

**HPC Review**

**HPC2014-03-01**

**Public Ways and Property Permit**

**CSX – Humpback Bridge Modifications**

**Page 1 of 4**

A 70% submission for the modifications to the Deer Park Bridge was submitted to the Town February 2014. They were reviewed by the HPC at its monthly meeting on Tuesday, February 18. The applicant did not attend the meeting. The submission is represented as 70% complete. The HPC is providing its formal review at this time. Unless the 100% permit documents represent a substantial change in design, the Commission will not need to review again for the permit.

**General Description:** The proposed project consists of alterations to the Washington Grove Humpback Bridge which arcs over a blind curve in the CSX Railroad tracks between Gaithersburg and Rockville, connecting Washington Grove with E. Deer Park Drive, Oakmont Avenue, and Central Avenue. The subject bridge replaced a c. 1880's humpedback timber king-post truss bridge, at the same location. The current bridge was built in 1945 and though various components of the bridge have been replaced over time, it has maintained its 1945 design and most of its 1945 materials.

**Adequacy of the Documents Submitted:** The documents submitted were sufficient for the HPC's review of the project. Documentation included Drawings dated 1/13/2014; outline specifications, calculations and comment responses were submitted to the Town in February 2014.

The current design was first presented to the Town by CSX in the fall of 2013 after several years of negotiations where the Town pressed for minimizing any alterations to the Bridge, Railroad Street, or the adjoining treed embankment.

**General Scope of Project:** The project consists of replacement of the upper portions of the bridge in order to provide slightly taller clearance for the passage of taller freight cars. The project is part of a larger project that will enable greater freight handling to the port of Baltimore from the west. This requires removal of the present superstructure - guardrails, asphalt paving, wooden planking and steel framing (steel beams replaced the 1945 heavy timber ones in 1988). The two 1988 heavy timber bents supporting the steel framing were replaced in kind in 2009, on the 1945 concrete piers, and will remain. The 1945 concrete abutments and foundations will also remain.

Additional wood blocking will be placed on the timber bents to provide bearing for new rolled steel beams that will connect the Deer Park side with the Washington Grove side in a gentle arc, replacing the 1988 steel I-beams. New timber planking, asphalt roadway and timber guardrails will be installed similar to the current bridge. The approach from the Deer Park side will require slight elevation of the existing roadway. This will be accomplished with an approach slab and milled asphalt. The Washington Grove side will not be raised and will require a slight milling of the asphalt to meet the profile of Railroad Street. The grades of the two sloping sides of the bridge will be slightly steeper than the current bridge. New metal guardrails will be installed along the track side of Railroad Street either side of the bridge.

No alterations to the wiring or traffic signals are anticipated. The construction lay down space will be on Deer Park Road. Scrub vegetation between the tracks and Railroad Street may be impacted by the construction, but no other trees or embankment vegetation is indicated to be affected on the Washington Grove side.

**Visibility from public ways:** The project will be visible from Railroad Street, Chestnut Avenue, Chestnut Road, Hickory Road and the Marc Train Depot.

**Protected status of CSX-Humpback Bridge.** In 2005, the Montgomery County Historic Preservation Commission voted to place the Humpback Bridge on the **Locational Atlas and Index of Historic Sites** in Montgomery County, based on the evidence set out in MHT Maryland Inventory of Historic Properties Form 21-220. Based on that same evidence, the MHT declared the bridge to be eligible for listing on the National Register of Historic Places. The bridge may also be considered a contributing resource to the Metropolitan Branch B&O Historic District and the Washington Grove Historic District.

The Town of Washington Grove values and intends to maintain these protections extended by the County and State to the significance, integrity, and historic character of the bridge. The County's modifications to the bridge should be conducted in such a way as to retain the historic, character-defining features of the bridge.

As set out in the 2005 MHT form, the specific historic features of the superstructure are as follow:

- Glue-laminated, yellow pine panel, asphalt-covered bridge deck, with a humpback center profile;
- Painted steel beams;
- Outer spans sloping downward 11.7%;
- Wood railing comprised of a curving wood handrail, a larger laminated creosoted wood rail, attached to wood posts bolted to the top of the deck with galvanized shoes;

Historic features of the substructure are as follow:

- Trapezoidal timber bents, creosoted, resting on concrete piers;
- Concrete abutments, wingwalls, and sloping grade between abutments and bent piers.

It is the opinion of the Montgomery County Historic Preservation Commission, the Maryland Historical Trust, and the Town's historic railroad and engineering consultant that the proposed modifications are consistent with the historic character and integrity of the bridge and do not threaten the bridge's legally protected status.

**Impact on character-defining features:** The presence of the bridge is inseparable from that of Washington Grove itself, originating in the same era –WG in the 1870s, the bridge in the 1880s; maturing together – Camp Meeting becoming a Town in 1930s, bridge rebuilt in 1940s; and aging gracefully together to this day. It was the first image that greeted those that flocked to the Camp Meeting revivals, the summer residents, the sojourners and visitors, and the last image as they boarded the train to return to their normal lives in the bustling city; and it continues to greet as just the opposite happens now: morning commuters depart their “special time and place” and the evening commuters return to the peace and tranquility that marks our very fortunate community.

For those not arriving by train, the unusual experiences of waiting to cross a single lane bridge, lofting over a whistling train, and plunging into the separate environment that is Washington Grove is as equally unique and memorable as the train arrival. It successfully throws you back to the time before life became engineered primarily for the automobile. The quirky contortions that may appear problematic are those that have successfully accommodated to their context. That the bridge “has character, interest and value as part of our development, heritage” and culture is clear.

The character and form of this part of the County is the result of railroad driven development, and we as well as the other Railroad Communities represent the closest connection with its linear nature and the difficult contradictions of its dividing and uniting forces. This explicit contradiction is exemplified by this bridge and the poetic tension it embodies between the connection and separation of communities that was the historic heritage of the railroad. It appears that it is likely the last of its kind remaining along this railway.

The history of the bridge is firmly linked to the tradition of timber trussed bridges common both to the County and USA. It retains its singular shape, timber bent supports, wood decking, concrete abutments and wooden rails

characteristic of this class of structure. Its hand-worked elements as well as the scale make it of a piece with the surrounding environment that still speaks of the rural heritage at the heart of the County.

The proposed design retains the scale and intrinsic character of the existing bridge: the concrete abutments, timber bents, arching roadway and rustic guardrails. The minor increase in height will likely be little noticed. The existing rural character and forested context will be preserved.

**Nearby contributing resources:** Contributing resources in the immediate vicinity include the houses on Brown between Hickory and Chestnut Roads, and the former Oddfellows Hall at the Commercial Corner. The avenues and roads and rural context are equally significant elements identified in the nomination of the Town to the National Register of Historic Places.

**Compatibility with the historic district:** The Washington Grove Historic District is anchored at this northwest corner by the commercial development that sprang up at this crossing point of the railroad. This development is decidedly agricultural and utilitarian in nature as evidenced by the grain elevator and tractor sales. The current bridge is an integral part of it. The proposed modifications retain the integrity of the ensemble.

**HPC Recommendations:**

1. Provide copies of images of current conditions of character-defining features of bridge to supervising county employees and contractors for reference.
2. Add the handrail feature and galvanized stirrups similar to the existing guardrail
3. Provide a historic marker commemorating the role of the bridge in the County and Town heritage.
4. Provide paint samples for review by the Town.
5. Remove the green paint or repaint the concrete foundations after repair a color to match concrete.



Robert Booher  
for the Historic Preservation Commission

Date: March 26, 2014

cc: Applicant Planning Commission  
HPC members Mayor Georgette Cole  
HPC Binder Town Clerk, Kathy Lehman  
Web site, Bill Saar

Index of Attachments

1. *MIHP form no.21-220, upon which designation to the Locational Atlas and Index of Historic Sites in Montgomery County, Maryland, was based.*
2. *Addendum to MIHP form no. 21-220, specifically regarding integrity.*
3. *Montgomery County Historic Preservation Commission proposed amendment to Master Plan for Historic Preservation, specifically including how the Humpback Bridge meets the County ordinance requirements and setting site boundaries.*

4. *Memorandum from County Transportation Planning Department outlining plans to replace the Humpback Bridge and its approaches with a four-lane oblique crossing of the CSX tracks.*
5. *Written decision of Montgomery County Planning Board to place Humpback Bridge on Location Atlas, and deferring the recommended placement of the bridge on the Master Plan for Historic Preservation until after a future further hearing.*
6. *Email from Peter Kurtze, Maryland Historical Trust, November 12, 2013, stating that the proposed CSX modifications to the Humpback Bridge would not affect its continued eligibility for the National Register of Historic Places.*
7. *Letter from Scott Whipple, Montgomery County Historic Preservation Commission, stating that the proposed CSX modifications to the Humpback Bridge would not affect its continued designation to the Locational Atlas.*
8. *Email from Larry Lee, Historic American Engineering Record (HAER), National Park Service, stating that CSX's planned modifications to the Humpback Bridge are reasonable and do not adversely affect the historic integrity of the bridge.*
9. *Photos of current condition of character-defining features of the Humpback Bridge, taken by Bob Booher, March 22, 2014.*

*Please note that the Historic Preservation Commission acts only in an advisory capacity to both applicants and the Planning Commission. The reviews undertaken are designed to assist homeowners in their projects, to provide input to deliberations of the Planning Commission and, more generally, to contribute to historic preservation in Washington Grove.*

*Further information regarding the scope, powers, duties, and structure of the Historic Preservation Commission may be found in Article XV of the Code of Ordinances of the Town of Washington Grove. Section 5 (a) of Article XV describes the powers and duties of the Historic Preservation Commission in the building permit process. This section reads as follows:*

*The Commission shall review all applications for building permits filed with the Town Planning Commission which would involve any change to a structure or site visible from any public way for historical accuracy, integrity, or compatibility with the neighborhood and improvements therein. The Commission may recommend to an applicant alternative historical designs, materials and sources for the same which may be more historically compatible. The Commission shall forward its recommendations regarding the same, if any, in an advisory capacity, to the Planning Commission for consideration by the Planning Commission within thirty (30) days from the Commission's receipt of the application from the Planning Commission*

1. MIHP form no.21-220, upon which designation to the Locational Atlas and Index of Historic Sites in Montgomery County, Maryland, was based.

# Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. 21-220

## 1. Name of Property (indicate preferred name)

historic Washington Grove Hump Back Bridge (preferred)  
 other B & O Bridge 21B; Montgomery County Bridge #0132; East Deer Park Drive bridge

## 2. Location

street and number East Deer Park Drive over CSX tracks at Railroad St. not for publication  
 city, town Gaithersburg, Md vicinity-  
Gaithersburg  
 county Montgomery

## 3. Owner of Property (give names and mailing addresses of all owners)

name Montgomery County, Md  
 street and number County Office Building telephone  
 city, town Rockville state MD zip code 20855

## 4. Location of Legal Description

courthouse, registry of deeds, etc. Montgomery County Land Records, Judicial Center liber EPB folio 101 and 105  
 city, town Rockville tax map ET61 tax parcel none tax ID number  
none

## 5. Primary Location of Additional Data

- Contributing Resource in National Register District
- Contributing Resource in Local Historic District
- Determined Eligible for the National Register/Maryland Register
- Determined Ineligible for the National Register/Maryland Register
- Recorded by HABS/HAER
- Historic Structure Report or Research Report at MHT
- Other: \_\_\_\_\_

## 6. Classification

Category	Ownership	Current Function	Resource Count
<input type="checkbox"/> district	<input checked="" type="checkbox"/> public	<input type="checkbox"/> agriculture	Contributing
<input type="checkbox"/> building(s)	<input type="checkbox"/> private	<input checked="" type="checkbox"/> landscape	Noncontributing
<input type="checkbox"/> structure	<input type="checkbox"/> both	<input type="checkbox"/> commerce/trade	<input type="checkbox"/> buildings
<input checked="" type="checkbox"/> site		<input type="checkbox"/> defense	<input type="checkbox"/> sites
<input type="checkbox"/> object		<input type="checkbox"/> domestic	<input checked="" type="checkbox"/> structures
		<input type="checkbox"/> education	<input type="checkbox"/> objects
		<input checked="" type="checkbox"/> transportation	<input type="checkbox"/> Total
		<input type="checkbox"/> funerary	
		<input type="checkbox"/> government	
		<input type="checkbox"/> health care	
		<input type="checkbox"/> industry	
		<input type="checkbox"/> other:	

Number of Contributing Resources  
previously listed in the Inventory

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## 7. Description

Inventory No. 21-220

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### Condition

excellent       deteriorated  
 \_\_\_\_\_ good       ruins  
 fair               altered

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Prepare both a one paragraph summary and a comprehensive description of the resource and its various elements as it exists today.

### SUMMARY

The Washington Grove Hump Back Bridge carries East Deer Park Drive in Gaithersburg over the CSX tracks to intersect with Railroad Street at Washington Grove, in Montgomery County. The bridge's three green-painted steel I-beam spans extend about 85 feet across and 20 feet above the double tracks and roadbed. It is supported by concrete abutments at its approaches and a pair of timber bents/piers on either side of the tracks. The bridge gets its name from the hipped or humped shape of its profile. Its approaches are steep asphalt two-lane country roads. The setting of the bridge is largely rural open space and woods. To the east is open space on either side of the tracks, flanked by Oakmont Avenue on the south and Railroad Street to the north. To the west of the bridge are some small scale commercial buildings to the north and woods to the south.

### DESCRIPTION

The Washington Grove Humpback Bridge is located in Montgomery County, MD, just east of the City of Gaithersburg and just to the south of the Town of Washington Grove. The bridge carries East Deer Park Drive over the CSX tracks to form a T-intersection with Railroad Street, the former Route 124. Traffic turning right off the bridge onto Railroad Street proceeds down the approach toward Washington Grove and the at-grade Aitchison crossing onto Oakmont Avenue. Traffic turning left at Railroad Street reaches the Washington Grove commercial corner and can proceed to Gaithersburg on E. Diamond Avenue or toward Emory Grove on Washington Grove Lane. Traffic heading south on the bridge can proceed straight to E. Deer Park Drive, turn left to get to Central Avenue, or bear hard left and find Oakmont Avenue. Traffic lights at each approach maintain alternating one-way traffic on the bridge.

The bridge is a 22 feet wide one lane three-span metal girder structure with a wooden deck and a bituminous concrete surface. It is categorized by the County as "timber deck with steel beams."<sup>1</sup> Its **superstructure** was rehabilitated in 1988 and 2000. Its center span is slightly over 36 feet long; the outer spans are 24 feet long. Each span is comprised of 5 sets of steel I-beam stringers. Both ends of the center span stringers rest on two timber bents on either side of the tracks. The two outer spans are each slightly over 24 feet long and extend from concrete abutments at approach level to rest on the timber bents. The two outer spans slope downward 11.7%.

A curving sleeper/shim, 13 inches high at the center, rests on each of the 5 center span stringers. Together they give the bridge deck its smooth humpback profile. The deck is comprised of glue laminated yellow pine panels that rest on top of the stringers and the sleeper. The deck panels are bolted to the tops of the stringers.

Completing the superstructure is a wood railing. The wood posts of the railing are anchored at four-foot intervals to the bridge by galvanized shoes bolted to blocks on the outer stringer. A curving wood handrail and a larger laminated wood rail complete the guardrail, which is creosoted.

The 1945 **substructure** of the bridge is comprised of the timber bents, their concrete footings, the concrete abutments, concrete wingwalls, and a concrete slope between the abutment and bent footings. The timber bents are each comprised of five 12" x 12" vertical posts approximately 14 feet high resting on a timber base bolted to a concrete footing. Diagonal timbers 3" x 10" stretch from the cap of the bent to the base. The footing is 9 feet high (5 feet above ground), twenty-seven feet long, and 6" deep. The outer two vertical posts lean inward, giving the bent a trapezoidal shape. All stringers are bolted into the cap of the timber bents; the outer stringers are bolted into the concrete abutments through a wood sill. The distance from the top of the tracks to the bottoms of the center stringers is approximately 19'4".<sup>2</sup>

The setting of the bridge for historic site designation purposes is the bridge itself, including its substructure, its abutments, wingwalls, approaches, the tracks and road bed under it, and the open space under and above it.

Attached are photographs of the bridge showing its current condition.<sup>3</sup>

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<sup>1</sup> Montgomery County 2003 Bridge Inventory Summary.

<sup>2</sup> All bridge details taken from plans of the bridge on file at the Montgomery County Department of Public Works and Transportation.

<sup>3</sup> All current condition images taken and processed by Allan Janus.

# Maryland Historical Trust

## Maryland Inventory of Historic Properties Form

Inventory No. M

Name  
**Continuation Sheet**

Number 7 Page 1

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MD-MC WG Bridge 1—Overall view of bridge looking west; silos of City of Gaithersburg Historic Site c. 1945 Wayne Feed and associated storerooms are framed between the timber bents of the bridge, small-scale and low commercial development, woods. (Compare with Figure1).

MD-MC WG Bridge 2—Detail of underside of bridge, bottoms of steel I-beam stringers resting on cap of north bent, cross-braces of timber bent, laminated southern yellow pine deck panels, fasteners of deck to stringers

MD-MC WG Bridge 3—south timber bent showing trapezoidal shape, concrete bent footing, slope, abutment, and wingwalls, timber block that carries outer stringers on abutment, galvanized shoes holding guardrail wood posts.

MD-MC WG Bridge 4—detail of base of south bent, bolts fastening timbers of bent, drips of creosote wood preservative, detail of concrete footing, beveled edges, imprint of wooden form, metal tags on timbers.

MD-MC WG Bridge 5—view of bridge looking east , showing wooden guardrail, sleeper/shim under center span creating smooth hump, wooded and rural context of bridge,

MD-MC WG Bridge 6 and 7—view of bridge looking north at Washington Grove side of bridge showing sleeper/shim under center span creating hump, wood shims between bent cap and steel stringer, ends/cross-section of glue-laminated deck, detail of guardrail, including “bumper” center laminated rail, abutment and wingwalls on Washington Grove side.

MD-MC WG Bridge 8—detail of bridge surface, looking south, traffic light at center, bridge railing.

MD-MC WG Bridge 9—view from center of bridge looking east, details of “bumper” laminated rail, handrail, and posts, wooded and open space surrounding bridge, Railroad Street and Grove Avenue entering Brown Street Park at left, at top of right railbed slope is old B & O telephone pole.



