

FINAL

VLT FACILITY OPERATION LICENSE IN
PRINCE GEORGE'S COUNTY

HOLLYWOOD CASINO RESORT AT ROSECROFT
RACEWAY

PENN NATIONAL GAMING, INC.

Secondary Review of Applicants' Traffic Flow
Studies

FINAL

December 18, 2013

**Sam
Schwartz
Engineering
D.P.C.**

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY 1
 1.1 Background..... 1
 1.2 Projected Conditions..... 1
 1.3 Analysis..... 2
 1.4 Proposed Improvements..... 2
 1.5 Parking and Internal Access..... 2
2. INTRODUCTION 3
3. BACKGROUND..... 3
4. PROJECTED CONDITIONS 4
 4.1 Trip Generation 4
 4.2 Trip Distribution..... 5
 4.3 Network Assignment..... 5
 4.4 Mode Choice..... 6
5. ANALYSIS 6
6. PROPOSED IMPROVEMENTS..... 8
7. PARKING AND INTERNAL ACCESS..... 8

LIST OF TABLES

Table 1: Trip Distribution – Penn National 5
Table 2: Network Assignment – Penn National 5
Table 3: Intersection Level of Service Results – Penn National 7
Table 4: Proposed Parking – Penn National..... 9

1. EXECUTIVE SUMMARY

Lenhart Traffic Consulting, Inc. prepared a Traffic Flow Study for the Rosecroft Raceway site dated May 7, 2013 in response to the Request for Proposal (RFP) for a Video Lottery Operation License in Prince George's County, MD. The Rosecroft Raceway site conducts live horse racing on Saturdays and Tuesdays starting at approximately 7:15 PM and simulcast video racing seven days a week. According to the applicant's plan, the casino would include a maximum of 3,000 slot machines and a maximum of 140 table games with ancillary bars and restaurants. The site will also include a 2,500 seat event center for live entertainment, a 258 room hotel, and horse racing would continue within a refurbished race track comprised of 685 seats.

1.1 Background

The location and number of intersections within the study area appear to be appropriate given the scale of the project and likely paths taken by projected visitors to the site. The applicant uses the weekday PM commuter peak hour volumes which are most likely higher than the evening PM peak hours (after 7:00 PM) which are typically when casino trips peak on a weeknight. They also use the midday Saturday peak hour volumes which may be higher than the Saturday evening peak hours (after 7:00 PM) which are typically when casino trips peak on a Saturday. The annual growth rate appears to be conservative for this portion of Prince Georges County based on AADT data provided by the applicant.

1.2 Projected Conditions

The applicant used the higher casino trip rates from two relevant sources. When developing gaming positions used to determine traffic generation for a casino, the assumptions of one gaming position equating to each slot machine and eight gaming positions are assigned for every table game is appropriate. It was also appropriately assumed that the gaming, hotel, food and beverage, and retail were bundled together to the casino trip generation. The use of the adjacent road peak hour for the PM peak commuter hour is appropriate since the peak hour of the generator would be later in the evening. For the entertainment facility, a trip rate per seat from the ITE Trip Generation Manual was appropriate. In addition, since the applicant assumed that the racetrack would continue to operate, the trip rate per seat from the ITE Trip Generation Manual was appropriately used. Overall, the traffic volumes developed for the three time periods appear to be appropriate.

Based on independent market research performed for the Commission, the routing assignment proposed by the applicant appears to be reasonable for the site. Although transit service is provided on corridors near the site, it does not penetrate the site. The distances between existing bus stops and the attractions and jobs proposed for the site would be too far for most people to walk to existing transit. In order for transit to be a serious option as an alternative to a personal vehicle, service would need to be extended into the site by WMATA. Since there has been no such commitment or agreement presented as part of the application, the applicant appropriately does not reduce visitor or employee trips to the site by personal vehicle. Although not contemplated in the traffic analysis presented, these transit initiatives would reduce autos traveling to the site if implemented.

