Pennoni
PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

September 25, 2006

Mr. Patrick McKoy
President/CEO
Riverwalk Casino, LP
Two Penn Center, Suite 200
1500 JFK Boulevard
Philadelphia, PA 19102

Re: Supplemental Traffic Impact Study Information
Riverwalk Casino, Philadelphia, PA

Dear Mr. McKoy:

Per your request, Pennoni Associates, Inc. (Pennoni) has prepared this letter report to provide additional information and/or clarifications of our Traffic Impact Study for the above-referenced project. The information provided herein is per discussions with Riverwalk Casino and the Philadelphia Gaming Advisory Task Force.

The outline of this letter report follows the Traffic Impact Study (TIS) report sections that was prepared in December of 2005.

INTRODUCTION

The Riverwalk Casino is an electronic gaming facility which will be located on the Delaware waterfront on Pier's 27, 31, 32, 33, 34, and 35 in the City Philadelphia. The proposed development will consist of a total of 5,000 gaming units which will be installed in two phases: Phase 1A (3,000 gaming units) and Phase 1B (2,000 gaming units).

The proposed Riverwalk Casino will also contain other uses such as food and beverage areas (± 81.2ksf), entertainment (±13.5ksf), amenity retail (±24.8ksf), employee facilities (±48ksf), public circulation/support space (±34ksf) and support space (±39.5ksf). The total site will be approximately 386,000 square feet, with a parking garage structure (which will be constructed in Phase 1A) consisting of 3,510 spaces with an additional 700 parking spaces for Phase 1B as needed. The Riverwalk Casino will operate twenty-four hours per day, seven days per week and is estimate to employ approximately 1,100 people.

The site is situated along the Delaware waterfront at the terminus of Spring Garden Street north of the Ben Franklin Bridge. The site will be highly visible from both Interstate 95 and the Benjamin Franklin Bridge. Excellent highway access is provided via I-95 to the northeast and southwest to bridges to the north and south into New Jersey, and via Interstate 76, to the Atlantic City Expressway. On and off-ramps to I-95 are relatively close by. The proposed primary access to the facility will be via Delaware Avenue.

Existing Traffic Conditions

Existing Land Uses

The proposed development is along a section of the Delaware River that is within the larger context of an established and expanding mix-used waterfront that includes significant residential such as Waterfront Square that is currently under construction, tourism, hotel, restaurant and commercial office development.

Study Area

Prior to beginning the Traffic Impact Study for the Riverwalk Casino, Pennoni Associates met with Robert Wright, Chief Engineer of the City of Philadelphia Streets Department. The meeting was held on October 24, 2005. During the meeting, the proposed study area was presented to, and approved by the Streets Department. In addition, the selected study area meets the requirements of the *Philadelphia Zoning Code* (1998), §14-1803(3)(a)(.1), which calls for the evaluation of all signalized intersections within 400 feet of a proposed parking facility.

Traffic Volumes

The existing peak hour traffic volumes shown in Figure 2 of the Riverwalk Casino Traffic Impact Study were obtained from weekday and Saturday evening peak period manual turning movement counts conducted at the study intersections during November and December of year 2005. Although the data collection was performed during the fall, seasonal adjustment factors were not applied to the traffic counts. This is due to the fact that the peak hour volumes at the intersection of Delaware Avenue and Spring Garden Street were found to be consistent with the volumes obtained by Urban Systems Associates, Inc. in the Spring of 2005, as presented in the *Philadelphia Slot Gaming Facilities Overview: Transportation Access Analysis, Technical Appendix* prepared for the Philadelphia Gaming Advisory Task Force (2005). The following table summarizes the volume comparisons:

Peak Hour Intersection Volumes
Based on Year 2005 Counts
Delaware Avenue and Spring Garden Street

Day	Pennoni Associates			Urban Systems Associates		
	Count Date	Peak Hour	Intersection Volume	Count Date	Peak Hour	Intersection Volume
Weekday	Thursday, Dec. 8	4:00-5:00	3,865	Wednesday, May 25	4:00-5:00	3,697
Saturday	Nov. 19	4:15-5:15	1,910	May 21	4:15-5:15	2,099

This comparison of these counts resulted in less than a ten (10) percent variation between the two different times of the year.