## 8. Significance

Inventory No. 21-220

Period	Areas of Significance	Check and justify below		
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> agriculture	<input type="checkbox"/> economics	<input type="checkbox"/> health/medicine	<input type="checkbox"/> performing arts
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> archeology	<input type="checkbox"/> education	<input type="checkbox"/> industry	<input type="checkbox"/> philosophy
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> architecture	<input type="checkbox"/> engineering	<input type="checkbox"/> invention	<input type="checkbox"/> politics/government
<input type="checkbox"/> 1900-1999	<input type="checkbox"/> art	<input type="checkbox"/> entertainment/ recreation	<input type="checkbox"/> landscape architecture	<input type="checkbox"/> religion
<input type="checkbox"/> 2000-	<input type="checkbox"/> commerce	<input type="checkbox"/> ethnic heritage	<input type="checkbox"/> law	<input type="checkbox"/> science
	<input type="checkbox"/> communications	<input type="checkbox"/> exploration/ settlement	<input type="checkbox"/> literature	<input type="checkbox"/> social history
	<input type="checkbox"/> community planning		<input type="checkbox"/> maritime history	<input type="checkbox"/> transportation
	<input type="checkbox"/> conservation		<input type="checkbox"/> military	<input type="checkbox"/> other: _____

Specific dates 0

Architect/Builder B &amp; O Railroad/Engineering Office

Construction dates

Built 1945, rehabilitated 1988 and 200

Evaluation for:

 National Register Maryland Register not evaluated

Prepare a one-paragraph summary statement of significance addressing applicable criteria, followed by a narrative discussion of the history of the resource and its context. (For compliance projects, complete evaluation on a DOE Form – see manual.)

### SUMMARY STATEMENT OF SIGNIFICANCE

The Washington Grove Hump Back Bridge and its historic context are significant under the criteria for designation as a Montgomery County Historic Site and as a National Register of Historic Places Historic Site, as applied to Maryland's bridges in the Maryland Highway Administration's Historic Bridge Context Study. The Bridge has character, interest, and value as part of the development of transportation, industry, agriculture, and communities in Montgomery County and the State of Maryland. It exemplifies the social history and development of the Washington Grove/Oakmont area of Montgomery County--- a symbol of the B & O Railroad's connection to community development and to the traditional rural landscape. It has retained its distinctive, even unique, hump back character that reflects an engineering solution to local constraints while providing for larger trains and more and heavier vehicular traffic. The bridge with its timber bents and wooden deck and railing and hump backed profile reflects traditional bridge forms. It retains sufficient integrity of design, materials, workmanship, association, setting and location to exemplify this rare bridge type. In addition, the bridge and its setting are established and familiar features in the Washington Grove neighborhood due to the singular characteristics of the bridge and its landscape.

The bridge is also significant for its impact on the National Register Washington Grove Historic District and as a contributing resource of the National Register Metropolitan Branch Baltimore and Ohio Railroad historic site.

### NARRATIVE

#### Bridge History

The present hump back bridge at Washington Grove was constructed by the B & O Railroad in 1945, and substantially rehabilitated and reconstructed in 1988 and in 2000. It replaced an earlier bridge of almost identical profile built by the B & O in the 1880's. The hump back bridge has persisted for 120 years and is now a familiar and picturesque reminder of Montgomery County's rural and agrarian beginnings. Its survival is due largely to the frugality of the B & O and sensitive forbearance on the part of Montgomery County.

Following the Civil War, the Baltimore and Ohio Railroad obtained a charter from the Maryland Assembly to build a western branch originating at Washington DC to connect with its old main line at Point of Rocks, also known as Washington Junction. This western line took the name Metropolitan Branch, borrowed from the earlier unsuccessful Metropolitan Railroad. Gaithersburg resident Francis Cassat Clopper had chartered and surveyed the route that would become the Metropolitan Branch for his own Metropolitan Railroad, but hard times and the intervention of the Civil War prevented his completing it. On May 25, 1873, the line was opened to passengers and freight, bringing with it economic opportunity and an influx of residents and seasonal visitors to all of Montgomery County in its path.<sup>4</sup> The Railroad's right-of-way at Washington Grove was purchased from Nathan Cooke on the north side of the tracks and from John Clements on the south side.<sup>5</sup>

<sup>4</sup> William E. Hutchinson, Gaithersburg the Heart of Montgomery County (City of Gaithersburg, MD, 1978) at 11 et seq.

<sup>5</sup> Montgomery County Department of Public Works and Transportation (MCDPWT) correspondence file on bridge #132.

# Maryland Historical Trust

## Maryland Inventory of Historic Properties Form

Inventory No. M **21-220**

Name  
Continuation Sheet

Number 9 Page 1

~~Two such groups of seasonal visitors anxious to escape the City's heat and enjoy a spiritual respite in the country were the members and other visitors to the Washington Grove Camp Meeting Association and the Emory Grove Camp Meeting, each associated with Methodism.~~

The camp meeting at the black community of Emory Grove (founded by freed slaves soon after the Civil War) began attracting city dwellers after the coming of the railroad.<sup>6</sup> It provided during its nearly 100 years of existence one of the few suburban retreats for Washington blacks. Black visitors to Emory Grove walked or rode from the Depot at Washington Grove the approximately one mile to Emory Grove.<sup>7</sup> (See figure 1 of Emory Grove Camp Meeting visitors walking through Washington Grove on their way to meeting.<sup>8</sup>)

The Washington Grove Camp Meeting Association was founded by five white Methodist churches in Washington with the purpose of acquiring a summer religious retreat site. In 1873, they bought the land now known as the Town of Washington Grove from the widow of Nathan Cooke. That site was selected for its proximity to the new railroad line. Regular, and later excursion, passenger service was established at Washington Grove, with a wood depot and later a rail siding. Members of the Association erected tents and cottages where they stayed for the season; others roomed at the hotel or came out for a day of preaching. The Washington Grove Camp Meeting was enormously popular, with as many as 12,000 visitors in a single day, almost all arriving by rail.<sup>9</sup>

The first bridge crossing the B & O tracks at Washington Grove was built in the 1880's, at the present location, over a blind curve in the tracks. It appears on the Lang 1886 subdivision map carrying the "county road" or E. Deer Park Drive over to what became Railroad Street, then called Gaithersburg Road.<sup>10</sup> (figure 2) Railroad Street to the east was a dirt track created by local farmers to get their wagons to the depot.<sup>11</sup> In 1883 the B & O constructed the at-grade Aitchison crossing connecting Railroad Street with what is now known as Oakmont Avenue.<sup>12</sup> Certainly the huge crowds ascending the passenger trains at Washington Grove for the return to trip to Washington needed a safe route to get themselves and their belongings to the south side of the single track to head east. The first depot was built on the north side of the tracks. (See Figure 3<sup>13</sup>, original Washington Grove depot crowded with visitors.) Later, in 1906, with the advent of double tracking, a new wood station was built on the south side of the tracks. (See figures 4<sup>14</sup> and 5<sup>15</sup>.) The blind curve would allow very little warning to people or animals crossing at grade of an approaching train.<sup>16</sup> Placing the bridge over the curve eliminated a dangerous situation.

The developers of Oakmont, a subdivision platted in 1888 on the south side of the bridge, opposite Washington Grove, took advantage of the attraction of the camp meeting, the railroad depot, and the convenience of the hump back bridge to sell their lots. The two-room Oakmont School served the surrounding communities and added to the importance of the bridge.<sup>17</sup> (See Figures 6<sup>18</sup> and 7<sup>19</sup>, a *Sentinel* Article about the two-room Oakmont School and a map showing the layout of Oakmont.)

<sup>6</sup> Elizabeth Jo Lampl and Clare Lise Cavicchi, Historic Context Report—"A Harvest in the Open for Saving Souls"—The Camp Meetings of Montgomery County (M-NCPPC July 2004).

<sup>7</sup> Edwards, Philip K., Washington Grove 1873-1937 a History of the Washington Grove Camp Meeting Association (1988) at 56.

<sup>8</sup> Figure 1 from Edwards at 283.

<sup>9</sup> Edwards at 67-95

<sup>10</sup> Lang 1886 subdivision map of Washington Grove at p. 105 Edwards; Figure 2.

<sup>11</sup> Edwards at 121.

<sup>12</sup> MCPWT map files, B & O Right-of-Way and Tracks Map, June 18 1918.

<sup>13</sup> Figure 3 from Edwards at 126.

<sup>14</sup> Figure 4 from Edwards at 194.

<sup>15</sup> Figure 5 from Harwood at 287.

<sup>16</sup> By 1893, there were 36 passenger trains per day and an increasing number of freight trains. Harwood, Herbert H., Jr., **Impossible Challenge** (Baltimore, Md, 1979) at 283.

<sup>17</sup> MDIHP form for Oakmont.

<sup>18</sup> Sentinel article from vertical files at Montgomery County Historical Society.

<sup>19</sup> 1917 Klinge Real Estate Map from Oakmont MDIHP form.

# Maryland Historical Trust

## Maryland Inventory of Historic Properties Form

Inventory No. M **21-220**

Name  
Continuation Sheet

Number 9 Page 2

~~The crossing bridge at Washington Grove likely financially benefited both the railroad and the Washington Grove Camp Meeting Association. (See Figure 8, an 1887 passenger train schedule for the Metropolitan branch,<sup>20</sup>) It facilitated the safe departures of campers and their gear and, more advantageously, the throngs of "day trippers", or excursion passengers, not members of the Association, who would come to enjoy the countryside and hear the preachers. The Association received a 15 cent rebate on each excursion ticket sold. This caused one of the first serious rifts of the Camp Meeting, eventually resulting in the closing of access to Washington Grove to outsiders on Sundays and the halt of excursion trains.<sup>21</sup>~~

The 1880's bridge at Washington Grove is shown on the 1897 Maddox subdivision map of Washington Grove (Figure 9) as having three spans.<sup>22</sup> The first images we have of the bridge are from around 1910.<sup>23</sup> Figure 10 is a c. 1910 image of the bridge looking west from several hundred feet east of the bridge; Figure 11 is an enlargement made from that image.

