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November 1, 2006

Mr. Glenn Rowe, P.E.
Pennsylvania Department of Transportation
Bureau of Highway Safety and Traffic Engineering
Commonwealth Keystone Building
400 North Street, 6th Floor
Harrisburg, PA 17064

RE: Pennsylvania Gaming Control Board
Foxwoods Casino TIS Review
PennDOT Agreement E00229, Work Order 14
EK Project No. 040015.038

Dear Mr. Rowe:

In accordance with Agreement E00229, Work Order 14, Edwards and Kelcey has completed its review of the following documents pertaining to the proposed Foxwoods-Philadelphia Slot Parlor/Casino Development which were prepared by Orth-Rodgers and Associates, Inc. Our review considered the applicant's completeness in meeting the standards set forth by PennDOT and the Institute of Transportation Engineers (ITE), as well as the completeness and reasonableness of their assumptions, calculations, findings, and conclusions.

Date of Document	Title of Document
03/03/06	*Preliminary Traffic Impact Assessment* This document reviewed existing conditions, traffic volumes and traffic patterns, estimated traffic associated with the proposed development and provided preliminary recommendations. This document was reviewed by Edwards and Kelcey in a letter dated 09/11/06
05/15/06	*Final Report* This extensive document along with its Technical Appendices expanded upon the Preliminary Report and provided recommendations for the years 2008 when Phase I of the development would be completed, and 2010 when Phase II would be completed.

Edwards and Kelcey was in the process of completing its review of this document when a Supplemental Report was received

10/04/06 *Supplemental Report, Modified Improvement Plan*

This report along with its Technical Appendices includes revisions to the recommendations contained in the Final Report and considers the Impact of Dockside Residences. The revised recommendations were brought forward by the City of Philadelphia, Department of Streets.

Edwards and Kelcey was in the process of completing its review of this document when another Supplement Report was received.

10/10/06 *Supplemental Report, Build Plus 10-Year Analyses*

This report and its Technical Appendices analyzes traffic conditions for year 2018 for the proposed development including the Dockside Residences.

Edwards and Kelcey was in the process of reviewing this document when a response to its review letter of September 11, 2006, was received.

10/11/06 *Response to the Review Letter of September 11, 2006*

This document answers each review comment, pointing out that many of the comments were in fact addressed in the Final Report and the two Supplemental Reports.

The review staff of Edwards and Kelcey agrees that most of the issues that can be addressed at this stage of planning have, in fact, been addressed. The review staff commends the authors of the reports and supplements for the thoroughness demonstrated.

Following are our comments and findings based on the site visit and the review of the above-referenced documents:

Description of Project

1. The proposed project is located near downtown Philadelphia between Christopher Columbus Boulevard and the Delaware River and between Reed Street and Tasker Street.

2. The proposed project is to be built in phases:

Phase I (2008)	3,000 slot machines	950 employees	4,500 parking spaces
Phase II (2010)	2,000 slot machines	300 employees	1,500 parking spaces
Total:	**5,000** slot machines	**1,250** employees	**6,000** parking spaces
Phase III (2018)	242 residences		

Analytical Approach and Scope

3. The traffic analyses included ten intersections along Columbus Boulevard between and including the I-95 NB ramp at Lombard Circle (north of the site) and the I-95 SB ramp at Morris Street (south of the site).

4. The analyses of current traffic and expected gaming traffic reasonably concluded that critical peak hours will be 3:15 – 4:15 p.m. Friday and 1:15 – 2:15 p.m. Saturday.

5. The stepwise traffic analyses included all of the aforementioned intersections for the following conditions for each of the critical hours:

    a. 2006 existing traffic
    b. 2008 traffic without gaming facility
    c. 2008 traffic with Phase I gaming facility
    d. 2010 traffic with Phase II gaming facility
    e. 2018 traffic with Phase I, Phase II, and residences

    The overall approach and information presented in these documents appear to be reasonable and consistent with PennDOT and ITE practices.

