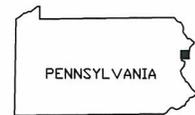
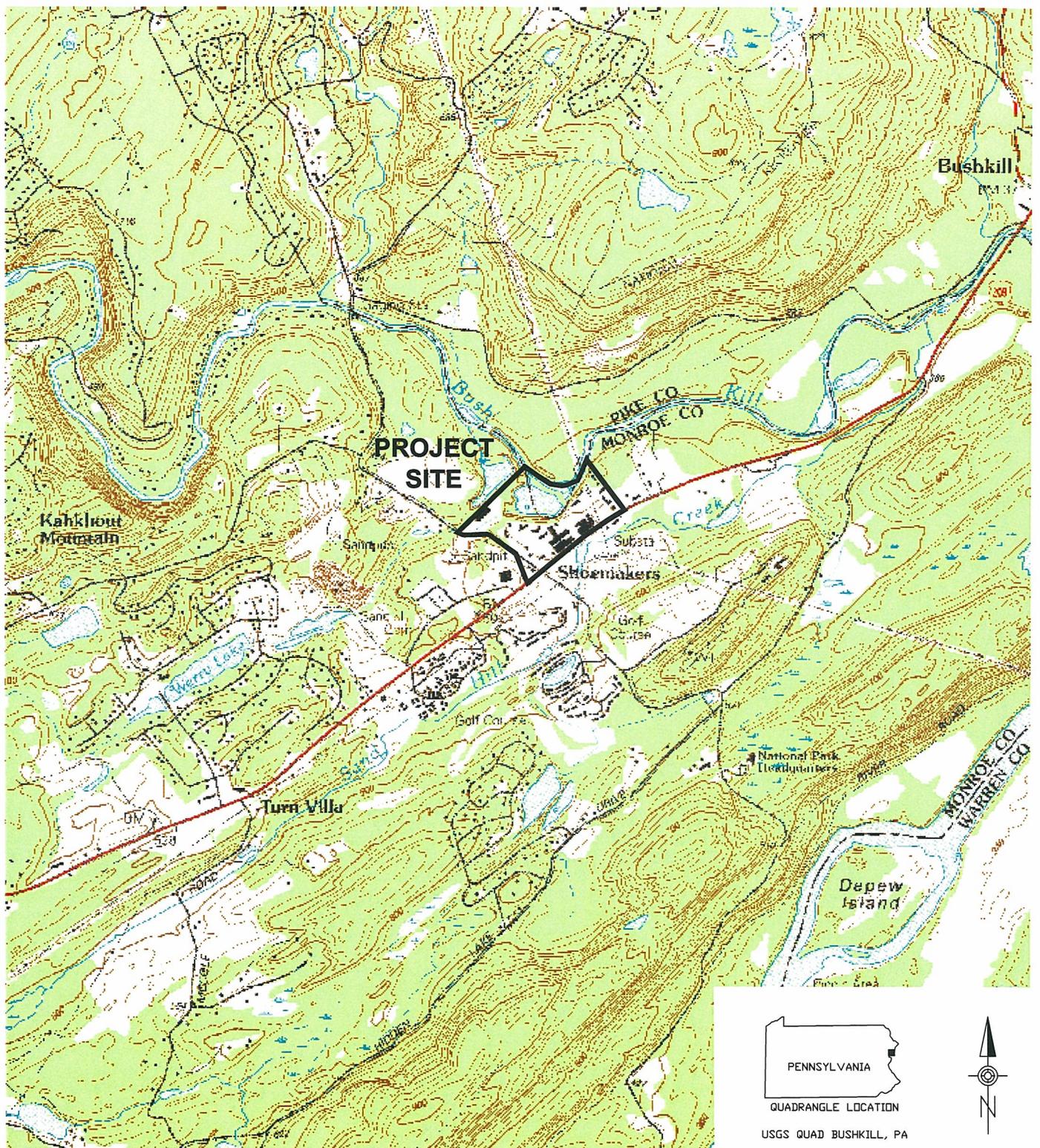


**APPENDIX A1 & A2**

**SITE LOCATION TOPOGRAPHIC MAP  
&  
SITE LOCATION AERIAL MAP**



PENNSYLVANIA  
 QUADRANGLE LOCATION



USGS QUAD BUSHKILL, PA

EXHIBIT A  
 WETLAND DELINEATION  
 MIDDLE SMITHFIELD TOWNSHIP  
 MONROE COUNTY, PA

**HRG**  
 Herbert, Rowland & Grubic, Inc.  
 Engineering & Related Services

369 East Park Drive  
 Harrisburg, PA 17111  
 (717) 564-1121  
 Fax (717) 564-1158  
 hrg@hr-g-inc.com  
 www.hrg-inc.com

DESIGN

GLDJ

DRAWN

GLDJ

SCALE

1" = 2000'

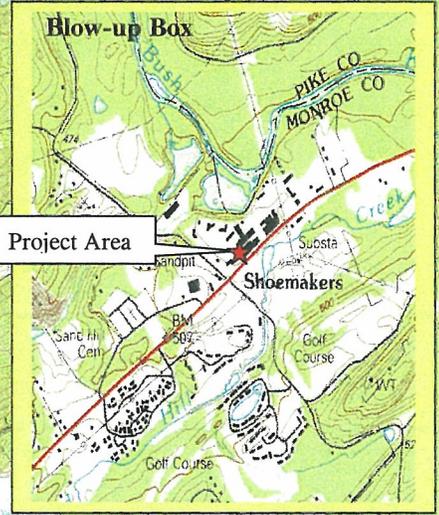
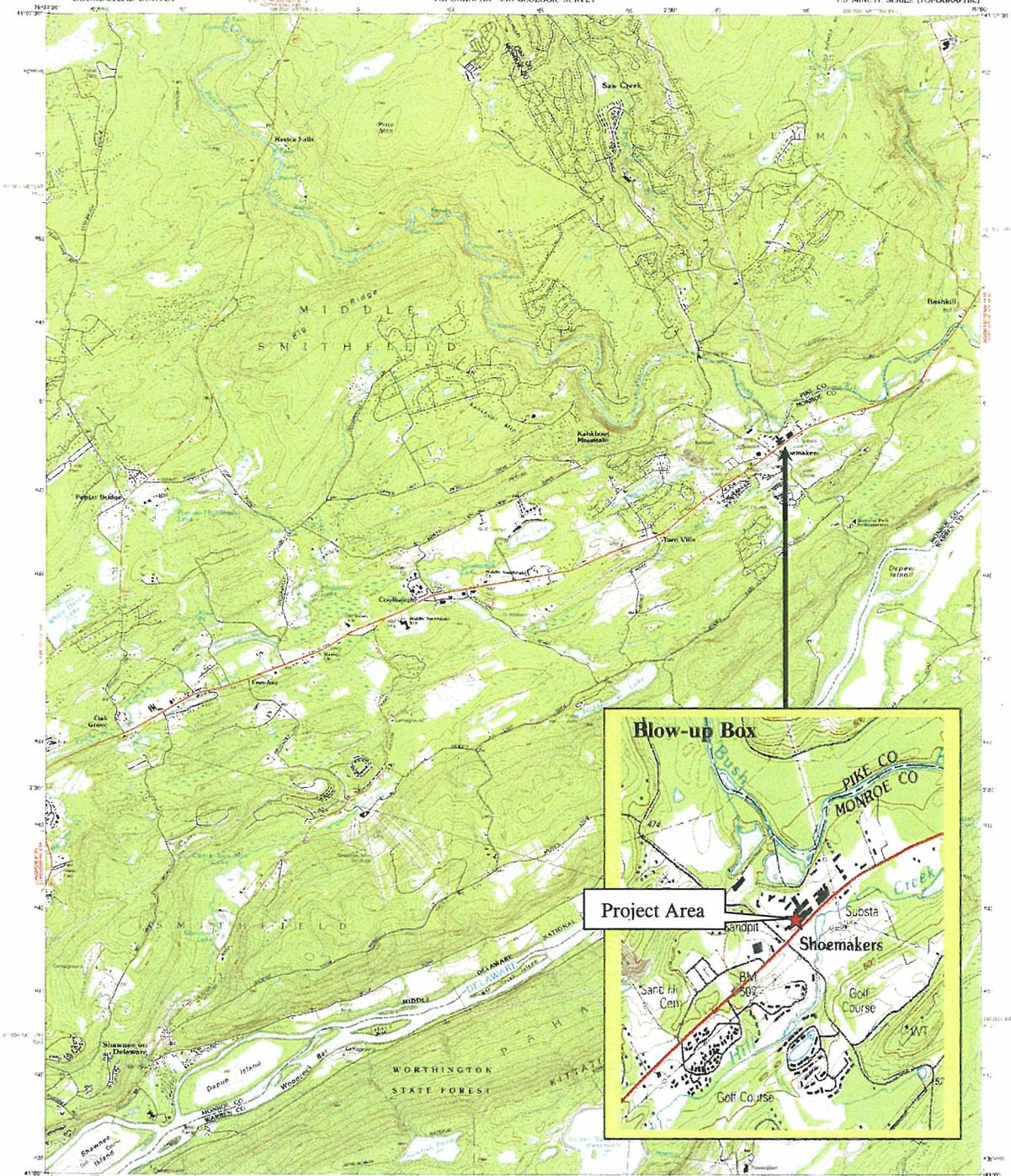
PROJECT

2773.052

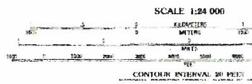
SHEET:  
 1

OF:  
 1

DATE:  
 11-7-05



Produced by the United States Geological Survey  
in cooperation with Commonwealth of Pennsylvania agencies:  
Control by USGS and NGS/NMVA  
Compiled from aerial photographs taken 1991  
Field checked 1992. Map dated 1995.  
North American Datum of 1983 (NAD 83). Projection and  
1 000-meter grid ticks: Universal Transverse Mercator, zone 18, shown in blue.  
2 500-meter ticks: Pennsylvania Coordinate System of 1983