The bridge is a three-span, kingpost, "a" frame, pony truss timber beam construction. The kingpost truss (also known as an "A" frame), seen projecting upward at the center of the bridge, stiffens the center span, which rests on timber bents bearing in the ground or on footings.<sup>24</sup> (See Figure 12.) "Pony truss" refers to the travel surface being at the bottom of the truss and there being no connection of the two trusses over the travel surface. The outer spans rest on the same timber bents as the center span. The north span on the Washington Grove side appears longer than the south span and is additionally supported by another timber bent halfway up the slope to Railroad St. The outer ends of the flanking spans appear to be resting on timber or stone abutments. Both outer spans slope downward, with the south span slope looking slightly steeper. A timber guard rail with posts and two or three rails is attached to the outer timber beams.

Also visible in the photos is a mail crane, which would have suspended a bag of outgoing mail at the correct height to be snagged by a passing mail train. The 1918 B & O Right of Way and tracks map shows three mail cranes at Washington Grove. Double-tracking had been completed between Washington and Gaithersburg around 1905—the double tracks as well as a set of switching tracks to access a siding track behind the gable-roof building in the background can be seen in Figure 5 under the bridge. Also, the chestnut fence built around Washington Grove to keep out temptations is seen at the right, as well as telegraph and telephone wires. Figure 13 is from 1918, a winter scene showing the bridge after a snowfall, with a waiting horse and buggy.<sup>25</sup> Another king-post pony truss B & O crossing bridge (a flat one) is shown in Figure 14, taken in 1946 at Kensington.<sup>26</sup>

The unique hump in the bridge at Washington Grove was likely due to the need to provide clearance for increasingly larger rail stock and to allow for a brakeman to ride on top of the cars as the train rounded the blind corner.<sup>27</sup> The approach ramp from the north was constrained by the street layout of Washington Grove, as it is today.

By the 1930's Washington Grove was populated year round and residents and town officials were complaining about the dilapidated condition of the bridge. They were particularly concerned with the loose planks that made up the roadway and clattered when vehicles went over the bridge.<sup>28</sup>

<sup>20</sup> Hutchinson at 22.

<sup>21</sup> Edwards at 98-102.

<sup>22</sup> Figure 9 from Edwards at 128.

<sup>23</sup> Figures 10 and 11 are from the collections of Philip Winter and Philip Edwards.

<sup>24</sup> Figure 12 is a typical plan for a King-Post bridge, from Tennessee DOT website.

<sup>25</sup> Figure 13 from the collection of Philip Winter.

<sup>26</sup> Figure 14 is found at 293, Harwood, Herbert H., Jr., **Impossible Challenge** (Baltimore, Md, 1979).

<sup>27</sup> According to long-time Oakmont resident George Young, Jr. This theory was seconded by the Director of the Western Maryland Railroad Museum-- "I have seen photos of a number of these bridges [figure 10] on the Western Maryland Railway, B&O, and Northern Central Railway. This type of bridge was built high in the center to allow room for brakeman riding on top of the cars. In the steam days brakemen rode the car tops to set and release the brakes to help control the trains' speed. The high center also made the bridge stronger. Note the inverted "V" brace in the center. That was a design adapted after the Civil War as road traffic became heavier. At times railroads carried "high and wide" loads. The largest load was determined by the smallest bridge. The bridges were upgraded to allow more clearance in later years." Email of 3/24/05 from Stewart Rhine.

<sup>28</sup> Town of Washington Grove Archives.

# Maryland Historical Trust

## Maryland Inventory of Historic Properties Form

Inventory No. M **21-220**

Name

Continuation Sheet

Number 9 Page 3

~~Relief came in 1945 with the construction by the B & O of the present bridge. The bridge design came from the B & O Engineering Office in Baltimore. A sketch of the existing bridge was included on the plan and showed that the new bridge would be several feet higher than the old one, but would have a similar profile. According to the sketch, the only difference in profile was that the new bridge would have a rounded surface on the center span. The old bridge as sketched looks identical to the profile of the c.1910 bridge. The only addition by 1945 was another intermediate bent to support the south span at its mid-point.<sup>29</sup>~~

According to an agreement between the B & O Railroad and the Board of County Commissioners of Montgomery County, dated September 7, 1945, the railroad desired to "reconstruct the present bridge #21B" at the same point 600 feet west of the Washington Grove Station, with a minimum clearance of 19 feet, increased load limit to 15T, and increased clear roadway width of 20 feet. The railroad agreed to remove the existing timber bridge and construct a new 3-span treated timber bridge with laminated floor, per drawing 35329-A. The railroad would be responsible for the tracks and the Western Union wires. Montgomery County for its part agreed to acquire the necessary property and place all fill and roadway surface necessary to raise and change the existing roadway approaches to meet the grade of the new bridge. Upon completion, the railroad would maintain the bridge and the county would maintain the approaches.<sup>30</sup>

The superstructure for the timber 3-span bridge built in 1945 by the B & O utilized 8" x 16" x 24' timber stringers for the outer spans and 8" x 24" x 36' timber stringers for the center span. The outer spans sloped downward 11%. The outer spans each had 13 timber stringers, while the center span had twelve. The stringers overlapped on the bent caps. The laminated deck was 22 feet wide and 5 inches thick, yielding a clear roadway of 20 feet. The guard rail was 3'10" high. This timber superstructure rested on the present substructure described in Paragraph 7.<sup>31</sup>

By the 1960's residents were again complaining about the condition of the bridge and, moreover, the reluctance of the B & O to erect safety gates at the Aitchison grade crossing just east of the bridge.<sup>32</sup>

It was not until the mid-1980's that the B & O agreed to upgrade the bridge. The County's engineering consultants Rummel, Klepper, and Kahl of Baltimore set out five options for replacing the timber superstructure. The recommended option was the one executed—to replace the deck in kind and replace the timber stringers with 5 steel beams. The existing bents were deemed in good condition, with only the caps needing replacement. The vertical clearance would remain the same. This option would have no impact on the operation of the railroad and would cost around \$30,000. The engineers also noted in their analysis:

The rehabilitated bridge will be aesthetically compatible with the existing bridge and its surroundings.<sup>33</sup>

The consulting firm also considered replacing the timber stringers with glue laminated wood or actual timbers. While noting that these options would "closely maintain the existing appearance of the bridge," they concluded that the glue laminated option was too expensive (\$45,000) and that there was too much uncertainty about acquiring timbers of an adequate size.

In 1987, the County and the B & O entered into an agreement over their respective responsibilities—The County would take over the bridge at the completion of the work. The load limit of the new superstructure was to be the same as the former—15T live load. Specifically, the B & O agreed to provide the labor to demolish the superstructure and replace it with steel stringers and a timber deck. Montgomery County would reimburse the railroad for the materials. The B & O preferred that the work be done with the least amount of work, since the expected life of the bridge was 6-8 years. Although the B & O did agree to the steel stringers, they insisted on testing the 1945 timber stringers to determine if they could still stand the stress of the 15T rating for the bridge.<sup>34</sup>

<sup>29</sup> Montgomery County Department of Public Works and Transportation plans.

<sup>30</sup> Montgomery County Department of Public Works and Transportation correspondence file on bridge #132.

<sup>31</sup> Montgomery County Department of Public Works and Transportation plan approved 1987.

<sup>32</sup> Montgomery County Department of Public Works and Transportation correspondence file on bridge #132.

<sup>33</sup> Montgomery County Department of Public Works and Transportation correspondence file on bridge #132.

<sup>34</sup> Montgomery County Department of Public Works and Transportation correspondence file on bridge #132. The results of these tests were not reflected in the file.

# Maryland Historical Trust

## Maryland Inventory of Historic Properties Form

Inventory No. M **21-220**

Name  
Continuation Sheet

Number 9 Page 4

~~The work proceeded as expected in 1988. Except for the superstructure changes described above, the only other rehabilitation was replacement of the timber bent caps and of the abutment sill. In 1989, the railroad granted the County an aerial easement over its tracks and right-of-way for the purpose of maintenance, ownership, repair, and operation of the bridge.<sup>35</sup>~~

In 2000, the bridge was redecked—the nail-laminated deck was replaced with a “glu-lam” one and the guard rail was replaced. The plans noted that the north span was 24'4 5/8", the center was 36'11", and the south span was 24'8". The clear roadway is 20'1 1/2". The steel stringers—W18x50 for the outer spans and W18x76 for the center span—were retained. The new wood rail posts, fastenings, and railings included in the 2000 work are described in paragraph 7 and shown in the images.

Significantly, the “hump” of the bridge remained virtually the same—the south span slope went from 11.7% to 11.92% while the north span slope increased from 11.7% to 11.76%. The “hump” created in the center span by the variable height sleeper remained the same. The clearance from the top of the tracks to the bottom of the center stringers measured on 1/4/5 was 19'4".<sup>36</sup>

### Architectural/Engineering Significance and Integrity

The 1945 in-kind timber reconstruction by the B & O of the then-existing bridge was by 1945 standards an anachronism. Such a simple timber beam bridge was an inexpensive and common railroad crossing type in the 19<sup>th</sup> and early 20<sup>th</sup> centuries.<sup>37</sup> However, by 1945, traffic loads stressed the limits of timber construction.