1.3 Analysis

The methodology used appears to be appropriate based on the traffic impact studies conducted in Prince George's County. Based on the results of the analysis, the effect of the project on area traffic would be extensive. However, this could be offset by measures to mitigate increased traffic in the area through applicant funded improvements at the affected intersections.

1.4 Proposed Improvements

Overall, it appears at the conceptual level that the proposed improvements would minimize traffic disruptions to the affected intersections as a result of the proposed project. However, the extent of the roadway widening proposed make it difficult at the conceptual level to assess the full cost of the right-of-way acquisitions, the availability of the properties needed for widening, and the approvals needed from Prince George's County and the State of Maryland. With the benefit of this information, the timeline and cost to implement these improvements could increase substantially. However, the applicant has agreed to pay \$26 million for these improvements including funds for utilities, right-of-way acquisition, and for contingencies.

In addition, the applicant does not address the sharp angle and sight distance issues at the Brinkley Road and Rosecroft Drive intersection. It should be recommended that as part of the mitigation, this intersection be modified so that Rosecroft Drive meets Brinkley Road as close to 90 degrees as possible. Without all of the recommended roadway improvements in place, it would be difficult for local traffic to operate without significant delays.

1.5 Parking and Internal Access

The main vehicular access into the site is through Rosecroft Drive. The preliminary layout and overall size of the site allows for vehicles to move freely around the site and into and out of parking facilities. Based upon the preliminary layout, it does not appear that internal site circulation should be an issue. However, this could be addressed as detailed designs are prepared.

2. INTRODUCTION

A Traffic Flow Study was prepared for the Rosecroft Raceway site by Lenhart Traffic Consulting, Inc. dated May 7, 2013 in response to the Request for Proposal (RFP) for a Video Lottery Operation License in Prince George's County, MD. The Rosecroft Raceway site is an active horse racing facility with live racing conducted on Saturdays and Tuesdays beginning around 7:15 PM. The facility also provides simulcast video racing seven days a week. According to the plan, horse racing would continue within a refurbished race track comprised of 685 seats. The casino would include a maximum of 3,000 slot machines and a maximum of 140 table games with ancillary bars and restaurants. The site will also include a 2,500 seat event center for live entertainment and a 258 room hotel.

The main vehicular access into Rosecroft Raceway is via Rosecroft Drive which is a 50 foot wide right-of-way that is part of the site. Rosecroft Drive connects to Brinkley Road which is approximately 1,000 feet from the northbound I-95/I-495 off-ramp, and approximately four-tenths (0.4) of a mile from the center of the I-95/I-495 and MD 414 interchange. Secondary access is provided from Rosecroft Boulevard off of Bock Road.

Prince George's County Planning Board and the staff of the Transportation Planning Section have established technical standards for the evaluation of the adequacy of transportation facilities. The Traffic Impact Analysis in Section 3 of the Transportation Review Guidelines – Part 1, 2012, prepared by The Maryland-National Capital Park and Planning Commission, was used as a reference for evaluating the applicant's Traffic Flow Study.

3. BACKGROUND

Existing condition traffic volumes were collected in the spring of 2013 on a weekday morning (6:30 to 9:30 am), weekday evening (4:00 to 7:00 pm), and Saturday afternoon (11:00 am to 3:00 pm) at the following eight intersections:

- MD 414 & I-95 SB Off-Ramp / Virginia Lane
- MD 414 & Spur from Brinkley Road
- MD 414 & I-95 NB Off-Ramp / Spur to Brinkley Road
- MD 414 & John Hanson Lane
- St. Barnabas Road & John Hanson Lane
- Brinkley Road & Spur from MD 414
- Brinkley Road & Rosecroft Drive
- Bock Road & Rosecroft Boulevard

The opening year of the project was estimated to be in 2016. Therefore, the future background traffic was estimated using a 2% per year annual growth rate over a three year period (2013 to 2016). In addition, the proposed traffic to be generated by the Southern Maryland Recreational Complex, located along the west side of Bock Road at Rosecroft Boulevard, was added to the background 2016 traffic.