**APPENDIX A1**

**Site Location 7.5 Minute Topo Map**

Fernwood Hotel & Casino  
Middle Smithfield Township,  
Monroe County, PA



104 Rt. 611, Suite 1  
Bartonsville, PA 18321  
(570) 629-7140  
www.hrg-inc.com

DESIGN  
EJW

DRAWN  
EJW

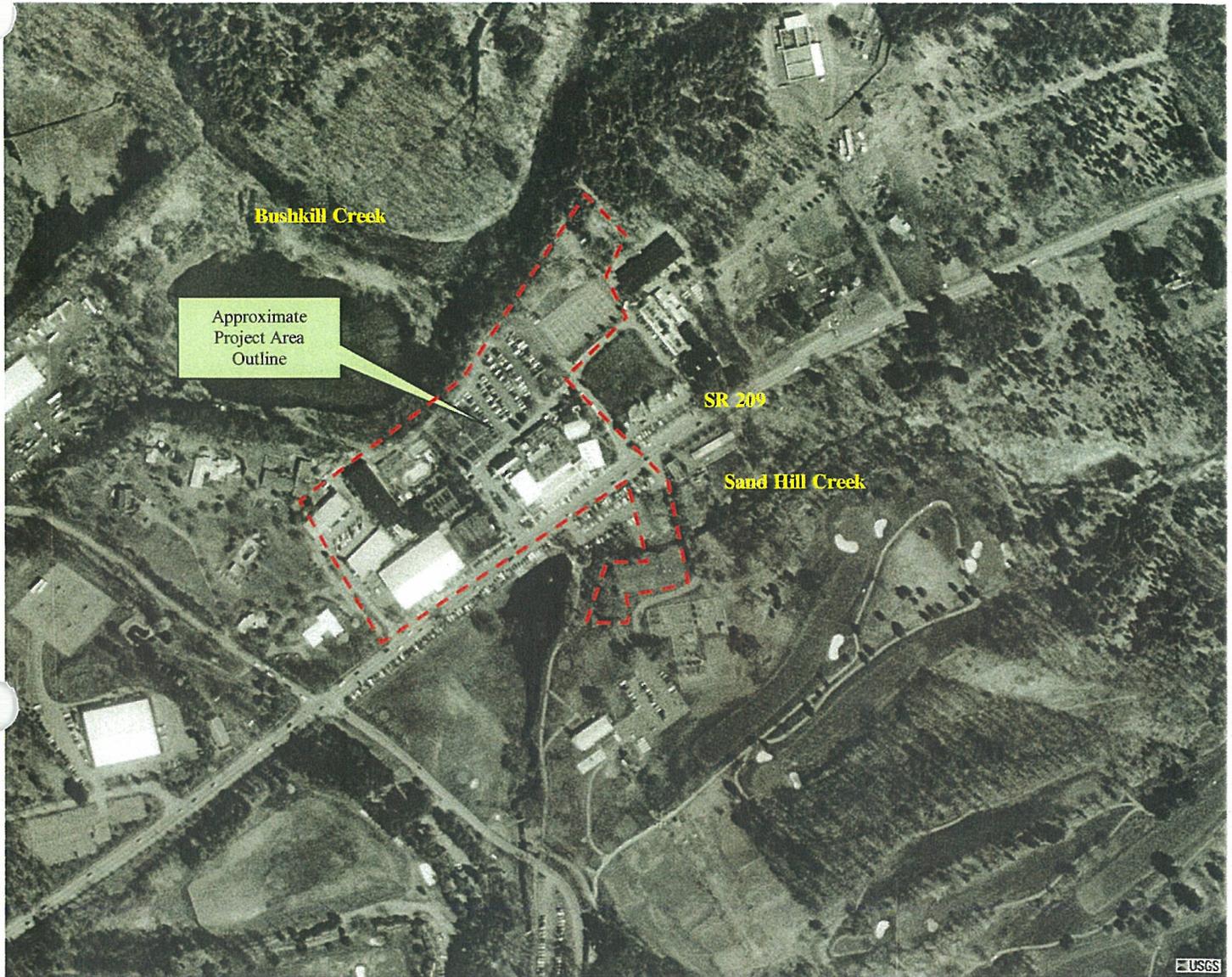
SCALE  
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SHEET:  
**1**

OF:  
**2**

DATE:  
**June 2007**

PROJECT  
2773.065



 **The National Map** Shoemakers, Pennsylvania, United States 4/24/1999



**APPENDIX A2**

**Site Location Aerial Photo Map**

Fernwood Hotel & Casino  
Middle Smithfield Township,  
Monroe County, PA



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(570) 629-7140  
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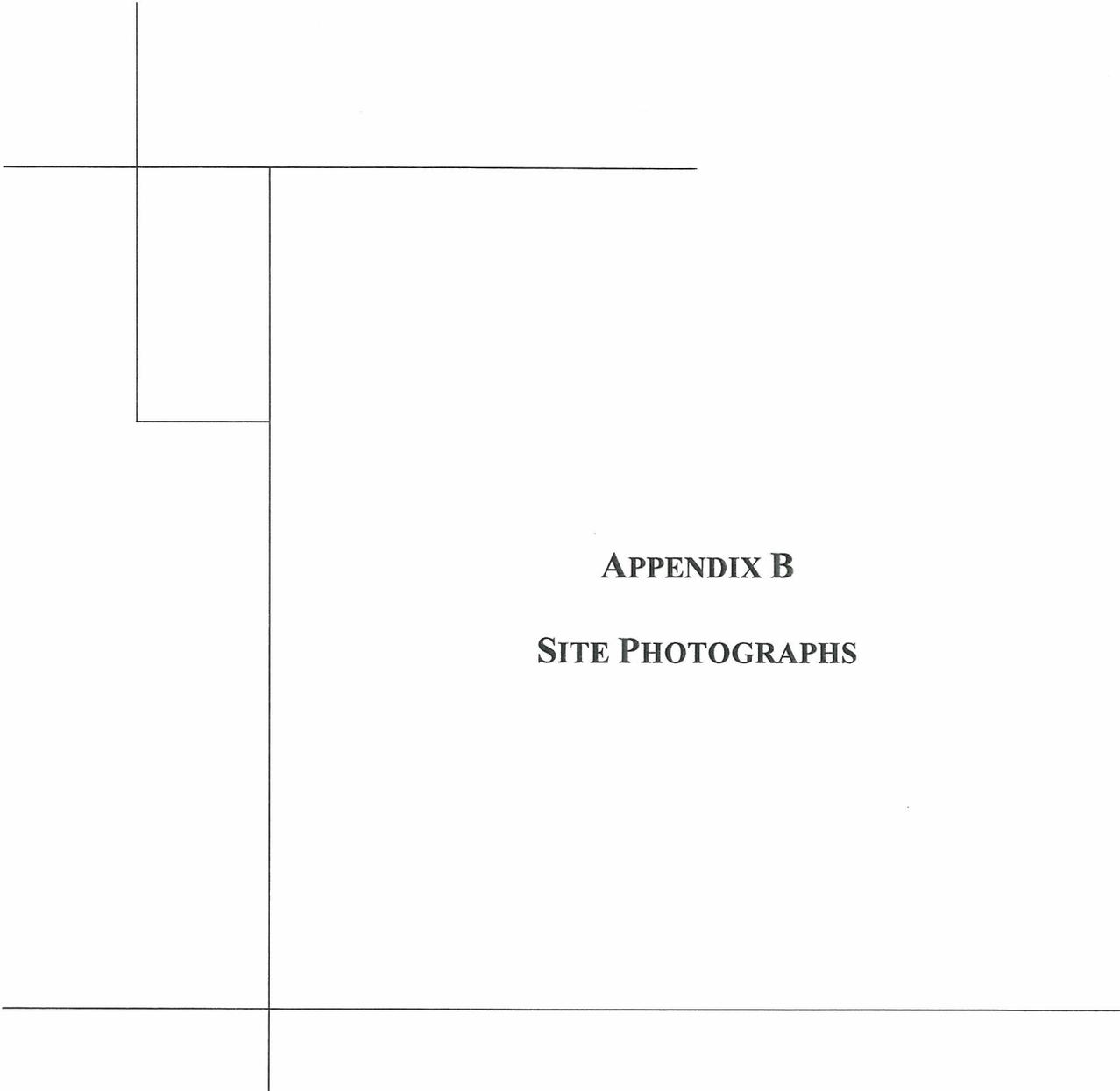
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DRAWN  
EJW

SCALE  
N/A

PROJECT  
2773.065

SHEET: <b>2</b>	OF: <b>2</b>	DATE: <b>June 2007</b>
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**APPENDIX B**  
**SITE PHOTOGRAPHS**



**Main Event Center (front view across SR 209) – To House Future Casino**



**Existing Maintenance & Phone Switching Building – Future Casino Back-end Operations**

**APPENDIX B**

**Site Photographs**

Fernwood Hotel & Casino  
Middle Smithfield Township,  
Monroe County, PA



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DRAWN  
EJW

SCALE  
N/A

PROJECT  
2773.065

SHEET:  
**1**

OF:  
**7**

DATE:  
**June 2007**



**Existing Warehouse Facility – Future Casino Back-end Operations (storage)**



**Typical Parking area to be redeveloped (site of former tennis courts)**

**APPENDIX B**

**Site Photographs**

Fernwood Hotel & Casino  
Middle Smithfield Township,  
Monroe County, PA



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(570) 629-7140  
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DRAWN  
EJW

SCALE  
N/A

PROJECT  
2773.065

SHEET:  
**2**

OF:  
**7**

DATE:  
**June 2007**



Typical Parking area to be redeveloped (looking south toward SR 209)



Edge of existing parking area looking east into wooded former cottage area.  
To be redeveloped into a parking area.

