loam (HeC3), Hagerstown and Frederick cherty silt loams (HfB & HfC), very rocky silt loams (HgC), very rocky silty clay loams(HhC3 & H1C3), , and Huntington Silt loam (Ho).

The Hagerstown and Frederick series soils are mapped together in Jefferson County. Both soils are deep well drained soils formed from weathered limestone. Slopes are generally short and irregular.

Several areas located in drainage ways contain Huntington Silt Loam (Hn). This soil is a deep, nearly level, well drained soil located along intermittent drainageways in the Limestone Valley. The soil has moderate limitations with regards to septic tank drainage fields, building locations and streets. It has slight limitations for access roads.

Rock outcrops are found in areas of Hagerstown and Frederick Very Rocky Silt Loams and Very Rocky Silty Clay Loams. Limestone ledges typically cover from $1/10^{th}$ to about $1/4^{th}$ of these soil types. This site has limestone outcrops located principally along ridges and within scattered tree lines.

The Hagerstown soil has moderate limitations with regards to septic tank drainage fields, home sites and access roads. The Hagerstown and Frederick soils have slight to severe limitations, principally due to rock outcroppings. Care will be taken in locating septic tank drainage fields to avoid areas of rocks. Septic Reserves have been located with the assistance of Lisa Dunn of the Jefferson County Health Department.

See Exhibit 3 for soil map and soil descriptions (pages 43-48).

## 8. Existing Natural or Man-Made Features

### Natural Features:

The parcel contains fields and woodlands. It is in farm use. Farm fields were planted in 2005 in soybeans and in corn in 2006. Some fields have also been allowed to lie fallow and are currently in grass.

The woodlands are mainly located along the western boundary, along fence rows and in scattered clumps. Woodlands in these soils are typically different varieties of Oak, Yellow Poplar, Black Walnuts and Black Locusts. The site has also been invaded by non native species such as Ailanthus (Bush of Heaven).

Rock ledges are located within some of these wooded clumps and fence rows. Additionally a small area of severely eroded soil is located within the Hagerstown and Frederick cherty silt loams located approximately halfway north through the site.

One sinkhole is identified as being on the property by the NRCS. It is located near the northeast corner along the property line. Several other sinkholes or depressions have been identified, one located near Hite Road (identified by the owner); and a number of depressions are located in the woods (identified by the owner). They may or may not be sinkholes.

The approximate location of the owner identified sink hole and depressions are shown on Concept Plan in the rear pocket and the NRCS identified sinkhole is shown on Exhibit 5 at page 50.

All of the site is located in Zone C and is not in a designated flood plain as shown on FIRM Community Panel No. 540065 0029B.

According to the Wetlands Map at Exhibit 4, there are no wetlands on the site. A number of minor drainage ways are identified on the Soils Map. No field investigation has been done to identify if there are any on site wetlands. If there are any on the site, they will most probably be located on Huntington soils located within these drainage ways (Ho soils).

See Exhibit 4 Wetlands Map at page 49

### Manmade Features:

Within the confines of the site, fence rows exist along with farm fences. A dirt farm track is located in the southwest quadrant of the site. A hand dug well is located to the east of the existing buildings located near Hite Road. This well will be filled and capped. No power poles or electric lines are located in or along the property.

No manmade ponds or quarries exist upon the property.

See Exhibit 11 for existing conditions at page 78

**9. Existing Structures**

The area to be developed contains an abandoned farm building located along Hite Road at about the middle of the southern boundary. The building is to be removed.

**10. Existing Easements, Right of Way**

Hite Road (WV Route 1/4) is presently contained within a 30 feet right of way along the southern boundary the property. An easement to WVDOH dated 2/14/1978 (DB 438 P539) is recorded for this road.

No electric wires and poles are located on the site; however the title policy for the parcel identifies two Rights of Way belonging to the Northern Power Company. A review of these rights of way by this office shows that they are located on Parcel 1, Map 9 (not part of this site).

This office has done a search of the records since the issuance of the policy on 2/4/05 and no other rights of way or easements have been identified.

See Exhibit 10 at pages 76 and 77 for copies of Schedules A & B of the title insurance for the property.

**11. Existing Covenants and Restrictions**

A joint well agreement is the only restriction. It is dated 2/15/1916 (at DB 113 P559) and a search of the records by this office also indicates that it is not on the site.

This office has done a search of the records since the issuance of the policy on 2/4/05 and no other restrictions have been identified

See Exhibit 10 at pages 76 and 77 for copies of Schedules A & B of the title insurance for the property.

**12. Approximate Size, Etc., of Areas to be Dedicated**

New paved roads will be constructed within the subdivision. These will be contained within fifty feet wide rights of way. There will be one main internal collector road (Jackson Woods Drive) serving the subdivision. A short lane (Box Elder Court) ending in a cul de sac will lead from this road to serve two lots. The main road will end in a cul de sac at the park and will eventually be extended to serve the three parent to child lots.

The roads serving the 12 lots and the park will be approximately 1700 feet long. The extended road (to be a county grade gravel road) to be built later will be approximately 1200 feet long. These roads and the associated rights of way will total approximately 6.1 acres. The internal roads and all rights of way will be dedicated to the Homeowners Association for maintenance and upkeep.

Land will be set aside in an easement for a future dedication to the West Virginia Division of Highways to allow for the eventual widening of Hite Road from a thirty feet wide right of way to a fifty feet wide right of way. This easement will entail a strip ten feet wide on the northern side of Hite Road where it adjoins the property. Total land included in this easement will be approximately 25,000 sq. ft. or .5 of an acre.

The storm water management area is located to the southeast corner of the area to be developed and will contain a SWM dry pond located within a SWM easement. Two other locations contained within the parkland are proposed for SWM areas. Storm water shall be managed through the use of dry ponds, berms and swales. Actual design will be determined at Preliminary Plat stage.

Storm water drainage easements will be provided to protect all storm water management areas including dry ponds, drainage swales not on roads and areas on any lots that contain alluvial soils. Easements will be provided where necessary to access the SWM areas. These easements will be determined at preliminary plat stage.

All SWM easements will be dedicated for upkeep to the Homeowners Association.

The parkland, consisting of 10.6 acres, will be dedicated to the Homeowners Association. This park will contain two storm water management areas. It will be left in a natural state except for the SWM areas and will preserve an existing woodland.

A school bus shelter, centralized mail box area and vehicle pull off area for the shelter and mail boxes will be located near the entrance to the subdivision and will be dedicated to the Homeowners Association for maintenance (exact locations to be determined at preliminary plat stage).

A total of 16.7 acres containing the parkland and rights of way will be dedicated and eventually owned by the Homeowners Association. Additionally all easements for storm water will be dedicated to the Homeowners Association.

<u>See the Concept Plan located in the rear pocket of the folder for general locations</u>.

## 13. Intended Improvements

### Subdivision Roads:

As previously stated, internal paved roads will be constructed for the subdivision and a graveled road will serve the three parent to child lots. The roads are to be constructed in two stages, with the first stage serving the twelve lot residential subdivision and the park and ending in a cul de sac. It will consist of the paved entrance road (Jackson Woods Drive) and side street (Box Elder Court), both ending in cul de sacs. An entrance sign will be placed at the entrance to the subdivision off of Hite Road. The roads will be constructed within a 50 feet wide right of way and will meet the requirements of Section 8.2.a of the Subdivision Ordinance.

The second stage will start at the park cul de sac (to be turned into a circle) and will serve the three future parent to child lots. This graveled road (Jackson Woods Drive extended) will continue the entrance road ending in a cul de sac and meet the required county standards.

All the roads will be constructed within 50 feet rights of way and be built to county standards (Section 8.2.a of the Subdivision Ordinance). All roads will have street signs.

### Subdivision Storm Drainage:

Storm drainage is proposed to be berms, swales and dry ponds built in accordance with County requirements. Storm water management dry ponds and easements for SWM will be created. Storm drainage will be designed in accordance with Section 8.2.c and Table 8.c.1 of the Subdivision Ordinance.

### Community Parks:

A community park is proposed. It will be left generally in a natural state except where the storm water management facilities are to be located.

### Other:

A school bus shelter/mail box area and a pull off area will be constructed near the entrance to the development. Exact location will be determined at preliminary plat stage.

### Planned Improvements by purchasers to individual lots:

**Water:** Individual wells will be constructed on each lot by the lot purchaser in accordance with Jefferson County Health Department requirements.

**Sewer:** Individual septic systems will be constructed on each lot by the lot purchaser in accordance with Jefferson County Health Department requirements.

## 14. Intended Land Uses

Twelve residential buildable lots, not including the residue lot will be produced as part of the subdivision. All these lots will be used for single-family residences. Each lot will contain a single family dwelling and any related accessory buildings to be built within the required setbacks and height limitations of Jefferson County. One community park parcel will be created. The residue lot will continue in farming use and also contain a storm water management pond.

Eventually three other residential lots will be created as parent to child parcels and will also be in residential use. The residue left after creation of the Parent to Child Parcels will remain in agricultural or open space use and will retain the right to construct one residential unit on the parcel.

## 15. Intended Earthwork

Earthwork for this subdivision will include grading to construct the access to the subdivision from Hite Road. In as much as possible roads will follow natural contours, though some cut and fill will be necessary.

Earthwork is expected to consist of cut and fill operations within the road rights of way. In order to minimize construction costs, earthwork should be balanced. Any excess earthen material will be spread and compacted where possible without disturbing the natural lay of the land. Approximately 5 to 10% of the overall site will be graded as part of the construction and development of the subdivision. This includes all the roads and storm water management facilities.

As part of the earthwork, all appropriate measures including silt fences, check dams and sediment traps in accordance with County, State and Federal regulations will be taken.

Additionally, because blasting may be required in order to construct the access road, any blasting that occurs will take place only under the supervision of a geo-technical engineer and will be done on weekdays between the hours of 8 a.m. and 5 p.m. All safety precautions as required by the State will be taken.

## 16. Proposed Covenants and Restrictions

Proposed Covenants are found at Exhibit 6 on pages 51 to 53.

## 17. Tentative Schedule

Once approval has been received from all governing bodies, clearing for the subdivision roads and SWM areas should start within 90 days. Rough grading and clearing of the site for road construction should occur within 180 days. The twelve lots will be sold over a period of three years with an anticipated schedule of four lots a year. Timing of the actual construction of individual homes will depend upon the purchasers of the lots.

## 18. Market, Feasibility Study

The owners/developers have previously developed Eastland; a subdivision started in 1986 and are active in the local real estate community.

Eastland, their major project to date as owner/developer consists mainly of custom homes on 1 acre lots on well and septic tanks. The last section of Eastland has now been approved and 7 lots are currently available for sale at a cost of approximately $175,000 each. One lot is under contract. The intent with regards to Eastland is to sell two to three lots a year until the subdivision is sold out.

Reviewing available land for sale in the zip code area (25430) as of May 17, 2006 (on www.homesdatabase.com), nineteen parcels ranging .97 of an acre to 107 acres were for sale. Prices ranged from $25,000 for an unbuildable lot in a flood plain to $6,500,000 for a 107 acre farm.

Below is a tabulation of for sale lots (not counting the one large tract) in the area.

| No. | acreage | price | Subdivision or community | Notes |
|---|---|---|---|---|
| **1.** | 107 | 6.5M | | Farm land |
| **2.** | 10.6 | 450K | | Agricultural use |
| **3.** | 36.7 | 399,900 | Abelow Farms | Located between Middleway & Summit Point, established subdivision |
| **4.** | 7.53 | 315K | Logie Farm | |
| **5.** | 1.75 | 299.9K | Amblers Glen | North of Kearneysville, established subdivision |
| **6.** | .97 | 275K | | Located next to Industrial Zoned F.O. Day property, on WV Route 9, possible commercial or industrial site, public water & sewer |
| **7.** | 7.83 | 255K | Rockdale | |
| **8.** | 3 | 198.5K | Woodbury Estates | Accessed from Leetown Rd. closest subdivision to site |
| **9.** | 2.38 | 165K | Parker minor sub. | |
| **10.** | 2.35 | 165K | Parker minor sub. | |
| **11.** | 2.35 | 154.5K | Cherry Hill | |
| **12.** | 3.02 | 150 K | | |
| **13.** | 3 | 150K | | |
| **14.** | 2.58 | 149.99K | Cherry Hill | |
| **15.** | 2.37 | 130K | Hidden River | Recreational community |
| **16.** | 1.68 | 130K | Hidden River | |
| **17.** | 1.16 | 55K | Hidden River | Unbuildable lot, in flood plain |
| **18.** | 1.87 | 25K | Hidden River | Unbuildable lot, in flood plain |

At the same time to determine number of lots sold, land transfers as collected by Real Estate Information Consultants, LLC were reviewed for the Middleway District.

Below is a comparison of land sales for the first four months of 2006 and for the same period in 2005 for the Middleway District.

| | Jan. 2005 | | Jan. 2006 | | Feb. 2005 | | Feb. 2006 | | March 2005 | | March 2006 | | April 2005 | | April 2006 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Location** | **Price** | **Loc.** | **Price** | **Location** | **Price** | **Location** | **Price** | **Location** | **Price** | **Location** | **Price** | **Location** | **Price** | **Location** | **Price** |
| **1.** | Hidden River | 16.2K | | | Hidden River | 50K | Lot 6 Cherry Hill | 120K | Crestview 3 acres | 145K | Fox Glen | 12K | 23.82 acres Cherry Meade | 350K | 5.57 acres Hidden River | 165K |
| **2.** | State Rd. | 32K | | | Hidden River | 33.183K | Lot 26 Fox Glen | 40.898K | Hidden River 1.72 acres | 45K | Lots 3, 10 & 11 Chapel View | 146.304K | 9.16 acres Kearneysville | 402.5K | Hidden River lot 10 | 19K |
| **3.** | | | | | Simpson Minor sub.1.31 acres | 18.666K | Hidden River 1.63 acres | 99.114K | Quail Ridge lots 82-128 | 540.5K | Henesy Corners 4 acres | 30K | Fox Glen | 35K | .5 acre | 18K |
| **4.** | | | | | 12.85 acres | 110K | Parcel 14 Leetown | 62.5K | | | Rose Hill Estates 6 acres | 200K | Willowwell | 120K | 2.23 acres | 82K |
| **5.** | | | | | 195.71 acres | 1M | Marrs Lane 4.86 acres | 155K | | | | | | | 2 acres | 103K |
| **6.** | | | | | | | Lot 12 Shenandoah Farms | 140K | | | | | | | | |
| **7** | | | | | | | 3.15+ acres | 180K | | | | | | | | |
| | **Total transactions per month** | | | | | | | | | | | | | | | |
| | **2** | | **0** | | **5** | | **7** | | **3** | | **4** | | **4** | | **5** | |
| | **Transactions for 4 month period in 2005** | | | | **14 Transfers** | | | | | | | | | | | |
| | **Transactions for 4 month period in 2005** | | | | **16 Transfers** | | | | | | | | | | | |

As can been seen from the table, actual vacant land sales in for the first 4 month in 2006 exceeded sales in 2005.

Additionally, we reviewed similar size subdivisions currently being advertised in the County for sales price:

- The Crofts in Shepherdstown, 15 lots ranging in size from 4 to 11 acres with parkland for $370,000 to $500,000
- Mission Ridge (on the Mountain) 31 wooded lots ranging in size from 3 to 8 acres in the $250K to 350K range (Some of the lots have river views). 6 or 7 lots still for sale.
- Lake Forest Estates (on the Mountain), 33 lots ranging in size from 3 to 10 acres with a lake and 100+ acre residue, starting in the $200K range.
- Merryfield Farm, 5 acre parcels, not on market for individual lots. Owner seeking builder. Approximate cost of individual lots 250K.
- Summit View Estates outside of Summit Point, 20 lots with houses, 3 to 5 acres in size being sold starting at $460K+.

Taking a look at the real estate market and at the continued demand for lots in the County, as well as the growth that has occurred over the past decade, there is market for the types of lots being developed at Jackson Woods. The owner/developer will be developing this project over the long term with the intent of selling three to four lots a year, an amount that can easily be absorbed by the market.

This subdivision with only twelve lots, its woods and rural setting as well as the farmland to both the east and the south will be attractive to households seeking a country setting.

## 19. Project Cost

Development costs include construction, engineering, surveying, planning, Planning Commission fees, percolation tests and Health Department fees and site development will total approximately $300,000.

## 20. Funding Sources

The project will be funded privately using local lending institutions and investors.

# PHYSICAL IMPACTS

## 1. Earthwork

Only those portions of the twelve lot residential cluster subdivision where roads or storm drainage facilities are to be constructed will be stripped as part of the land development. The remainder of the subdivision will be left in its natural state until house construction by lot purchasers.

It is anticipated that between 5 to 10% of the site may be stripped of surface vegetation to construct roads and the storm water management facilities.

Grading is expected to occur mainly along the route of the proposed roads. It should be balanced. Since there is always the possibility that non-ripable limestone may be in the path of a cut, blasting may become necessary to construct the roads. If blasting does become necessary, construction blasting by the contractor will only be allowed between the hours of 8 a.m. and 5 p.m. and shall be performed under the direct supervision of a geotechnical engineer in order to maintain the geological integrity of the surrounding bedrock and to ensure that adjoining properties are not affected by the blasting.

The road construction may modify slightly the natural drainage patterns on the site. Storm water will be routed through the drainage swales and berms to the storm water management facilities. During construction, water runoff will be controlled by strategically placed stone check dams, sediment basins and silt fences.

## 2. Conversion of Farmland

This property is zoned rural. It is currently being farmed. The entire parcel contains 195.7 acres of which (once the parent to child transfers are completed) 78.2 acres will be converted into residential lots including the three parent to child lots, roads and a community park. 10.5 acres will be retained in a natural state as a community park. Once the subdivision and the three parent to child lots are created, 117.5 acres will be retained in farming use or 60% of the original parcel.

The development of this subdivision will lead to the loss of 46 acres of farm land (not including the parent to child parcels which will take up an additional 32.2 acres for a total of 78.2 acres of land no longer being farmed).

It should be noted that the proposed park will retain part of the woodland that is currently on site.

## 3. Wildlife Population

Based on information currently available to the Wildlife Resources Center at the West Virginia Division of Natural Resources, there are no known endangered species within the project area. It is possible that the Madison Cave Isopod (a rare species) might exist in sinkholes (if water is located in these sink holes). However, there is no indication that any of the sinkholes have water within them and the areas containing the sinkholes are not to be disturbed. No further studies have been or will be done.

According to the Soils Survey of Jefferson County, soils are classified as well suited, suited, poorly suited or not suited for specific types of wildlife. Wildlife is specified as openland wildlife, woodland wildlife and wetland wildlife. According to the Survey, some of the soils found on the site are well suited for both openland and woodland wildlife (Hagerstown and Frederick soils and Huntington Soils). None of these soils are suited for wetland wildlife.

"Openland wildlife refers to birds and mammals that normally live in cropland, meadow, pasture and areas overgrown with grasses, weeds and shrubs. Examples are bobwhite quail, ring necked pheasant, mourning dove, cottontail rabbit, meadow lark, killdeer and field sparrow. Woodland wildlife refers to birds and mammals that normally live in wooded areas. Examples are ruffled grouse, white-tailed deer, squirrel, raccoon, wood thrush, warbler, and vireo." Other animals and birds may also be found on the site including groundhogs, opossum, field mice, robins, red tailed hawks, wild turkeys, etc.

See Exhibit 7 Letters from Agencies for the letter from DNR at page 55 and information on the Madison Cave Isopod at pages 56 and 57.

## 4. Groundwater and Surface Water Resources

### Surface Water:

There is no surface water on the entire parcel. Drainage is generally to the south and west and flows towards Hopewell Run.

If any areas are identified at the preliminary plat stage as wetlands, appropriate steps, including buffers will be provided to ensure that any identified wetlands on site are not harmed.

See Exhibit 4 Wetlands Map for surface water sensitive areas within one mile of the site at page 49.