Assessment: The location and number of intersections within the study area appear to be appropriate given the scale of the project and likely paths taken by projected visitors to the site. The applicant uses the weekday PM commuter peak hour volumes which are

most likely higher than the evening PM peak hours (after 7:00 PM) which are typically when casino trips peak on a weeknight. They also use the midday Saturday peak hour volumes which may be higher than the Saturday evening peak hours (after 7:00 PM) which are typically when casino trips peak on a Saturday. The annual growth rate appears to be conservative for this portion of Prince Georges County based on AADT data provided by the applicant.

4. PROJECTED CONDITIONS

4.1 Trip Generation

The Institute of Transportation (ITE) *Trip Generation Manual* is the standard by which traffic volumes are determined for specific land uses. However, empirical data that is available from surveys of analogous sites can be used to supplant the ITE data. Trip rate per gaming position is typically used to determine traffic generation for a casino. In addition, facilities within the casino such as hotel, food and beverage outlets, and retail are dealt with differently depending upon the facility and how the rates were calculated. Some studies have assumed that these facilities are used help to support the gambling operations while others provide a separate trip generation rate for these facilities. The applicant looked at two studies including *Trip Generation Characteristics of Small to Medium Sized Casinos* and the *Hollywood Casino & Hotel Springfield Traffic Impact Study*, Franklin County Ohio. The Franklin County Ohio rates were higher and used for the Rosecroft Raceway site.

Based on the applicant's proposal, 3,000 slot machines and 140 table games were assumed. This equates to 4,120 gaming positions if it is assumed that one gaming position equates to each slot machine and there are eight gaming positions for every table game. The gaming, hotel, food and beverage (12 restaurants and 6 bars/lounges), and small retail were bundled together into the casino trip generation. For the weekday PM peak hour of the adjacent road, a vehicle rate of 0.49 x gaming position was used. For the Saturday peak hour of the generator, a vehicle rate of 0.56 x gaming position was used. Since the report did not include a rate for the weekday AM peak hour, a vehicle rate of 0.16 (1/3 the PM peak hour rate) x gaming position was used.

For the entertainment facility, a trip rate per seat was used to determine traffic generation. The ITE *Trip Generation Manual* Land Use Code 441 was used yielding a vehicle rate of 0.02 x the number of seats for the weekday PM peak hour. Since the ITE *Trip Generation Manual* did not include a rate for the Saturday peak hour, a vehicle rate of 0.04 (double the weekday PM peak hour rate) x seat was used. It was assumed that the entertainment facility would be closed during the weekday AM peak hour. The applicant assumed that the racetrack would continue to operate along with the casino and the number of seats was used to determine traffic generation. The ITE *Trip Generation Manual* Land Use Code 452 was used yielding vehicle rates of 0.01 x the number of seats for the weekday AM peak hour and 0.06 x the number of seats for the weekday PM peak hour. The ITE *Trip Generation Manual* did not include a rate for the Saturday peak hour so a vehicle rate of 0.12 (double the weekday PM peak hour rate) x seat was used.

The overall trips projected by the applicant to be generated by the project were 708 during the weekday AM peak hour, 2,110 during the weekday PM peak hour, and 2,489 during the Saturday peak hour.

Assessment: The applicant used the higher casino trip rates from two relevant sources. When developing gaming positions used to determine traffic generation for a casino, the assumptions of one gaming position equates to every slot machine and eight gaming positions are assigned for every table game is appropriate. It was also appropriately assumed that the gaming, hotel, food and beverage, and retail were bundled together to comprise the overall casino vehicle trip generation. The use of the adjacent road peak hour for the PM peak commuter hour is appropriate since the peak hour of the generator would be later in the evening. For the entertainment facility, a trip rate per seat from the *ITE Trip Generation Manual* was appropriate. In addition, since the applicant assumed that the racetrack would continue to operate, the trip rate per seat from the *ITE Trip Generation Manual* was appropriately used. Overall, the traffic volumes developed for the three time periods appear to be appropriate.