In 2005, the hump back bridge at Washington Grove is a rare, if not unique, bridge type in Montgomery County and in Maryland. It is the only hump back bridge of the 303 bridges in Montgomery County. There is no mention of this type of bridge in the Maryland Highway Administration Historic Bridge Context Study.<sup>38</sup> A search of Historic American Engineering Record (HAER) bridges did not turn up and with humped backs. It is also one of two surviving bridges in Montgomery County with timber bent piers for support.<sup>39</sup> In the 2003 Bridge Inventory Summary, the bridge is one of two classified as TDSB, or Timber deck with steel beams. One other bridge in Montgomery County has a wood deck.

As such, the 1945 bridge was a traditional bridge form and its 1988 rehabilitation continues to reflect that traditional form.<sup>40</sup> Its profile and essential dimensions remain the same. It still rests on its 1945 timber bents. Its substructure of concrete abutments, wingwalls, abutments, and slope, as well as the bents, retains integrity. The hump back form is traditional. Significantly, the 1945 bridge was a reconstruction of the existing bridge on the site.

The hump back bridge evolved as an engineering solution to local characteristics. Approaches to the bridge were constrained by the flat landscape and need to add dirt fill to create a sufficient grade to allow the bridge to pass over rail stock at a sufficient height. The existence of a blind curve at the bridge location necessitated additional height to allow the brakeman to ride on top of the steam trains. The orthogonal street plan of Washington Grove prevented a more gradual approach on the north. As the height of rolling stock rose, the height of the bridge increased with it. As the vehicular traffic using the bridge increased, steel was the best option in 1988 for a sound superstructure. Significantly, maintaining the aesthetic quality of the bridge was an engineering goal of the 1988 design team.

<sup>35</sup> Montgomery County Department of Public Works and Transportation correspondence file on bridge #132.

<sup>36</sup> Montgomery County Department of Public Works and Transportation approved 1987.

<sup>37</sup> Tennessee Department of Transportation web site, Figure 12.

<sup>38</sup> A search of internet sites for other examples of hump back bridges yielded only the example at Figure 16, from Bridges of the Midwest web site.

<sup>39</sup> Conversation with Rod Brown, Bridge Division, MCPWT, 4/7/05. The other MC bridge with timber bents is the Talbot Avenue bridge.

<sup>40</sup> “Metal girder, or beam, bridges exemplify the modern application of traditional bridge technology.” MHA Historic Bridge Context Study at 103.

# Maryland Historical Trust

## Maryland Inventory of Historic Properties Form

Inventory No. M **21-220**

Name

**Continuation Sheet**

Number 9 Page 5

~~The bridge retains sufficient integrity of design (hump back form comprised of three spans with same slopes, wood deck, wood guardrails, resting on 1945 substructure), materials (substructure), workmanship (timber bents, concrete footings), association (see next section), setting and location to stand as a representative example of a rustic three-beam hump back bridge with wood deck and rails, on timber bents. In addition, it exemplifies a bridge type (hump back railroad crossing bridge) which is now rare, even though its integrity may have been compromised to a greater degree.~~

In addition, the bridge and its setting are established and familiar features in the Washington Grove neighborhood and in the Gaithersburg vicinity, due to the singular characteristics of the bridge and its landscape, thereby further satisfying the Montgomery County historic site designation criteria.

### Historic Significance

The Hump Back Bridge at Washington Grove has historically been at the center of a community that straddles the former B & O Railroad tracks. The railroad attracted people to this part of Montgomery County and the bridge facilitated the development of transportation, industry, agriculture, and the surrounding communities.

Prior to the coming of the Metropolitan branch of the B & O Railroad, the area east of Gaithersburg was woods and farm land cultivated by several large land owners.<sup>41</sup> The only road was the Laytonsville Road, used by farmers to trade at the junction of Laytonsville Road (now East Diamond Avenue) and Frederick Road, which was the small crossroads village of Gaithersburg.<sup>42</sup> With the advent of the railroad, the communities of Washington Grove (1873), Emory Grove (c. 1864), and Oakmont (1888) flourished, as well as Gaithersburg. The Hump Back Bridge at Washington Grove facilitated communication, travel, and trade across the tracks.

The bridge is significant for its contribution to the National Register Historic District of Washington Grove.

The bridge was one of the earlier overhead crossings built by the B & O on the Metropolitan Branch. (By comparison, Gaithersburg did not get an overhead crossing until 1930, after a popular priest was killed in an auto-train accident.<sup>43</sup>) The entire Metropolitan Branch is a National Register historic site. The bridge, which was built and maintained by the B & O, is potentially a contributing resource in that historic site.

The rustic nature of the current bridge continues the simple beam design utilized by the B & O in the 1880's. Although the B & O was known for its modern railroad bridge designs, the c. 1885 three-span king-post design in timber was typical of its crossing bridges.

The location of the bridge at Washington Grove influenced the development of roads in the area. Railroad Street east of the bridge grew from a wagon track made by local farmers to get their produce to the depot. The bridge linked road traffic from Rockville and south to Washington to Washington Grove, Emory Grove, Laytonsville, and east Gaithersburg. The subdivision of Oakmont in 1888 tied its street plan into the "county road," Deer Park Drive, to gain access to the bridge. The bridge was essential to the farmers whose land was bisected by the B & O tracks.

By the 1890's a commercial area had built up where the Gaithersburg Road, as the west end of Railroad Street was known, joined Laytonsville Road. Thomas I. Fulks opened a store at what is now known as the Washington Grove commercial corner. After acquiring the part of Nathan Cooke's farm that had not been sold to the Washington Grove Camp Meeting Association, he opened a branch of his successful farmer's supply business on the south side of Laytonsville Road. When his son-in-law Lawson King bought

<sup>41</sup> Edwards at 33.

<sup>42</sup> Hutchinson at 11 et seq..

<sup>43</sup> Hutchinson at 25.; The B & O's major campaigns to eliminate grade crossings came later in the 1905-10 and mid-1920's eras.

# Maryland Historical Trust

## Maryland Inventory of Historic Properties Form

Inventory No. M **21-220**

Name  
**Continuation Sheet**

Number 9 Page 6

~~the Fulks' farm and farmer's supply and foreclosures sale in 1945, included the Wayne Feed mill, whose feed site is a local City of Gaithersburg historic site.<sup>44</sup> A little further west along the tracks, Bryant's Mill competed with Wayne Feed, both benefiting from the rail and road access.<sup>45</sup>~~

The rustic landscape surrounding the hump back bridge is surprisingly intact. Figure 17 is a 1938 aerial view of the Washington Grove area.<sup>46</sup> Figure 18 is the same view in 1987<sup>47</sup>, largely the same as today. Roads (two-lane asphalt), woods, open space, the railroad tracks, structures—Hershey's Restaurant, formerly Jesse Burns' general store and the Washington Grove Post Office until 1978; the Washington Grove commercial corner's c. 1914 ex-Elks Lodge; Fulks' farmer's supply/Wayne Feed mill; c. 1950's Hanagan's Auto Repair and the adjacent Radiator Shop, formerly an ice cream store—are all still there. Very little new has intruded, and what has been built has stayed respectfully behind the tree line (the new school and the County's housing opportunity office) or was constructed to a sympathetic design (the new wood-with-slate-roof passenger waiting shed).

The rural landscape surrounding the hump back bridge is a precious link for future citizens of Montgomery County to the agrarian past of this rapidly-developing area.

## 9. Major Bibliographical References

Inventory No. M 21-220

- Edwards, Philip K., *Washington Grove 1873-1937 a History of the Washington Grove Camp Meeting Association* (1988).  
Harwood, Herbert H., Jr., *Impossible Challenge* (Baltimore, Md, 1979).  
Hutchinson, William E., *Gaithersburg the Heart of Montgomery County* (City of Gaithersburg, MD, 1978).  
Maryland Highway Administration *Historic Bridge Context Study*.  
Montgomery County Department of Public Works and Transportation bridge plans and correspondence for bridge #0132.

<sup>44</sup> MDIHP form for Wayne Feed Mill.

<sup>45</sup> MDIHP form for Williams Feed.

<sup>46</sup> Enlargement of part of 1938 Soil Conservation Service aerial photo of Gaithersburg area, National Archives.

<sup>47</sup> M-NCPPC-MC.

# Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M **21-220**

Name  
Continuation Sheet

Number 9 Page 7

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## 10. Geographical Data

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Acreeage of surveyed property <.1 acre \_\_\_\_\_  
Acreeage of historical setting <.1 acre \_\_\_\_\_  
Quadrangle name Rockville NE \_\_\_\_\_ Quadrangle scale:

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### Verbal boundary description and justification

Included in the boundary is the 87' long x 22 foot wide bridge, its 27 foot wide substructure, its abutments and wingwalls, and its two-lane approach ramps, rising on the north at the corporate limits of Washington Grove and on the south approximately 100 feet down East Deer Park Drive.

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## 11. Form Prepared by

name/title Gail Littlefield

organization

date 4/15/05

street & number PO Box 463

telephone 301 990 6567

city or town Washington Grove

state MD

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The Maryland Inventory of Historic Properties was officially created by an Act of the Maryland Legislature to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 supplement

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The survey and inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

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return to: Maryland Historical Trust  
DHCD/DHCP  
100 Community Place  
Crownsville, MD 21032-2023  
410-514-7600

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**Maryland Historical Trust  
Maryland Inventory of  
Historic Properties Form**

Inventory No. M **21-220**

Name  
**Continuation Sheet**

Number 9 Page 8

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2. Addendum to MIHP form no. 21-220, specifically regarding integrity.