    The technical analyses relied on appropriate HCM/Synchro software, outputs of which were included in the Technical Appendices.

Existing Conditions and Levels of Service

6. The documents provide a comprehensive inventory of roadway and intersection configurations and of traffic control devices in sufficient detail for traffic analyses.

7. The documents indicate that seven of the ten intersections studied along Columbus Boulevard are interconnected, although coordination is not functioning. (It has been subsequently determined that coordination has been re-established.)

8. The Appendices include tabulations of automatic traffic recorders (ATRs) and manual turning movement counts which include autos, trucks, buses and pedestrians. (This information was used to determine critical peak hours of traffic.)

9. The documents describe and illustrate a railroad line in the median of Columbus Boulevard. The line is occasionally used by trains operating at 10 mph with flaggers at roadway crossings.

10. The documents describe four SEPTA bus routes that operate in the vicinity of the site.

11. No information has been provided regarding traffic accidents. However, the authors indicated in their response to EK's September 11, 2006 comments that such information will be addressed during the design phase.

Site Trip Generation and Distribution

12. Trip generation estimates appear to be reasonable and are based on assumptions regarding model split and auto occupancy rates of employees and patrons.

13. Trip distribution estimates appear to be reasonable, given the configuration of streets, interstate ramps and population distribution.

    Level of Service (LOS) at various intersections is sensitive to trip generation and distribution estimates. Operational adjustments may be needed if these estimates have significant variances.

    The documents indicate that peak hourly volumes of arriving vehicles may be as much as 1,000 vph in Phase I, and 1,400 vph in Phase II.

Future Roadway Conditions and Levels of Service

14. Future peak hour traffic volumes were assigned to the roadway system and intersections in a stepwise manner:

    2008: Future Traffic without gaming facility
    2008: Future Traffic with gaming facility, Phase I
    2010: Future Traffic with gaming facility, Phase II
    2018: Future Traffic with gaming facility, Phase II and residences

    The LOS of each intersection was determined. Improvements were developed in an iterative manner to ensure that the LOS at each intersection was as good as or better than the current LOS.

15. The improvements recommended are to be completed in two phases:

    Phase I includes a variety of roadway, intersection, and signalization improvements along Columbus Boulevard and intersecting streets. These recommendations are clearly illustrated in the Final Report (05/15/06) and in the Supplemental Report (10/04/06). The authors state that these improvements can be implemented without acquiring additional rights-of-way. These Phase I improvements would be completed prior to the opening of the gaming facility in 2008.

Phase II includes the construction of a new southbound off ramp from I-95 to Dickenson Street and the reversal of travel along that street between Front Street and Columbus Boulevard. This recommendation is illustrated in the Final Report (05/15/06).

The review team concurs with the recommendations of the Final and Supplemental Reports. The recommendations appear to be feasible and will result in acceptable LOS.

16. Although the Phase I improvements may not need additional right-of-way, there may be overhead and underground utilities that will need to be relocated or adjusted. Some of these locations were identified during the site visit as follows:

    a. Columbus Blvd. and I-676/I-95 Ramps
    b. Columbus Blvd. and Washington Avenue
    c. Columbus Blvd. and Reed Street (see Figure 1)
    d. Columbus Blvd. and Dickinson Street
    e. Columbus Blvd. and Tasker Street

    Early coordination with utility agencies and companies will be necessary to meet the 2008 completion scheduled for Phase I.