**APPENDIX B**  
**Site Photographs**

Fernwood Hotel & Casino  
Middle Smithfield Township,  
Monroe County, PA



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(570) 629-7140  
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DESIGN  
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SCALE  
N/A

PROJECT  
2773.065

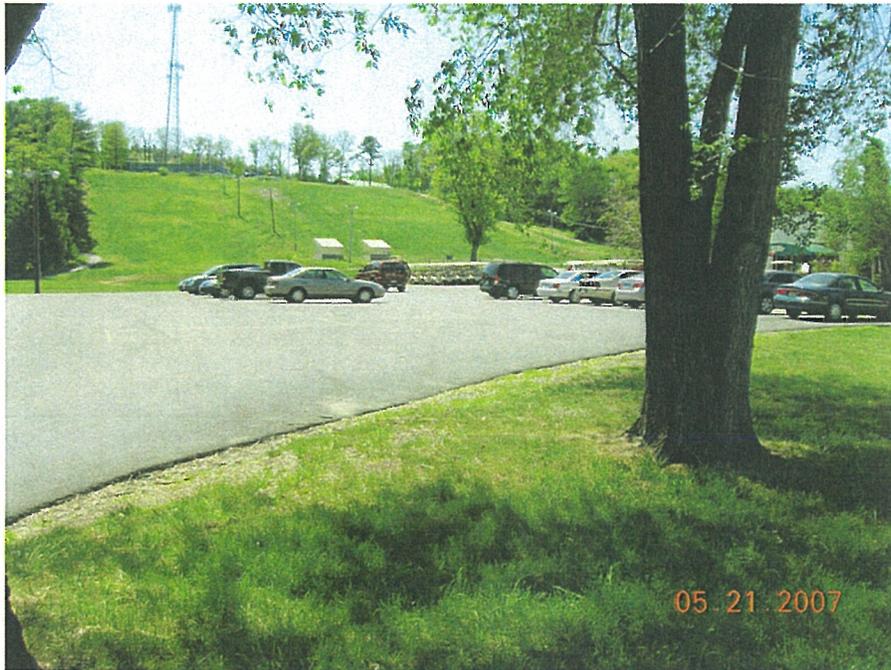
SHEET:  
3

OF:  
7

DATE:  
June 2007



**Bushkill Creek (located northeast of the project area)**



**Existing Parking area to be redeveloped – located south of SR 209**

**APPENDIX B**

**Site Photographs**

Fernwood Hotel & Casino  
Middle Smithfield Township,  
Monroe County, PA



104 Rt. 611, Suite 1  
Bartonsville, PA 18321  
(570) 629-7140  
www.hrg-inc.com

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SCALE  
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PROJECT  
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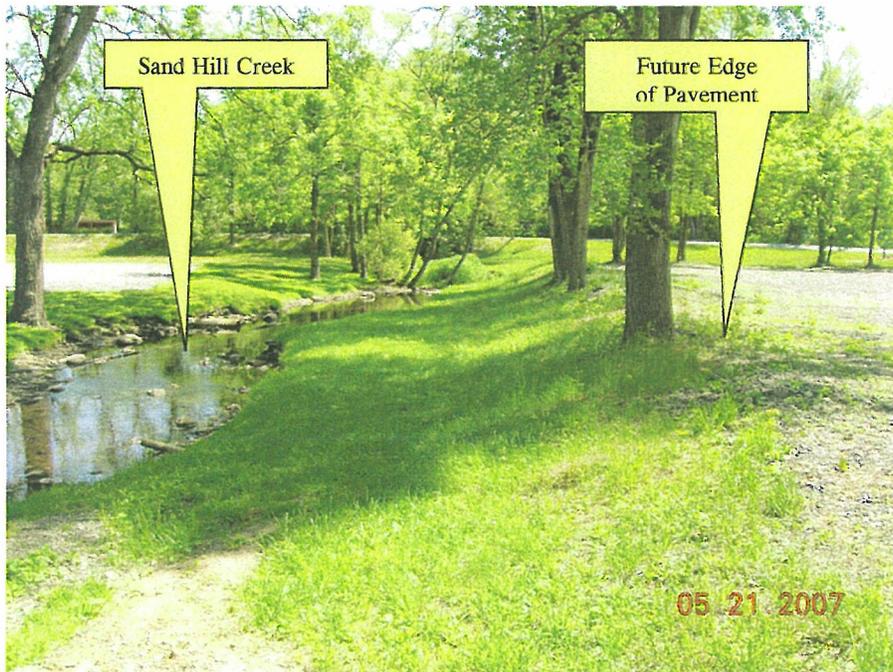
SHEET:  
4

OF:  
7

DATE:  
June 2007



**Existing Parking area to be redeveloped – located south of SR 209  
Former Tennis Courts (adjacent to Sand Hill Creek)**



**View of Sand Hill Creek and edge of future parking area re-development**

**APPENDIX B**

**Site Photographs**

Fernwood Hotel & Casino  
Middle Smithfield Township,  
Monroe County, PA



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(570) 629-7140  
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DESIGN  
EJW

DRAWN  
EJW

SCALE  
N/A

PROJECT  
2773.065

SHEET:  
5

OF:  
7

DATE:  
June 2007



**New HVAC Unit for Event Center – Propane Fuel**



**Inside of Event Center – Future Casino Gaming Floor**

**APPENDIX B**

**Site Photographs**

Fernwood Hotel & Casino  
Middle Smithfield Township,  
Monroe County, PA



104 Rt. 611, Suite 1  
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(570) 629-7140  
www.hrg-inc.com

DESIGN  
EJW

DRAWN  
EJW

SCALE  
N/A

PROJECT  
2773.065

SHEET:  
**6**

OF:  
**7**

DATE:  
**June 2007**



**East Side of Event Center – Future Grill Area**



**East Side of Event Center – Future Main Entrance w/Canopy**

**APPENDIX B**

**Site Photographs**

Fernwood Hotel & Casino  
Middle Smithfield Township,  
Monroe County, PA



104 Rt. 611, Suite 1  
Bartonsville, PA 18321  
(570) 629-7140  
www.hrg-inc.com

DESIGN  
EJW

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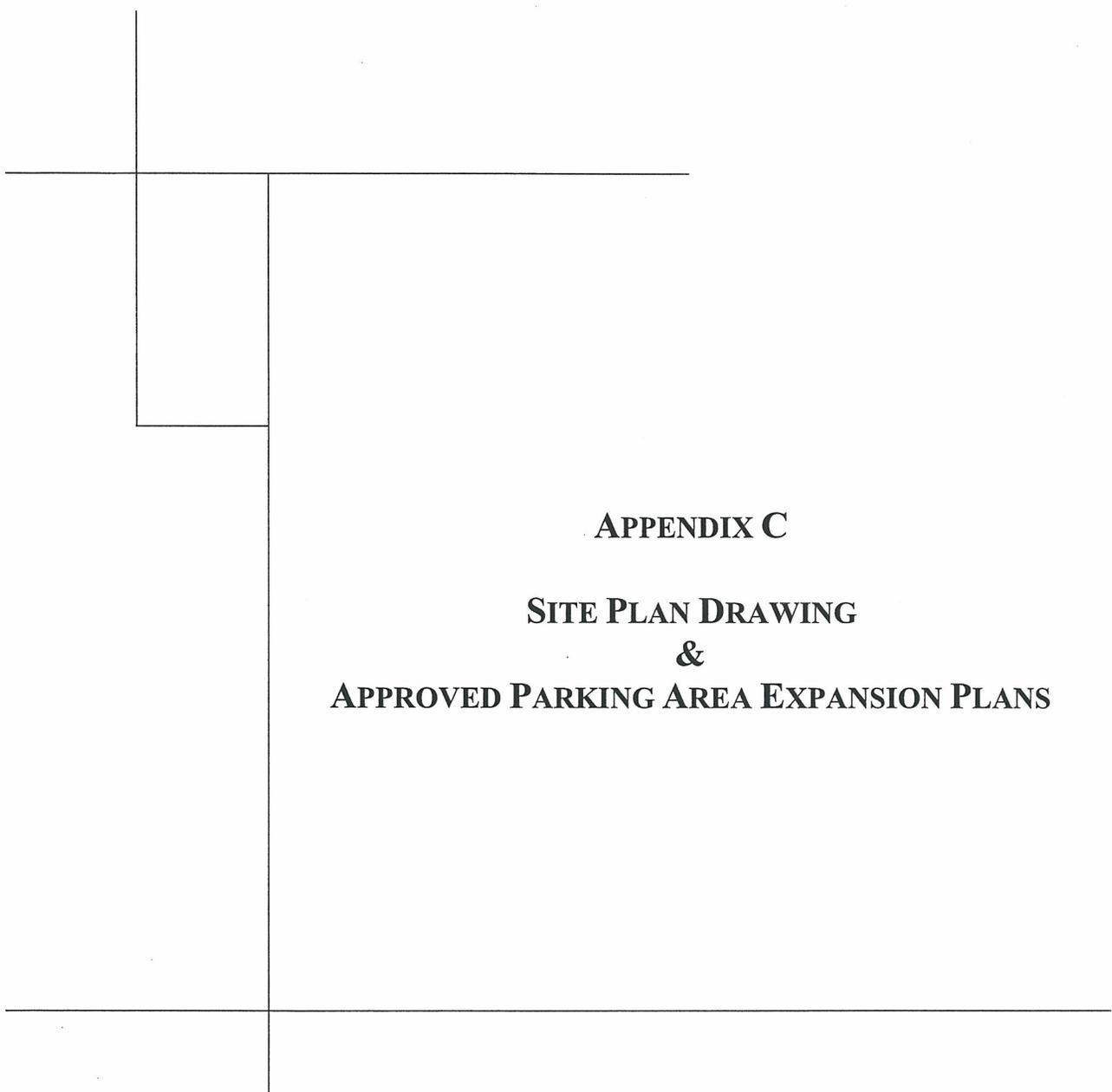
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PROJECT  
2773.065