### Ground Water Resources:

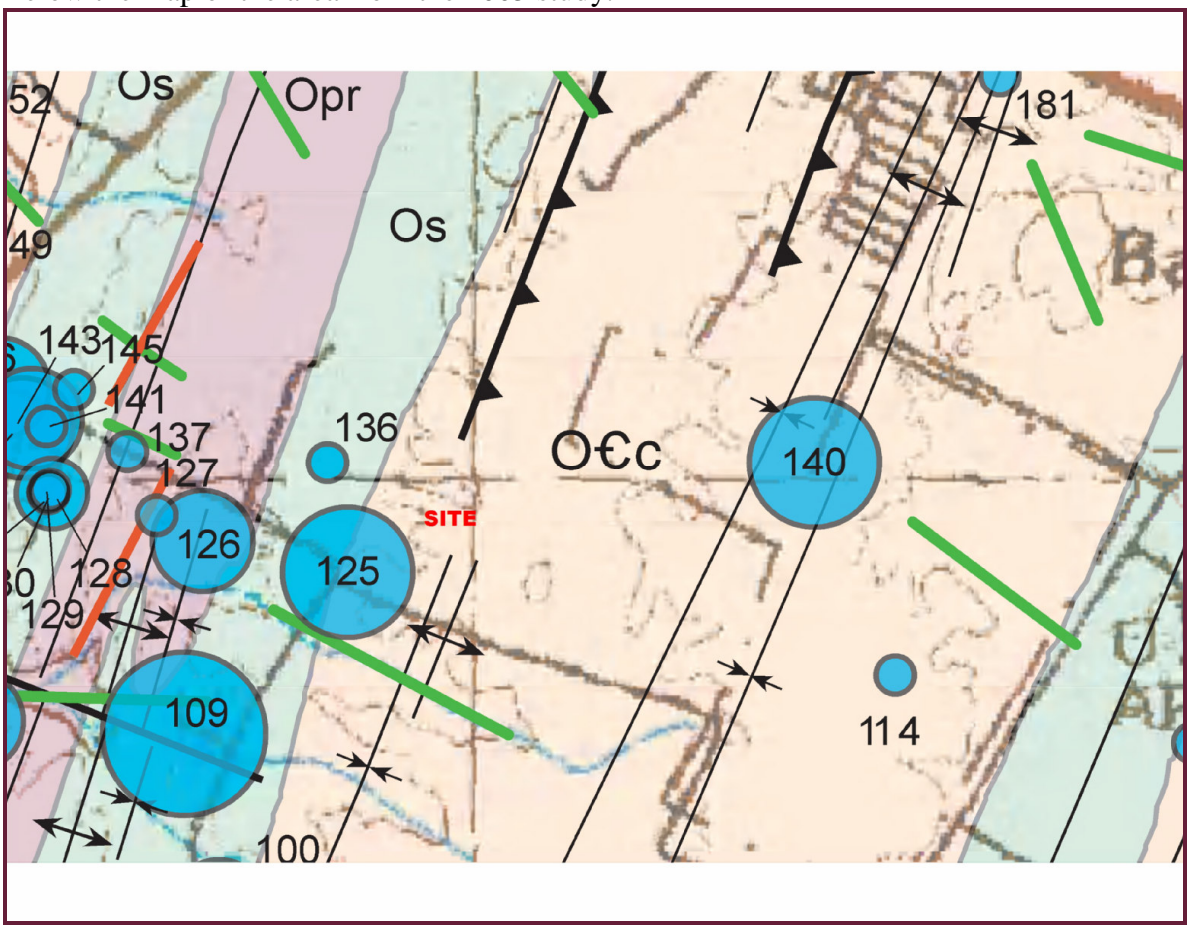
Regarding ground water, the most current study is "Fracture Trace Map & Single Well Aquifer Test Results in a Carbonate Aquifer in Jefferson County WV" done by McCoy, Podwysocki, Crider and Weary, USGS in 2005. "Geohydrology, Water Availability and Water Quality of Jefferson County, WV" by the USGS, 1991 was the main source used to date for information.

The subject property according to the map in the 2005 study and Figure 2 in the 1991 study is underlain by limestone of the Conococheague Formation Group. It is a carbonate rock.

Below the description from the 2005 study:

| | |
|---|---|
| O€c | **Conococheague Limestone (Lower Ordovician and Upper Cambrian)** -- Interbedded limestone, dolostone, dololaminite and sandstone. Limestone, medium-gray, fine-grained, thin- to medium-bedded. Dolostone and dololaminite, light-gray, fine-grained, medium-bedded. Sandstone, light-gray to buff, reddish-weathering, medium- to coarse-grained, calcareous. Limestone lithologies include intraformational conglomerates, algal bioherms, ribbon rock, and oolites. Lithologies occur as carbonate cycles. Thickness about 2400 ft |

Below the map of the area from the 2005 study:




Green lines indicate cross strike fracture traces, bold black lines with teeth indicate thrust faults (teeth indicate direction of upper plate), thin black lines indicate folds and red lines are strike-parallel fracture trace. The blue circles indicate tested wells and dot size is proportional to transmissivity values.

The chart shows information on the nearby wells shown on the previous page:

| Well No. | Well Depth (ft. below surface) | Casing depth (ft.) | Well Diameter (in.) | Transmissivity (ft.2/d.) | Specific capacity (gpm/ft.) | Static Water Level (ft. below surface) | Aquifer Unit | Pumping discharge (gpm) | Drawdown (ft.) | Pump Test duration (min.) |
|---|---|---|---|---|---|---|---|---|---|---|
| **109** | 61 | 20 | 6 | 40000 | 134.55 | 6.96 | Stonehenge Limestone | 14.8 | .11 | 100 |
| **114** | 139 | 39 | 6 | 10 | 0.48 | 68.32 | Conococheague Limestone | 8.1 | 16.81 | 31 |
| **125** | 115 | 59 | 6 | 20000 | 35.24 | 40.46 | Conococheague Limestone | 11.6 | ..33 | 30 |
| **126** | 150 | 93 | 6 | 10000 | 14.54 | 9.95 | Rockdale Run Formation & Pinesburg Station Dolomite | 14.1 | .97 | 106 |
| **127** | 260 | 38.5 | 6 | 30 | 0.8 | 15.53 | Rockdale Run Formation & Pinesburg Station Dolomite | 13.0 | 16.79 | 100 |
| **136** | 265 | 19 | 6 | 40 | 0.16 | 57.38 | Stonehenge Limestone | 6.1 | 38.95 | 25 |
| **137** | 135 | | 6 | 7 | 0.21 | 39.40 | Rockdale Run Formation & Pinesburg Station Dolomite | 4.6 | 21.54 | 30 |
| **140** | 200 | | 8 | 30,000 | 46.98 | 59.78 | Conococheague Limestone | 14.6 | 0.31 | 30 |

The 2005 concludes that wells located adjacent to targeted geologic features are likely to produce a wide range of yields and that wells located within 100 meters of a fracture trace have a higher median value (for tranmissivity {the ability of the aquifer to transmit water}). The authors indicate that tranmissivity values should be used for internal comparisons only and that locations of individual fractures should be field located. According to the map on the last page, a cross strike fracture trace is located in the upper NW corner of the site and two folds are located roughly perpendicular to Hite Road in the southern portion of the property.

Based on the well data above (8 wells), well depths from 61 ft. to 265 ft. and gallons per minute ranged from 4.6 gpm to 14.8 gpm.

According to the 1991 study, carbonate rock "underlies the central 86% of the County. Although the soils overlying the aquifer are only moderately permeable, surface run off is negligible. The aquifer is recharged primarily from precipitation."… "Ground water levels fluctuate in response to recharge or discharge from the aquifers….the depth to water varies with geologic and topographic setting. For example, the depth to water in eight wells in valley areas underlain by carbonates rocks ranges from 5 to 105 ft. and averages 30 ft"

According to Figure 7 of the 1991 study, the water table at the site should be below the 500 ft. contour. According to the USGS the site lies between 600 to 560 ft. in elevation.

According to data from the WV Department of Health in the 1991 study (data collected since 1984), in the Conococheague Formation Group 37 wells were reported, of which none were between 0 to 100 ft. in depth, 70% were between 101 to 399 ft. in depth, 30% were 400 to 800 ft. in depth and 43% had yields between 1 to 10 gpm, 54% had yields between 11 to 50 gpm and 3% had yields between 51 to 100 gpm.

Data from the USGS Ground Water Site Inventory Data Base (1991 study) covering 135 wells in the same formation gave the following depths: 46% were between 0 to 100 ft. in depth, 46% were between 101 to 399 ft. in depth and 8% were between 400 to 800 ft. in depth.

USGS (1991 study) reported yield for 47 wells in this group. Of these, 40% had yields between 1 to 10 gpm, 36% had yields between 11 to 50 gpm, 11% had yields between 51 to 100 gpm and 13% had yields between 101 to 600 gpm.

The 2005 study also indicates that well yields in the area would be adequate.

It appears from the above that the site is suitable for the use of individual wells and that water in sufficient yields for home consumption should be available. It should be noted that prior to being able to obtain a building permit, the owner of each lot will have to obtain a permit from the West Virginia Health Department and the individual wells will have to meet both construction and water quality standards as promulgated by the State of West Virginia.

**Storm Water Management:**

Storm water will be controlled upon the property through the use of dry ponds, berms and swales. Actual design of the storm water management facilities will occur at preliminary plat stage and will meet the requirements of Section 8.2.c and Table 8.c.1 of the Subdivision Ordinance.

Quality control will be provided by extended detention of run off volume generated by a 1.25 inch rainfall event for 24 hours or for the volume of ½" run off from proposed impervious surfaces if not drained to a pond.

In addition, erosion and sediment control will include installation of stone check dams, silt traps and silt fencing to be placed at strategic locations in drainage swales and around all areas where the soil has been disturbed by construction activity.

**Wells:**

A request was submitted to the Jefferson County Health Department for available data relating to the existence of contaminated wells within 1000 feet of this proposed subdivision. A response has been received, and no known contaminated wells are located within 1000 feet. All wells to be constructed (by individual lot owners) will meet Jefferson County Health Department Standards and where necessary water will be treated to ensure safe drinking water.

See Exhibit 7 Letters from Agencies for copy of letter from the Health Department at page 58.

## 5. Visual and Land Use Compatibility

The property is located in the Rural District. Surrounding uses appear to be principally agricultural. To the west are farm fields and a wooded field containing a large building (a shot gun shell manufacturing plant). Next to the southwest corner of the property is a single family house. To the south, across Hite Road, is open farm land belonging to the U.S. Government. A grouping of former farm buildings and a house is located on a separate lot at the edge of this property. It is privately owned. To the east are woods and farm fields. To the north are farm fields and scattered residential development. Located near the northwest corner of the property is Woodbury Estates, a large lot residential subdivision accessed from Leetown Road. Located approximately 1,000 feet from the northeast corner of property is Fox Glen, accessed from Route 9. It is an older small lot residential subdivision.

The twelve lot subdivision will be surrounded by a house in the southwest corner, woods to the west, the proposed park to the north, fields and woodlands to the east and open farm land to the south.

The three parent to child lots, located in the northwest quadrant will have fields and woodlands to the east and north, residences and woodlands to the west and parkland to the south.

The residue parcel of 117+ acres will be retained in farming use and is to the east of all of the proposed lots.

Plans call for the development to contain 12 single family residential lots in a subdivision, all three or less acres in size; three single family lots created by parent to child transfers, all over three acres in size with a residue lot of 117.5+ acres. Total lots to be created over time will be 15 residential lots, not including the residue.

Though there is not much development in the immediate vicinity of the property, the creation of residential lots is allowed by the zoning ordinance in the rural zone. Located along Jefferson Orchards Road and along Hite road are scattered single family houses and lots. One is actually located right at the intersection of the two roads and is in the southwest corner of the property. Additionally Woodbury Estates is located at the northwest corner of the property and Fox Glen subdivision is located in the vicinity.

The lots will be screened from Hite Road by the topography that rises quickly from Hite Road as it moves to the east. The lots are all located in the southwest quadrant of the property and only three lots will actually be next to the road. The residences on these three lots will be screened from Hite Road both by the increase in height from the roadway and the distance of the road from the developed portions of the lots. `The remaining lots will be in the interior of the property and will be screened from Hite Road via the topography and existing woodlands.

The use is compatible in that it maintains a large residue parcel in farming use and retains existing woodlands upon the site. The subdivision lots are similar in size to scattered

development along the existing roads and will be buffered from surrounding development by farm fields and woodlands.

## 6. Sensitive Natural Areas

**Sinkholes:**

One sinkhole has been identified on the property according to both the Comprehensive Plan for the County and the NRCS. Two other areas with sink holes or depressions have been identified by the owner. One sinkhole is located along Hite Road at the approximate middle of the property. The other depression or sinkholes (or severely eroded soils as identified in the soil survey) are located near the western boundary and are within the area proposed to be used for a park. Both of these sink holes/depressions are in areas that will not be developed.

Based upon the location of sinkholes and or depressions, the owner determined to have a Karst Assessment undertaken by Specialized Engineering of Ranson WV. This report was completed on November 13, 2006. The report identifies four separate sinkholes in the area to be developed. Three are located in the proposed park area and one is located on Lot 3. According to the report "all the sinkholes…appeared to be generally stable". The area identified by the owner as a sink hole along Hite Road was identified on site as a "depression…and [it] appeared to be stable with no observable sinkholes". The Karst Assessment states that " Specialized Engineering did not encounter conditions suggesting that there are geological hazards or terrain limitations that may restrict residential development at the subject site as it is currently planned…". It did make recommendations with regards to sinkhole management and these can be found at page 88 of Exhibit 12.

See Exhibit 12, pages 79 to 92 for Portions of the Karst Assessment prepared by Specialized Engineering.

Care will be taken during preliminary plat engineering to protect the existing sink holes and depressions from run off by ensuring that any new storm water flow does not enter these areas. Existing sinkholes and eroded areas will be protected by the use of silt fences and temporary and/or permanent berms, if necessary, to divert any drainage created by construction from entering these areas. However, if any storm water discharge is directed towards any of these areas, the recommendations of the Karst Assessment shall be followed. If any further sink holes are discovered during construction, appropriate measures will be taken to protect these found sink hole from run off as stated above.

Additionally, in accordance with the recommendations of the consultant (as shown below), restrictive covenants or other language will be included within the HOA documents and on any deeds for individual lots containing sink holes to ensure continued protection and/or management.

- Restrictive covenants should be established in any future land transfer document regarding parcels that may encompass any karst feature that has been designated for protection or management.

See Exhibit 5 Sink Hole Map at page 50.

**Other Sensitive Areas:**

No other sensitive natural areas appear to exist within the confines of the site. If any are discovered during construction, best management practices of sediment and erosion control will be implemented to ensure that those areas remain undisturbed.

# SOCIAL IMPACTS

### 7. Demand for Schools

Based on information provided by the Jefferson County School Board as part of its impact fee analysis, there are 0.64 (0.55 per 2000 census) children for each single family residential unit in the County. We have further broken these numbers down, using the 2000 Census age tables for Jefferson County as follows: 0.29 elementary, 0.15 middle school, 0.05 ninth grade and 0.15 senior high for single family detached homes.

Based on the creation of twelve residential lots in the subdivision and the eventual creation of an additional three lots (parent to child lots), the maximum impact on the schools system of this property at this time would be fifteen newly created lots. We have used this number in our calculations below.

Ages 5-10: 15 x 0.29 = 5.22 0r 6 Kindergarten through Fifth Grade students would attend North Jefferson Elementary School (current enrollment of 329 children, SBA capacity of 378).

According to the *State of the Schools Report 2005* prepared by JCPS, *"NJES is a school with a highly diverse student population… almost 63% of students receive free or reduced lunch, while 33% received special education services…NJES has made Adequate yearly Progress…for its third year in a row and was recently named a West Virginia Distinguished Title I School."*

Currently NJES has 4 classrooms in 3 portable buildings.

Ages 11-13: 15 x 0.15 = 2.25 or 3 Sixth Grade through Eighth Grade students would attend Shepherdstown Middle School (current enrollment of 414 children, SBA capacity of 420).

According to the *State of the Schools Report 2005* prepared by JCPS, *"In 2002, SMS was named a WV School of Excellence and maintains a long list of Academic Achievement…SMS was built in 1929 and although well respected by the students and staff, the school is showing its age. This year, new art and music classroom space was added, but the need for space continues"*

Currently three portable classrooms in two buildings are located at this school.

Age l4: 15 x .05 = .75 or 1 ninth grader will attend the 9th grade complex at Shenandoah Junction (current enrollment of 655 children, SBA capacity of 600)

Ages 15-17: 15 x 0.15 = 2.25 or 3 Tenth through Twelfth Grade students would attend Jefferson High School (current enrollment of 1646 children, SBA capacity of 1349).

According to the *State of the Schools Report 2005* prepared by JCPS, *"JHS is the largest high school in WV…JHS operates on a departmental basis and is involved in a major renovation project at the main campus building. The auditorium has been completed with work to begin soon… to relieve crowding. With the completion of a new high school, the current JHS 9th grade complex will become a middle school, with the ninth grade being split between the renovated JHS and the new high school."*

JHS currently makes use of 8 portable buildings (14 classrooms).

We note that for every residential unit built, no matter who resides in it, an impact fee will be paid to mitigate any impact of additional school age children on the Jefferson County School System. It is anticipated that the construction of homes on this parcel will pay a total of $148,155 (15 x $9,877) in impact fees based on the impact fee schedule (effective on 4/1/06), no matter who resides in the development. These funds will be used by the Board of Education to provide capital improvements to the school system to offset the impact of new development in the County.

A letter was sent in March 2006 (using 2005 enrollment figures) to the JCBOE regarding the school impact.

See Exhibit 7, page 60 for letter to JCPS.

**8. Traffic**

The subdivision will generate 96 trips (12 x 8 = 96) per day. The projected peak hour traffic will be 10 (12 x 0.8 = 9.6) trips per hour. If we add in the three parent to child lots, the maximum traffic increases to 120 trips per day and peak trips per hour will be 12.

The West Virginia Department of Highways has 3 pertinent traffic counts on roads in the vicinity of the proposed development. A count on Leetown Road north of Hite Road recorded 4000 vehicles per day. A count on Old Leetown Road just east of its intersection with Leetown Road recorded 3400 vehicles per day and a count on Wiltshire Road near the industrial park recorded 1800 vehicles per day. All these counts were done in 2005.

We note that Jefferson Orchard Road is one of the accesses to the Jefferson County Waste Transfer Station and that persons coming to the transfer station may use a portion of Hite Road and Jefferson Orchard Road to get there. However the proposed development is located on that portion of Hite Road that continues beyond Jefferson Orchard Road and is lightly traveled. Hite Road going east exits at Wiltshire Road.

Since peak trips were less than 150 trips per hour, the Subdivision Ordinance does not require either a traffic count or a traffic study. None were done.

Based on the definition of "key intersection" in the Subdivision Ordinance, the nearest key intersections are Wiltshire Road and WV Route 9 at Bardane, approximately 2 ⅓+ miles by road, northeast of the site and Leetown Road and WV Route 9 approximately 2 ½ + miles by road, northwest of the site.

There is one problem area identified, approximately one mile away from the site designated in the Comprehensive Plan as a roadway "problem area." It is located at the intersection of Jefferson Orchard Road and Old Leetown Pike. It is noted as a bad intersection. It is not noted in the accompanying table T-2.

See Exhibit 9 for Highway problem areas at pages 74 and 75.

**9. Demographic Impact**

According to the U.S. Census Bureau, American Fact Finder Table QT-H2 tenure, household size and age of householder: Census 2000, 100% data, for Jefferson County the average household size is 2.54 persons per household, therefore this subdivision will add (12 x 2.54) 31 persons in the subdivision to the County and an additional 8 persons from the 3 parent to child parcels for a total of 39 persons.

**10. Health and Emergency Medical Facilities**

Local doctors and other medical services are located in Ranson and Charles Town, as well as in Shepherdstown (pharmacy, doctor and dentist offices). Jefferson Memorial Hospital in Ranson, approximately four and a half miles from the site, has adequate facilities to provide a broad range of medical services and meet the emergency needs of the residents. EMS services are provided by the County's Emergency Medical Services located in Ranson. There are also hospitals and physicians in Martinsburg WV.

See Exhibit 7 Letters from Agencies for letter from Jefferson Memorial Hospital at page 59.

A letter was sent to the Jefferson County Ambulance Authority and a response received.

See Exhibit 7 Letters from Agencies for the letter from the Ambulance Authority at page 65.

**11. Fire**

The development lies within the fire district that is served by both Citizens and Independent Fire Companies in Charles Town and Ranson Volunteer Fire Companies, five miles away. Letters were sent and ~~no~~ a response received from Citizens Fire Company at the end of September, 2006. . A response was received from Independent Fire Company.

See Exhibit 7 Letters to Agencies for copies of the letters from the fire companies at pages 63 and 64.

**12. Police**

The West Virginia State Police and the Jefferson County Sheriff's Department both have jurisdiction at the development site.

See Exhibit 7 Letters from Agencies for letters from the Sheriff and from the West Virginia State Police at pages 61 and 62.

**13. Trash Removal**

Waste Management Inc. will provide trash removal.

See Exhibit 7 Letters from Agencies for the letter from Waste Management at page 66.

**14. Electric Service**

The Allegheny Power Company will serve the site.

**15. Telephone Service**

Frontier Communications will provide phone service to this site.

**16. Water and Sewer Service**

All lots within the proposed subdivision will be served by individual wells and septic systems constructed in accordance with the requirements of the Jefferson County Health Department.

**17. Relationship of Property to Comprehensive Plan**

As part of the 2004 Comprehensive Plan , some general goals from the 1994 plan were adopted as part of the *Statement of Goals.*

On page 19 of the adopted 2004 plan the following goal is stated:

"*Promote a diversity of housing within the County"*

The two to three acre lots allow for a diversity of housing and allow the opportunity for inhabitants to live in a rural setting.