Future "Pre-Development" Traffic Conditions

For opening year (2007) pre-development conditions, the existing peak hour traffic volumes were escalated by a factor of 2.1% to reflect general background growth. In addition, projected traffic volumes associated with 170 condominium units at the nearby Waterfront Square development were added to the background volumes. As shown in Figure 4 of the Riverwalk Casino Traffic Impact Study, the adjustments resulted in a total intersection volume of 4,087 vehicles in the weekday peak hour, and 2,051 vehicles in the Saturday peak hour.

The future traffic conditions have accounted for the traffic volume increases that are expected to occur throughout the region over this period. The base pre-development year of the analysis reflects a 2007 build year for the Riverwalk Casino such that pre-development versus post-development traffic impacts may be assessed. This analysis time period is per the City of Philadelphia requirements.

Trip Generation and Distribution

Trip Generation

The trip generation calculations presented in the Riverwalk Casino Traffic Impact Study incorporate data from two sources: 1) traffic counts performed at an existing similar type of facility in Delaware, and 2) factors presented in an *ITE Journal* article entitled "Gaming Casino Traffic" (Paul C. Box and William Bunte, 1998). Trip generation rates are based on the conversion of rates of traffic flow in and out of the facility to trips per gaming position. Thus, the trip generation rates include traffic associated with the auxiliary land uses, such as restaurants and non-gaming entertainment venues.

According to the *Trip Generation Handbook* (Institute of Transportation Engineers, 2004), there is interaction among land uses within a multi-use site, particularly where trips can be made by walking. This capture of trips internal to the site has the net effect of reducing vehicle trip generation between the overall development site and the external street system (compared to the total number of trips generated by comparable, stand-alone sites).

Mode Split Analysis

Approximately 80% of the site-generated traffic is expected to take place by vehicle trips. Due to the extensive availability of public transportation options, the remaining 20% of site traffic will utilize other modes. The identified modes include bus and rail service, charter buses, water-taxis and Delaware River shuttle/ferry service is further described below.

Two SEPTA bus routes provide direct connection to the proposed Riverwalk Casino:

- Route 25 – Columbus Commons to Frankford Transportation Center via Port Richmond, Northern Liberties and Bridesburg
- Route 43 – Parkside to Northern Liberties and Fishtown via Spring Garden Street

During the weekday afternoon peak hour, a north-south Route 25 bus on Delaware Avenue passes the casino site every 10 minutes, and an east-west Route 43 bus on Spring Garden Street stops at Front Street (opposite the site) every 15 minutes. During the Saturday afternoon peak hour, both bus routes encounter the casino site every 30 minutes.

City bus Routes 21 (Penn's Landing to 69th Street Terminal via Chestnut and Walnut Streets), Route 33 (Tioga to Penn's Landing via 19th and 20th Streets) and Route 42 (Wycombe and West Philadelphia to Penn's Landing via Spruce, Chestnut and Walnut Streets) offer service to Penn's Landing, from which a connection to Route 25 can be made.

SEPTA's Market-Frankford Rail Line has a station at the intersection of Spring Garden Street and 2nd Street, located two blocks from the proposed casino. Service is offered days, nights, weekends and holidays. From approximately 7:00 AM to 6:00 PM on weekdays, the train is available every eight minutes or less. From approximately 8:30 AM to 8:00 PM on the weekends, service is provided every 10 minutes.

According to the site developer, 50 to 60 charter buses are expected to access the casino on an average day. Each bus is estimated to carry 38 patrons.

The Delaware River Port Authority (DRPA) operates the PATCO Speedline rail service between Lindenwold, New Jersey and Philadelphia. The rail line runs on the Ben Franklin Bridge, and passengers can transfer between PATCO and SEPTA transit links in center city Philadelphia. In 2005, the DRPA sponsored the *Southern New Jersey to Philadelphia Transit Study*, which identified potential transit improvement alternatives for the region. One of the Pennsylvania alternatives involves establishing streetcar/trolley service between the existing abandoned Franklin Square Station and Delaware Avenue. Trolleys would then utilize the median of Delaware Avenue to travel north along the waterfront to a terminus at the Market-Frankford Line's Spring Garden Street station. Service to the south would extend to the Pier 70 Shopping Plaza. The Franklin Square Station would be reopened, and passengers using the PATCO Speedline from New Jersey could transfer to the new waterfront shuttle service. A full alternatives analysis for the study area is in progress.