SHEET:  
7

OF:  
7

DATE:  
June 2007



**APPENDIX C**  
**SITE PLAN DRAWING**  
**&**  
**APPROVED PARKING AREA EXPANSION PLANS**



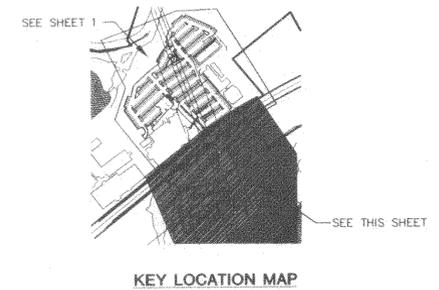


**GENERAL NOTES:**

- OWNER / DEVELOPER - HARA CORP. (A SUBSIDIARY OF RESORTS U.S.A., INC.) JOHN BRIGGS, VICE PRES., DEVELOPMENT OPERATIONS P.O. BOX 447 BUSHKILL, PA 18324
- BOUNDARY BASED UPON A SURVEY AS PERFORMED BY FRANK SMITH JR., INC.
- TOPOGRAPHY AND EXISTING FEATURES BASED ON SURVEY PERFORMED BY FRANK SMITH JR., INC.
- PARCEL DATA: PORTION - PIN# 09-7354-00-13-7435 TAX ASSESSMENT #9/4/1/102 DEV. 2094 PG. 3198 PORTION - PIN# 09-7354-00-14-3113 TAX ASSESSMENT #9/4/1/101 DEV. 2136 PG. 3740 MIDDLE SMITHFIELD TWP. EMERGENCY GRID NO. 360A ZONING DISTRICT: C-1 REQUIRED SETBACKS FRONT 60' REAR 30' SIDE 30' AREA BEING DEVELOPED = 6.1 ACRES
- PARKING REQUIREMENTS REQUIRED PROVIDED N/A 589
- THE PURPOSE OF THE PROJECT IS TO RELOCATE EXISTING PARKING SPACES ALONG ROUTE 209 INTERNALLY TO THE SITE.
- ALL USES SHOWN ON THIS PLAN ARE SUBJECT TO THE RULES AND REGULATIONS AS SET FORTH IN THE MIDDLE SMITHFIELD TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE MIDDLE SMITHFIELD TOWNSHIP ZONING ORDINANCE, AS BOTH ARE AMENDED.
- BY APPROVAL OF THIS PLAN, THE TOWNSHIP OF MIDDLE SMITHFIELD HAS NEITHER CONFIRMED NOR DENIED THE EXISTENCE AND/OR EXTENT OF ANY WETLAND AREAS, WHETHER OR NOT DELINEATED ON THE PLAN, AND ANY ENCROACHMENT THEREON FOR ANY REASON WHATSOEVER SHALL BE THE SOLE RESPONSIBILITY OF THE DEVELOPER, HIS HEIRS AND ASSIGNS AND SHALL BE SUBJECT TO THE JURISDICTION OF THE ARMY CORPS OF ENGINEERS AND/OR THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE ENCROACHMENT SHALL CONFORM TO THE RULES AND REGULATIONS OF THE JURISDICTIONAL AGENCIES.
- AN APPROVED AND COMPLETED HIGHWAY OCCUPANCY PERMIT SHALL BE REQUIRED PRIOR TO OCCUPANCY AND/OR USE. SEE APPROVED HIGHWAY OCCUPANCY PLAN DRAWINGS FOR DIMENSIONS AND SIGNAGE AT DRIVEWAYS & IN PENN DOT R.O.W.
- WATER SUPPLY AND SEWERAGE ARE EXISTING, AS INDICATED.
- EXTERIOR LIGHTING, DIRECTED AWAY FROM ADJACENT PROPERTIES, SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 5.227 OF THE ZONING ORDINANCE.
- THE OWNER / DEVELOPER SHALL BE RESPONSIBLE TO OBTAIN ANY AND ALL REQUIRED APPROVALS FROM LOCAL, STATE AND FEDERAL BODIES/AGENCIES.
- A 10 FOOT BUFFER ALONG ROUTE 209 R.O.W. SHALL BE LANDSCAPED TO PREVENT VEHICULAR PASSAGE.
- THERE ARE NO 100 YEAR FLOOD HAZARD ZONES ASSOCIATED WITH THIS PROJECT.
- ALL PPL TOWERS SHALL HAVE PARKING NO CLOSER THAN 5 FT. FROM THE EDGE OF THE BASE AND SHALL BE PROTECTED BY FENCING AND/OR GUIDE RAIL.
- EXISTING PAVED DRIVEWAYS SHALL BE MAINTAINED IN ACCORDANCE WITH APPROVED PENNDOT HIGHWAY OCCUPANCY PERMITS #05027645 AND #05027639 UNTIL THE PENNDOT IMPROVEMENTS ARE CONSTRUCTED. AT THIS TIME REALIGNMENT OF THE DRIVEWAYS MAY OCCUR VIA SUPPLEMENTS TO THE EXISTING PERMITS.
- ALL PROPOSED PARKING AREAS SHALL BE PAVED.
- LIGHT STANDARDS DIRECTLY BENEATH OR WITHIN 20 FT. OF THE OUTER TRANSMISSION LINE SHALL NOT EXCEED 10 FT. IN HEIGHT. LIGHT STANDARDS WITHIN 20-25 FT. OF THE OVERHEAD WRES SHALL NOT EXCEED 18 FT. IN HEIGHT.
- NO WETLANDS ARE LOCATED WITHIN THE LIMITS OF THE PROJECT PROPOSED ON THIS PLAN.
- A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.

**LEGEND:**

- PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- RIGHT OF WAY
- PP&L R/W
- PROPOSED CURB
- PROPOSED EDGE OF PAVE
- EXISTING EDGE OF WOODLANDS
- EXISTING UTILITY POLE
- EXISTING ELECTRIC LINE
- EXISTING UTILITY LINE
- EXISTING BUILDING
- BUILDING SETBACK LINE
- NUMBER OF PROPOSED ADJACENT PARKING SPACES



**AFFIDAVIT OF PLAN SUBMISSION:**  
This Land Development Plan was submitted to the MONROE COUNTY PLANNING COMMISSION for review on 20

DATE Christopher P. McDermott, Professional Engineer License No. PE-043178-E

**CERTIFICATE OF ACCURACY AND COMPLIANCE:**  
I hereby certify that the plan shown and described hereon, as well as all related drawings and documents submitted herewith are true and correct to the accuracy required by and are in complete compliance with the MIDDLE SMITHFIELD TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT REGULATIONS and/or the MIDDLE SMITHFIELD TOWNSHIP ZONING ORDINANCE and were prepared by me or under my direct supervision and for which I accept full and complete responsibility.

THIS PLAN IS CERTIFIED ONLY IF IT BEARS THE EMBOSSED SEAL OF Christopher P. McDermott Professional Engineer PE-043178-E

DATE Christopher P. McDermott, Professional Engineer License No. PE-043178-E

**CERTIFICATE OF OWNERSHIP & ACKNOWLEDGMENT OF PLAN:**  
COMMONWEALTH OF PENNSYLVANIA COUNTY OF MONROE SS  
On this, the day of in the Year 20 before me, the undersigned officer, personally appeared JOHN BRIGGS, who being duly sworn, according to law did depose and say:  
1. That he is the Vice President of HARA CORP. (the "Corporation"), and that in his capacity as Vice President he is authorized to execute this Certificate and Acknowledgment on behalf of the Corporation.  
2. That the Corporation is the owner of the property shown and depicted on the annexed Plan and that the Land Development plan thereon was made at the direction of the Corporation.  
3. Affiant acknowledges, on behalf of the Corporation, that the Land Development Plan be, by the Corporation's own act and plan, and desires the same to be recorded according to law.

JOHN BRIGGS, As Vice President, Development Operations, HARA CORP.

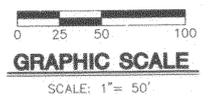
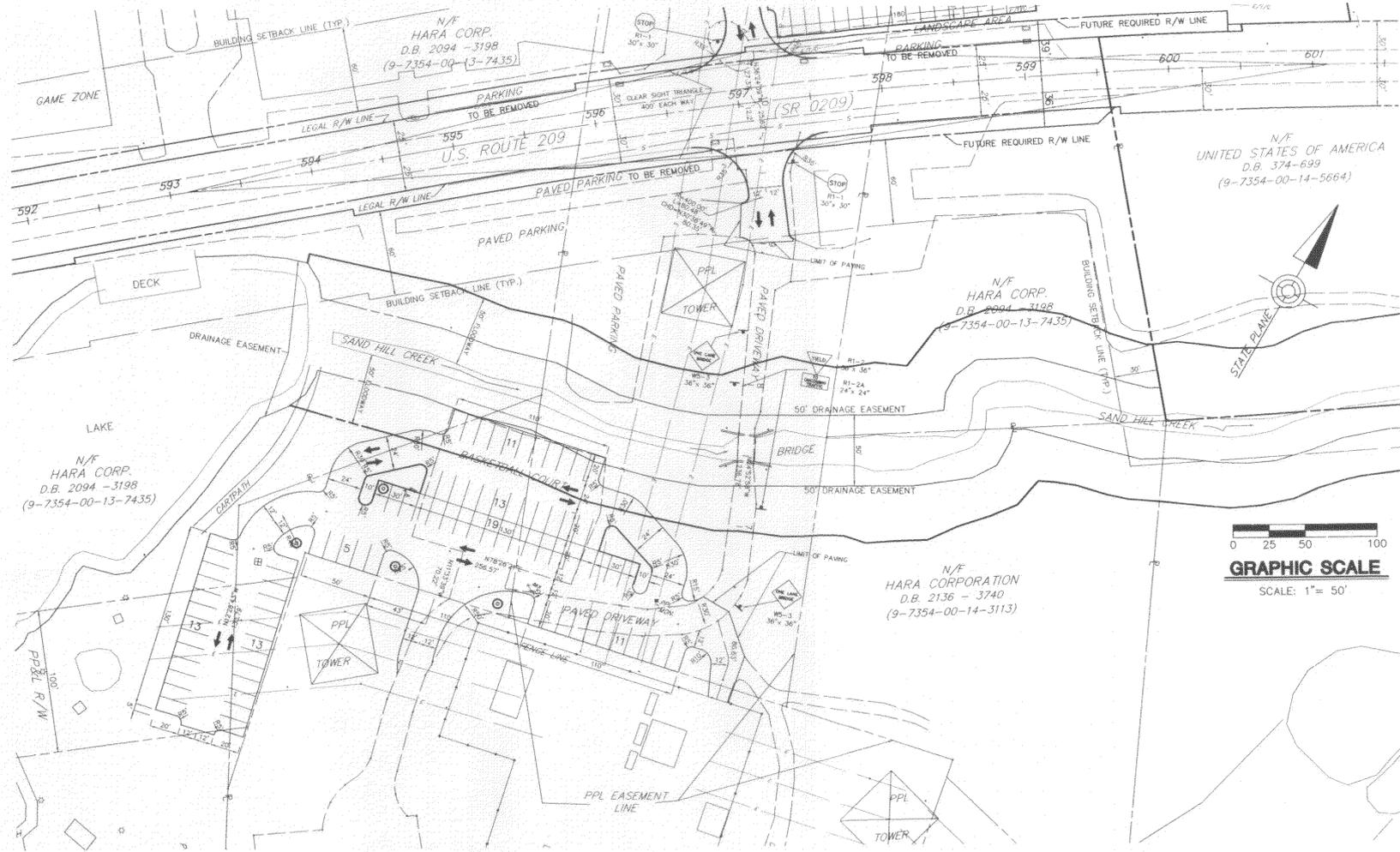
Sworn before me this day of in the Year 20