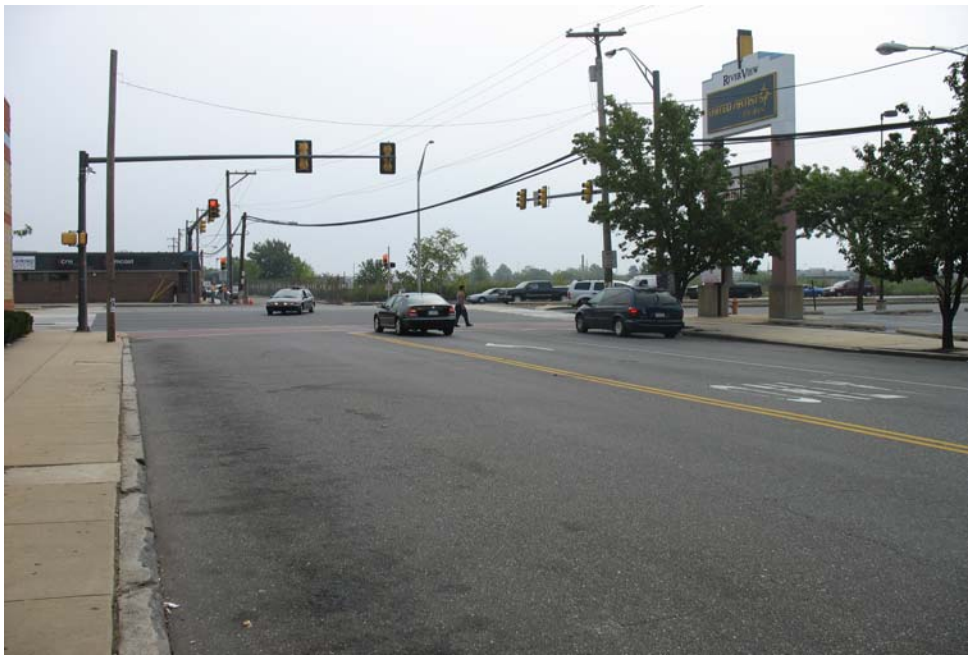

Figure 1: Overhead utility along Reed Street at Columbus Blvd.

17. The design of Phase I improvements should make certain that corner curb radii are adequate, that vehicle turning paths are checked (particularly dual turn lanes) and that pedestrian and ADA requirements are satisfied.

18. Observations were made during the field visit at the following intersections:

    a. Columbus Blvd. and Washington Avenue – Possible enlargement of existing island on southwest corner of the intersection should be considered to create a free-right movement for traffic traveling east on Washington Street heading south on Columbus Blvd. The concrete island separating vehicular traffic and bicycle traffic on southbound Columbus Blvd. may cause drainage problems.
    b. Columbus Blvd. and Reed Street - The through traffic on Reed Street does not line up geometrically. The turning radii on the curbs should be checked if sufficient (see Figure 2). Adequate signage should be provided on southbound Columbus Blvd. approaching Reed Street since the left-thru lane becomes left turn lane at Dickinson Street.
    c. Columbus Blvd. and Tasker Street – The through traffic on Tasker Street does not line up geometrically. The turning radii on curbs seem insufficient (see Figure 3)
    d. Columbus Blvd. and Morris Street - Median crossover should be examined due to the vertical difference between and the existing super elevation of southbound/northbound Columbus Blvd.