PO Box 463  
Washington Grove, Md 20880  
July 6, 2005

Clare Cavicchi  
Historic Preservation Commission Staff  
MNCPPC-Montgomery County  
Spring Street  
Silver Spring, Maryland

Re: Washington Grove Humpback Bridge, MD-MC 21-220

Dear Clare,

I attach an addendum to my MIHP #21-220 form supporting my nomination of the Washington Grove Humpback Bridge to the County Register.

Please make it available as appropriate.

Of particular interest might be the potential for federal Transportation Enhancement Program reimbursement for part of any county rehabilitation costs for the bridge.

Sincerely,

Patricia Gail Littlefield

Addendum to MDIHP 21-220 Paragraph 9  
Washington Grove Humpback Bridge

Further Integrity Analysis of Washington Grove Humpback Bridge

I. Background

At the hearing before the Montgomery County Historic Preservation Commission held May 25, 2005, questions regarding the integrity of the Washington Grove Humpback Bridge were raised. This Addendum further analyzes the bridge and its updates in terms of the Secretary of the Interior's National Register of Historic Places criteria and the Maryland State Highway Administration Historic Bridge Context Report.

II. National Register Seven Aspects of Integrity.

As summarized in the National Register Bulletin on Historic Aviation Properties,

"In addition to being significant under the National Register Criteria, properties must retain integrity to be listed. Integrity is the ability of a property to convey its significance. The National Register recognizes seven aspects or qualities that, in various combinations, define integrity. *To retain historic integrity a property will always possess several, and usually most, of the aspects.* (emphasis supplied)  
The retention of specific aspects of integrity is paramount for a property to convey its significance. *Determining which of the aspects are most important to a particular property requires knowing why, where, and when the property is significant.* (emphasis supplied)

The basic guidance for evaluating the integrity of historic properties is found in the National Register Bulletin: How to Apply the National Register Criteria for Evaluation. The following sections supplement that bulletin with an emphasis on evaluating the integrity of historic aircraft.

**SEVEN ASPECTS OF INTEGRITY:**

- Location
- Setting
- Materials
- Design
- Workmanship
- Feeling
- Association"

The Washington Grove bridge retains its ability to convey its historic significance as part of the development, heritage, or cultural characteristics of the county (MC ordinance 1a), as exemplifying the cultural, economic, social, and historic heritage of the county and its communities (MC ordinance 1d), as embodying the distinctive characteristics of its type, a humpback beam bridge with timber supports (MC ordinance 2a), and as an established and familiar visual feature due to its singular physical characteristics and landscape (rural woods and open space, small roads, vernacular structures).

III. Maryland State Highway Administration, Historic Bridges in Maryland: 1631-1960, Historic Context Report<sup>1</sup>.

A. Historic Integrity (Report, Appendix C, Section C)

The bridge retains significant original character-defining elements, as delineated by the Maryland Highway Administration Historic Bridge Context Report, cited at footnote 1. Of "primary importance" are the bridge's original timber bents, concrete piles, and concrete abutments. (Report at C-31).

The 1988 replacement of the deteriorated timber beams ("primary importance") of the bridge with steel was not "in kind," due to cost and uncertainty of ready supply.<sup>2</sup> The replacements of the wood deck, asphalt surface, and wooden guard rail ("primary importance") in 1988 and 2000 were "in kind." (The present wood guardrail design has been "heavied up," undoubtedly to provide additional safety as traffic flow and weight have increased.)

As the attached c.1980 pre-rehabilitation photo of the bridge shows, the replacement of the beams with steel is not "disruptive to the element's as-built structural and visual impact." Therefore, under this Maryland standard, the beams have only suffered "moderate loss of historical integrity." (Report at C-29)

Likewise, the design and workmanship of the present bridge are largely intact. The steel replacement beams are of the same length and height as the 1945 timbers and thereby preserve the 1945 profile of the bridge. (See attached c. 1980 bridge photo to compare to current condition photo MD-MC WG Bridge 1)

Assessments of loss of integrity need to be made on a case-by-case basis. (Report at C-29). Balancing the Washington Grove bridge's historic and engineering significance with its scarcity (detailed in the MIHP 21-220 form and below), its integrity qualifies it for designation.

B. Maryland Expanded National Register Criteria For Bridge Evaluation (Report, Appendix C, Section A).

Maryland bridges are eligible for the National Register for their historic significance under criteria that are similar to the Montgomery County criteria 1a and 1 d. Under the Maryland expanded criteria, the bridge would be eligible under A. 1. ("reflects trends in the social, economic, industrial, and transportation development of the locality, [and] state...") and A.2. ("is associated with historical crossings.") (See Report at C-1-2).

The Maryland Expanded National Register criteria for bridges, among other things, balance the generic National Register criteria with a Maryland historic bridges' scarcity. Thus, a bridge which is "a representative example of a specific bridge type which may survive in substantial numbers" need only have "*sufficient integrity* of design, materials,

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<sup>1</sup> Found at <http://www.sha.state.md.us/keepingcurrent/maintainRoadsBridges/bridges/OPPE/historicBridges/histbrpg0.asp>. Hereinafter "Report."

<sup>2</sup> See MIHP 21-220 form at 9-3 for details.

workmanship, association, setting, and location.” (Report at C-2, Criteria C.5.) A bridge which “exemplifies a bridge type which is *now rare*” meets the National Register criteria “*even if its integrity may be compromised to a greater degree* [than required under C.5].” (Report at C-2, Criteria C.6.) (emphasis supplied)

As covered in the MIHP 21-220 nomination form for the bridge, the Washington Grove bridge is the only remaining “humpback” type bridge in Montgomery County and possibly in the State of Maryland. As such the bridge qualifies as a rare representative example. The attached 1939 drawing for the Chesapeake and Ohio Railway of a “Typical Overhead Highway Bridge” illustrates the once ubiquitous nature of humpbacked railroad crossing bridges.<sup>3</sup> It shows a three-span, slope-sided bridge resting on piers and abutments remarkably similar to those at Washington Grove. These simple bridges, once common, have all been replaced with other designs.<sup>4</sup> The only exception we know of in Maryland is the Washington Grove Humpback Bridge.

#### IV. National Register Eligibility and its benefits.

As explained above, the Washington Grove Humpback Bridge is eligible for individual National Register designation under Maryland criteria A1, A2, C5, and C6.

The bridge is also eligible for the National Register as a contributing resource to the Metropolitan Branch B & O Railroad, a historic resource which stretches the length of the rail line from Washington Union Station to Point of Rocks, Md., and the width of the right-of-way. In addition, the bridge could be a contributing resource to the National Register Historic District of Washington Grove, if the historic district boundaries were to be expanded in the future to include it.<sup>5</sup>

National Register eligibility is significant to the future of the Washington Grove Humpback Bridge because “eligible” bridges qualify to compete for the Maryland Highway Administration Transportation Enhancement Program.<sup>6</sup> Rehabilitation of the bridge could qualify for the reimbursement program under Program Category “Rehabilitation and operation of historic transportation buildings, structures or facilities, (including historic railroad facilities and canals).”

<sup>3</sup> Original provided by Thomas Dixon, Chesapeake and Ohio Historical Society, Inc.

<sup>4</sup> Eric DeLony, retired director of the National Park Service’s Historic American Engineering Record (HAER) concurs—“[Y]ou’ve got what is known as an “over bridge,” i.e. a bridge that goes over the rail line. From your description, it appears to be a timber trestle structure with concrete abutments and wing walls and concrete pedestals for the wooden bents — a standard structure for railroads. These have become rare since they are being replaced. .... [I]n my experience they are rare and being destroyed at an accelerating rate.” Email to Nancy Helme of 6/26/05.

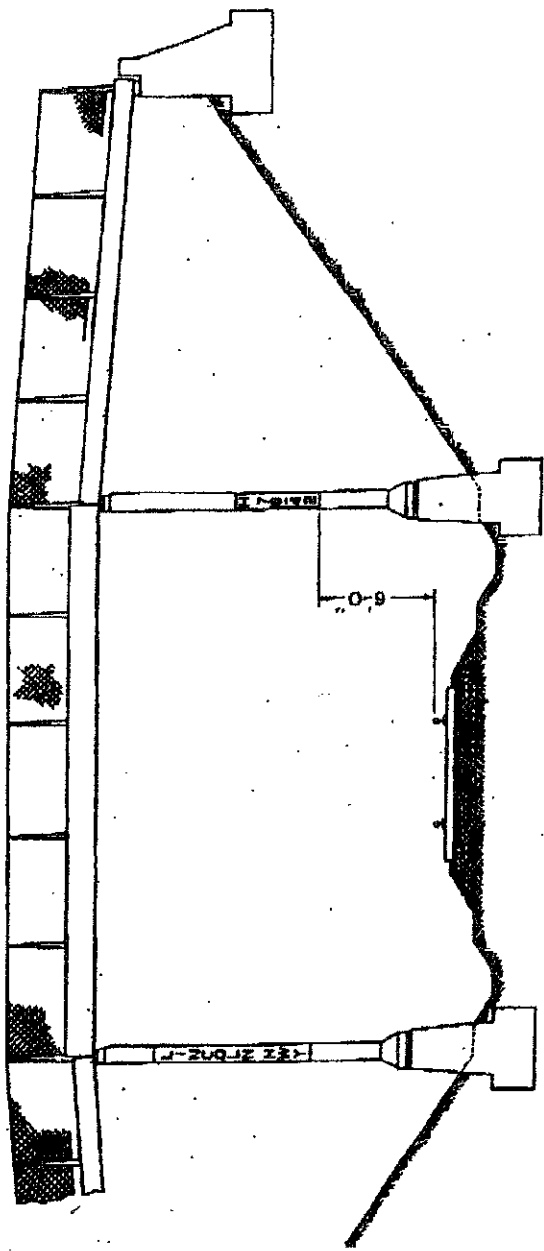
<sup>5</sup> Under the Maryland criteria, an historic bridge can be considered a contributing resource to an historic district if it was built within or no later than 10 years after the district’s period of significance and complements the historical and architectural character of the district in style, scale, and materials. Report at Appendix C, Section D, at C-65-6. The Washington Grove Historic District’s period of significance is 1873 to 1937. The bridge’s 1945 construction date coupled with its complementary style and materials would qualify it as a contributing resource in an expanded district.