Page 41 of the adopted 2004 Plan states:

*"Land areas that are outside of the regions that can reasonably be expected to be served by water and sewer facilities should be developed at lower densities, with properties employing wells and drain fields.*

This development, by creating 12 lots on a total parcel of 195 acres is outside of the area that can logically be served with water and sewer. The lower density and the individual water and septic systems are appropriate for this type of area.

On page 54 of the adopted 2004 plan the following is stated:

*"Improving design of the residential development in the rural Districts, providing incentives which ensure that cluster subdivisions are the preferred means by all parties when developing rural tracts.*

This development will maintain at least 117+ acres in agricultural use, while locating the residential lots in the area containing the more picturesque topography and most of the woodlands. It clearly is the preferred form of development for this property and maintains the landscape of the surrounding area.

## 18. Housing Supply

According to ""A Housing Development Strategy" for Telemon Corporation prepared by Cramer Crystal and based on Census 2000 information, the tri-county area (Jefferson, Berkeley and Morgan) is a healthy growing area with private non farm employment growing by 25% in Jefferson County as compared to 13% state wide between 1990 and 1998. Jefferson County ranked 4th in growth having increased its population by 17.4% between 1990 and 2000 and owner occupied units during the same time period increased by 32%. The County ranks 54th of 55 counties in the state with regards to poverty (1995 ranking) and the Census Bureau in 1997 noted that persons residing in the County with incomes at or below the poverty range were 10% of residents.

The study states with regards to the Jefferson County market "building permit data indicate that the growth in single family units is increasing.

The latest information released by the US Census indicates that from April 1, 2000 to July 1, 2005 Jefferson County was the second fastest growing County in WV with an increase of 7,016 inhabitants. It had a 16.6% increase in population , second only to Berkeley County (one of the 100 fastest growing counties in the USA) which grew by 23 %.

When one reviews building permits, it is clear that new construction has been principally in single family residential units. Also, growth in new single family units appears to be fairly steady.

Below is a review of several data sources regarding building permit activity in Jefferson County:

- Jefferson County Department of Planning, Zoning & Engineering by number of individual units and value:

| | **Single Family** | **Total Value** | **Duplex** | **Total Value** | **Town homes** | **Total Value** | **Mobile homes (both new & replacement)** | **Total Value** |
|---|---|---|---|---|---|---|---|---|
| **2001** | 568 | $84,933,412 | | | 43[1] | $4,177,000 | 109 | $1,166,414 |
| **2002** | 503 | $ 99,241,644 | 18 | $2,996,000 | 15 | $2,073,000 | 46 | $1,679,080 |
| **2003** | 644 | $141,016,766 | 29 | $5,866,000 | 8 | $1,280,000 | 112 | $3,274,611 |
| **2004** | 345 | $87,422,702 | 17 | $2,835,000 | 8 | $1,280,000 | 50 | $1,277,894 |
| **2005** | 328 | $104,416,701 | 10 | $2,106,000 | 9 | $2,250,000 | 30 | $1,467,380 |
| **1st qtr. 2006** | 115 | $ 30,169,928 | 0 | $0 | 15 | $1,647,640 | 6 | $ 225,000 |
| **April 2006** | 32 | $ 9,666,625 | 0 | $0 | 0 | $0 | 3 | $ 87,444 |

[1] Includes both apartments and townhomes

- U.S. Census Data (Http://censtats.census.gov) comparing 3 years Information on single family homes only for the month of March (Covers both the County and Municipalities, imputes numbers for non reporting jurisdictions):

| | Month of March | | | Cumulative year to date Estimates with imputation | | |
|---|---|---|---|---|---|---|
| **Single family residences** | **Buildings** | **Units** | **Construction cost** | **Buildings** | **Units** | **Construction cost** |
| **2004** | 66 | 66 | 12.594,292 | 215 | 215 | 39,674,318 |
| **2005** | 82 | 82 | 17,027,485 | 200 | 200 | 40,192,280 |
| **2006** | 65 | 65 | 13,036,766 | 229 | 229 | 49,210,840 |

- Additionally information kept on Impact Fees (obtained from Jefferson County Department of Impact Fees) from January 24, 2004 to March 28 2006 indicates the same trend continuing:
  711 single family homes and 42 town homes

Based on a review by this office of Census data for Jefferson County, the County in 2000 contained 17,623 housing units of which 16,165 were occupied. Of the households in occupied housing units, 1737 had incomes below poverty level. Of the 1458 vacant units, 16 were boats, RVs, vans, etc, and over a third of the vacant units were constructed prior to 1960 (514 units). Additionally only 157 vacant units were available for rent at a median monthly rent of $453 and 163 vacant units were available for sale at a median price of $93,300. Based on this information regarding vacant units, the effective vacancy rate, based on units actually available, was under 2% as opposed to the rate derived from the Census of 8%. An effective vacancy rate of 4% or less indicates a tight housing market. Based on this information, we can see that there is a need for additional housing in the County.

Also, according to the Jefferson County Planning and Zoning Commission's annual report for 2002 (the last report filed) from 1972 thru 2002, 21,828 lots plus 334 apartment units were proposed at Community Impact Stage, while only 7,810 lots plus 154 apartments were actually approved or a ratio of only one lot actually recorded and available for construction for every 2.8 lots proposed at Community Impact Stage.

The same ratio holds true for 2002 when 1,434 lots were proposed and only 503 were actually approved (1434/503=2.8).

Appendix A (page 113 -114) of the Comprehensive Plan states that using Community Impact Statements as an indicator of growth is ill advised. Therefore it may be best to compare actual lots recorded and building permit activity to see if there is a need for additional lots

According to Appendix B of the Jefferson County Comprehensive Plan (page 120), from 1984 thru 2002; 7,149 Improvement Location Permits were actually issued:

- 6,050 for single detached dwellings, duplex units and townhouses
- 1,099 for mobile homes.

During that same period 5,001 residential lots and 434 apartment units were approved. So more buildings were built than lots approved.

According to Real Estate Information Consultants, LLC, a firm collecting information on land transfers in the region, the following transfers occurred in Jefferson County from November 2002 through September 2004 (a 23 month period):

- 2,580 transfers with homes
- 884 vacant land transfers
- 240 commercial (including rental residential properties) transfers

The above numbers include all transfers in the county, including the municipalities. These numbers can serve as an indicator of the amount of activity during the period. The monthly average was approximately 112 homes, 38+ vacant parcels, 10+ commercial parcels or a total of 160+ transfers a month. Clearly home transfers are the largest part of the sales and transfers in Jefferson County. Again, this would indicate a strong market for housing in the County.

The Comprehensive Plan at page 113 also notes the change in household size, noting that households have decreased in size from 3.21 persons per household in 1970 to 2.54 persons per household in 2000. This can be seen in that housing units increased at a faster rate than population during this period:

- in the 1970s population increased by 42.4% and housing units increased by 55.7%.
- in the 1980s population increased by 18.5% and housing units increased by 26.5%.
- in the 1990s population increased by 17.4% and housing units increased by 20.7%.

As can be seen from the latest census information and building permit information, the County continues to grow, having grown 16.6 % over the past five years. Additionally according to the Harding Report ( a monthly report put out by a local real estate broker, total dollar value of home sales increased by 26% in 2005 to a record $291,467,039 with average home price increasing to $311,307 *(Source data, MRIS)*. This trend appears to be continuing and would also indicate a demand for more housing.

**19. <u>Historic Sites</u>**

One structure on site is more than 50 years old; it is an abandoned building and is in ruins. It is to be removed.

No structures on the National Register of Historic Places are located within 500 feet of the proposed site.

No cemeteries or other historic sites are located on the property. No structures exist on the property to be developed.

Two structures and two cemeteries located on the southern side of Hite Road are listed in the County Inventory as Site 32 & 33. Information from the Inventory is shown below:

**Slave Quarters Hopewell (Site 32)**

Present Owner: Link Brothers Corporation *(Note: no longer owner)*
Mailing Address: Kearneysville
Original Owner: Jacob Hite
Assessor Map #: *
Approximate Lot Size: *
Property Currently Zoned: *
Assessment: Land - *; Improvements - *; Total - *
Physical Condition: Structure - Good; Grounds - Good; Neighborhood - Good
Common Name: New Hopewell, slave quarters/kitchen
Address: *
Area: Leetown
Architect/Builder: Hites
Date of Construction: early 1800s, L 19th century; Source - *
Architectural Style: *
Present Use: residence
Original Use: slave house and kitchen
Incidence in Area: *
Importance to Its Neighborhood: *
Accessible to Public: *
Architectural Significance: Local
Significance of Interiors: *
Significance of Landscaping: *
Historic Significance: *
Representation in Other Surveys: *
PHYSICAL DESCRIPTION
Facade Material: brick
Foundation: stone
Roof Form: pitched
Porch or Veranda: no; Height: -
Building Height in Stories: 2
Roof Dormers: no
Chimneys: 1; Where: *
Facade Emphasis: *
Window Sash: 1st: no; 2nd: no
Entrance: Fan *; Lintel *; Trans *; Sidelights *; Undecorated *
INTERIOR DETAILS: walls 18 inches thick, ground floor was originally dirt
Mantels: none
Overmantles: no
Staircase: no
Wainscotting: *
Interior Doors of Period: no
Door and window Frames: no
Other Panelling: none
Ceiling Cornices: none

Chair Rails: no
Base Molds: no
Wallcoverings of Period: no
Hardware: no
Ceiling Medallions: no
Original Floors: no
Other Interior Details: *
Significant Outbuildings: *
Landscaping: *
Other Notes: Used to be stairway on outside of house to second floor.

## New Hopewell (Site 33)

House

Kitchen/Slave quarters?

Hites Fort
Present Owner: Link Brothers Corporation *(Note: no longer owner)*
Mailing Address: Kearneysville
Original Owner: Jacob Hite, Thomas Hite
Assessor Map #: *
Approximate Lot Size: *
Property Currently Zoned: *
Assessment: Land - *; Improvements - *; Total - *
Physical Condition: Structure - Good; Grounds - Good; Neighborhood - Good
Common Name: New Hopewell
Address: *
Area: Leetown
Architect/Builder: Jacob Hite main house; Thomas Hite
Date of Construction: c 1772 main house; c 1865; Source - Kenamond MJCHS XXXI 1965
Architectural Style: *
Present Use: residence
Original Use: residence
Incidence in Area: *
Importance to Its Neighborhood: *
Accessible to Public: *
Architectural Significance: State
Significance of Interiors: *
Significance of Landscaping: *
Historic Significance: *
Representation in Other Surveys: *
PHYSICAL DESCRIPTION
Facade Material: ships siding
Foundation: stone
Roof Form: pitched
Porch or Veranda: 1; Height: 1 story
Building Height in Stories: 2
Roof Dormers: no
Chimneys: 3 double; Where: *
Facade Emphasis: horizontal
Window Sash: 1st: yes; 2nd: yes; 3rd: yes
Entrance: Trans; Undecorated
INTERIOR DETAILS
Mantels: 2
Overmantles: 1 living room
Staircase: 2 original
Wainscotting: *
Interior Doors of Period: yes
Door and window Frames: yes
Other Panelling: living room
Ceiling Cornices: no
Chair Rails: yes

Base Molds: yes (ceiling molds)
Wallcoverings of Period: some
Hardware: some
Ceiling Medallions: some
Original Floors: pine, original
Other Interior Details: originally had a dumb waiter; coat of arms in back of fireplaces; closets on both sides of fireplaces in living room
Significant Outbuildings: fort[?], log smoke house
Landscaping: *
Other Notes: 13 panes around front door, shows patriotism in Revolutionary War. Most window panes original.
Kenamond concluded (MJCSH XXXI 1965) this was built by Jacob Hite's son Thomas (1750-1779) who acquired the land in 1772 and named his house New Hopewell to distinguish it from his father's Hopewell.

## New Hopewell Cemetery No. 1

46 JF 157
New Hopewell Cemetery #1
Jefferson
Middleway
2.5 miles NE. of Leetown
Alice Howard (was Rt. 2, Box 9) 9 Hite Road, Kearneysville, WV
Historic: 1700-1750, 1751-1800, 1801-1850, 1851-1900, 1951-Present
Black
Cemetery
10
1
Middleway
Undisturbed
Ridge and Valley
Hag/ Fred/ Hunt
Trees and overgrown weeds
600'
Hopewell Run;
1/4 acre, 100 X 50 ft., in an oval shape
In the middle of a field - in a cluster of trees - numerous old trees and many young ones, many raised areas not marked. 200 yards across the road from the new Hopewell home. Tombstones exist for George Washington Tabb and Samuel Link - the other raised areas are said to be slave graves.
Reconnaissance
Shepherd College, Jefferson County Cemetery Survey

## New Hopewell Cemetery No. 2

46 JF 158
New Hopewell Cemetery #2
Jefferson
Middleway
2.5 miles NE. of Leetown, on right side of Darke Lane southbound from Leetown Rd. intersection.
H. Bayre and ALice Link, Rt. 2, Box 9, Kearneysville, WV
Historic: 1801-1850, 1851-1900
Family burial ground and possible slave cemetery
Cemetery
10
1
Middleway
Unknown
Ridge and Valley
Hag / Fred / Hunt
Mixed
560'
Hopewell Run;
500 x 500 ft.
In the yard near the historic residence.

Reconnaissance
Shepherd College, Jefferson County Cemetery Survey

These structures have all been sold since the survey was done and are part of a private residence. They are surrounded on three sides by land belonging to the US government. The buildings appear in good condition.

The subdivision will be located to the northwest of the site and will not affect the New Hopewell buildings since the complex is located on the southern side of Hite Road. Additionally the topography and existing tree lines will shield the subdivision from the remaining New Hopewell property.

See Exhibit 7 Material from Historic Inventory for the pertinent data concerning other structures in the vicinity identified in the Windshield Survey at pages 67 to 73.

## 20. Recreation

The developer plans a 10.5+ acre area for recreation, though no recreational facilities are required due to the large size of the individual lots. The Subdivision Ordinance does not require land to be set aside for recreation if overall density is less than 2 units per acre of residential land. This development has a density of roughly 1 unit for every 2.6 residential acres.

The closest park is Leetown Park; a County owned park located at the intersection of Jefferson Orchard Road and the Leetown Pike, approximately 1 mile south of the site.

No state parks are located in the vicinity of the proposed development.

# ECONOMIC IMPACTS

## 21. Property Tax Evaluation

It is estimated that the subdivision will generate at least $54,146 in property taxes based on the following computation:

- Jefferson County Property Tax Guide, Class II Tax Rates
- Appraised value of project including houses: $7,200,000 (12 lots)
- Assessed value (60% of $7,200,000): $4,320,000
- Total county tax rate: $1.2534/$100 of valuation
- Tax computation: $4,320,000 divided by $100 multiplied by $1.2534 equals $54,146.88.

No tax calculation was done for the parent to child lots.

Additional economic impacts will be created via the School and Police Impact Fees adopted by the County Commissioners and payable to the County at the time a building permit is issued. Twelve new single family residential parcels are being created. Based on the present school impact fees ($9,877 per single family residence), a minimum of $118,524 will be made available to assist with schools.

Below a table indicating impact fees both for the subdivision and also for the additional three lots:

| | **Impact fee** | **Cluster (12 lots)** | **Parent to child (3 lots)** | **Total** |
|---|---|---|---|---|
| **Schools** | $9877 | $118,524 | $29,631 | $148,155 |
| **Law enforcement** | $127 | $1524 | $381 | $1905 |
| **Parks and Recreation** | $696 | $8352 | $2088 | $10,440 |
| **Fire and EMS** | $566 | $6792 | $1698 | $8490 |
| Total | **$11,266.00** | **$135,192.00** | **$33,798** | **$168,990** |

As a result of this project, additional funds will flow to the County Commission and the Board of Education for use in providing public services to the residents of this development and will assist in mitigating any impacts upon the same public services. We note that this is the minimum amount that will be collected in Impact Fees since all the fees except for the School fee are recalculated automatically (unless the Commissioners act to not increase the fees) each year at the beginning of April.

## 22. Bank Deposits and Loans

The closest bank is located in Kearneysville. Other banks are found in Charles Town. These banks will be accessible by the residents and it is assumed that the occupants of the development will most likely utilize local banking facilities. As a result, banking activities such as deposits, investment accounts and mortgages may increase.

## 23. Anticipated Local Spending

It is anticipated that a local contractor will construct the roads and other improvements. Many of the contractors' employees will most likely be Jefferson County residents. Most construction materials will be purchased locally.

Residents of Jackson Woods will most likely shop in Ranson or Charles Town for both food and sundries, and thereby contribute to the local economy. The closest store, a small local variety store is located in Leetown and a Sheetz convenience store is located in Kearneysville. Major shopping is in Charles Town and Ranson.

## 24. Local Employment Implications

Since this development will be marketed locally, it is anticipated that some of the buyers of the properties will work either in Jefferson County or in surrounding communities. However, if local trends continue, most of the buyers will be either households working in the metro area, seeking housing they can afford or households who have reached or are nearing retirement age who want to live in a more rural community.

Many of these lot buyers will want to put up custom homes on their lots creating employment opportunities for local contractors and craftsmen. Other local employment opportunities may be created for existing businesses. As more housing is built, there is an increasing need for various types of business. As an example, paint and wall paper stores may find an increase in their business as homeowners personalize their home to their taste.

## 25. Property Values

Housing in general is a good investment and according to a Washington Post Article in March 2003, housing is a long-term investment that typically appreciates approximately 5% a year.

A more recent article in the Washington Post (Dec 18, 2004) discussed the availability of housing within the metro area including Jefferson County. This article pointed out that housing prices in the Shepherdstown Census Tract were higher than in other areas in Jefferson County. Also, according to "the Housing Affordability Index", a compilation of house sales done on a quarterly basis by the National Homebuilders Association, for both the Hagerstown MSA and the

Washington DC Metro Area, from 1995 to 2004, median house prices have increased faster than household income as can be seen by the following table*:*

| Metro Area Hagerstown | 3rd quarter 95 | 3rd quarter 2000 | 3rd quarter 2004 | % increase |
|---|---|---|---|---|
| Median house price | 101,000 | 120,000 | 175,000 | 73% |
| Median household income | 39,000 | 49,000 | 54,400 | 39% |
| Metro Area Washington DC-MD-VA | | | | |
| Median house price | 161,000 | 183,000 | 325,000 | 201% |
| Median household income | 62,700 | 82,800 | 85,400 | 36% |

As stated earlier home prices in the area have been rising. A cursory study of 20 properties on April 17, 2006 (listed in the MLS) for sale in the Charles Town area, all land only ranging in size from 1 to 10 acres, indicated the following:

- the lowest asking price was $95,000 for a 1.78 acre parcel
- the highest price was $399,950 for 10 acres
- 9 parcels ranging in size from 1 acre to 1.11 acres had prices between $175,000 to $255,000
- 9 parcels ranging in size from 3 acres to 5.42 acres had prices from $199,900 to $320,000
- Average asking price was $233,775

Looking at house prices in the metropolitan area, the following table shows an increase in median house prices:

| Metropolitan Area | 2003 | 2004 | 2005.I | 2005.II | 2005.I | 2005.IV p | %Chya |
|---|---|---|---|---|---|---|---|
| Single-family | | | | (Not Seasonally Adjusted, 000s) | | | |
| U.S. | 170.0 | 184.1 | 188.3 | 207.9 | 215.9 | 213.0 | 13.6% |
| NE | 190.5 | 220.0 | 246.2 | 243.1 | 249.2 | 240.3 | 8.0% |
| Hagerstown-Martinsburg, MD-WV | 141.8 | 165.9 | 185.5 | 206.0 | 222.4 | 221.7 | 26.2% |
| Washington-Arlington-Alexandria, DC-VA-MD-WV | 277.9 | 339.8 | 380.6 | 429.2 | 441.4 | 432.9 | 20.6% |

The above table taken from the National Association of Realtors information indicates median single family home prices for the entire United States, the northeast region and both the Hagerstown Metropolitan area which includes Berkeley County and the Washington – Arlington—WV Metropolitan Statistical Area that includes Jefferson County. The 4th quarter of 2005 indicated a median home price in the Hagerstown MSA of $221,700 and in the Washington MSA a median home price of $432,900. From that we can extrapolate that prices in Jefferson County will be closer to those in the Hagerstown MSA.