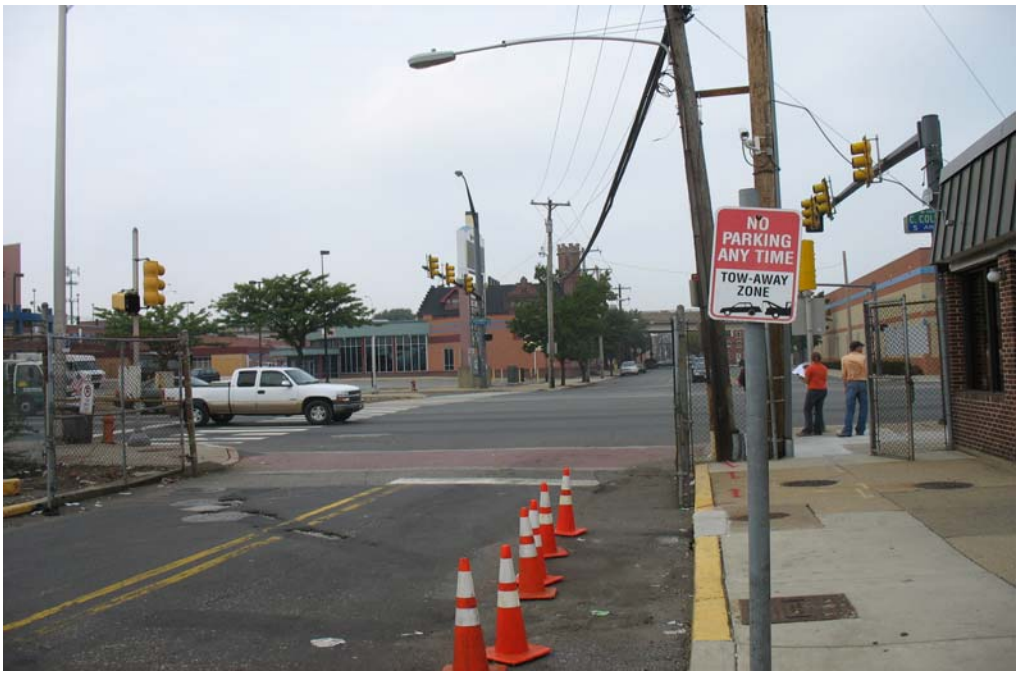

Figure 2: Insufficient turning radii on curbs at Columbus Blvd. and Reed Street

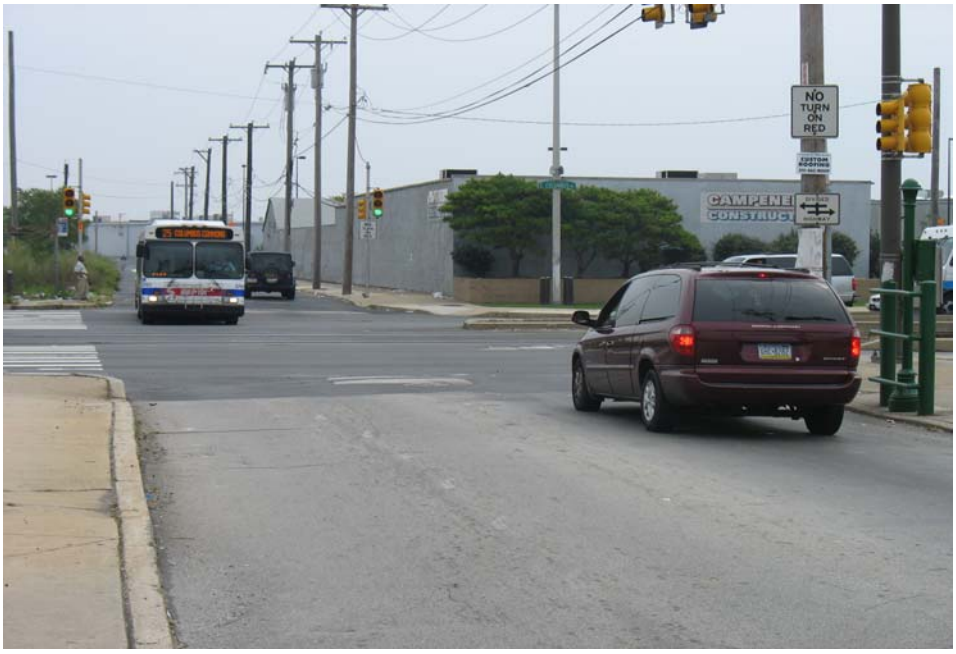

Figure 3: Insufficient turning radii on curbs at Columbus Blvd. and Tasker Street

19. A Point-of-Access (POA) Study may be required to further demonstrate the feasibility of constructing a new off ramp from SB I-95 to Dickenson Street. Much of the information and analyses for the POA Study is included in the documents that have thus far been completed. However, the POA Study should examine the effects of the new ramp on the adjacent interchanges along I-95. It is noted that this study must be approved by PennDOT and Federal Highway Administration (FHWA) prior to any ramp construction activities.