Notary Public My Commission expires:

**REQUIRED PERMIT CERTIFICATION:**  
COMMONWEALTH OF PENNSYLVANIA County of Monroe SS  
On this, the day of 20 before me, the undersigned officer, personally appeared JOHN BRIGGS, who being duly sworn, according to law, doth depose and say that he is the vice president of HARA CORP., which is the owner of the property shown and depicted on this plan, hereby certifies that the HARA CORP., its heirs or assigns will implement all requirements and obtain all permits as required by any and all local, state or federal agencies and does also agree and realize that if the said permits are not obtained as required any and all approvals given by MIDDLE SMITHFIELD TOWNSHIP will become nullified and be voided with no further action on the part of the Township.

John Briggs, Vice President, Development Operations, HARA CORP.

NOTARY PUBLIC



**MIDDLE SMITHFIELD TOWNSHIP PLANNING COMMISSION CERTIFICATE OF REVIEW AND RECOMMENDATIONS:**  
At a public meeting held on 20 the PLANNING COMMISSION OF MIDDLE SMITHFIELD TOWNSHIP reviewed and by a motion, duly carried, does hereby recommend approval of the said Land Development Plan for the property of RESORTS U.S.A., INC. as shown hereon.

Chairman \_\_\_\_\_  
Secretary \_\_\_\_\_

**MIDDLE SMITHFIELD TOWNSHIP BOARD OF SUPERVISORS CERTIFICATE OF REVIEW AND APPROVAL:**  
At a public meeting held on 20 the BOARD OF SUPERVISORS OF MIDDLE SMITHFIELD TOWNSHIP reviewed and by a motion, duly carried, does hereby approve, endorse and seal the said LAND DEVELOPMENT plan for the property of RESORTS U.S.A., INC. as shown hereon.

Chairman \_\_\_\_\_  
Supervisor \_\_\_\_\_

NO.	REVISION	DATE	BY
2	REVISED PER MCOCD COMMENTS	4/21/03	BKM
1	REVISED PER TOWNSHIP COMMENTS	1/30/03	PAM

**HRG**  
Herbert, Rowland & Grubic, Inc.  
Engineering & Related Services  
Harrisburg • Lancaster • State College • Gettysburg • Pittsburgh • Stroudsburg

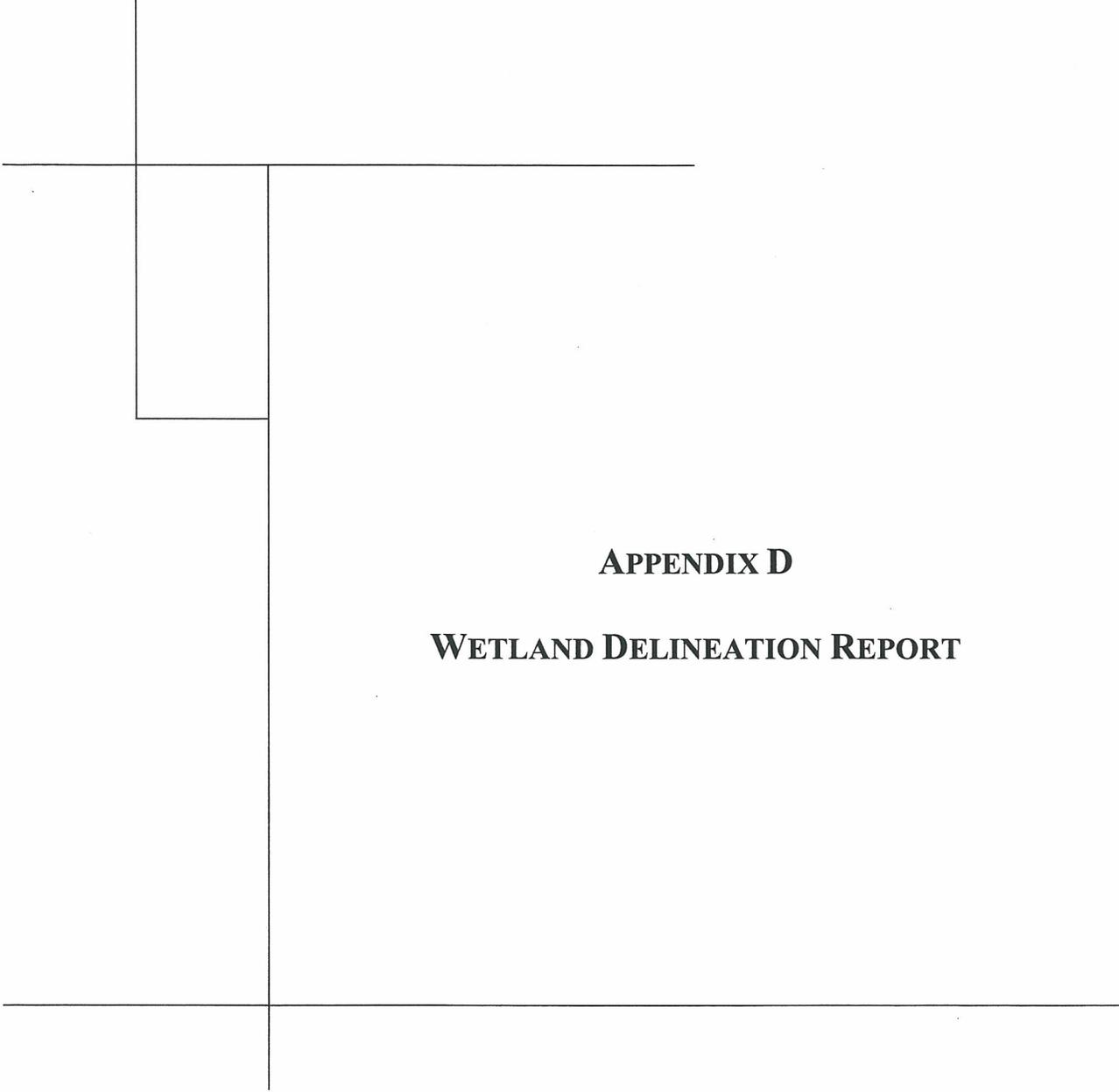
1273 North Ninth Street  
Stroudsburg, PA 18360  
(570) 476-6100  
Fax (570) 476-4046  
Email - pocono@hrg-inc.com  
Website - www.hrg-inc.com

**RESORTS U.S.A., INC.**  
P.O. BOX 447  
BUSHKILL, PENNSYLVANIA 18324  
(570) 588-6661

**LAND DEVELOPMENT PLAN FOR PARKING LOT EXPANSION PROJECT**  
MIDDLE SMITHFIELD TOWNSHIP MONROE COUNTY PENNSYLVANIA

PROJ. MGR. - CPM  
DESIGN- PAM  
CADD- RHH  
CHECKED- CPM  
SCALE- 1" = 50'  
DATE- 12/13/02

SHEET NO. **2**  
DRAWING NO. **2 OF 11**  
PROJECT 2773.001



**APPENDIX D**  
**WETLAND DELINEATION REPORT**

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EXHIBIT B – Soil and Wetland Inventory	
EXHIBIT C – Existing Conditions Plan	
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APPENDIX A – Wetland Photographs	
APPENDIX B – Data Forms	

# **WETLAND DELINEATION REPORT – RESORTS USA**

## **MIDDLE SMITHFIELD TOWNSHIP, MONROE COUNTY, PENNSYLVANIA**

---

### **INTRODUCTION**

On the 28<sup>th</sup> of October, 2005, a field investigation was conducted on an approximately 45-acre project site to determine the presence and extent of any freshwater wetlands. The site is located between S.R. 209 and Bushkill Creek in Middle Smithfield Township, Monroe County, Pennsylvania. The wetland delineation was limited to the area to the north east of the intersection of route 209 and Winona Falls Road. An unnamed tributary of Bushkill Creek intersects the site from west to east and Bushkill Creek itself forms the northern boundary of the project site. The center of the site is located at approximately -75° 01' 40" W and 41° 04' 47" N. See the Site Location Map presented as Exhibit A.

### **EXISTING USES OF THE SITE**

The property is currently mostly developed as a tourism resort. The specific project site includes the main resort area itself as well as residences, a pond, wooded areas and infrastructure such as internal roads, maintenance buildings and waste collections areas.