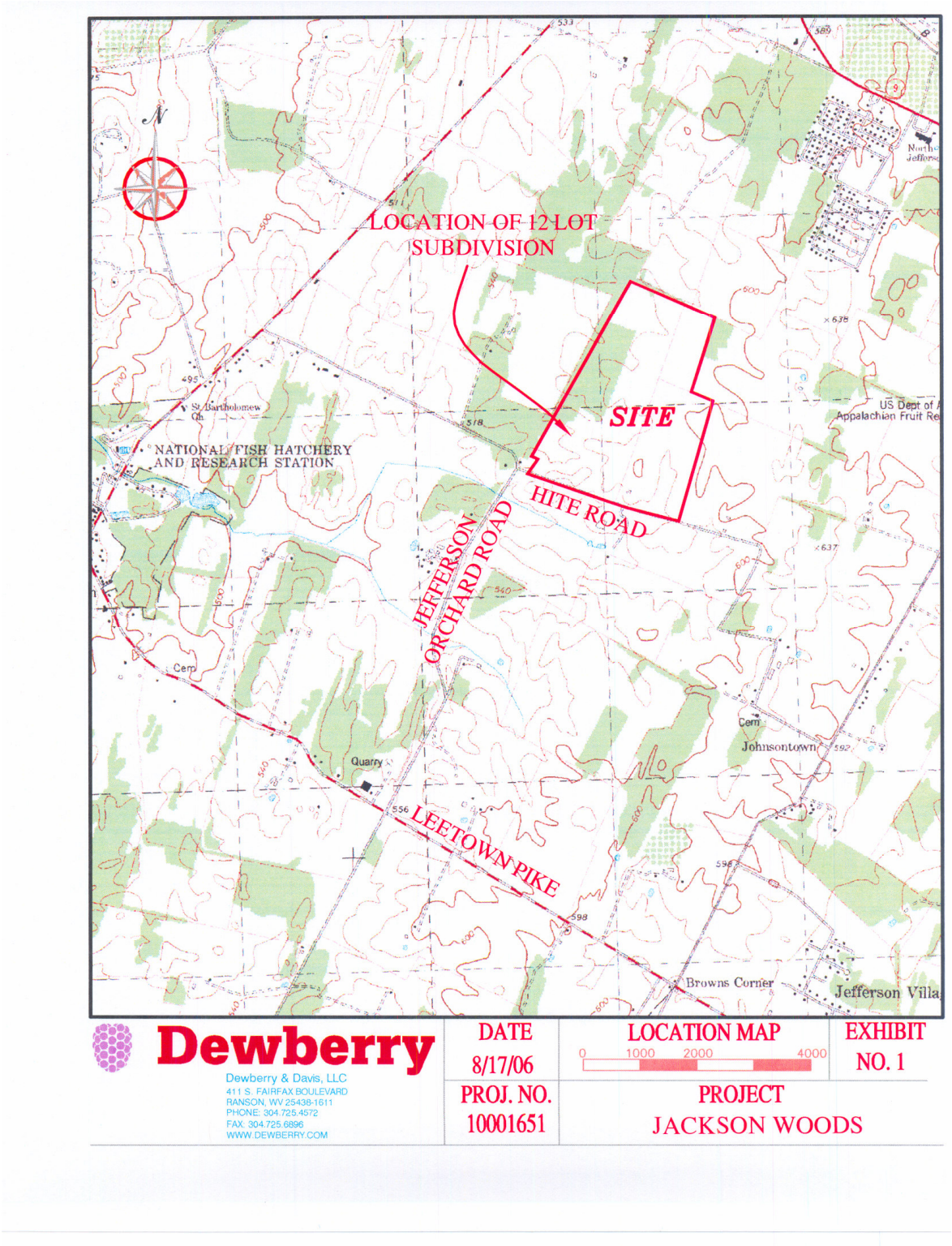
The above indicates that housing is a good investment in that its value is definitely increasing at a faster rate than household incomes and that generally creation of new housing will over time increase the value of both housing and land in the vicinity.

New single-family homes on two to three acre lots located in Jefferson County should not only maintain their value but may also increase the value of surrounding properties for use as possible

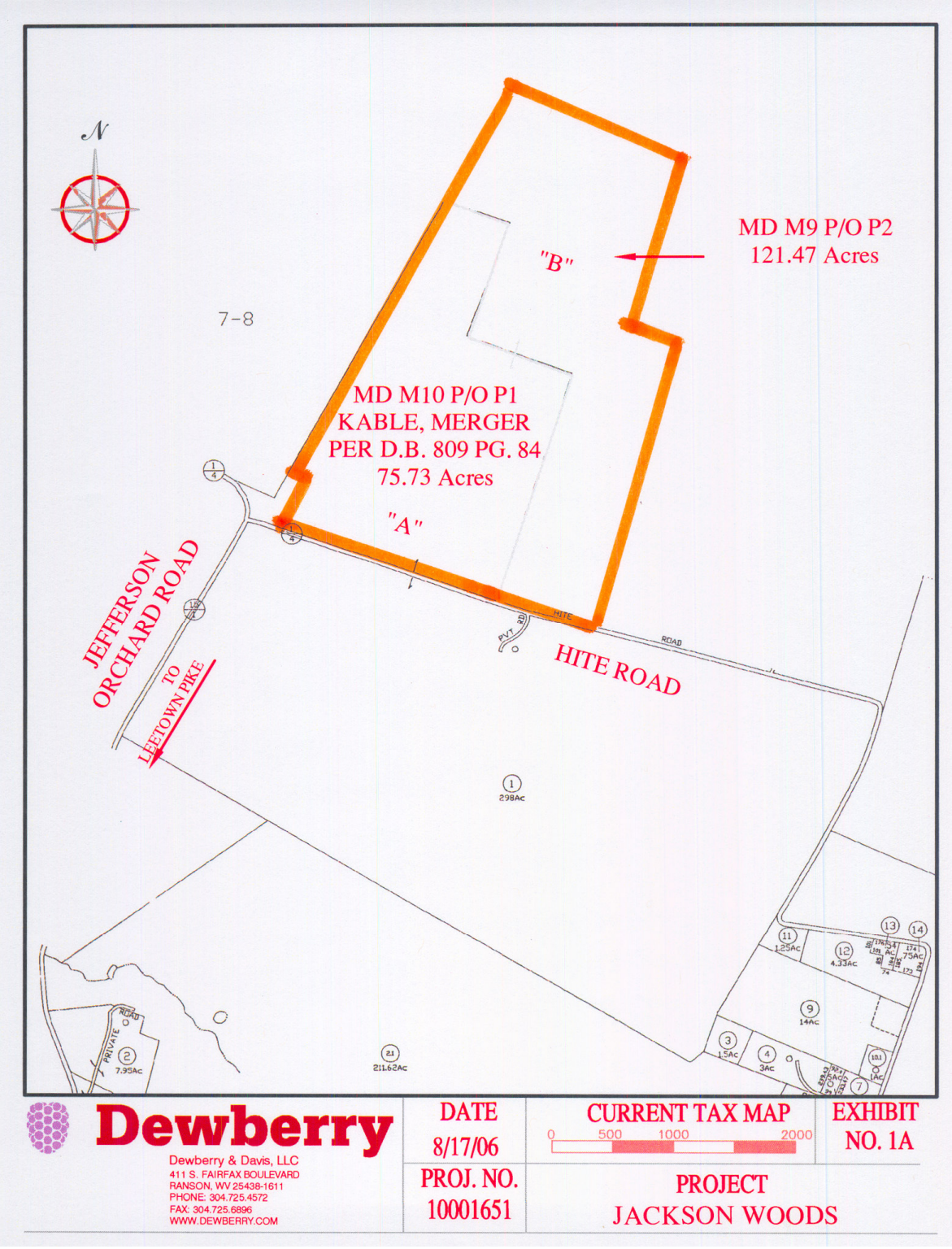
home sites. Surrounding residential parcels that have not been used for housing development may see the value of the land increase as new homes are built in the vicinity.

We note, however, that this parcel is surrounded on two sides, to the south and west on land that will probably not be used for residential housing (land to the south belonging to the U.S. government and the west a manufacturing facility). With regards to these lands, the proposed development should not affect the land value.

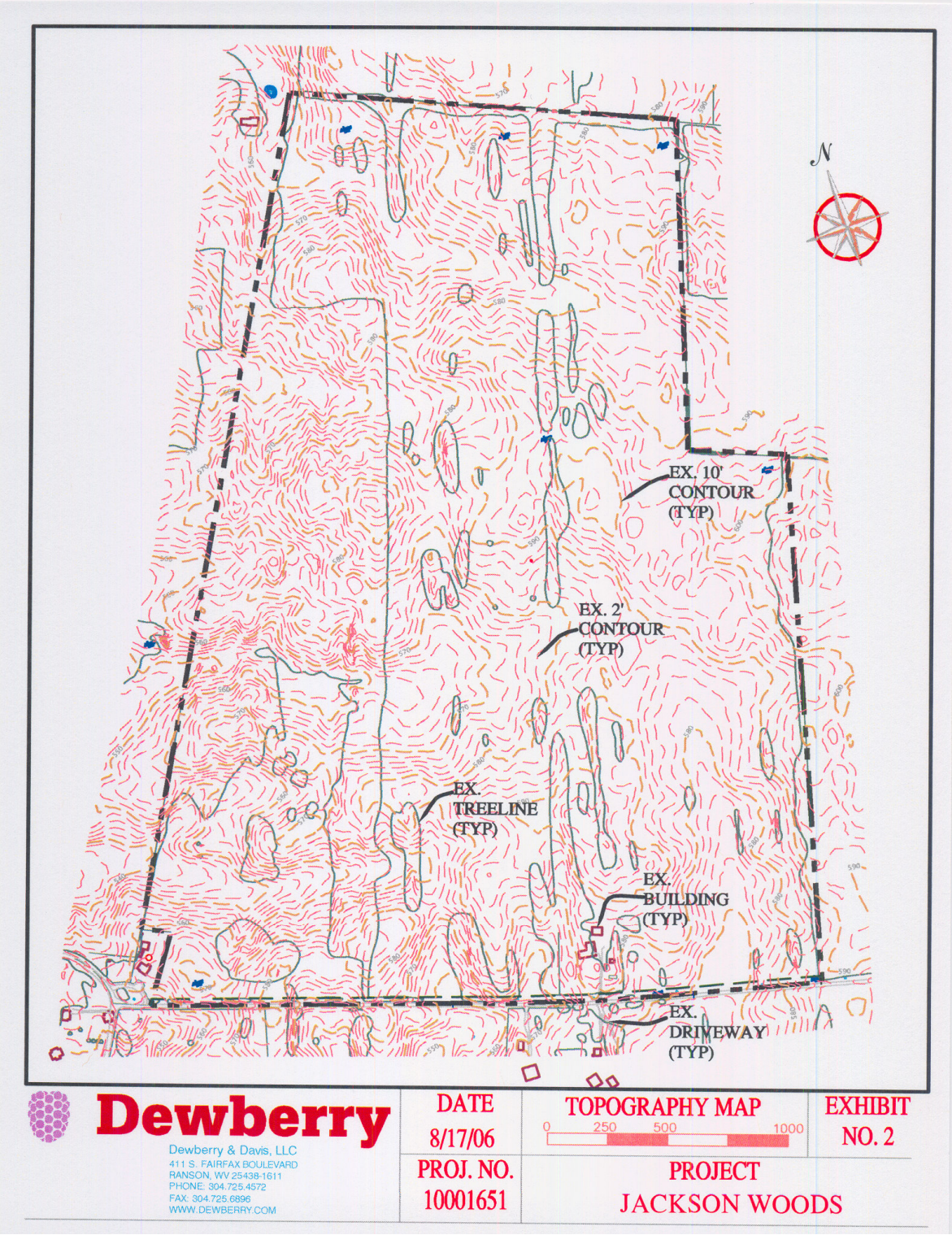
## Exhibit 1: Site Location map



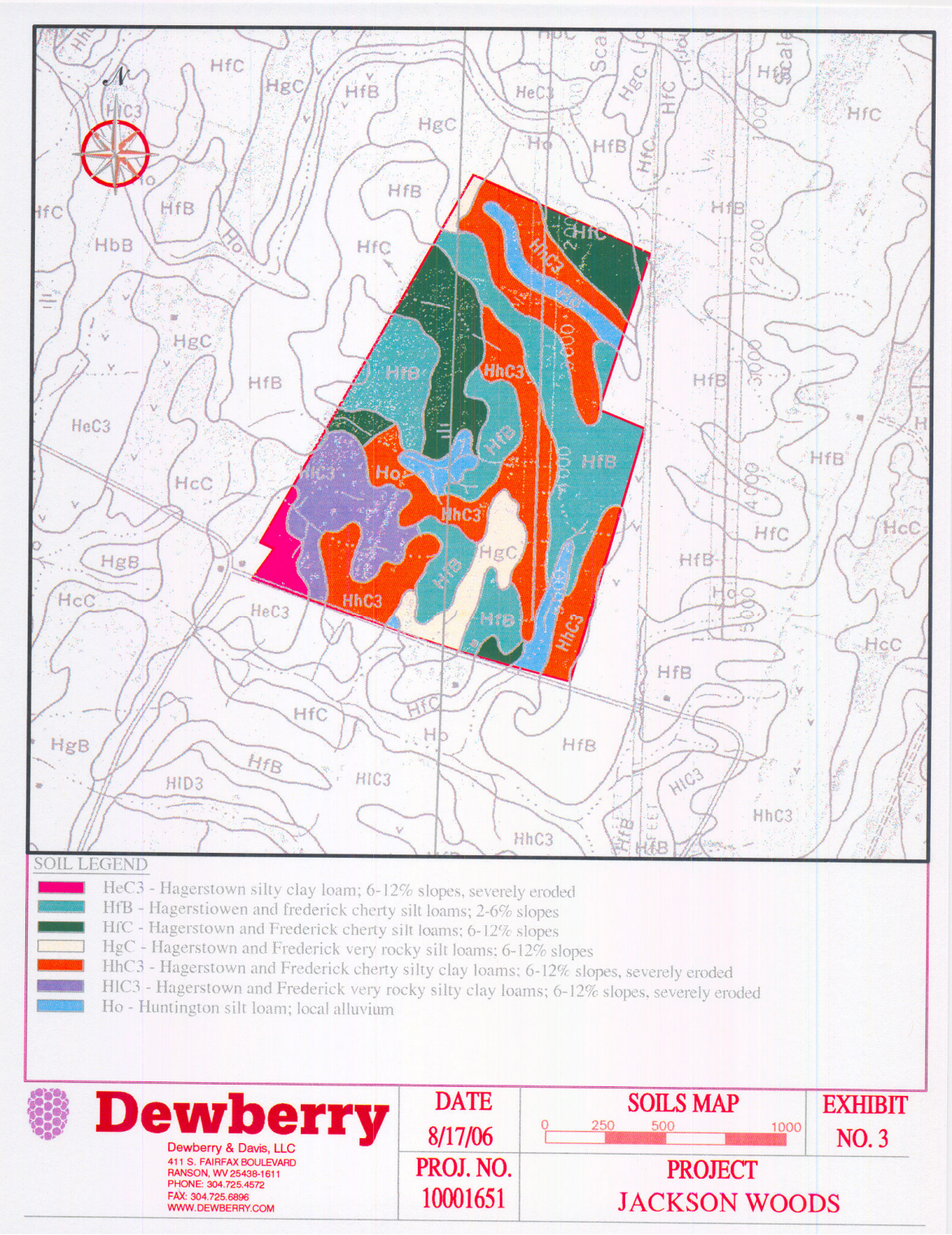
## Exhibit 1A: Portion of Tax Map showing parcel



## Exhibit 2: Topography



## Exhibit 3: Soils map and soils description



## SOILS DESCRIPTIONS

monly this soil is moderately deep to limestone or shale. Included in mapping were a few, small, rocky and extremely rocky spots. Also included were a few steep areas.

Rockiness, moderately steep slopes, and the severe hazard of erosion severely limit use for cultivated crops or pasture. This soil is well suited to woodland. Capability unit VIIs–1.

### Frederick Series

The Frederick series consists of deep, well-drained soils in the Great Limestone Valley. Slopes are short and irregular. These soils formed in material weathered from limestone, that contained some quartz grains and angular chert. Frederick soils in Jefferson County are mapped only in undifferentiated units with Hagerstown soils.

In a representative profile the surface layer is dark-brown cherty silt loam about 9 inches thick. The subsurface layer is yellowish-brown silt loam about 3 inches thick. The subsoil extends to a depth of 55 inches. The upper 7 inches is a strong-brown silty clay loam; the middle 25 inches is slightly plastic and slightly sticky, red silty clay; and the lower 11 inches is red cherty clay.

Frederick soils are easy to work, except where they are eroded or very rocky. Permeability is moderate. Available moisture capacity and natural fertility are high.

These soils are suited to corn, small grain, alfalfa, and orchard fruits. Many of the very rocky areas are suited to pasture.

Representative profile of Frederick cherty silt loam from an area of Hagerstown and Frederick cherty silt loams, 2 to 6 percent slopes, 100 yards north of State Route 51, 3½ miles west of Charles Town:

Ap—0 to 9 inches, dark-brown (10YR 4/3) cherty silt loam; weak, fine, subangular blocky and weak, fine, granular structure; very friable; many roots; 20 percent chert fragments; slightly acid; abrupt, smooth boundary.

A2—9 to 12 inches, yellowish-brown (10YR 5/4) silt loam; very weak, medium, platy and weak, fine and medium, subangular blocky structure; friable; common roots; 10 percent chert fragments; slightly acid; clear, wavy boundary.

B21t—12 to 19 inches, strong-brown (7.5YR 5/6) silty clay loam, with a few streaks of yellowish red (5YR 5/6); moderate, medium, blocky structure; friable to firm; thin patchy clay films; 10 percent chert fragments; strongly acid; clear, wavy boundary.

B22t—19 to 33 inches, red (2.5YR 5/6) silty clay; strong, fine, blocky structure; firm, slightly plastic and slightly sticky; thick, continuous, strong-brown (7.5YR 5/6) clay films; 10 percent chert fragments; few, fine, yellowish-brown (10YR 5/6) siltstone particles up to ¼ inch across; strongly acid; clear, wavy boundary.

B23t—33 to 44 inches, red (2.5YR 5/8) silty clay; strong, fine and medium, blocky structure; firm, slightly plastic and slightly sticky; thick, continuous, strong-brown (7.5YR 5/6) clay films and a few faces of yellowish brown (10YR 5/6); 10 percent chert fragments; few, fine, yellowish-brown (10YR 5/6) siltstones up to ¼ inch across; strongly acid; clear, wavy boundary.

B3—44 to 55 inches, red (2.5YR 5/8) cherty clay; few patches of yellowish-brown (10YR 5/6); weak to moderate, fine and medium, subangular blocky structure; firm; thin patchy clay films; 20 percent chert fragments; strongly acid.

The surface layer ranges from cherty silt loam to cherty silty clay loam. The B horizon is silty clay or clay and ranges from red to yellowish-red; however, the upper few inches of the B horizon ranges to strong brown. Coarse fragments range from less than 10 percent to about 30 percent. Bedrock is at a depth of from 4 to 10 feet. Reaction is strongly acid to medium acid.

The argillic horizons of these soils are slightly thinner than the defined range for the series, but this difference does not alter their use or behavior.

Frederick soils are associated with browner and less acid Hagerstown and Benevola soils; with less red, less clayey Duffield soils; and with Frankstown soils that have a thinner solum and contain more shale. Frederick soils have less sandy clay than Braddock soils and are deeper than the Chilhowie and Opequon soils.

### Hagerstown Series

The Hagerstown series consists of deep, well-drained soils in the Great Limestone Valley. Slopes are short and irregular. These soils formed in material derived from limestone.

In a representative profile the surface layer is dark-brown silt loam about 7 inches thick. The subsoil extends to a depth of 62 inches. The upper 36 inches is yellowish-red silty clay or clay, and is mostly plastic and sticky. The lower 19 inches is variegated, dark-red, yellowish-red, and strong-brown silty clay.

Hagerstown soils are easy to work and are fertile. Permeability is moderate. Available moisture capacity is high.

These soils are suited to corn, small grains, alfalfa, and to orchard fruits. About half of the acreage is very rocky and suited only to pasture and trees.

Representative profile of Hagerstown silt loam, 2 to 6 percent slopes, south of State Route 51, 1¾ miles west of Charles Town:

Ap—0 to 7 inches, dark-brown (7.5YR 4/2) silt loam; moderate, medium and fine, granular structure; friable; many roots; few chert fragments; slightly acid; abrupt, smooth boundary.

B21t—7 to 12 inches, yellowish-red (5YR 5/6) silty clay; moderate, medium and fine, blocky structure; firm, slightly plastic and slightly sticky; medium patchy clay films; common roots; some material from Ap horizon in root channels; slightly acid; clear, wavy boundary.

B22t—12 to 32 inches, yellowish-red (5YR 4/6) clay; strong, fine and medium, blocky structure; firm, plastic, and sticky; few roots; thick continuous clay films; medium acid; gradual, wavy boundary.

B23t—32 to 38 inches, yellowish-red (5YR 4/6) silty clay; strong-brown (7.5YR 5/6) streaks; moderate to strong, fine and medium, blocky structure; firm, plastic and sticky; few roots; medium continuous clay films; slightly acid; gradual, wavy boundary.

B24t—38 to 43 inches, yellowish-red (5YR 4/6) silty clay; common, strong-brown (7.5YR 5/6) streaks; moderate, fine and medium, blocky structure; firm; plastic and slightly sticky; few roots; medium continuous clay films; slightly acid; gradual, wavy boundary.