20. An Environmental Assessment of the proposed ramp may also be required. The approval of these documents by state and federal officials may be necessary before construction of the ramp can begin. Therefore, the preparation of these documents, if required, should be started promptly if the 2010 completion schedule is to be met.

Employee Transit Ridership

21. The documents reasonably assume that 30% of the employees will use public transit to and from work and that four SEPTA bus routes operate in the vicinity of the casino site.

    Bus operations, routes and stops should be integrated into roadway and site plans as they are developed. The stops should be carefully located to minimize LOS impacts.

    The documents estimate that 30% of the employees will use transit, amounting to between 285 and 375 riders per day. Therefore, attention must be given to the size of the bus stop waiting area, its location and its connectivity to the casino.

Employee Parking—Offsite

22. The documents estimate that 70% of the employees will drive to and from work, one per vehicle and that they will park offsite.

    These estimates result in a need for 675 and 875 offsite spaces for Phase I and Phase II respectively. The documents do not identify where the offsite spaces will be located.

    Subsequent planning and design efforts should identify offsite parking locations and determine how the employees will travel between the parking and casino facilities.

Patron Parking—Onsite

23. Onsite garage parking will provide 4,500 spaces in Phase I, and 6,000 spaces in Phase II. The Supplemental Report (10/04/06) provides a schematic layout of the ground floor ramp system of the parking garage.

    The trip generation estimates for Phase II are between 1,000 and 1,400 vehicles per hour will enter the parking garage during Friday and Saturday during peak casino periods with similar amounts of traffic exiting at the same time. Thus, there potentially will be conflicts within the garage between vehicles being un-parked and vehicles being parked.

    The schematic layout of the ground floor of the parking garage ramp system implies that consideration has been given to the storage of incoming vehicles whose entries may be delayed either by internal congestion, or by parking attendants. As many as eleven garage receiving lanes are shown on the schematic layout. This may be adequate to prevent a backlog of incoming vehicles from blocking the public streets; however, the reports offer no quantitative evidence to support that supposition.

Traffic Control Devices and Signage

24. Recommendations in the documents are that the traffic signals along Columbus Boulevard be interconnected and coordinated, and that variable message signs along major routes be installed and/or supplemented to provide advisory messages for motorists entering and leaving the site.

25. Coordination of traffic signals is necessary and has been assumed in all of the LOS analyses.

26. A comprehensive signage system should be developed in coordination with, and cooperation from, the nearby destinations.

CONCLUSIONS

The review staff of Edwards and Kelcey agrees that most of the issues that can be addressed at this stage of planning have, in fact, been addressed systematically and thoroughly. As the plans are further refined and developed, the designers should:

- Review recent traffic accident statistics to determine the need for any safety measures.
- Be prepared to making operational adjustments to adapt to changing conditions.
- Resolve geometric design details.
- Initiate early coordination with utility agencies and companies regarding relocation needs associated with street and intersection improvements.
- Initiate the preparation of the Point-of-Access (POA) and Environmental Studies that may be required for the proposed off ramp from southbound I-95
- Integrate public bus operations and stops with the roadway and site design.
- Identify offsite employee parking sites and means of connecting them with the casino site.
- Ensure that vehicles entering the parking garage will not backup into public streets due to internal congestion.
- Ensure an interconnected and coordinated traffic signal system along Columbus Boulevard.
- Develop a comprehensive signage system in coordination with other nearby destinations.
- Ensure compliance with all ADA requirements throughout the improvement areas.

This summarizes our comments related to the Foxwoods Casino Philadelphia Traffic Impact Study. We will be happy to further discuss any of these issues with you or you staff, or meet to clarify or elaborate on any of our findings. Please let me know if we can be of further assistance.

Very truly yours,

Stephen E. Cunningham, P.E.
Project Manager

SEC/jk

cc: Paul Resch, Acting Secretary, Pennsylvania Gaming Control Board
Devang Patel, P.E., Pennsylvania Department of Transportation
Richard Sesny, Pennsylvania Department of Transportation
EK Project Team