Topographically, the property consists of a higher area along S.R. 209, where the majority of the resort is located, and a lower area down towards Bushkill Creek containing the pond and maintenance areas. The majority of the low-lying areas are within the 100 year floodplain. Elevations range (approximately) from 460 feet along S.R. 209 down to 395 feet along Bushkill Creek.

### **SOILS**

According to the Soil Survey of Monroe County, Pennsylvania, the project area is located in the Wyoming-Chenango-Pope Association. Soils of this association are nearly level to sloping, deep, somewhat excessively drained and well drained soils underlain by glacial outwash and alluvium. The soil series found within the project area include the Alluvial, Philo, Pope, Wayland and Wyoming soils.

The specific soils found within the project area are:

Alluvial land (As). This gently sloping, miscellaneous soil unit is found on floodplains and along frequently flooded drainageways on uplands. Drainage is variable. This soil is not hydric but does present hydric inclusions.

Philo silt loam (Ph). This soil unit is nearly level, deep and moderately well drained. It is found on flood plains

adjacent to the major streams in the area. This soil is not hydric but does present hydric inclusions.

Pope silt loam (Po). This is a nearly level, deep and well drained soil found on floodplains. This soil is not hydric but does present hydric inclusions.

Wayland silty clay loam (Wb). This is a nearly level, deep and very poorly drained soil found on floodplains. This soil is hydric.

Wyoming gravelly sandy loam (WyA) 0 to 3 percent slopes. This soil unit is nearly level, deep and somewhat excessively drained. It is found on terraces, kames, eskers and valley trains. This soil is not hydric but may present hydric inclusions in wet spots and potholes.

Wyoming gravelly sandy loam (WyB) 3 to 8 percent slopes. This soil unit is gently sloping, deep and somewhat excessively drained. It is found on stream terraces, benches and broad kames, adjacent to streams. This soil is not hydric but may present hydric inclusions in wet spots and potholes.

Wyoming gravelly sandy loam (WyC) 8 to 15 percent slopes. This soil unit is sloping, deep and somewhat excessively drained. It is found on upper parts of sides of terraces, kames, moraines and valley trains. This soil is not hydric but may present hydric inclusions in wet spots and potholes.

Wyoming gravelly sandy loam (WyE) 25 to 70 percent slopes. This soil unit is steep to very steep, deep and somewhat excessively drained. It is found on the sides of terraces, kames and valley trains. This soil is not hydric.

## **MAPPED WETLANDS**

The National Wetland Inventory (NWI) mapping is used to inventory and classify wetlands using the Cowardin Classification System (USFWS, 1979). The wetlands on the NWI maps were identified from aerial photography and are not necessarily the only regulatory wetlands within a given area. These maps serve as a good first source to determine if wetlands exist within the given area and their general characteristics.

According to the National Wetlands Inventory Mapping, there are two mapped wetlands within the project area. One of these is the pond in the middle of the project area and the other is an area immediately upstream of the pond. The National Wetlands Inventory Map was used as a reference for this report; however, it should be noted that the delineation represents current conditions. Mapped soils and wetlands can be seen in Exhibit B.

## **DELINEATION METHODS**

The Routine On-Site Determination Method in accordance with the Corps of Engineers Wetlands Delineation Manual (USACE, 1987) was used to identify and delineate the wetlands within the project study area. Even though the project area exceeds 2 hectares (5 acres) in size, regular transects were not used due to limitations caused by steep terrain, water bodies and existing buildings. A crisscross pattern was utilized during field reconnaissance to ensure that all areas of the site were visually inspected for wetland indicators. In particular, any depressions or drainage lines evident on aerial photography and contour mapping were targeted for presence of wetland indicators.

To identify a wetland using the US Army Corps of Engineers (USACE) determination, an area must exhibit hydric soils, wetland hydrology and a predominance of hydrophytic vegetation.

The wetland field investigation was conducted on October 28<sup>th</sup>, 2005. The daytime temperature ranged from approximately 32° to 55°, with a mixture of sunshine and cloud cover. The boundaries of the identified wetlands were marked with numbered flags for later survey. Exhibit C shows the delineated wetlands. Photographs of the wetlands and data forms are located in Appendix A and Appendix B, respectively.

## DESIGNATED WETLANDS

The field investigation identified three (3) palustrine wetland areas and one open water pond, within the project site (see Table 1). These systems are all communicating and eventually all drain into Bushkill Creek.

Wetland 1 is a palustrine emergent wetland system immediately downstream of the pond (see Picture 1). The dominant vegetation species include Cattails (*Typha latifolia*), Sensitive Fern (*Onoclea sensibilis*), Spicebush (*Lindera benzoin*) and Red Maple (*Acer rubrum*). This wetland is delineated by 9 flags labeled W1-1 to W1-9; the boundary then follows the toe of slope to Bushkill Creek. The eastern end of the wetland is open to Bushkill Creek. There is one soil point associated with Wetland 1; this is SP1-1 and is identified by a pin flag. Total area of this wetland is approximately 0.4 acres.

Wetland 2 is a palustrine emergent/forested wetland system located between the pond and the northwestern boundary of the property (see Pictures 2 and 3). The dominant vegetation species include Cattails (*Typha latifolia*), Sensitive Fern (*Onoclea sensibilis*), Spicebush (*Lindera benzoin*) and American Sycamore (*Platanus occidentalis*). This wetland is delineated by 42 flags labeled W2-1 to W2-42. There are two soil points associated with Wetland 2; these are SP2-1 (wetland) and SP2-2 (upland) identified by pin flags. Total area of this wetland is approximately 0.8 acres.

Wetland 3 is a palustrine emergent wetland system located upstream of the pond, between the pond and the maintenance area (see Pictures 4 and 5). The dominant vegetation species include Cattails (*Typha latifolia*),

Sensitive Fern (*Onoclea sensibilis*), Soft Rush (*Juncus effusus*), Red Osier Dogwood (*Cornus stolonifera*) and Speckled Alder (*Alnus rugosa*). This wetland is delineated by 36 flags labeled W3-1 to W3-36. There is one soil point associated with Wetland 3; this is SP3-1 identified by a pin flag. Total area of this wetland is approximately 0.7 acres.

Table 1 – Wetland Areas

Wetland Area	Approximate Size (Acres)
Wetland 1	0.4 acres
Wetland 2	0.8 acres
Wetland 3	0.7 acres
Total Wetland Area	= 1.9 acres Palustrine Wetland

There is a manmade pond in the middle of the project area, with a total area of approximately 5.5 acres. Bushkill Creek forms the northern boundary of the project site and there is also an intermittent tributary of Bushkill Creek, which crosses the site from west to east. This tributary is enclosed for part of its length, where it crosses the maintenance area, and it then empties into Wetland 3.

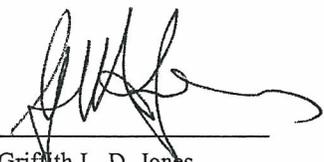
#### UPLAND AREAS

All areas outside of the delineation are classified as upland; these areas generally coincide with higher elevations or steeper slopes and free draining soils.

#### CONCLUSION

On October 28<sup>th</sup>, 2005 a wetland delineation was conducted on a site located in Middle Smithfield Township, Monroe County, Pennsylvania. The delineation identified three (3) palustrine wetland areas that drain into Bushkill Creek. The total palustrine wetland area on the property is 1.9 acres, not including the open water pond. The wetland areas were identified, flagged and surveyed. The delineation was limited to the subject property.

Prepared By:

  
\_\_\_\_\_  
Griffith L. D. Jones  
Environmental Scientist

Reviewed By:

Allen T. Brubaker  
Brian E. Dunlap, E.I.T. For  
Staff Professional

**REFERENCES**

USGS Map, Bushkill, PA Quadrangle (Topographic), 7.5-Minute Series, 1993.

Soil Survey, Monroe County, Pennsylvania, United States Department of Agriculture Soil Conservation Service, Issued August 1981.

Corps of Engineers Wetland Delineation Manual, Environmental Laboratory, January 1987.

Munsell Soil Color Charts, Kollmorgen Instruments Corp, 2000 Revised Edition.

The Shrub Identification Book, George W.D. Symonds, 1963, Harper Collins, New York.

The Tree Identification Book, George W.D. Symonds, 1958, Harper Collins, New York.

Weeds of the Northeast, Richard Uva et al, 1997, Cornell University Press, Ithaca, New York

Wildflower Guide, Lawrence Newcomb, 1977, Little, Brown and Company, New York

National List of Plant Species that Occur in Wetlands:Northeast (Region 1), U.S. Fish and Wildlife Service, Reed, P.B., Jr. 1988

Hydric Soils List, Monroe County Conservation District, Stroudsburg, PA

Penn State University – Pennsylvania Soil Map  
<http://soilmap.psu.edu/>

## **QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL**

Griffith L. D. Jones  
Environmental Scientist

Bachelor of Land Management, University of Sydney, Australia  
Diploma di Geometra, Istituto Tecnico Enrico de Nicola, Rome, Italy

## **EXPERIENCE**

Mr. Jones is an Environmental Scientist with the Civil/Water Resources Group. His responsibilities include wetland delineations and report preparation; wetland mitigation design; collection and analysis of watershed data; research and report preparation for Phase I Environmental Assessments; preparation of local, state and federal permit applications.