B3—43 to 62 inches, variegated dark-red (2.5YR 3/6), yellowish-red (5YR 4/6), and strong-brown (7.5YR 5/6) silty clay; weak, medium, platy structure; firm, plastic and sticky; thin discontinuous clay films; some very soft yellowish-brown (10YR 5/6) siltstone; slightly acid.

The B horizons are clay and silty clay and range from yellowish red to dark reddish brown (fig. 7). Depth to bedrock ranges from 4 to 10 feet. Natural reaction ranges from medium acid to slightly acid.

Hagerstown soils are associated with the Frederick soils that are less brown and more acid in the subsoil. They are redder and finer textured than the adjoining Duffield and

**Hagerstown silty clay loam, 6 to 12 percent slopes, severely eroded** (HeC3).—This soil has lost most of the original surface layer by erosion, and the heavier subsoil material and the topsoil have been mixed by plowing. The resulting surface layer is finer textured and redder than that described as representative for the series. Also, this soil is shallower to bedrock. Small areas of this soil are intermingled with the other Hagerstown soils, but many areas are on the points and the sides of the drainageways. Included in mapping were some gently sloping,

management under optimum

**Hagerstown and Frederick cherty silty clay loams, 6 to 12 percent slopes, severely eroded** (HhC3).—These soils have profiles similar to those described as representative for their respective series, but most of the original surface layer has been removed by erosion. The present surface layer is finer textured, redder, and contains about 20 percent chert fragments. These soils are similar; they have similar requirements for proper use and management. They are scattered in association with the other Hagerstown soils, but many areas are on the points and sides of drainageways. Included in mapping were moderately steep and moderately eroded areas. Also included were small areas of Duffield, Huntington, local alluvial soils, and a few limestone outcrops.

Erosion has made tillage difficult, but this soil is suited to all locally grown crops. It is suited to row crops if grown in a cropping system with long-term hay. In some areas rock outcrops influence the direction of tillage. Intensive conservation practices are needed to help reduce runoff and control further excessive erosion. Capability unit IVe–1.

**Hagerstown and Frederick very rocky silty clay loams, 6 to 12 percent slopes, severely eroded** (HlC3).—These soils differ from those described as representative for their respective series by having outcropping limestone ledges and by having most of their original surface layer removed by erosion. The present surface layer is redder, more clayey, and does not take in water as readily as the original surface layer. These soils are similar and have similar requirements for use and management. Areas are Hagerstown soils, Frederick soils, or both. Limestone ledges are on about one-fifth of the surface. These soils are scattered in association with the other Hagerstown and Frederick soils, but many areas are on points and sides of drainageways where runoff has concentrated. Included in mapping were small moderately eroded areas and a few extremely rocky areas.

Much of the acreage of this unit is in crops, but soil losses and rock outcrops make cultivation impractical. Some areas extend into orchards and crop fields. These soils are better suited to pasture or trees than to crops. Proper management of tall-grass pasture is difficult in some areas, but bluegrass and white clover are suited. Capability unit VIs–1.

**Hagerstown and Frederick very rocky silty clay loams, 12 to 25 percent slopes, severely eroded** (HlD3).—The soils in this unit are similar to those described for their respective series, but limestone outcrops occupy about one-fifth of the surface and erosion has removed most of the original surface layer. The present surface layer is redder than the surface layer of the soil described as representative and does not absorb water readily. These soils are similar; they have similar requirements for use and management. These soils are generally on short breaks near small drainageways or in bands along the hills where water or livestock have cut through the

moderately steep, and moderately eroded areas. Also included were a few limestone outcrops.

The silty clay loam surface layer, which resulted from erosion, has made this soil difficult to till, but this soil is suited to corn if a good cropping system is used. In some areas limestone outcrops influence the direction of tillage. Sodded waterways, stripcropping, minimum tillage, and winter cover crops help prevent further erosion. Capability unit IVe–1.

**Hagerstown and Frederick cherty silt loams, 2 to 6 percent slopes** (HfB).—The Frederick soil in this unit has the profile described as representative for the Frederick series. Hagerstown soils are similar to Frederick soils, and they have similar requirements for use and management. Soils in this unit are either all Hagerstown, all Frederick, or both. These soils are commonly in large undulating areas. Slopes are short and fairly smooth. The surface layer contains 15 to 20 percent chert fragments. Included in mapping were small, severely eroded areas, a few strongly sloping areas, some nearly level areas, and a few areas of limestone outcrops. Also included were small areas of Duffield soils.

This unit is well suited to corn, small grains, and alfalfa. It is suited to orchards, but frost pockets can be a hazard in depressions. In some areas a few hedges of limestone influence the direction of tillage. Use of a suitable cropping system, stripcropping, and sodded waterways helps to reduce runoff. Capability unit IIe–1.

**Hagerstown and Frederick cherty silt loams, 6 to 12 percent slopes** (HfC).—The soils in this unit are similar, and they have similar requirements for use and management. Areas are all Hagerstown soils, all Frederick soils, or both soils. These soils are in large rolling areas that are dissected by numerous drainageways. The surface layer contains about 15 percent chert fragments. Included in mapping were a few gently sloping soils, moderately steep soils, some severely eroded areas, and a few limestone outcrops. Also included were small areas of Duffield and Huntington, local alluvium soils.

This unit is suited to corn, small grains, and alfalfa. This unit is well suited to orchards. In some areas limestone outcrops influence the direction of tillage. Air drainage generally is better than on the gently sloping soils. Maintaining drainageways in sod, returning crop residue to the soil, stripcropping, and using minimum tillage help to prevent losses of soil and water. Capability unit IIIe–1.

**Hagerstown and Frederick very rocky silt loams, 2 to 6 percent slopes** (HgB).—The soils in this unit have profiles similar to those described as representative for their sod and runoff has removed much of the surface layer. Included in mapping were some moderately eroded spots and a few extremely rocky areas.

Many areas of this unit are small and are managed with the surrounding soils. Most of these soils are in pasture, but they are difficult to manage properly because of rockiness and the severe erosion hazard. They are better suited to trees. Capability unit VIIs–1.

## Huntington Series

The Huntington series consists of deep, nearly level, well-drained soils on flood plains of streams and along intermittent drainageways in the Limestone Valley. These soils formed in recent alluvium washed from limestone uplands. They are subject to flooding.

In a representative profile the surface layer is dark-brown silt loam about 10 inches thick. The subsoil extends to a depth of 42 inches. The upper 11 inches is dark-brown silt loam, and the lower 21 inches is dark yellowish-brown silt loam that contains chert and sandstone fragments. The substratum is strong-brown and yellowish-red silty clay loam and silt loam.

Huntington soils are easily worked, and they are fertile. Permeability is moderate. Available moisture capacity is high.

These soils are suited to corn, small grains, and alfalfa. Flooding and ponding occur during prolonged wet periods. Frost pockets severely limit use for orchards.

Representative profile of Huntington silt loam, local alluvium in pasture, one-half miles northwest of Shepherd College in Shepherdstown:

Ap—0 to 10 inches, dark-brown (10YR 3/3) silt loam; weak, fine, granular structure; friable; many roots; few, angular, sandstone and chert fragments; few pores; neutral; abrupt, smooth boundary.

B1—10 to 21 inches, dark-brown (7.5YR 4/4) silt loam; weak, medium, subangular blocky structure; friable; fine roots; common quartz grains; neutral; gradual, wavy boundary.

B2—21 to 42 inches, dark yellowish-brown (10YR 4/4) silt loam; weak, fine, subangular blocky structure; firm; few roots; 15 percent chert and sandstone fragments less than 2 inches in diameter; common iron concretions, decreasing with depth; neutral; gradual, wavy boundary.

IIC—42 to 52 inches, strong-brown (7.5YR 5/6) silty clay loam and silt loam mixed with some yellowish-red (5YR 4/6 to 5/6) heavy silty clay loam; massive; firm; few manganese concretions; slightly acid.

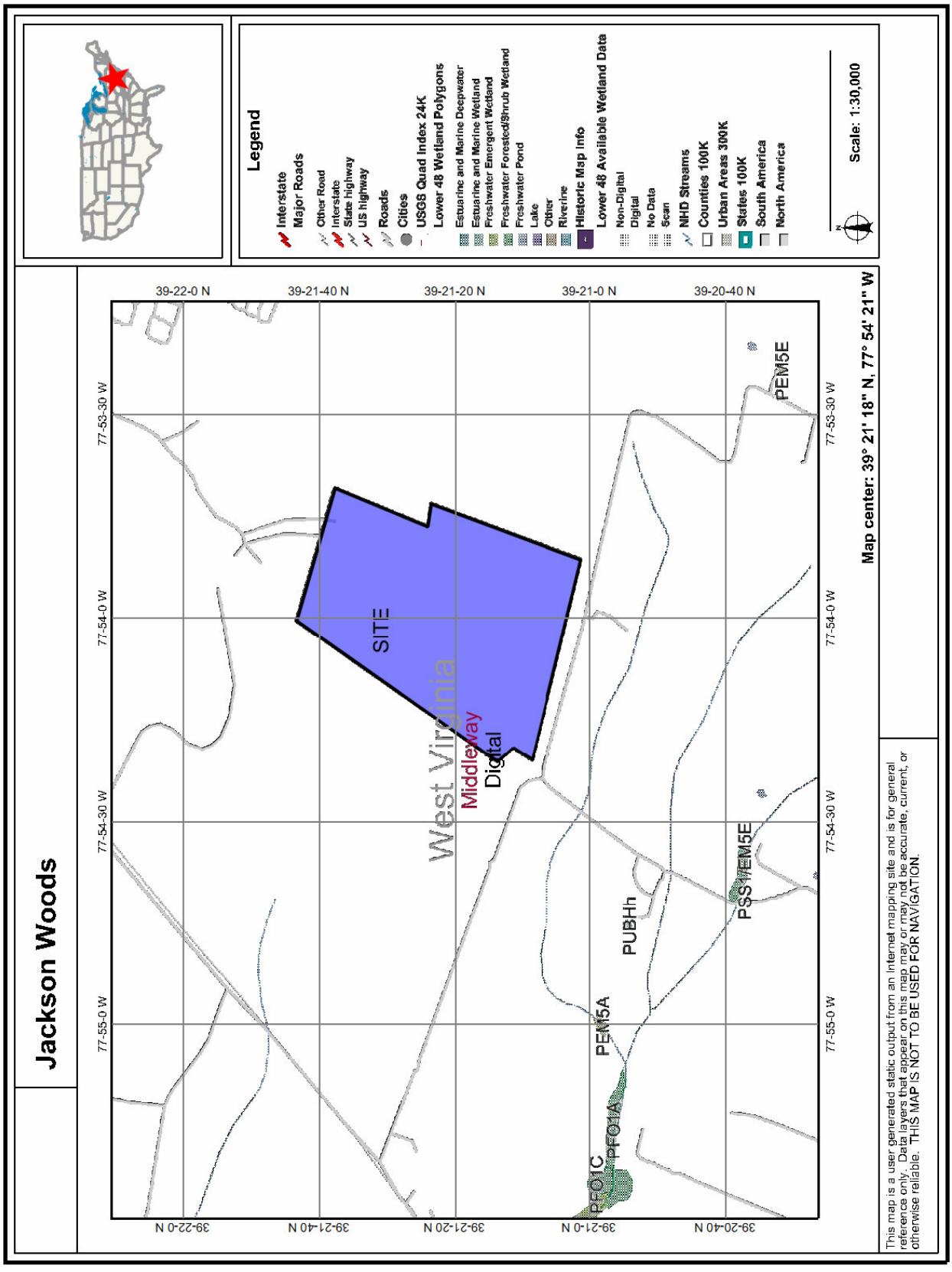
The A horizon ranges from very dark grayish brown to dark brown. The B horizon ranges from dark brown to dark yellowish brown. Depth to residual material or stratified alluvium ranges from 40 to 80 inches. Natural reaction ranges from slightly acid to neutral. The hazard of flooding ranges from slight to moderate.

Huntington soils are associated with the moderately well drained Lindside and poorly drained Melvin soils. They contain less sand throughout than Landes soils that are along rivers. Huntington soils are slightly lower than Ashton soils, and they are flooded more frequently than the Ashton soils. Huntington soils are at lower elevations than Monongahela soils, and they lack the fragipan that is present in Monongahela soils.

streams. Included in mapping were a few areas of Lindside, Melvin, and Ashton soils.

This soil is subject to streambank cutting and scouring during periods of high water. The hazard of flooding is moderate. Most of the acreage of this soil is in crops or pasture. The soil is suited to all locally grown crops except orchard fruits. Row crops can be grown continuously but winter cover crops are needed to protect this soil from erosion and to help maintain tilth. Capability unit IIw-6.

## Exhibit 4: Wetlands Map



## Exhibit 5: Sinkhole map

## EXHIBIT 6 Proposed Covenants

1. No lot shall be split, divided, or subdivided for sale, gift, trade or transfer otherwise.

2. No building of a temporary nature, trailer, house trailer, mobile home, tent, boat, boat trailer, camper, recreation vehicle or other similar item or other undesirable structure shall be placed or stored in the open upon the property.

3. No trailer, mobile home, temporary building, basement, shack, garage, barn, outbuilding or other structure in the course of construction shall be used temporarily or permanently as a residence on any property.

4. No residence shall be constructed containing less than 2,200 square feet of living space, excluding basement and garage space. First floor cannot contain less than 1,200 square feet of living space. All residences must have at least a two-car garage. No residence shall be constructed closer than 40 feet to front of the property line unless authorized by developer or his assigns.

5. No more than one dwelling shall be erected on any property.

6. When any dwelling structure shall be constructed on a property, the owner shall provide that any portion of such lot owned by him and not improved by said dwelling structure, driveway or other structures to be properly graded, seeded and suitably planted with grass, shrubs, or trees. At all times during construction, suitable erosion control methods shall be provided. Upon completion of construction, each lot shall be suitably fine graded and seeded within six months. All driveways shall be paved within one year from the date of completion of the residence. All residences shall be landscaped along the front foundation line.

7. Each property owner shall keep his property and all improvements thereon in good order and repair. This shall include the dwelling and all open grounds surrounding it. Each owner shall care for his property in a manner and with such frequency as is consistent with good property management.

8. No commercial business or activity shall be permitted on any property.

9. No trash, rubbish, or other wastes shall be allowed to accumulate on any property. No burning or burying of trash shall be permitted on any property.

10. Only domesticated house pets shall be permitted upon any property. No chickens, pigs, cattle, horses or other animals shall be permitted upon any property.

11. All sewage waste systems shall comply with the standards set by the West Virginia State Department of Health.

12. No unregistered automobiles, trucks, motorcycles, or other vehicles shall be placed or parked upon any property, or within the subdivision.

13. No unregistered vehicle shall be operated anywhere within the subdivision.

14. The grantee, for himself and his heirs, successors or assigns, acknowledge that the property conveyed to them by deed and being a parcel of the subdivision shall be subject to an annual charge or assessment in such amount as will be fixed by the grantor, his successors or assigns, in the sum of at least $100.00 per property. If actual costs for the purpose referred to herein exceed the revenue received, the annual charge may be increased, but only so as to meet the actual costs. Such charge shall be payable at the date of purchase of each respective property, and payable each successive year on that same date. The purpose of this payment shall be for the perpetual maintenance of each property until such time as the respective owners construct a dwelling and assume responsibility for property maintenance. Maintenance shall consist of mowing, trimming and removal of grasses and other vegetation in a manner consistent with good property maintenance.

15. No fence shall be erected within the subdivision except those built by the developer or by the lot owner, provided that the lot owners fence be along their back property lines, along their side property lines to points not to exceed their front building line of their residence. Privacy fences may be erected around the perimeters of swimming pools and tennis courts. The design of all private fencing must be approved by the developer or his assigns prior to construction.

16. All public utility services shall be buried below ground on all subdivision lots.

17. All residences shall be built a minimum distance of 40 feet from the front property line and 12 feet from the side and rear property lines.

18. All building plans and construction blueprints shall be submitted and approved by the developer or his assigns prior to the construction of any dwelling, garage, or other building. Further any building commenced on said property shall be completed within one year of said commencement date.

19. No television, radio, or other type antenna or satellite dish shall be erected on any portion of a lot except behind the rear line or a residence and not more than 25 feet from the rear building line of the residence.

20. It is expressly agreed that if any covenant or condition contained herein, or any part thereof is invalid or void, such invalidity or voiding thereof shall in no way affect any other covenant or condition.

21. No lot shall have access to any road other then those of the Subdivision.

22. The developers hereby reserve a 10 foot wide utility easement along the front, rear and side of each lot.

23. No private or public hunting shall be permitted anywhere within the developed land of the subdivision. Hunting, upon permission of the landowner and in accordance with WV

Regulations may be permitted on the undeveloped portions of the subdivision including the residue parcel (no. ).

24. In the event an owner buys more than one lot for the purpose of erecting only one residence thereon, the residence shall be erected within the boundaries of any one lot and shall not extend onto any adjoining lot.

25. No dog shall be permitted to run at large anywhere within the Subdivision, or on other adjoining properties. Nor shall any dog be permitted to roam or run outside the boundaries of its owners lot except under leash control by its owner or keeper.

26. The grantees acknowledge that the developer has reserved and retained the right to modify, change or waive the covenants and restrictions on any lot or lots shown on any plat thereof.

27. No above ground pools shall be erected in the development.

28. The developer and/or his assigns reserves the right to construct and operate a model home on any lot in the Subdivision.

29. The developer must approve house location on lot prior to ground breaking.

30. No clothes lines shall be permitted.

31. No all-terrain vehicles (ATV) may be operated on the streets of the Subdivision or any lot in the Subdivision.

# EXHIBIT 7 LETTERS FROM AGENCIES

## DNR Letter & Information on Isopod

**DIVISION OF NATURAL RESOURCES**
**Wildlife Resources Section**
**Operations Center**
**P.O. Box 67**
**Elkins, West Virginia 26241-3235**
**Telephone (304) 637-0245**
**Fax (304) 637-0250**

**Joe Manchin III**
***Governor***

**Frank Jezioro**
***Director***

June 5, 2006

Ms. Annette van Hilst
Dewberry & Davis, LLC
411 S. Fairfax Boulevard
Ranson, WV 25438-1611

Dear Ms. van Hilst:

We have reviewed our files for information on rare, threatened and endangered (RTE) species and sensitive habitats for the area of the proposed Kable subdivision in Jefferson County, WV.

We have no known records of any RTE species or sensitive habitats within the project area; however, the federally threatened Madison Cave isopod (*Antrolana lira*) may occur in the project area. This species has been collected from a groundwater well at the Leetown Science Center. Please contact the U.S. Fish and Wildlife Service (304-636-6586) regarding any necessary coordination. For more information on the Madison Cave isopod please see the species fact sheet on our website: www.wvdnr.gov/wildlife/RETSpecies.asp.

This response is based on information currently available and should not be considered a comprehensive survey of the area under review.

Enclosed please find an invoice.

Thank you for your inquiry, and should you have any questions please feel free to contact me at the above number, extension 2048.

Sincerely,

Barbara Sargent
Environmental Resources Specialist
Natural Heritage Program

enclosure

u:\BDSInv\D&D.doc

Note: Correct letter replaces letter for other subdivision


**Rare, Threatened And Endangered Species**

To View Rare, Threatened And Endangered
Species Fact Sheets In West Virginia **Select Species From List And Submit Go!**

To View The West Virginia Rare, Threatened
And Endangered Species Lists **Click Here!**

Select Species | Go

**Status of Species:**
(S) = Species of Concern
(R) = Rare Species
(FT) = Federally Threatened Species
(FE) = Federally Endangered Species

**Rare Species**

**Common Name**
Madison Cave Isopod

**Scientific Name**
Antrolana lira (AN-troh-LAHN-ah LYE-rah)

**Status**
This species was listed as federally threatened in 1982. At that time it was known only from the Shenandoah Valley of Virginia.


(Photo by Craig Stihler)

**West Virginia Status**
The Madison Cave isopod is known from two sites in Jefferson County. One site is a cave that intersects the ground water, and the second is a well. This animal probably occurs in pockets of ground water that extend beyond the sites where it has been observed. All other occurrences are in Virginia.

**Description**
The Madison Cave isopod is rather large for an isopod (the common terrestrial “pill bug” or “sow bug” is a good example of the general form of an isopod) reaching a maximum length of 18 mm (0.7 inch). Females are slightly larger than males. Its body is dorsal-ventrally (top to bottom) flattened. It has two pairs of antennae, the first pair is short and the second is long. Like many cave-adapted species, the Madison Cave isopod is blind and un-pigmented. Movement is by walking on the substrate or by swimming.

**Habitat**
The Madison Cave isopod inhabits underground lakes and deep karst aquifers where it lives in the groundwater. It has been observed in a few caves that descend to the groundwater table.