4.2 Trip Distribution

The applicant assumed the following for trips into and out of the site in Table 1:

Table 1: Trip Distribution – Penn National

Land Use	Direction	Weekday AM	Weekday PM	Saturday Midday
Casino	In	53%	53%	61%
	Out	47%	47%	39%
Entertainment	In	Closed	50%	50%
	Out	Closed	50%	50%
Racetrack	In	91%	66%	66%
	Out	9%	34%	34%

Assessment: The trip distribution proposed by the applicant appears to be reasonable for the site.

4.3 Network Assignment

According to the applicant, traffic to and from the site would be routed generally as presented in Table 2:

Table 2: Network Assignment – Penn National

Direction	Percentage
North (Capital Beltway)	30%
South (Capital Beltway)	40%
North (Local)	10%
South (Local)	5%
East (Local)	10%
West (Local)	5%
Total	100%

Assessment: Based on independent market research performed for the Commission, the routing assignment proposed by the applicant appears to be reasonable for the site.

4.4 Mode Choice

According to the applicant, the area near the site is currently served by the Washington Metropolitan Area Transit Authority (WMATA) with several bus lines operating along MD 414, Brinkley Road, St. Barnabas Road., and Bock Road.

Assessment: Although transit service is provided on corridors near the site, it does not penetrate the site. The distances between existing bus stops and the attractions and jobs proposed for the site would be too far for most people to walk to existing transit. In order for transit to be a serious option as an alternative to a personal vehicle, service would need to be extended into the site by WMATA. Since there has been no such commitment or agreement presented as part of the application, the applicant appropriately does not reduce visitor or employee trips to the site by personal vehicle. Although not contemplated in the traffic analysis presented, these transit initiatives would reduce autos traveling to the site if implemented.

5. ANALYSIS

The eight existing intersections identified previously were evaluated using the Critical Lane Volume (CLV) Methodology. This is the preferred methodology for traffic impact analysis within Prince George's County as per the *Transportation Review Guidelines – Part 1, 2012*. Based on the results of the analysis (Table 3), six of the eight intersections are projected to have capacity issues with the implementation of the proposed project:

- MD 414 & I-95 SB Off-Ramp / Virginia Lane
- MD 414 & Spur from Brinkley Road
- MD 414 & I-95 NB Off-Ramp / Spur to Brinkley Road
- MD 414 & John Hanson Lane
- Brinkley Road & Spur from MD 414
- Brinkley Road & Rosecroft Drive

Assessment: The methodology used appears to be appropriate based on the traffic impact studies conducted in Prince George's County. Based on the results of the analysis, the effect of the project on area traffic would be extensive. However, this could be offset by measures to mitigate increased traffic in the area through applicant funded improvements at the affected intersections.