Previous relevant experience includes:

- Wetland delineation
- Wetland mitigation design and site selection
- Site assessment
- Watershed mapping and assessment
- Natural resource mapping

## **CONTINUING EDUCATION**

Wetland Delineation Training Course, Institute for Wetland & Environmental Education & Research, Burlington NJ, 2002

Fundamentals of Highway Traffic Noise, Federal Highway Administration, State College PA, 2002

TNM 2.0 Traffic Noise Model, HMMH, Boston MA, 2002

Environmental Site Assessments for Commercial Real Estate, Phase I and Phase II Site Assessment Processes, ASTM International, Harrisburg, PA 2005

**APPENDIX A  
PHOTOGRAPHS**



Picture 1 - Looking across Wetland 1 towards Bushkill Creek



Picture 2 – Looking across Wetland 2 from the access road

<b>APPENDIX A</b>  <b>WETLAND PHOTOGRAPHS</b>  Resorts USA Wetland Delineation Middle Smithfield Township Monroe County, PA				DESIGN GLDJ
				SCALE
				PROJECT 2773.052
SHEET: 1	OF: 5	DATE: 11/16/05		
			369 East Park Drive Harrisburg, PA 17111 (717) 564-1121 <a href="http://www.hrg-inc.com">www.hrg-inc.com</a>	



Picture 3 – Looking across Wetland 2



Picture 4 – Looking across Wetland 3

APPENDIX A

WETLAND PHOTOGRAPHS

Resorts USA Wetland Delineation  
Middle Smithfield Township  
Monroe County, PA



369 East Park Drive  
Harrisburg, PA 17111  
(717) 564-1121  
www.hrg-inc.com

DESIGN  
GLDJ

SCALE

PROJECT  
2773.052

SHEET:  
2

OF:  
5

DATE:  
11/16/05



Picture 5 – Looking across Wetland 3 toward maintenance buildings



Picture 6 – Looking across pond towards Bushkill Creek

<b>APPENDIX A</b>  <b>WETLAND PHOTOGRAPHS</b>  Resorts USA Wetland Delineation Middle Smithfield Township Monroe County, PA				DESIGN GLDJ
				SCALE
				PROJECT 2773.052
SHEET: 3	OF: 5	DATE: 11/16/05		
			369 East Park Drive Harrisburg, PA 17111 (717) 564-1121 <a href="http://www.hrg-inc.com">www.hrg-inc.com</a>	



Picture 7 – Looking across the pond from Wetland 1



Picture 8 – Upland areas of site

<b>APPENDIX A</b>  <b>WETLAND PHOTOGRAPHS</b>  <b>Resorts USA Wetland Delineation</b> <b>Middle Smithfield Township</b> <b>Monroe County, PA</b>				369 East Park Drive Harrisburg, PA 17111 (717) 564-1121 <a href="http://www.hrg-inc.com">www.hrg-inc.com</a>	DESIGN GLDJ
				SCALE	
				PROJECT 2773.052	
SHEET: 4	OF: 5	DATE: 11/16/05			



Picture 9 – Upland area in the southern portion of the site



Picture 10 – Bushkill Creek in proximity of the site

<b>APPENDIX A</b> <b>WETLAND PHOTOGRAPHS</b> Resorts USA Wetland Delineation Middle Smithfield Township Monroe County, PA				369 East Park Drive Harrisburg, PA 17111 (717) 564-1121 <a href="http://www.hrg-inc.com">www.hrg-inc.com</a>	DESIGN GLDJ
				SCALE	
				PROJECT 2773.052	
SHEET: 5	OF: 5	DATE: 11/16/05			

**APPENDIX B**  
**DATA FORMS**

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>2773.052</u>	Date: <u>10/28/05</u>
Applicant/Owner: <u>Resorts USA</u>	County: <u>Monroe</u>
Investigator: <u>GJ / BD</u>	State: <u>PA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland 1</u>
Is the site significantly disturbed (Atypical Situation)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Plot ID: <u>SP1-1</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u><i>Acer rubrum</i></u>	<u>T</u>	<u>FAC</u>	9. _____	_____	_____
2. <u><i>Fraxinus pennsylvanica</i></u>	<u>T</u>	<u>FACW</u>	10. _____	_____	_____
3. <u><i>Platanus occidentalis</i></u>	<u>T</u>	<u>FACW-</u>	11. _____	_____	_____
4. <u><i>Lindera benzoin</i></u>	<u>S</u>	<u>FACW-</u>	12. _____	_____	_____
5. <u><i>Rosa multiflora</i></u>	<u>S</u>	<u>FACU</u>	13. _____	_____	_____
6. <u><i>Phalaris arundinacea</i></u>	<u>H</u>	<u>FACW+</u>	14. _____	_____	_____
7. <u><i>Onoclea sensibilis</i></u>	<u>H</u>	<u>FACW</u>	15. _____	_____	_____
8. <u><i>Typha latifolia</i></u>	<u>H</u>	<u>OBL</u>	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). >50%

Remarks:

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b>  Depth of Surface Water: <u>0</u> (in.)  Depth to Free Water in Pit: _____ (in.)  Depth to Saturated Soil: <u>0</u> (in.)	
Remarks:	

**SOILS**

Map Unit Name (Series and Phase):		<u>Alluvial land (As)</u>	Drainage Class:	<u>Variable</u>
Taxonomy (Subgroup):		<u>Fluvaquents</u>	Field Observations	
			Confirm Mapped Type?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Profile Descriptions:	Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
	0-8"		10YR 3/2			
	8-16"		10YR 3/2	10YR 5/6	Frequent, small	

Hydric Soil Indicators:

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input checked="" type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low -Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (Check)	(Check)
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

Site is identified as disturbed because the pond and channel are believed to be manmade, although many years ago.

Wetland is delineated by flags W1-1 to W1-9 and then along toe of slope to Bushkill Creek. Soil point is SP1-1.

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>2773.052</u>	Date: <u>10/28/05</u>
Applicant/Owner: <u>Resorts USA</u>	County: <u>Monroe</u>
Investigator: <u>GJ / BD</u>	State: <u>PA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland 2</u>
Is the site significantly disturbed (Atypical Situation)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Plot ID: <u>SP2-1</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Platanus occidentalis</u>	<u>T</u>	<u>FACW-</u>	9. _____	_____	_____
2. <u>Lindera benzoin</u>	<u>S</u>	<u>FACW-</u>	10. _____	_____	_____
3. <u>Typha latifolia</u>	<u>H</u>	<u>OBL</u>	11. _____	_____	_____
4. <u>Onoclea sensibilis</u>	<u>H</u>	<u>FACW</u>	12. _____	_____	_____
5. <u>Solidago sp.</u>	<u>H</u>	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC). >50%

Remarks:

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b>  Depth of Surface Water: <u>0</u> (in.)  Depth to Free Water in Pit: _____ (in.)  Depth to Saturated Soil: <u>0</u> (in.)	
Remarks:	

**SOILS**

Map Unit Name (Series and Phase):		Alluvial land (As)	Drainage Class:	Variable
Taxonomy (Subgroup):		Fluvaquents	Field Observations	
			Confirm Mapped Type?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc,
0-12"		10YR 4/2	7.5YR 4/6	Large, abundant	

Hydric Soil Indicators:

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   (Check)	(Check)
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

Site is identified as disturbed because much of the area surrounding the wetland itself is believed to be manmade, although many years ago.

Wetland is delineated by flags W2-1 to W2-42. Soil points are SP2-1 (wetland) and SP2-2 (upland).

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>2773.052</u>	Date: <u>10/28/05</u>
Applicant/Owner: <u>Resorts USA</u>	County: <u>Monroe</u>
Investigator: <u>GJ / BD</u>	State: <u>PA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland 2</u>
Is the site significantly disturbed (Atypical Situation)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Plot ID: <u>SP2-2</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Quercus rubra</u>	<u>T</u>	<u>FACU-</u>	9. _____	_____	_____
2. <u>Acer rubrum</u>	<u>T</u>	<u>FAC</u>	10. _____	_____	_____
3. <u>Liriodendron tulipifera</u>	<u>T</u>	<u>FACU</u>	11. _____	_____	_____
4. <u>Lindera benzoin</u>	<u>S</u>	<u>FACW-</u>	12. _____	_____	_____
5. <u>Rosa multiflora</u>	<u>S</u>	<u>FACU</u>	13. _____	_____	_____
6. <u>Lonicera japonica</u>	<u>V</u>	<u>FAC-</u>	14. _____	_____	_____
7. <u>Impatiens capensis</u>	<u>H</u>	<u>FACW</u>	15. _____	_____	_____
8. <u>Solidago tenuifolia</u>	<u>H</u>	<u>NI</u>	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC). <50%

Remarks:

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b>  Depth of Surface Water: _____ (in.)  Depth to Free Water in Pit: _____ (in.)  Depth to Saturated Soil: <u>6"</u> (in.)	
Remarks:	

**SOILS**

Map Unit Name (Series and Phase):		Alluvial land (As)	Drainage Class:	Variable
Taxonomy (Subgroup):		Fluvaquents	Field Observations	
			Confirm Mapped Type?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc,
0-6"		10YR 3/3			Loamy sand
6-12"		10YR 3/3			

Hydric Soil Indicators:

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

<p>Hydrophytic Vegetation Present?   <input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No (Check)</p> <p>Wetland Hydrology Present?   <input checked="" type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>Hydric Soils Present?   <input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No</p>	<p style="text-align: right;">(Check)</p> <p>Is this Sampling Point Within a Wetland?   <input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No</p>
<p>Remarks:</p> <p>Site is identified as disturbed because much of the area surrounding the wetland itself is believed to be manmade, although many years ago.</p> <p>Wetland is delineated by flags W2-1 to W2-42. Soil points are SP2-1 (wetland) and SP2-2 (upland).</p>	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>2773.052</u>	Date: <u>10/28/05</u>
Applicant/Owner: <u>Resorts USA</u>	County: <u>Monroe</u>
Investigator: <u>GJ / BD</u>	State: <u>PA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland 3</u>
Is the site significantly disturbed (Atypical Situation)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Plot ID: <u>SP3-1</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u><i>Acer rubrum</i></u>	<u>T</u>	<u>FAC</u>	9. <u><i>Typha latifolia</i></u>	<u>H</u>	<u>OBL</u>
2. <u><i>Alnus rugosa</i></u>	<u>Sapling</u>	<u>FACW+</u>	10. <u><i>Carex sp</i></u>	<u>H</u>	_____
3. <u><i>Acer rubrum</i></u>	<u>Sapling</u>	<u>FAC</u>	11. _____	_____	_____
4. <u><i>Cornus stolonifera</i></u>	<u>Shrub</u>	<u>FACW+</u>	12. _____	_____	_____
5. <u><i>Rosa multiflora</i></u>	<u>Shrub</u>	<u>FACU</u>	13. _____	_____	_____
6. <u><i>Viburnum dentatum</i></u>	<u>Shrub</u>	<u>FAC</u>	14. _____	_____	_____
7. <u><i>Juncus effusus</i></u>	<u>H</u>	<u>FACW+</u>	15. _____	_____	_____
8. <u><i>Onoclea sensibilis</i></u>	<u>H</u>	<u>FACW</u>	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). >50%

Remarks:

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b>  Depth of Surface Water: _____ (in.)  Depth to Free Water in Pit: _____ (in.)  Depth to Saturated Soil: <u>0"</u> (in.)	
Remarks:	

**SOILS**

Map Unit Name (Series and Phase):		<u>Wyoming gravelly sandy loam (WyE)</u>	Drainage Class:	<u>Somewhat excessively</u>
Taxonomy (Subgroup):		<u>Typic Dystrochrepts</u>	Field Observations	
			Confirm Mapped Type?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4"		7.5YR 3/2	7.5YR 4/4	Faint	
4-14"		Gley1 5/10Y	7.5YR 4/6	Small 15%	

Hydric Soil Indicators:

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Check)	(Check)
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

Site is identified as disturbed because much of the area surrounding the wetland itself is believed to be manmade, although many years ago.