**Threats And Prospects**
Contamination of groundwater is the major threat to the Madison Cave isopod. Sources of contaminants include agricultural runoff, poultry farms, and runoff from developments.

**Range**
This species is restricted to the Shenandoah Valley of Virginia and West Virginia.

**Life History**
Little is known about the life history of this species. Biologists suspect that this species is long-lived and has a low

rate of reproduction.

**Diet**
This species probably feeds on detritus that finds its way into the groundwater.

**Additional Comments**
This species was discovered in 1958 in Madison Saltpetre Cave in Augusta County, Virginia. The Madison Cave isopod belongs to a group (family Cirolanidae) that consists largely of marine species. This is the only freshwater species found north of Texas.

**Help**
Cavers visiting caves in the Shenandoah Valley are encouraged to report sightings of “large” (nearly 0.6 in+) white aquatic isopods. Residents of the Shenandoah Valley should work to protect groundwater quality.

**Contact Webmaster | wildlife@wvdnr.gov**

## Health Department Letter

# Jefferson County Health Department

ROSEMARIE CANNARELLA, M.D., M.P.H.
HEALTH OFFICER

1948 WILTSHIRE ROAD, SUITE 1
KEARNEYSVILLE, WV 25430
ENVIRONMENTAL: (304) 728-8415
FAX: (304) 728-3314
MEDICAL: (304) 728-8416
FAX: (304) 728-3319

April 11, 2006

Annette van Hilst
Dewberry & Davis LLC
411 S. Fairfax Boulevard
Ranson, WV 25438

Dear Ms. van Hilst:

The Jefferson County Health Department has received your request for information regarding contaminated wells within 1000 feet of the proposed Kable Residential Subdivision. The property is located near the intersection of Hite Road and Jefferson Orchard Road.

A review of our records shows that this department is unaware of any bacteriologically contaminated wells within that area. If you have any questions, please contact the Jefferson County Health Department at 728-8415.

Sincerely,

Rosemarie Cannarella MD, MPH

Rosemarie Cannarella, MD, MPH
Health Officer

Cc: Paul Raco, Jefferson County Planning, Zoning, & Engineering
Richard Wheeler, District Sanitarian, WVBPH
Lisa Dunn, Sanitarian Supervisor

## Hospital letter

WVUH·EAST
City Hospital JEFFERSON Memorial Hospital

March 28, 2006

Annette van Hilst, RA
Dewberry Davis LLC
411 S. Fairfax Boulevard
Ranson, West Virginia 25438-1611

RE: Kable Residential Subdivision

Dear Ms. Van Hilst:

This is in response to your letter to me dated March 20, 2006, concerning the request for hospital services for the proposed Kable Residential Subdivision.

As President & CEO of West Virginia University Hospitals-East, both Jefferson Memorial Hospital and City Hospital would be glad to provide hospital services for the proposed Development.

Sincerely,

Roger M. Eitelman
President & CEO

RME:lsr

## School letter

Dewberry
411 S. Fairfax Boulevard
Ranson, WV 25438-1611
304 725 4572
304 725 6896 fax
www.dewberry.com

March 20, 2006

Superintendent Steven Nichols
Jefferson County Board of Education
PO Box 987
Charles Town WV 25414

**Subject: Kable Residential Subdivision**

Dear Superintendent Nichols:

As part of the process of developing a Community Impact Statement for the subject project, we develop a section on the proposed impact of the development upon the Jefferson County School System. Attached, please find a summary of the proposed development and the draft of the section dealing with school impact.

Please review this material and provide this office with any comments that you would want included or presented to the Jefferson County Planning Commission.

I thank you for your cooperation.

Sincerely

Annette van Hilst RA
Senior Land Planner
Land Design & Survey Division
**Dewberry & Davis LLC**

Attachments: Project Summary
Site location Map
Excerpt, Draft CIS, "Demand for Schools" section

## Sheriff letter

Telephone: 728-3205
Tax Office: 728-3220
Fax: 728-3299

SHERIFF and TREASURER *of Jefferson County*

Everett "Ed" Boober
P.O. Box 9
Charles Town, WV 25414

*March 24, 2006*

*Ms. Annette van Hilst, RA*
*Dewberry & Davis LLC*
*411 S. Fairfax Boulevard*
*Ranson, WV 25438-1611*

*Dear Ms. Van Hilst:*

*This is in response to your request that this department furnish you with an account with respect to our ability to respond to calls for service regarding matters of law enforcement and preservation of the peace at the proposed "Kable Residential Subdivision" located approximately one mile from Leetown Road (Rt. 1) near the intersection of Hite Road (Route1/4) & Jefferson Orchard Road (Rt. 15/1) in Jefferson County, West Virginia.*

*The Sheriff's Department is charged with the affirmative duty of investigating criminal activity, preserving the peace, and enforcing the law. This duty extends to all corners of the county and to any community, subdivision or a business property without regard to size or location.*

*However, as our community continues to grow, it becomes progressively more difficult to assure timely response due to the significant increase in the numbers of calls for service with the staffing that is currently being provided to the Sheriff's Department. On occasion, calls for service must be handled on a priority basis where the most-serious, urgent type of events must receive priority in response and other, less serious calls for service, are responded to as quickly as manpower becomes available.*

*The foregoing should not be construed as an expression from this office that we are unable or unwilling to respond to calls for service in a timely manner. Given the resources and level of manpower with which we are obligated to work, our level of service is, and will continue to be responsive, timely, and efficient in carrying out our duties and responsibilities in the areas of law enforcement, criminal investigation and preservation of the peace in the Jefferson County community.*

*Sincerely,*

*Everett "Ed" Boober*
*Sheriff and Treasurer*

## State Police letter

**WEST VIRGINIA STATE POLICE**

Kearneysville, West Virginia
March 22, 2006

Annette van Hilst RA
Senior Land Planner
Land Design & Survey Division
Dewberry & Davis LLC
411 South Fairfax Boulevard
Ranson, West Virginia 25438

RE: Providing police services for the Kable residential subdivision

Dear Madam:

This officer has reviewed your request for comment about police services for your proposed subdivision. This agency, as a law enforcement agency, doesn't have the luxury of declining police services. The West Virginia State Police will respond to any call for service within our area of responsibility; however, with the ever growing population of Jefferson County and the decrease in our manpower, we are forced to prioritize non-emergency calls for service.

Respectfully submitted,

Sgt ED Anderson

Sergeant E. D. Anderson
West Virginia State Police
Charles Town Detachment

**EQUAL OPPORTUNITY EMPLOYER**

## Citizens Fire Company letter

CHIEF STEVE ANDERSON
200 Citizens Way
Charles Town, WV., 25414
Phone (3040 725-2814

September 29, 2006

Dewberry
Kable Residential Subdivision
411 S. Fairfax Blvd
Ranson, WV., 25438

Sirs:

As all the other letters we have sent regarding the protection for fire service. We will provide but it puts a strain on the fire companies in this area. Regarding more coverage and more calls on the volunteers in this county. It just keeps growing and there always seems to be no help from the county commission in helping us fund our companies to help provide us with help to cover our contending cost of fuel and equipment we have to buy.

Sincerely,

Signature

Chief Steve Anderson

## Independent Fire Company Letter

**Independent Fire Co. No. 1, Inc.**
Mailing:
P.O. Box 925
Charles Town, WV 25414

Phone: 304-725-2514

**Organized 1884**
Location:
200 W. 2nd Ave.
Ranson, WV 25438

Fax: 304-728-6006

August 29, 2006

Annette Van Hilst
Senior Land Planner
Dewberry
411 S Fairfax Boulevard
Ranson, WV 25438

Re: Kable /Jackson Woods Residential Subdivision

Dear Annette Van Hilst,

Our Fire Company is a Volunteer organization and is committed to providing high quality service to the residents of our response area. In general, nationwide volunteer fire companies are having problems with manpower, escalating cost of operation and significant increases in responses.

The proposed addition of these12 units of single family residences in Jackson Woods will result in minimum additional strain on our Fire Company. With the assistance of aid from the other fine fire companies in our area, we will be able to provide the needed Fire and EMS services.

The response time to this subdivision will be a minimum of 9 minutes under the best of conditions. This extended response along with no public water with fire hydrants will result in a higher than normal fire loss compared to Charles Town, Ranson and other nearby residential area. This delay also will equate to the Ambulance service.

I can be reached at 304 725-2514 if additional information or questions arise.

Sincerely,

Edwin D. Smith
Fire Chief

Volunteers at work providing Ambulance, Fire, and Rescue Services

## EMS Letter

JEFFERSON COUNTY AMBULANCE AUTHORITY
208 S. Mildred Street
Ranson, WV 25438
**E-mail – jeffcoamb@citlink.net**
**Telephone – 304-728-3287**
**Fax – 304-728-6221**

March 22, 2006

Annette van Hilst, RA
Dewberry
411S Fairfax Boulevard
Ranson, WV 25438

Subject: Kable Subdivision

Dear Ms Annette van Hilst,

I have reviewed the preliminary plans of the Kable Subdivision relating to residential growth and the effects on Emergency Medical Services. The primary Ambulance Company will be the Independent Fire Company with supplemental Emergency Medical Technicians from the Ambulance Authority.

Increases in call volume due to our growing and aging population are placing our services near their peak capabilities. With the increases in EMS incidents, ***we can not assure any given response time***, but with the assistance of the other Jefferson County EMS units, we will continue to provide the Emergency Medical Services. The current average EMS response to this area is 9 minutes.

Sincerely,

Edwin D. Smith
Operations Manager

Cc: Jefferson County Planning Commission
Jefferson Co Commission

**West Virginia EMS Agency of the Year – 2004**

## Waste Management Letter

WASTE MANAGEMENT OF
WEST VIRGINIA, INC.
Rt. 2, Box 68-A
Dawson Dr.
Bridgeport, WV 26330
(304) 842-7010
(304) 842-7087 Fax

March 24, 2006

Dewberry
PO Box 35
Charles Town, WV 25414
Attn: Annette van Hilst, RA

Re: Kable Residential Subdivision

Dear Ms. van Hilst:

Waste Management of West Virginia, 25 Bowling Lane, Martinsburg, WV 25401 is ready, willing, and able to provide trash removal and disposal services for the Kable Residential Subdivision and any other developments in Berkley and Jefferson Counties located outside the corporate limits of all (5) of the following municipalities – the Town of Bolivar, the City of Charles Town, the Town of Harpers Ferry, the City of Ranson, and the Town of Shepherdstown – as the corporate limits of said municipalities existed as of June 26, 1979, for as long as Waste Management of West Virginia maintains a motor carrier certificate for the hauling of residential waste issued by the Public Service Commission of West Virginia.

Waste Management of West Virginia is also working with the Jefferson County Solid Waste Authority to construct a Solid Waste Transfer Facility in Jefferson County. This facility will compliment the solid waste plan for the Eastern Panhandles' residents and commercial customers.

Sincerely,

William Oblak
Senior District Manager

cc: WV Public Service Commission
Paul Raco, Executive Director, Department of Planning and Engineering
PO Box 135, Charles Town, WV 25414

## EXHIBIT 8

# Material from West Virginia Historic Inventory

Explorer: The West Virginia History Database

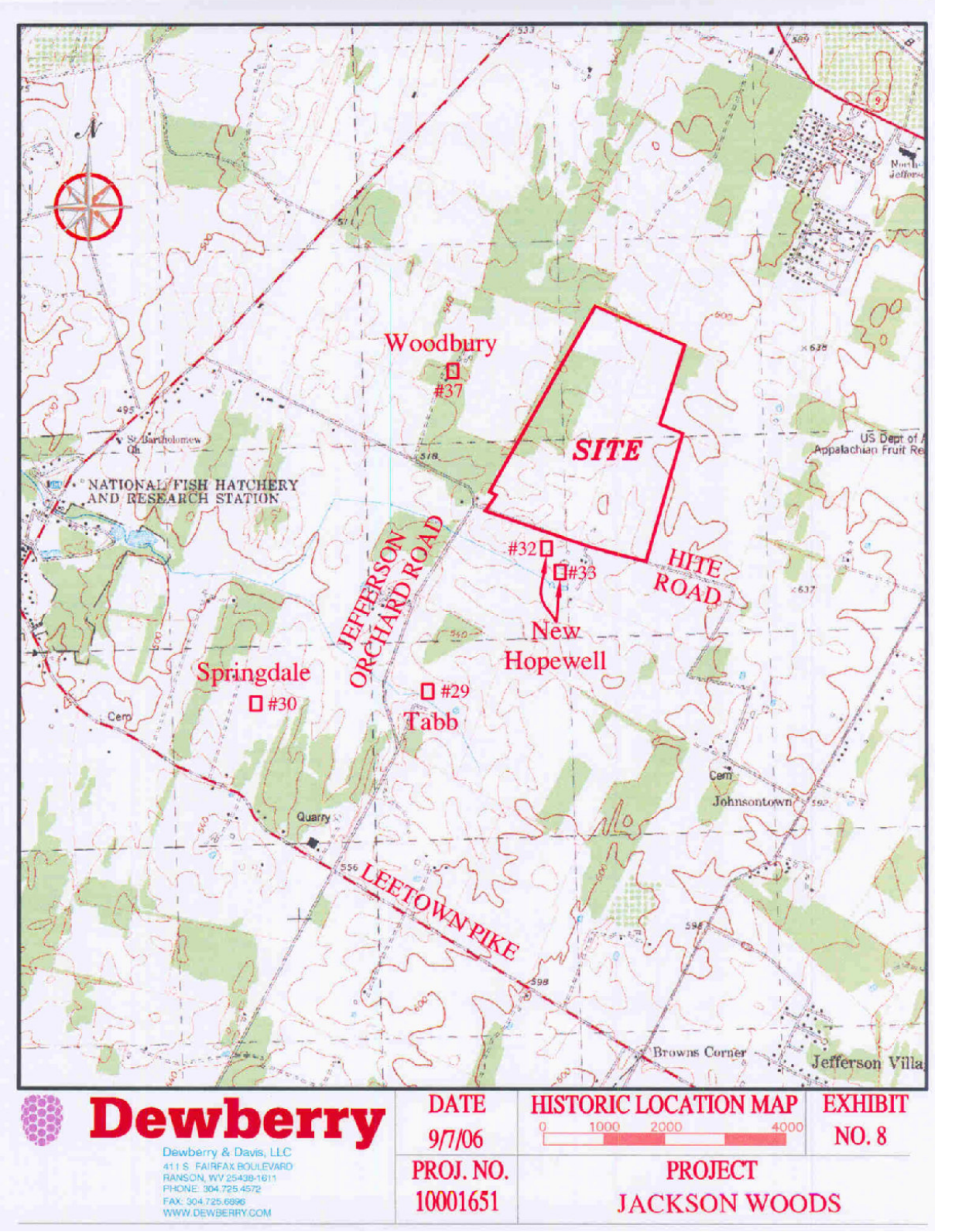
Jefferson County Module created by
William D. Theriault, PhD.

Published by

The WW Division of Culture and History
Charleston WV

s

## MAP


Woodbury
#37
SITE
NATIONAL FISH HATCHERY
AND RESEARCH STATION
JEFFERSON
ORCHARD ROAD
#32
#33
HITE
ROAD
New
Hopewell
Springdale
#30
#29
Tabb
Quarry
LEETOWN PIKE
Johnsontown
Browns Corner
Jefferson Villa
Dewberry
Dewberry & Davis, LLC
411 S. FAIRFAX BOULEVARD
RANSON, WV 25438-1611
PHONE: 304.725.4572
FAX: 304.725.6996
WWW.DEWBERRY.COM
DATE
9/7/06
HISTORIC LOCATION MAP
0 1000 2000 4000
EXHIBIT
NO. 8
PROJ. NO.
10001651
PROJECT
JACKSON WOODS

Note: Information on the New Hopewell Complex in text (33 & 32; 46 JF 157 & 46 JF 158).

**Site 29 Tabb**

Present Owner: Mr. and Mrs. Lyle Tabb
Mailing Address: Route 1, Kearneysville
Original Owner: Part of Jacob Hite Land Grant
Assessor Map #: *
Approximate Lot Size: *
Property Currently Zoned: *
Assessment: Land - *; Improvements - *; Total - *
Physical Condition: Structure - Fair, needs pointing
Common Name: Retirement
Address: Lee Town Pike
Area: Leetown, within half mile of Prato Rio
Architect/Builder: *
Date of Construction: 1735; Source - *
Architectural Style: Same period as Prato Rio and Vinemont
Present Use: dwelling
Original Use: dwelling
Incidence in Area: *
Importance to Its Neighborhood: Great
Accessible to Public: *
Architectural Significance: County, should be restored
Significance of Interiors: *
Significance of Landscaping: *
Historic Significance: *
Representation in Other Surveys: *
PHYSICAL DESCRIPTION
Facade Material: all stone
Foundation: stone
Roof Form: gabled
Porch or Veranda: yes; Height: 1 stoey
Building Height in Stories: 2 and 3
Roof Dormers: none
Chimneys: 2; Where: cellar fireplace in tallest section

Facade Emphasis: stone
Window Sash: 1st: 9/6; 2nd: 6/6; *3rd
Entrance: Undecorated
INTERIOR DETAILS
Mantels: bedroom mantle excellent. For reference see Jeff. Cty. Hist. Soc. Vol. XXI, 1955
Overmantles: Federalist Period
Staircase: 2 closed stairwells
Wainscotting: *
Interior Doors of Period: yes
Door and window Frames: yes, pegged
Other Panelling: *
Ceiling Cornices: *
Chair Rails: *
Base Molds: yes
Wallcoverings of Period: plaster, horse hair
Hardware: wooden lock to cellar
Ceiling Medallions: no
Original Floors: yes, random width
Other Interior Details: *
Significant Outbuildings: stone barn
Landscaping: *
Other Notes: Part of Jacob Hite Land Grant

## Cemetery 154

46 JF 154
Springdale Slave Cemetery
Jefferson
Middleway
2 miles E. of Leetown, behind David Bell home
David Vell, Rt. 1, Box 586, Kearneysville, WV
Historic =
Black
Cemetery
10
2
Middleway (8 acres)
Undisturbed
Ridge Top
Ridge and Valley
Mowed grass in small area
25 X 25 feet
Cemetery is now a cleared grass area - no stones remain but one did. 100 yards behind Bell home and right of barn, slave quarters are located near main residence.
Reconnaissance
Shepherd College, Jefferson County Cemetery survey

## Cemetery 153

S. Skroban / A. Shearer
June, 19, 1990
46 JF 153
Tabb Slave Cemetery
Jefferson
Middleway
2 miles E. of Leetown, N. of the David Bell home.
Tabb property (Lyle Tabb) Rt. 3, Box 265, Kearneysville, WV
Historic:
Black
Cemetery
Undisturbed
Ridge and Valley

Weeds
50 X 50 feet
On top of hillside - stones exist but weeds are rampant, next to a line of trees and N. side of the Bell home.
Reconnaissance
Shepherd College, Jefferson County Cemetery Survey

## Site 28

No information available

## Site 37 Woodbury

Present Owner: Jack Huyett (1973)
Mailing Address: Charles Town
Original Owner: Henry St. George Tucker
Assessor Map #: *
Approximate Lot Size: *
Property Currently Zoned: *
Assessment: Land - *; Improvements - *; Total - *
Physical Condition: Structure - * Good/Fair/Poor; Grounds - Good/Fair/Poor; Neighborhood - Good/Fair/Poor
Common Name: Woodbury
Address: *
Area: *
Architect/Builder: *
Date of Construction: 1830's, probably; Source - Howard Adams has it pretty well bracketed, I believe. JAW
Architectural Style: *
Present Use: *
Original Use: *
Incidence in Area: *
Importance to Its Neighborhood: *
Accessible to Public: *
Architectural Significance: National
Significance of Interiors: *
Significance of Landscaping: *
Historic Significance: *
Representation in Other Surveys: *National - owner has applied
PHYSICAL DESCRIPTION
Facade Material: stucco on stone

Foundation: *
Roof Form: *
Porch or Veranda: *; Height: *
Building Height in Stories: *
Roof Dormers: *
Chimneys: *; Where: *
Facade Emphasis: *
Window Sash: *1st; *2nd; *3rd
Entrance: Fan *; Lintel *; Trans *; Sidelights *; Undecorated *
INTERIOR DETAILS: handsome interior, 22 rooms
Mantels: *
Overmantles: *
Staircase: *
Wainscotting: *
Interior Doors of Period: *
Door and window Frames: *
Other Panelling: *
Ceiling Cornices: *
Chair Rails: *
Base Molds: *
Wallcoverings of Period: *
Hardware: *
Ceiling Medallions: *
Original Floors: *
Other Interior Details: *
Significant Outbuildings: *
Landscaping: *
Other Notes: Built by distinguished Virginia Tucker family - lawyers, bishops, etc. Descended from Adam Stephens' daughter, Anne.