<sup>6</sup> Details at <http://www.sha.state.md.us/ImprovingOurCommunity/OPPE/tep.asp>.



Washington Grove Humpback Bridge, Built 1945 (photo c1980)

57



TYPICAL OVERHEAD HIGHWAY BRIDGE  
NO SCALE

<p>APPROVED FOR USE</p> <p>THE CHESAPEAKE AND OHIO RAILWAY COMPANY</p> <p>THE DELAWARE AND BALTIMORE RAILROAD COMPANY</p> <p>THE NEW YORK, CHICAGO AND ST. LOUIS RAILROAD COMPANY</p> <p>THE PERE MARQUETTE RAILWAY COMPANY</p>	<p>THE CHESAPEAKE AND OHIO RAILWAY COMPANY</p> <p>ERIE RAILROAD COMPANY</p> <p>THE NEW YORK, CHICAGO AND ST. LOUIS RAILROAD COMPANY</p> <p>PERE MARQUETTE RAILWAY COMPANY</p>
<p>THE BALTIMORE COMPANY</p> <p><i>[Signature]</i></p>	<p><b>STANDARD BRIDGE NUMBER SIGNS</b></p>
<p>THE NEW YORK, CHICAGO AND ST. LOUIS RAILROAD COMPANY</p> <p><i>[Signature]</i></p>	<p>APPROVED BY</p> <p>ADVISORY COMMITTEE ON WAY AND STRUCTURES</p> <p><i>[Signature]</i></p>
<p>SOLE MANUFACTURERS</p> <p>W. S. E. W. S. E.</p>	<p>NOV. 8, 1939</p>
<p>K. L. S. W. S. E. W. S. E.</p>	<p><b>R-615-A</b></p>



3. Montgomery County Historic Preservation Commission proposed amendment to Master Plan for Historic Preservation, specifically including how the Humpback Bridge meets the County ordinance requirements and setting site boundaries.

## THE AMENDMENT

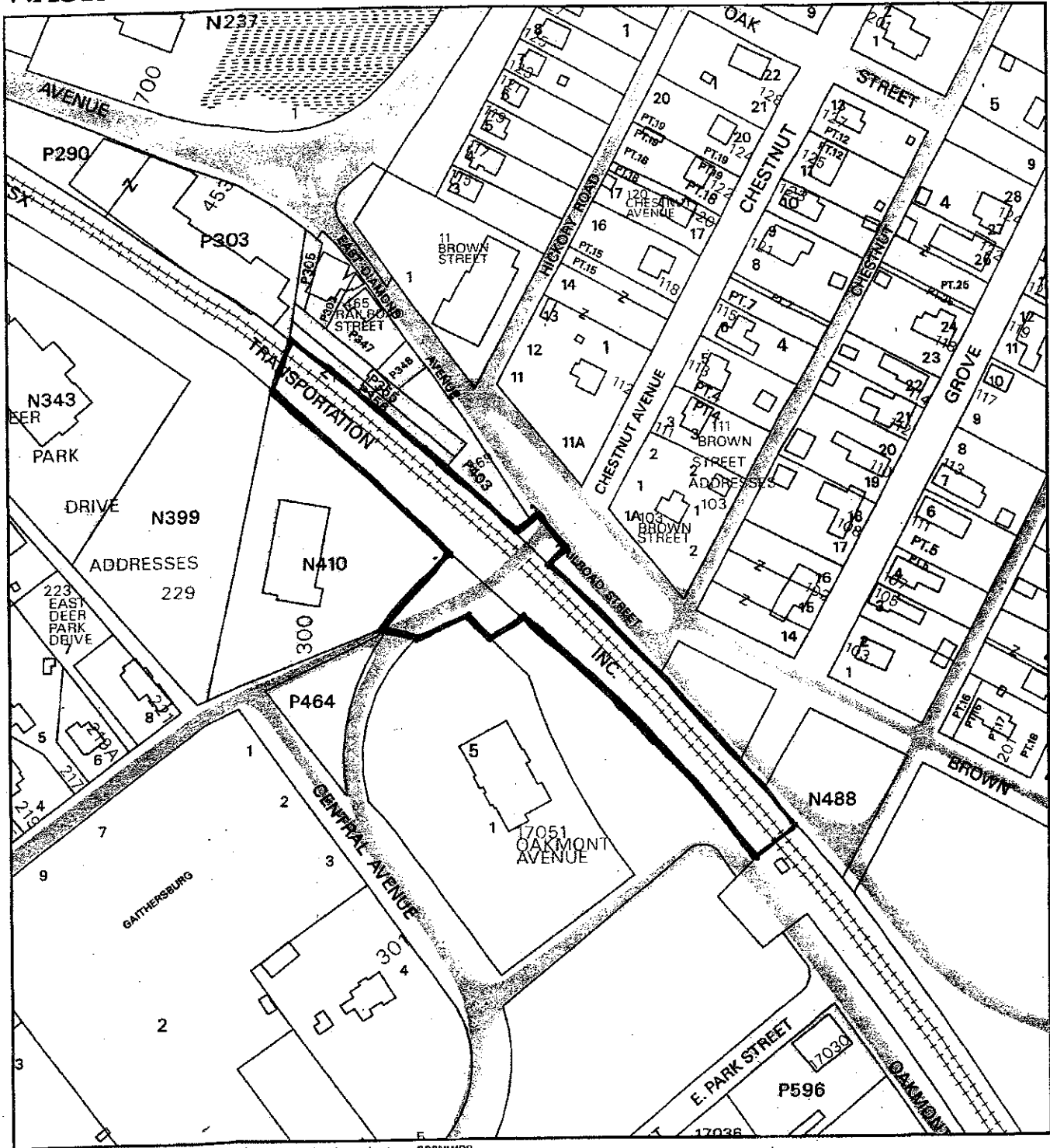
The purpose of this amendment is to designate one individual site on the *Master Plan for Historic Preservation*, thereby extending to it the protection of County's Historic Preservation Ordinance, Chapter 24A of the Montgomery County Code.

21-220 Washington Grove Humpback Bridge,  
East Deer Park Drive over CSX tracks at Railroad Street

- The Humpback Bridge is a historic site that is integral to the context of Washington Grove, a National Register Historic District. The bridge, which spans the railroad tracks and is adjacent to the Washington Grove station site, represents the origin and development of Washington Grove and the surrounding areas of Oakmont and Gaithersburg.
- The Humpback Bridge is a local landmark that is a unique established and familiar visual feature. The bridge's distinctive rounded profile is a visually striking feature recognizable to residents, motorists, and pedestrian passersby, as well as MARC train commuters.
- The form and profile of the bridge are reflective of bridge construction from 1945, the year that the structure was erected. A timber bridge has been in place at this location since the 1880s. The bridge was rehabilitated in 1988 and 2000.
- This resource meets criteria 1a, 1d, 2a, and 2e.
- The proposed environmental setting is outlined on the attached map. Future restoration or rehabilitation work on the bridge must preserve the form, scale, and location of this resource. The traditional rustic use of wood is important, but materials should be considered in the future with some leniency.



# WASHINGTON GROVE HUMPHACK BRIDGE



Map compiled on May 18, 2005 at 12:38 PM | Site located on base sheet no - 223NW08

## NOTICE

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This map is created from a variety of data sources, and may not reflect the most current conditions in any one location and may not be completely accurate or up to date. All map features are approximately within five feet of their true location. This map may not be the same as a map of the same area plotted at an earlier time as the data is continuously updated. Use of this map, other than for general planning purposes is not recommended. - Copyright 1998

Key Map



N



Research & Technology Center

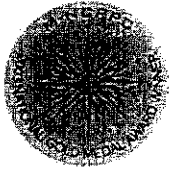


1 inch = 200 feet  
1 : 2400

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

8787 Georgia Avenue - Silver Spring, Maryland 20910-3760

4. Memorandum from County Transportation Planning Department outlining plans to replace the Humpback Bridge and its approaches with a four-lane oblique crossing of the CSX tracks.



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION  
Montgomery County Department of Park and Planning

June 28, 2005

**MEMORANDUM:**

TO: Clare Cavicchi  
Countywide Planning Division

VIA: Daniel K. Hardy, Supervisor *DKH*  
Transportation Planning

FROM: Ki H. Kim, Planner *KHK*  
Transportation Planning

SUBJECT: Deer Park Bridge Writeup

---

This memorandum describes the purpose and status of the Department of Public Works and Transportation Phase I Facility Planning Study for the reconstruction of the Deer Park Bridge that connects East Deer Park Drive to Railroad Street in Gaithersburg.

The purpose of the Deer Park Drive Bridge Planning Study is to provide a safe and efficient crossing over the CSX Railroad tracks in Montgomery County. The existing bridge crossing at Deer Park Drive is inadequate in terms of geometric, structural, and safety considerations to all users. The needs identified for an improved bridge crossing include:

- Single lane of traffic limits accessibility
- Substandard clearance over railroad tracks
- Emergency vehicles exceed weight limits
- Lack of pedestrian facilities

The degree to which the characteristics of the existing bridge limit accessibility is evidenced in part by the fact that the bridge carries approximately 6,300 vehicles per day, a lower volume than the 9,000 vehicles per day that cross the CSX tracks via the at-grade crossing of Railroad Street located about a quarter-mile to the south.