Wetland is delineated by flags W3-1 to W3-36. Soil point is SP3-1. Abrupt change in topography defines boundary.

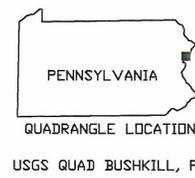
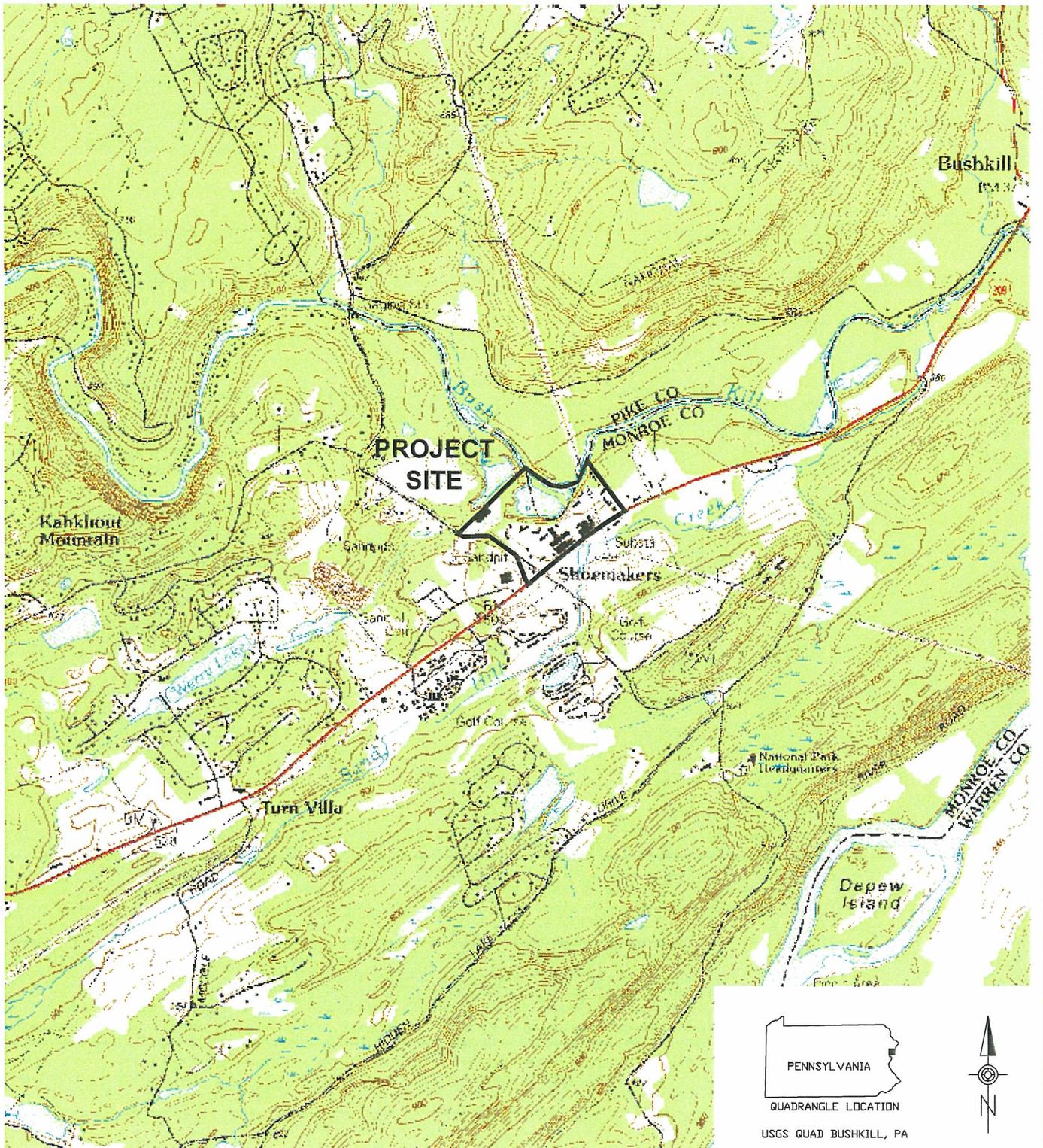


EXHIBIT A  
 WETLAND DELINEATION  
 MIDDLE SMITHFIELD TOWNSHIP  
 MONROE COUNTY, PA

SHEET: 1	OF: 1	DATE: 11-7-05
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DESIGN GLDJ
DRAWN GLDJ
SCALE 1" = 2000'
PROJECT 2773.052

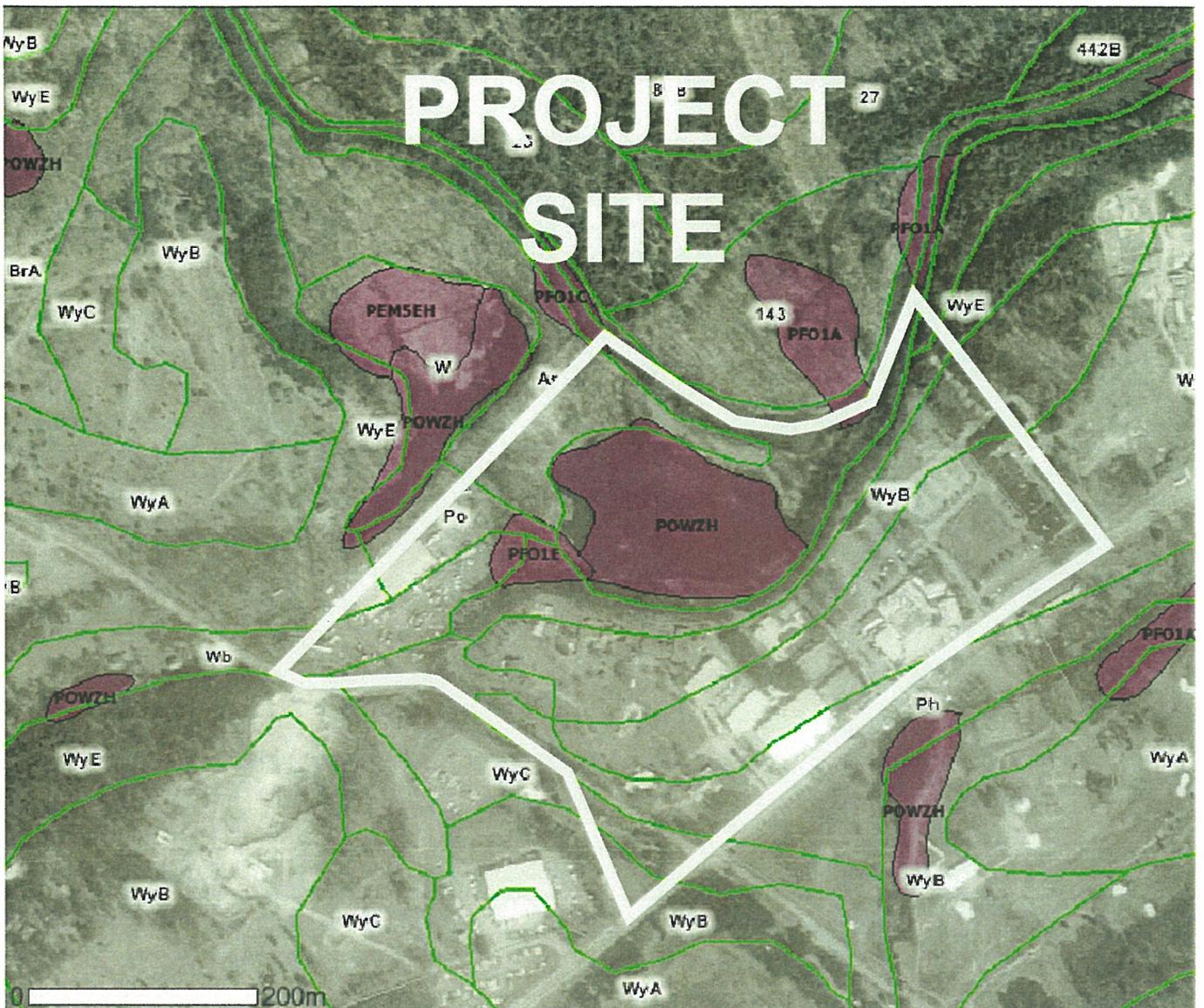


EXHIBIT B  
 SOILS AND WETLANDS INVENTORY  
 MIDDLE SMITHFIELD TOWNSHIP  
 MONROE COUNTY, PA

SHEET: 1	OF: 1	DATE: 11-7-05
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DESIGN GLDJ
DRAWN GLDJ
SCALE
PROJECT 2773.052