## Site 30 Springdale

Present Owner: Thomas Kearns
Mailing Address: Charles Town
Original Owner: *
Assessor Map #: 8, parcel 3; deed book 110, p. 100
Approximate Lot Size: 162 acres
Property Currently Zoned: *

Assessment: Land - 6,600; Improvements - 3,700; Total - 10,300
Physical Condition: Structure - Fair; Grounds - Poor; Neighborhood - Fair
Common Name: Mantipike
Address: Smithfield Road
Area: *
Architect/Builder: *
Date of Construction: mid 19th century; Source - RW
Architectural Style: *
Present Use: single family farmhouse
Original Use: single family farmhouse
Incidence in Area: rare
Importance to Its Neighborhood: Great
Accessible to Public: *
Architectural Significance: Local
Significance of Interiors: *
Significance of Landscaping: *
Historic Significance: *
Representation in Other Surveys: *
PHYSICAL DESCRIPTION
Facade Material: wood siding and plaster
Foundation: stone
Roof Form: pitched
Porch or Veranda: 3; Height: 1 (2), 2 (1)
Building Height in Stories: 2
Roof Dormers: no
Chimneys: 3; Where: ends and middle of house
Facade Emphasis: horizontal
Window Sash: 1st: yes; 2nd: yes; 3rd: yes
Entrance: Trans
INTERIOR DETAILS
Mantels: 4
Overmantles: no
Staircase: 2
Wainscotting: no
Interior Doors of Period: some
Door and window Frames: yes
Other Panelling: no
Ceiling Cornices: no
Chair Rails: no
Base Molds: yes
Wallcoverings of Period: no
Hardware: some
Ceiling Medallions: no
Original Floors: some
Other Interior Details: 10 rooms; portions of house were plastered
Significant Outbuildings: *
Landscaping: *
Other Notes: *

## Exhibit 9 Highway Problem Areas

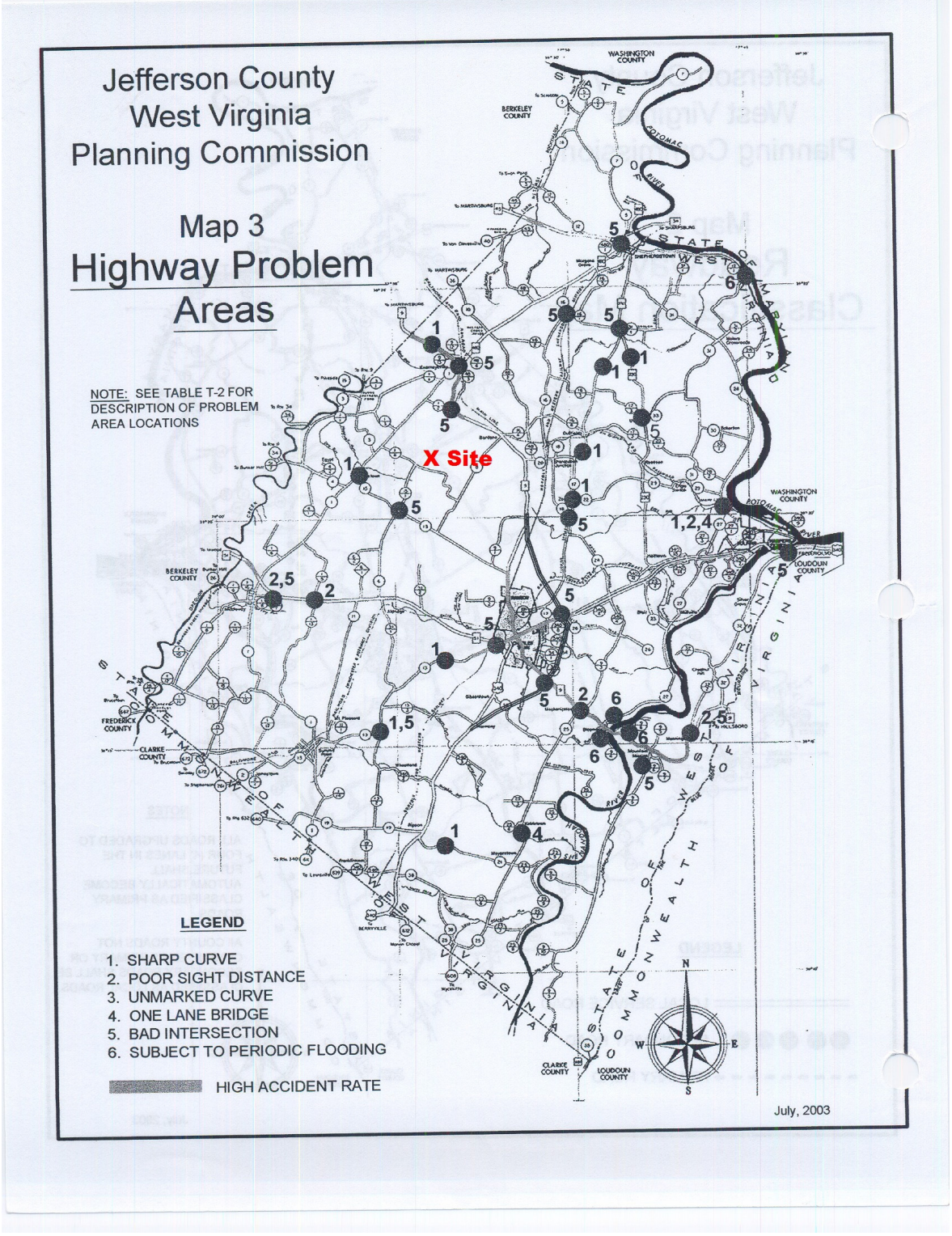


**TABLE T-2**
Highway Problem Areas

| Route Number | Road Class | Location | Problem |
|---|---|---|---|
| 340 | P | Shenandoah River Bridge to VA Line | Curvy, rough shoulders, falling rocks, stone retaining wall at edge of road. |
| 340 | P | Intersection with Rt. 32 | Inadequate turning area onto Rt. 32. |
| 340 | P | Intersection with Rt.9 | Poor access from Rt. 340 (By-pass) east-bound off ramp onto Rt. 9 west-bound lane. |
| 9 | P | Intersection with Rt. 340 | Poor access from Rt. 9 (By-pass) west-bound off ramp onto Rt. 340 west-bound lane. |
| 9 | P | Intersection with Rt. 32/2 | Poor intersection angle causing poor visibility. |
| 9 | P | Intersection with Rt. ½ & 48/3 | Numerous intersections. |
| 9 | P | Intersection with Rt. 480 | Poor left turn movements onto Rt. 480 & Rt. 1 |
| 9 | P | Intersection with 9/3 | Poor sight distance. |
| 51 | S | Intersection with Rt. 1/5 & 1/13 | Poor sight distance turning onto Rt. 1/5 & Rt. 1/13. |
| 51 | S | From Qpequon Creek to Charles Town | Hidden driveways. |
| 230 | S | 1 mile South of Rt. 17 | S-Curve |
| 230 | S | Intersection with Rt. 31/1 & 16/1 | Poor visibility/sight distance. |
| 1/7 | L | Intersection with Rt. 51 (Middleway) | Poor sight distance & intersection angle. |
| 1/17 | L | Between Rt. 1 & Rt. 13 | Rough one-lane dirt road. |
| 9/3 | L | Intersection with Rt. 9 (Cattail Run Rd. & Rt. 9) | Poor sight distance pulling onto Rt. 9. |
| 9/4 | L | From Rt. 9 at Bloomery to the dead-end | Within 100 year flood plain, periodic flooding. |
| 9/5 | L | From Rt. 9, South to VA Line (Mission Road) | Many curves on 2 - lane paved section with large subdivisions. |
| 13 | L | Intersection with Rt. 51 in Charles Town | Poor intersection angle causing poor visibility. |
| 13 | L | Intersection with Rt. 51/1 | Poor intersection angle causing poor visibility. |
| 13 | L | Intersection with Rt. 13/2 | 90-degree turn. |
| 16/1 | L | Intersection with Rt. 16 | Poor intersection angle causing poor visibility. |
| 17 | L | ½ Mile South of Duffields | Two 90-degree turns. |
| 17 | L | 1 Mile South of Rt. 230 Intersection | S-Curves |
| 18 | L | Intersection with Rt. 17 North of Rt. 24 | Poor intersection angle causing poor visibility. |
| 21 | L | 1 Mile East of Rt. 340 at Rippon | Two 90-degree turns. |
| 22 | L | Intersection with Rt. 17 | Poor visibility. |
| Rt. 32 | L | Intersection with Rt. 340 | Poor intersection angle causing poor visibility, steep grade of road is dangerous when icy or wet. |

Road Classifications: P = Primary, S = Secondary, L = Local Service Road



*EXHIBIT 9*
*PAGE 2/2*

## Exhibit 10 Schedule A& B Title Insurance

**ALTA OWNERS POLICY**
**SCHEDULE A**

Policy No **0-9993-2983558**
Date of Policy: **February 04, 2005**

Amount of Insurance. **$1,000,000.00**
File No.: **05-186J**

1 Name of Insured:

**HARRY M. KABLE and CAROL F. KABLE**

2 The estate or interest in the land which is covered by this policy is **FEE SIMPLE**

3 Title to the estate or interest is vested in·

**HARRY M. KABLE and CAROL F. KABLE**

4 The land herein described is encumbered by the following:

**Deed of Trust from HARRY M. KABLE and CAROL F. KABLE to David D. Pill and Scott K. Swaim, Trustee(s) dated 02/03/05, and recorded February 04, 2005 in the Office of the Clerk of the County Commission of Jefferson, West Virginia in Deed of Trust Book 1395 at Page 0644. This deed of trust is to secure a note made payable to Valley Farm Credit, ACA in the principal sum of $1,100,000 00.**

5 The land referred to in this policy is described as follows

**All those certain tracts of land with improvements thereon, situated in the Middleway District of Jefferson County, West Virginia, and more particularly described as follows:**

**ALL OF MERGER PARCEL "1", containing 74.820 acres, more or less, and ALL OF MERGER PARCEL "2", containing 122.377 acres, more or less, as is more particularly described on a plat thereof made by Appalachian Surveys, Inc., 2 June, 1995, and recorded in the Office of the Clerk of the County Commission of Jefferson County, West Virginia, in Plat Book 13, at Page 45. to which reference is hereby made for a more particular description of the real estate herein conveyed, said real estate containing 197.197 acres, more or less, together with all easements and appurtenances thereunto belonging, LESS AND EXCEPTING 1.487 acres conveyed to Richard J. Jenkins and Christine L. Jenkins dated July 1, 1999 and recorded in the aforesaid Clerk's Office in Deed Book 928 at Page 199..**

This policy is valid only if Schedule B is attached

**SCHEDULE B**

File No # **05-186J** Policy No # **0-8993-2983558**

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of

1 Rights or claims of parties in possession not shown by the public records.

2. Easements, or claims of easements, not shown by the public records

3 Encroachments, overlaps, boundary line disputes, or other matters which would be disclosed by an accurate survey or inspection of the premises.

4. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records

5 Those taxes or special assessments which become due and payable subsequent to Date of Policy

**The mortgage, if any, referred to in Item 4 of Schedule A, and the following exceptions:**

**6. Joint Well Agreement dated February 15, 1916 and recorded in the aforesaid Clerk's Office in Deed Book 113, at Page 559.**

**7. Right of Way to Northern Power Company dated April 18, 1941 and recorded in the aforesaid Clerk's Office in Deed Book 154, at Page 554.**

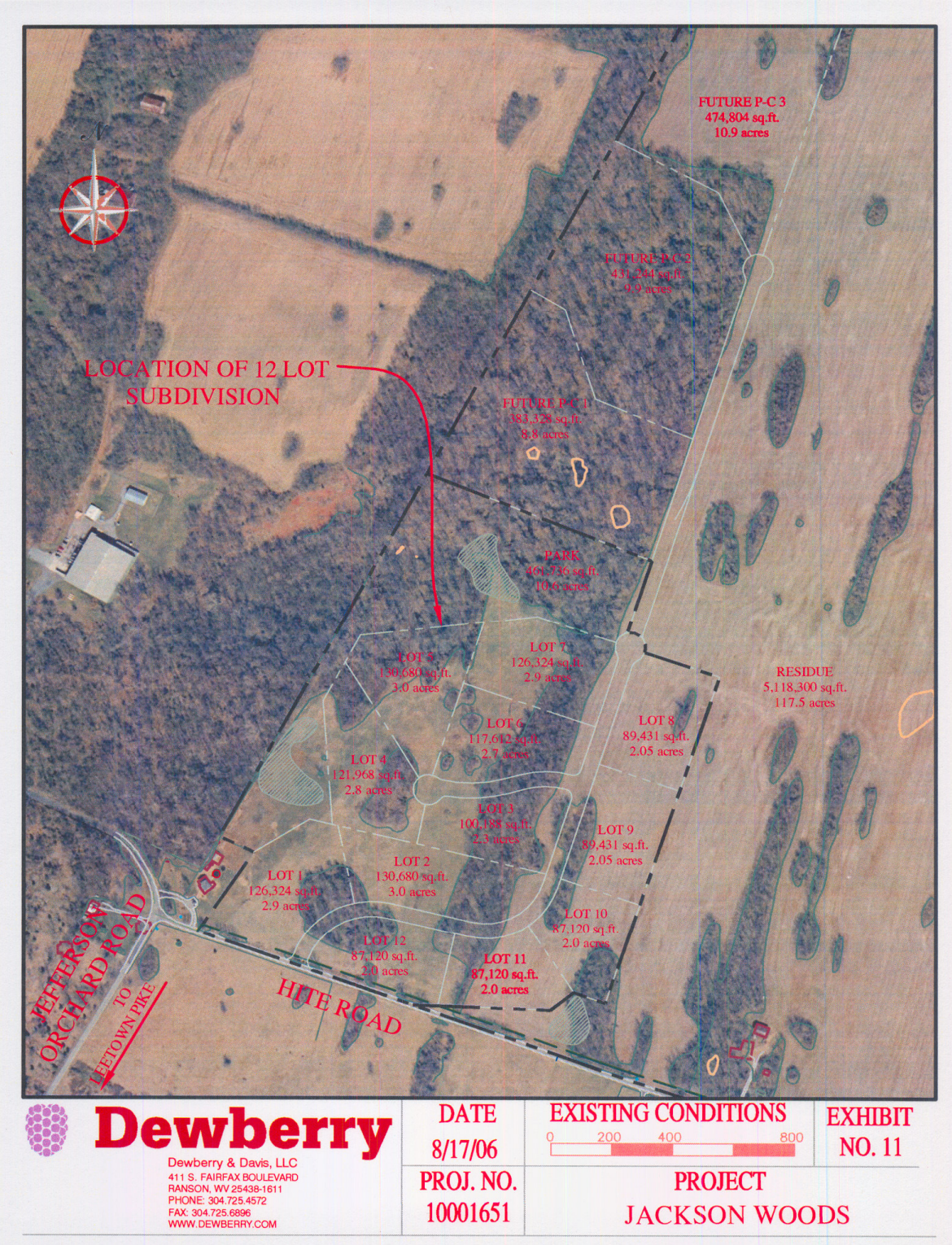
**8. Right of Way to Northern Power Company Dated March 24, 0941 and recorded in the aforesaid Clerk's Office in Deed Book 155, at Page 351.**

**9 Easement to the West Virginia Department of Highways dated February 14, 1978 and recorded in the aforesaid Clerk's Office in Deed Book 438, at Page 539.**

Countersigned:

Authorized Signatory

## Exhibit 11: Existing Conditions:



## Exhibit 12: Portions of Karst Assessment Report:

# Karst Assessment Report

**Jackson Woods Residential Subdivision**
**Kearneysville Area**
**Jefferson County, WV**

Prepared for:

**Mr. Marty Kable**
336 Rosemont Way
Martinsburg, WV 25414

Prepared by:

Specialized Engineering
503 South Fairfax Boulevard
Ranson, West Virginia 25438
(304) 724-2159

November 13, 2006

File No. 063569

**SPECIALIZED ENGINEERING**
*Engineers • Geologists • Inspectors*

**SPECIALIZED ENGINEERING**
*Engineers • Geologists • Inspectors*

November 13, 2006

***Principals***
David I. Wiegand, P.G.
Charles R. Mitchell, P.E.
Gregory S. Seldon
David S. Schultz, P.E.
Patrick S. Norton, P.E.
Al Nouri, Ph.D., P.E.

Mr. Marty Kable
336 Rosemont Way
Martinsburg, WV 25414

Re: **Karst Assessment**
**Proposed Jackson Woods Residential Subdivision**
Kearneysville Area, Jefferson County, WV
SE Project No. 063569

Dear Mr. Kable:

**Specialized Engineering** is pleased to provide our Karst Assessment of the proposed Jackson Woods Residential Subdivision, located on Hite Road in Jefferson County, West Virginia.

The content of this report explains in detail the procedures undertaken for the study and the findings of each of the procedures. Our conclusions and recommendations are based in part upon information provided by federal, state, and local regulatory agencies; information gathered by Specialized Engineering personnel; our site observations; and our experience with similar projects in the site area. Although we cannot be responsible for the accuracy of the data provided to us by others, there was no indication that any of the information provided is inaccurate. The contents of this report should not in any way be construed to indicate that Specialized Engineering is recommending purchasing, selling, or developing the project site.

Thank you for engaging our services to undertake this project. If you have any questions or require additional information, please do not hesitate to contact us at your convenience.

Respectfully submitted,
**Specialized Engineering**

Glenn R. Pyle, P.G.
Project Manager

Ira L. Helms, P.G.
Director, Geological and
Environmental Services

7504 Connelley Drive, Suite G • Hanover, Maryland 21076
Phone: 410-768-4800 • Fax: 410-768-4803 • www.specializedengineering.com

Karst Assessment
Jackson Woods Residential Subdivision
Jefferson County, West Virginia

**TABLE OF CONTENTS** **PAGE**



Items hi-lited in yellow are included in Exhibit 12



**Note:** Items hi-lited in yellow are included in this CIS.

## 1.0 EXECUTIVE SUMMARY

### 1.1 Karst Geology

The subject site is located in an area underlain by carbonate rock units of Upper Cambrian and Lower Ordovician age. A direct visual survey for karst features at the site was performed along with a review of literature. Several sinkholes were observed on the property. Any sinkholes that will be impacted by the proposed development should be remediated prior to site development using the graded-fill method as per the guidelines for sinkhole remediation specified by the WVDEP and detailed in this report. In addition, the cave survey databases reviewed did not list any mapped caves in the area of the site. Existing known sinkholes records did not record any features for the project site.

Based upon the site reconnaissance, Specialized Engineering did not encounter conditions suggesting that there are geological hazards or terrain limitations that may restrict residential development at the subject site as it is currently planned (except as noted below). Specific recommendations regarding the proposed site improvements, remedial activities, and stormwater management in karst terrain, are included in the body of the report.

As indicated in this report, the bedrock and overlying soil below the site are susceptible to sinkhole development, as indicated by several sinkholes present at the property. Risk associated with sinkholes can be minimized, during development, with proper foundation design and construction and the control of site hydrology. The Owner must recognize, however, that a risk of sinkhole-induced damage to foundations, floor slabs, and pavements does exist. The Owner must evaluate the risks and attendant costs of development, and must be willing to accept them.

The owner/designer should not rely solely upon the executive summary and must read and evaluate the entire contents of this report, prior to utilizing our recommendations in the preparation of conceptual design and/or construction documents.

## 2.0 SITE LOCATION AND TOPOGRAPHY

The subject property is an approximate 195-acre parcel of undeveloped land located to the north of Hite Road, east of the intersection of Hite Road and Jefferson Orchard Road, approximately 1¼ miles north of Leetown Pike in the Kearneysville area of Jefferson County, West Virginia. A site location map is provided as Figure 1 of Appendix A

According to the 2-foot contour map provided by Dewberry and Davis, LLC for the property, the site topography generally consists of gently rolling terrain. Site elevations range from 540 to 600 feet above mean sea level (MSL), with the highest elevation on the eastern border of the site and the lowest elevations on the southwest corner of the property. The entire property generally trends to the southeast.

The USGS 7.5 minute Topographical Quadrangle Map (Middleway, WV) was reviewed as a part of this assessment. An excerpt of the topographic map is included as Figure 1 to this report.

## 3.0 SITE GEOLOGY

According to the *Geologic Map of West Virginia* published by The West Virginia Geological and Economic Survey, the subject property is located within Great Valley Section of the Valley and Ridge Physiographic province. The Great Valley is a generally downwarped trough of Paleozoic limestones, shales, and sandstones situated between the Blue Ridge Massif on the east, and the Allegheny Mountains to the west. The valley extends between the two mountain uplands trending from northeast to southwest, parallel with the strike of the bedrock.

### 3.1 Bedrock Identification

According to the Geological Map[1] of the property the predominant parent bedrock unit for the project site is the Upper Cambrian to Lower Ordovician aged Conococheague Formation. This unit is a relatively thick carbonate (approximately 2,400 feet) and includes interbedded limestone, dolostone, dololaminite and sandstone. The lower portion is interbedded with oolites, intraformation conglomerates and stromatolite structures. The strike of the formation is to the northeast, with bedding planes dipping to the southeast at 20 to 50 degrees. The site is located to the east of the Blizzard syncline (a downward folded arch of rock layers).