The approved and adopted 1985 Gaithersburg Vicinity Master Plan recommends a fifty-foot-wide transit easement located directly adjacent to the existing railroad tracks and a four-lane arterial (A-255) along Oakmont Avenue realigned to include an oblique crossing of the CSX tracks. The

Gaithersburg Vicinity Master Plan is in the process of being updated and the Staff Draft is tentatively scheduled for the Planning Board in November 2006. The Staff Draft will reflect the County's recommended alternative for the Deer Park Bridge.

The Project Team developed three concepts in Fall 2004 and had a public informational meeting in January 2005 to seek the public's inputs to be considered in the Project Team's selection of the recommended concept. The Project Team is currently reviewing the public's comments and coordinating with the Town of Washington Grove, and City of Gaithersburg to develop a concept to be recommended to the County Council's Transportation and Environment Committee for their consideration for the Phase II Facility Planning Study. Staff expects to schedule a Planning Board briefing on the recommended alternative during fall 2005.

KHK:gw

Mmo to Cavicchi re Deer Park Bridge

5. Written decision of Montgomery County Planning Board to place Humpback Bridge on Location Atlas, and deferring the recommended placement of the bridge on the Master Plan for Historic Preservation until after a future further hearing.

**Agenda for Montgomery County Planning Board Meeting**  
**Thursday, July 14, 2005, 9:30 A.M.**  
 8787 Georgia Avenue  
 Silver Spring, MD 20910-3760

Board Action

Roll Call	SEE MINUTES
Approval of Minutes: April 7, 2005, April 14, 2005	APPROVED AS PRESENTED
Commissioners' Reports	SEE MINUTES
Directors' Reports	NONE
Reconsideration Requests	NONE
Adoption of Opinions	NONE

10.

**Action: Agreed to place the Washington Grove Humpback Bridge (Historic I.D. 21/220 - located at East Deer Park Drive over the CSX tracks at Railroad Street) on the Locational Atlas and Index of Historic Sites in Montgomery County, Maryland, and by this action, decline staff's recommendation at this time.**

Staff of the Department's Historic Preservation Division presented highlights of the July 7 technical staff report.

Ms. Patricia Gail Littlefield, the originator of this historic nomination application, presented slides and historical data on the bridge in support of historic designation.

Many of those who testified submitted a copy of their testimony into the record.

The Board received testimony in support of the historic designation from District 39 Maryland General Assembly officials: Senator P. J. Hogan and Delegates Nancy King and Charles Barkley, who related the support of Joan Stern, who was unable to attend but submitted a letter into the record.

The Board also received testimony in support of historic designation from Mayor Sidney Katz, City of Gaithersburg and Chairman of Gaithersburg's Historic District Commission, and Mayor John Compton, Town of Washington Grove.

Mr. Arthur Holmes, Jr., Director, Department of Public Works and Transportation (DPWT), and Jeri Cauthorn, DPWT Division of Capital Development, testified on behalf of the County Executive in opposition to the designation believing it would be contrary to the provision of a safe, effective, and efficient transportation system and contrary to sound comprehensive planning.

Ms. Caroline Alderson reported that the Historic Preservation Commission voted 4-1 to designate the hump back bridge.

Others testifying in support of historic designation of the hump back bridge included Robert Brewer, a homeowner in the area; Robert Booher on behalf of the Washington Grove Historic Preservation Commission; Wayne Goldstein of Montgomery Preservation, Inc.; and



individuals Avi Sood, Linda Roynestad, Charles Challstrom, Shelley Winkler, Linda Eagleson, Darrell Anderson, also a member of the Planning Board of the Town of Washington Grove, Pamela Lindstrom, Ann Briggs, George Paine, Tad Stahnke, and Nancy Helme.

After considerable discussion about traffic patterns and the traffic system relative to the bridge as well as the impact of designation on the CSX tracks and their future use, the Board took its action as reported above. By placing the hump back bridge on the Index, this action protects retention of the structure and requires a hearing to consider placement on the Master Plan for Historic Preservation.

6. Email from Peter Kurtze, Maryland Historical Trust, November 12, 2013, stating that the proposed CSX modifications to the Humpback Bridge would not affect its continued eligibility for the National Register of Historic Places.

## Bob Booher

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**From:** Peter Kurtze [PKurtze@mdp.state.md.us]  
**Sent:** Tuesday, November 12, 2013 4:28 PM  
**To:** Tim Tamburrino; Bob Booher  
**Subject:** RE: CSX-Deer Park Bridge at Washington Grove

In my opinion, the proposed design will not affect the district's continuing eligibility for inclusion in the National Register of Historic Places.

Peter Kurtze  
Administrator, Evaluation and Registration  
Maryland Historical Trust  
100 Community Place, 3<sup>rd</sup> floor  
Crownsville, MD 21032-2023  
(410) 514-7649  
[pkurtze@mdp.state.md.us](mailto:pkurtze@mdp.state.md.us)

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**From:** Tim Tamburrino  
**Sent:** Tuesday, November 12, 2013 4:16 PM  
**To:** Bob Booher ([bbooher@sbaranes.com](mailto:bbooher@sbaranes.com)); Peter Kurtze  
**Subject:** RE: CSX-Deer Park Bridge at Washington Grove

Bob and Peter,  
I last spoke with CSX on August 26, 2013. At that time, I confirmed once again that there is no federal or state involvement in this portion of their National Gateway project. Therefore, we don't have any official "handle" on this project. However, I am very pleased to hear that they are avoiding impacts to the Washington Grove Historic District and that CSX can accomplish their goals with minimal impact to the Humpback bridge.  
Thanks, Tim

**Tim Tamburrino**  
Preservation Officer/Transportation Reviewer  
Maryland Historical Trust/MDP  
100 Community Place  
Crownsville, MD 21032  
(410)514-7637  
[mht.maryland.gov](http://mht.maryland.gov)  
[ttamburrino@mdp.state.md.us](mailto:ttamburrino@mdp.state.md.us)

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**From:** Bob Booher [<mailto:bbooher@sbaranes.com>]  
**Sent:** Thursday, November 07, 2013 2:34 PM  
**To:** Peter Kurtze; Beth Cole  
**Cc:** patricia littlefield  
**Subject:** RE: CSX-Deer Park Bridge at Washington Grove

Thanks. We look forward to any guidance you can provide.

7. Letter from Scott Whipple, Montgomery County Historic Preservation Commission, stating that the proposed CSX modifications to the Humpback Bridge would not affect its continued designation to the Locational Atlas.



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

February 5, 2014

Mr. Marty Marchaterre, Senior Planner  
Mr. Lance Rasnake, Project Manager  
AMEC Environment & Infrastructure  
2456 Fortune Drive, Suite 100  
Lexington, KY 40509

Re: Washington Grove Humpback Bridge (#21/220-1A)  
Historic Preservation Review under Chapter 24A-10

Dear Messrs. Marchaterre and Rasnake:

I have received and reviewed the plans you provided for project work at the Washington Grove Humpback Bridge, a resource (#21/220-1A) listed in the Locational Atlas and Index of Historic Sites.

I have reviewed the 70% submittal plans, dated 1/17/14, you provided. As Supervisor of the Montgomery County Planning Department Historic Preservation Section, I am of the opinion that this project, as submitted, **would not** constitute a substantial alteration as per Chapter 24A-10 of the County Code. Unless changes are made to the plans, no further historic preservation review is necessary.

Thank you for your efforts to develop a design solution that is sympathetic to the bridge's character-defining historic features while providing for the bridge's continued use into the future. If you have questions or comments, please feel free to contact me at 301.546.3400 or [scott.whipple@mncppc-mc.org](mailto:scott.whipple@mncppc-mc.org).

Sincerely yours,

A handwritten signature in black ink, appearing to read "Scott Whipple", written over a large, stylized circular flourish.

Scott Whipple, Supervisor  
Historic Preservation Section

cc: Gail Lucas, DPS  
Hadi Mansouri, DPS

## Bob Booher

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**To:** Lee, James  
**Subject:** RE: Deer Park Bridge

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**From:** Lee, James [[mailto:larry\\_lee@nps.gov](mailto:larry_lee@nps.gov)]  
**Sent:** Wednesday, March 05, 2014 9:15 AM  
**To:** Bob Booher  
**Cc:** patricia littlefield  
**Subject:** Re: Deer Park Bridge

Bob,

I thought I got back to you on that. Sorry I somehow missed it.

I agree that these drawings look good. This concept, and the apparent execution, looks to be the best resolution all around. It will keep the essential character of the bridge and provide the clearance CSXT needs. I look forward to seeing the final review submission.

Larry

--

J. Lawrence Lee, Ph.D., P.E.  
Engineer-Historian  
Historic American Engineering Record  
National Park Service  
202-354-2161  
[larry\\_lee@nps.gov](mailto:larry_lee@nps.gov)  
<http://www.nps.gov/history/hdp/>  
<http://www.Facebook.com/HeritageDocumentationPrograms>

"Green aisles of Pullman cars  
Soothe me like trees  
Woven in old tapestries . . ." - William Rose Bénéét

8. Email from Larry Lee, Historic American Engineering Record (HAER), National Park Service, stating that CSX's planned modifications to the Humpback Bridge are reasonable and do not adversely affect the historic integrity of the bridge.