Table 3: Intersection Level of Service Results – Penn National

Intersection	Existing	No Build	Build	Build w/ Improve.
Morning Peak Hour				
1. MD 414 & I-95 SB Off-Ramp / Virginia Ln	B	B	B	B
2. MD 41 4 & Spur from Brinkley Rd	E	F	F	B
3. MD 414 & I-95 NB Off-Ramp / Spur to Brinkley Rd	A	B	C	A
4. MD 414 & John Hanson Ln	A	B	B	A
5. St. Barnabas Rd & John Hanson Ln	B	B	B	B
6. Brinkley Rd & Spur from MD 414	A	A	A	A
7. Brinkley Rd & Rosecroft Dr	C	D	F	D
8. Bock Rd & Rosecroft Blvd	A	B	B	B
Evening Peak Hour				
1. MD 414 & I-95 SB Off-Ramp / Virginia Ln	D	E	E	C
2. MD 41 4 & Spur from Brinkley Rd	C	C	F	C
3. MD 414 & I-95 NB Off-Ramp / Spur to Brinkley Rd	D	E	F	D
4. MD 414 & John Hanson Ln	D	D	E	B
5. St. Barnabas Rd & John Hanson Ln	B	B	C	C
6. Brinkley Rd & Spur from MD 414	A	A	D	B
7. Brinkley Rd & Rosecroft Dr	C	C	F	C
8. Bock Rd & Rosecroft Blvd	B	B	C	C
Saturday Peak Hour				
1. MD 414 & I-95 SB Off-Ramp / Virginia Ln	C	D	E	B
2. MD 41 4 & Spur from Brinkley Rd	C	D	F	C
3. MD 414 & I-95 NB Off-Ramp / Spur to Brinkley Rd	D	D	F	D
4. MD 414 & John Hanson Ln	C	C	D	B
5. St. Barnabas Rd & John Hanson Ln	A	B	C	C
6. Brinkley Rd & Spur from MD 414	A	A	D	B
7. Brinkley Rd & Rosecroft Dr	B	B	F	D
8. Bock Rd & Rosecroft Blvd	A	A	A	A

Note: Potential capacity issues are highlighted.

6. PROPOSED IMPROVEMENTS

The applicant has developed mitigation measures based on concept plans for the six intersections that are projected to be affected by the proposed project. They have also recommended the addition of a second southbound travel lane on Rosecroft Drive into the site. The intersection improvement measures include the addition of travel and turning lanes, reconstruction of traffic signals, and the installation of a traffic signal. The preliminary cost estimate provided by the applicant is \$26 million for these improvements. The applicant has agreed to pay 100% of these costs including funds for utilities, right-of-way acquisition, and for contingencies. The resulting level of service based upon these improvements (Table 3) shows that all affected intersections are projected to operate at LOS D or better with the project in place.

Assessment: Overall, it appears at the conceptual level that the proposed improvements would minimize traffic disruptions to the affected intersections as a result of the proposed project. However, the extent of the roadway widening proposed make it difficult at the conceptual level to assess the full cost of the right-of-way acquisitions, the availability of the properties needed for widening, and the approvals needed from Prince George's County and the State of Maryland. With the benefit of this information, the timeline and cost to implement these improvements could increase substantially. However, the applicant has agreed to pay \$26 million for these improvements including funds for utilities, right-of-way acquisition, and for contingencies.

In addition, the applicant does not address the sharp angle and sight distance issues at the Brinkley Road and Rosecroft Drive intersection. It should be recommended that as part of the mitigation, this intersection be modified so that Rosecroft Drive meets Brinkley Road as close to 90 degrees as possible. Without all of the recommended roadway improvements in place, it would be difficult for local traffic to operate without significant delays.

7. PARKING AND INTERNAL ACCESS

According to Exhibit 3.1.6.1A-11 - Concept Site Plan and Renderings in the applicant's submission to the Commission, approximately 5,132 parking spaces are being proposed (Table 4). A total of eight parking facilities are planned including six outdoor at-grade lots for the Casino, Hotel, Event Center, Employees, Horse Trailers, and Racing Service. A guest lot under the casino and a six level parking deck are also planned on the site.

Table 4: Proposed Parking – Penn National

Parking Type	Number of Spaces
General Surface	1,335
General Garage	3,098
Valet	NA
Handicapped	97
Employee	490
Reserved	51
Racing	61
Total	5,132

Assessment: The main vehicular access into the site is through Rosecroft Drive. The preliminary layout and overall size of the site allows for vehicles to move freely around the site and into and out of parking facilities. Based upon the preliminary layout, it does not appear that internal site circulation should be an issue. However, this could be addressed as detailed designs are prepared.