In areas where bedrock was exposed, field observations compared favorably to the published descriptions. An excerpt of the local geological map is included as Figure 2, Attachment A.

### 3.2 Structural Geology

The site structural geology has direct bearing on the terrain, karst development, and hydrology of the property. The property is partially bounded on the western border by a thrust fault (Kearneysville Fault) that trends in a general southwest to northeast direction. The fracturing associated with the faulting in this area is a significant factor in the development of sinkholes in

[1] Dean, S. L., et al., 1990, Geology of the Berryville, Charlestown, Harper Ferry, Middleway and Round Hill Quadrangles, Jefferson County, West Virginia; WVGES, Map WV-35

carbonate rock (e.g., limestone). As rainwater flows along the fractures and bedding planes, soil is washed away and dissolution of the surrounding bedrock takes place. Openings in the rock increase in size, and an underground drainage system may to develop, allowing more water to pass through and accelerating the formation of underground karst features. These underground features may eventually collapse, thereby creating surface features such as sinkholes or dolines (closed basins).

### 3.3 Hydrology

There are no permanent bodies of open surface water on the site. The closest perennial stream to the property is an unnamed tributary to Hopewell Run, located approximately 500-feet south of the site.

Based on local hydrological data[2], groundwater at the site has been inferred to occur at an elevation of 500-feet MSL in the site area. Recent pump test data[3] for a domestic water supply well on the adjacent property to the west indicates that the static water level was recorded at 40-feet below grade. On the basis of these data it can be inferred that groundwater throughout the site generally resides at approximately 40 feet below existing grade.

## 4.0 KARST ASSESSMENT

### 4.1 Karst Geology

As in any region where soluble bedrock is present, a karst landform regime has developed in the area of the subject site. Folding of the local carbonate rocks during faulting has opened up numerous fractures both parallel with the axis of the folds, as well as perpendicular to them. Surface fractures and joints weather differentially in these terrains, producing a pinnacled or "sawtooth" profile at the bedrock/soil interface. In contrast, rock-enclosed fractures can be secondarily enlarged by the action of carbon dioxide (acidic) charged groundwater, in some cases forming water-filled or air-filled conduits. The slow raveling of soil into these conduits can produce sinkholes. As the regional terrain is "mature" karst, nearly all the fractures have undergone successive cycles of sediment filling and flushing.

In the Jefferson County area, prominent karst features such as caves, sinkholes, and collapse lineaments are most strongly developed near active drainages and incised stream valleys, especially near the Potomac and Shenandoah Rivers and their major tributaries. In addition, karst development may be accelerated by a steepening of the hydraulic gradient as a result of man-made dewatering (e.g. quarries, community wells, etc.).

At the time of our field observations the most prevalent solutional (karst) feature at this site was pinnacled bedrock, particularly in the form of a series of linear rock outcrops trending parallel to the strike of the bedrock (NE), primarily in the central areas of the site. Each of these outcrop

[2] Hobba, William A., 1981, Ground-water Hydrology of Jefferson County, West Virginia; USGS, EGB-16

[3] McCoy, K.J. et al., 2005, Fracture Trace Map and Single-Well Aquifer Test Results in a Carbonate Aquifer in Jefferson County, West Virginia, USGS Open-File Report 2005-1407

areas was carefully examined for the presence of karst features, as they often are the locations of soil raveling and sinkholes. Four separate sinkholes were noted during our site inspection. The locations of the sinkholes are indicated on Figure 3 in Appendix A. Two sinkholes, approximately 75 apart, were noted in a swale in the planned park area to the north of proposed Lot 5. One small sinkhole was observed on the western property line, in a swale in the planned park area to the west of proposed Lot 4. A single sinkhole was located in a swale within a wooded area in the southeast corner of proposed Lot 3. (see Site Photographs, Attachment B). All of the sinkholes noted during our site inspection appeared to be generally stable, with no evidence of recent soil raveling, tension cracks in the surrounding area, or fresh subsidence.

With the exception of the aforementioned sinkholes, no additional caves, surface sinkholes or incipient sinkholes were observed during our site fieldwork (October 2006). One small area of closed descending contours was observed upon analysis of a 2-foot contour map prepared for the site by the client's civil engineer. The area is located to the west of the abandoned structures located along Hite road. The depression was inspected during our site visit and appeared to be stable with no observable sinkholes.

Finally, examination of data[4] from the West Virginia Geological and Economic Survey's "Caves of West Virginia" (Davies 1965), the West Virginia Speleological Survey Bulletin, and West Virginia Department of the Environment, did not reveal any known caves, springs or sinkholes previously recorded for the site.

## 5.0 SUMMARY AND CONCLUSIONS

Specialized Engineering has completed a karst assessment of the proposed Jackson Woods residential subdivision. Based on the results of our study we would like to present the following findings and recommendations:

The subject site is located in an area underlain by carbonate rock units of Upper Cambrian to Lower Ordovician age. A direct visual survey for karst features at the site was performed along with a review of literature. Four shallow sinkholes are noted on the property. Any sinkholes that will be impacted by the proposed development should be remediated prior to site development using the graded-fill method as per the guidelines for sinkhole remediation specified by the WVDEP and detailed in this report. Existing known sinkholes records did not record any features for the project site.

Based upon the site reconnaissance, Specialized Engineering did not encounter conditions suggesting that there are geological hazards or terrain limitations that may restrict residential development at the subject site as it is currently planned (except as noted below). Specific recommendations regarding the proposed site improvements, remedial activities, and stormwater management in karst terrain, are included in the body of the report.

[4] References cited *include*: 1.) Gulden, Robert & Mark Johnsson, 1984, Caves of the Eastern Panhandle of West Virginia, WVSS Bulletin #8; 2.) Davies, W. E., Caverns of West Virginia, WVGES, 1965; 3.) Hobba, W. A., 1976, Ground Water Hydrology of Berkeley County, W. Va., USGS, WV Geological and Economic Survey, and the Berkeley County Court; 4.) Karst database (proprietary), West Virginia Speleological Survey

As indicated in this report, the bedrock and overlying soil below the site are susceptible to sinkhole development, as indicated by the several sinkholes present at the property. Risk associated with sinkholes can be minimized, during development, with proper foundation design and construction and the control of site hydrology. The Owner must recognize, however, that a risk of sinkhole-induced damage to foundations, floor slabs, and pavements does exist. The Owner must evaluate the risks and attendant costs of development, and must be willing to accept them.

## 6.0 RECOMMENDATIONS

Based upon our survey of the property, research of various data, and the information presented in this report, Specialized Engineering recommends the following:

- Any trash, debris, or dumped refuse located in the sinkholes should be removed prior to development. Debris should be inspected as a potential source for the introduction of environmentally hazardous substances (e.g.: batteries, HVAC units, drums, compressors, transformers, automobile parts, etc.).

- Any sinkholes that are impacted by the development should be cleaned out and remediated using the graded filter technique as specified in the attached WVDEP guidelines (Appendix C).

- Restrictive covenants should be established in any future land transfer document regarding parcels that may encompass any karst feature that has been designated for protection or management.

- If any sinkholes should form during construction, a professional engineer or geologist with experience in karst issues should be contacted to observe the structure and provide recommendations and oversight for remediation.

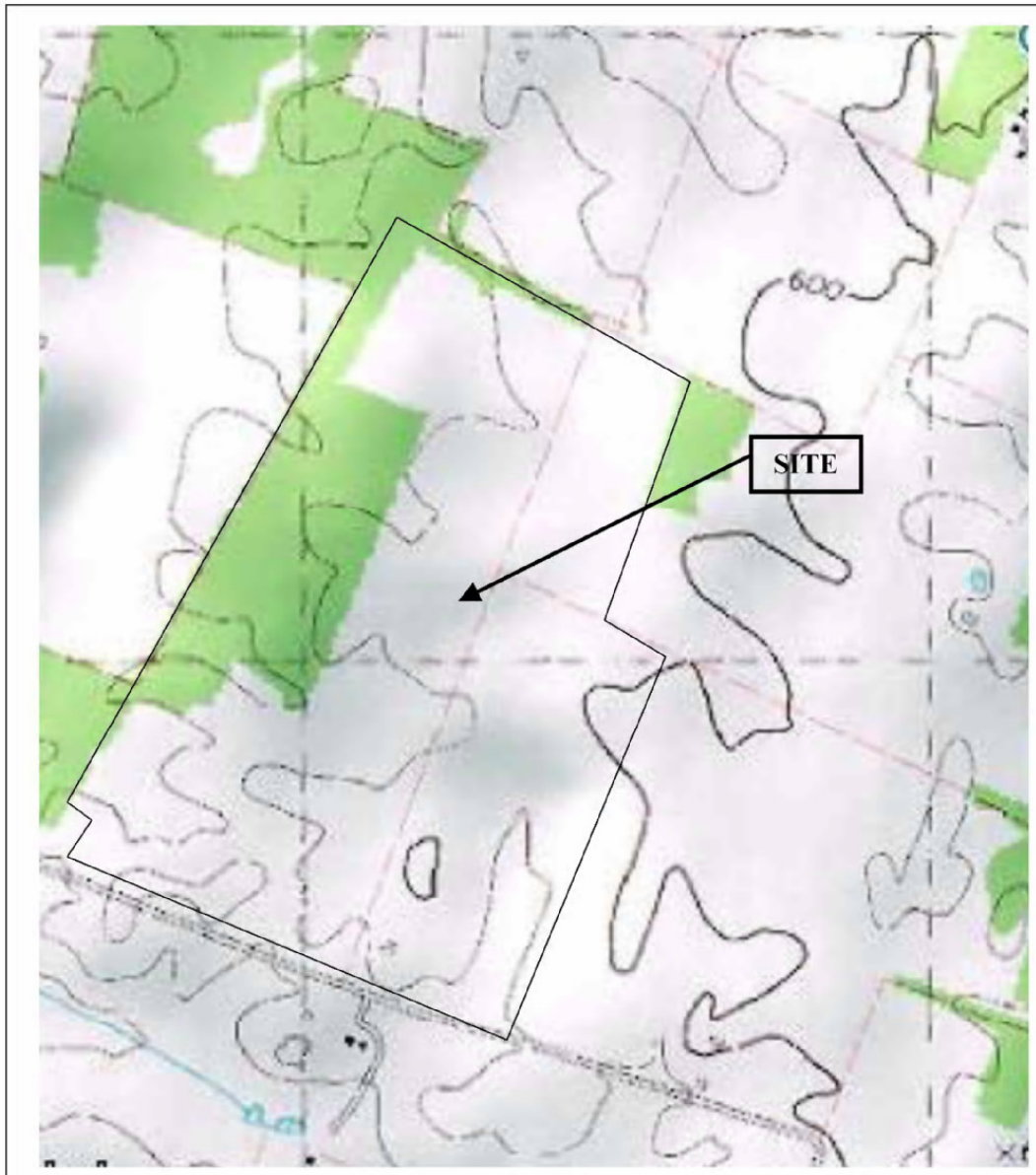
- Blasting is not expected to affect any water-filled subsurface conduits at the site. As in any region with karst-prone bedrock, blasted areas should be thoroughly cleaned of loose, "shot" rock, and inspected for open fractures or voids prior to backfilling. Disturbed, blasted areas can act as pathways into subsurface open fractures for soil raveling and the formation of new sinkholes or subsidence. If sinkholes, voids, or fractures are intercepted by blasting they should be closed using concrete or pressure grouting techniques. A recommended treatment for small karst structures using concrete is shown on Figure 4.

## 7.0 LIMITATIONS AND ASSUMPTIONS

This report has been prepared for the sole and exclusive use of Mr. Marty Kable and his engineering consultants for the specific application to proposed Jackson Woods Residential Subdivision and has been prepared in accordance with generally accepted geological practices. No other warranty, either expressed or implied, is made. Our conclusions and recommendations are based, in part, upon information provided to us by others and our visual site observations. We have typically not verified the completeness or accuracy of the information provided by

others. Our observations are based upon conditions visually apparent at the site at the time of our site visit and are not intended to address specific subsurface soil and groundwater conditions, which can only be determined by performing a detailed subsurface sampling program. The contents of this report should not be construed in any way to indicate Specialized Engineering's recommendations to purchase, sell, or develop the project site.

Specialized Engineering by virtue of providing the services described in this report, does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies any conditions at the site that may present a potential danger to public health or safety. In areas that require notification of local, state, or federal public agencies as required by law, it is the Client's responsibility to so notify.




Reference: USGS Topographic Map Middleway, West Virginia (1974)

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*Geotechnical & Forensic Engineering*

**Figure 1. Topographic/Site Map**

Project No. 063569 Appendix A


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*Geotechnical & Forensic Engineering*

**Figure 3. Sinkhole Location Map**

Project No. 063569 Appendix A

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*Geotechnical & Forensic Engineering*

**Jackson Woods Photolog**

Project No. 063569 Appendix B

Sinkhole north of Lot 5 in wooded park area

Sinkhole north of Lot 5 in wooded park area

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*Geotechnical & Forensic Engineering*

**Jackson Woods Photolog**

Project No. 063569 Appendix B

Sinkhole north of Lot 5 in wooded park area

Sinkhole along property line west of Lot 4

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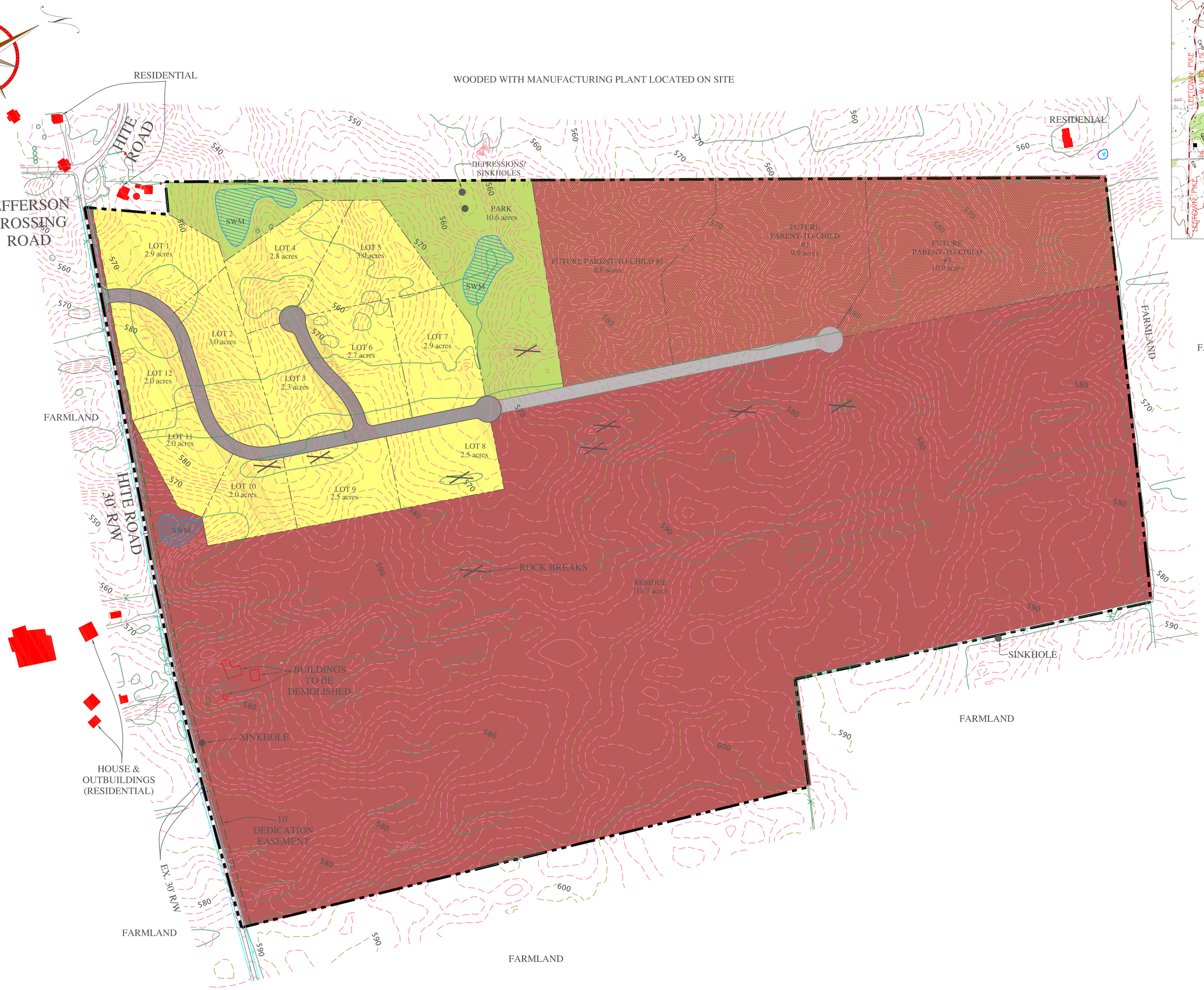
*Construction Quality Control • Environmental Consulti*
*Geotechnical & Forensic Engineering*

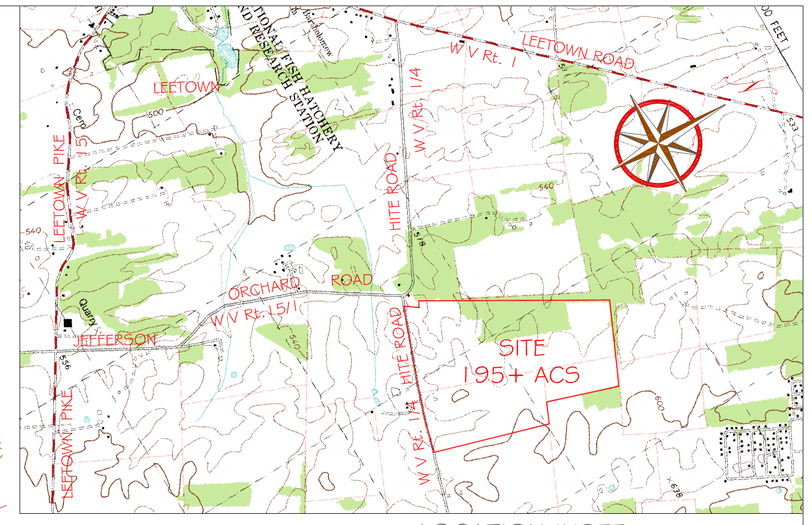
**Jackson Woods Photolog**

Project No. 063569 Appendix B

Sinkhole in wooded area in southeast corner of Lot 3

Closed depression west of abandoned structures along Hite Rd.




LOCATION INSET
SCALE: 1" = 2000'

SYMBOL LEGEND

| | |
|---|---|
| SWM AREA | |
| EASEMENT BOUNDARY | |
| PROPERTY BOUNDARY | |
| LOT LINE | |
| ROW - PAVED | |
| ROW - TO SERVE P-TO-C | |
| LOTS | |
| RESIDUE | |
| PARK | |
| PARENT TO CHILD LOTS | |
| BUILDINGS TO BE DEMOLISHED | |
| EXISTING BUILDINGS | |
| EXISTING TREELINES | |
| EXISTING ROCK BREAKS | |
| EXISTING DEPRESSIONS/SINKHOLES | |

**Dewberry**

Dewberry & Davis, LLC
411 S. FAIRFAX BOULEVARD
RANSON, WV 25438-1611
PHONE: 304.725.4572
FAX: 304.725.6896
FAX: 304.725.6896

# Sketch Plat showing JACKSON WOODS Middleway District Jefferson County, West Virginia

## LOT ACREAGE

| | |
|---|---|
| RESIDUE | = 118.7 ACS. |
| LOTS | = 30.7 ACS. |
| PARENT-TO-CHILD | = 29.6 ACS. |
| PARK | = 10.6 ACS. |
| RIGHT-OF-WAY | = 6.1 ACS. |
| TOTAL | = 195.7 ACS. |

## SET BACK LIMITS FOR LOTS 1-12

Front.....25'
Rear.....20'
Side.....12'

## SET BACK LIMITS FOR PARENT TO CHILD LOTS

Front.....40'
Rear.....50'
Side.....15'

Height Limit-35 ft.
Right-of-way is 50'.
Contours based on aerial photogammetry.

| No. | DATE | BY | Description |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| 2 | 9/15/06 | CBB | Revisions per staff comments |
| 1 | 9/7/06 | CBB | Revisions per staff comments |

REVISIONS

SCALE: 1"=200'

GRAPHIC SCALE

0 100 200 400

( IN FEET )
1 Inch = 200 ft.

| | |
|---|---|
| DRAWN BY | C. Blackford |
| APPROVED BY | A. vanHilst |
| CHECKED BY | A. vanHilst |
| DATE | September 7, 2006 |

SKETCH PLAT

PROJECT NO. 1001651

SHEET NO. 1 OF 1