During the summer months, DRPA's RiverLink Ferry System provides ferry service between the Penn's Landing and Camden waterfronts. Departures are on the ½ hour, and express service is offered before and after Tweeter Center events. Although it is difficult to quantify the number of casino patrons who are likely to utilize the ferry service, it is a viable option for passage between Philadelphia and Camden.

In speaking with Penn's Landing Corporation, they currently are planning to offer passenger-only water taxi service called the Waterlink along the Delaware River waterfront between Festival Pier (Riverwalk Casino), Cavanaugh's Riverdeck, Philadelphia Marine Center, the Great Plaza and the marina. Initially, three (3) water shuttles will operate daily and have a capacity of 26 passengers per vessel. Unlike the RiverLink Ferry, this type of service would not require casino patrons to find alternate transit options to get from Penn's Landing to the Riverwalk Casino.

In addition, Penn's Landing Corporation has several parking lots along the waterfront that can provide shuttle services to the Penn's Landing attractions but also could be expanded to include the Riverwalk Casino. This visitors could then "park once" and be shuttle to the various destinations. On special events at the Riverwalk Casino, shuttle services from the waterfront parking lots per the Transportation Management Plan (as outline later) could provide advance notice to casino patrons for parking alternatives. The waterfront parking lots have over 1,600 parking spaces and include the following lots:

- Pier 24 Parking Lot (120 spaces)
- Vine Street Parking Lot (280 spaces)
- Penn's Landing's Market & Walnut Street Parking Lots (400 & 220 spaces)
- Lombard Circle Parking Lot (220 spaces)
- South Street Pedestrian Bridge Parking Lot (400 spaces)

Trip Distribution

Regional and Local Site-Generated Traffic

The new vehicle trips generated by the proposed development were distributed and assigned to the roadway network based on a combined evaluation of existing travel patterns, the anticipated characteristics and behavior of the development-generated traffic, the location of regional transportation facilities, availability of public transportation facilities and the assumed access scenario.

It is expected that the majority of site traffic generated during the peak periods will use Delaware Avenue to access the regional routes, such as I-95, I-676 and I-76. In addition, local trips are expected to utilize roadways such as Spring Garden Street, and Race Street. Overall, it is estimated that the traffic generated by the Riverwalk Casino will be 70% regional and 30% local, as shown in the following table.

Distribution of Site-Generated Traffic

GENERAL DIRECTION	ARRIVALS		DEPARTURES	
REGIONAL				
From/To North	I-95 South to Callowhill St.	33%	To I-95 North via Delaware Ave. Northbound	33%
From/To South	I-95 North to Delaware Ave.	20%	To I-95 South via Delaware Ave. Northbound	14%
			To I-95 South via Delaware Ave. Southbound	6%
From/To East (New Jersey)	I-676 West/Ben Franklin Bridge to Spring Garden St.	6%	To I-676 East/Ben Franklin Bridge via Spring Garden St.	6%
	I-76 West/W.W. Bridge to	2%	To I-76 East/W.W. Bridge via	2%

GENERAL DIRECTION	ARRIVALS		DEPARTURES	
REGIONAL				
	Delaware Ave.		Delaware Ave. Southbound	
From/To West	I-76 East to Spring Garden St.	9%	To I-76 West via Spring Garden St.	9%
LOCAL				
From/To North	From Delaware Ave. North of Spring Garden St.	8%	To Delaware Ave. North of Spring Garden St.	8%
From/To South	From Delaware Ave. South of Spring Garden St.	7%	To Delaware Ave. South of Spring Garden St.	7%
From/To East (New Jersey)	From the East via Ben Franklin Bridge to Spring Garden St.	8%	To the East via Spring Garden St. to Ben Franklin Bridge	8%
From/To West	From the West via Spring Garden St.	7%	To the West via Spring Garden St.	7%

The above percentages are also illustrated on the attached Figure A.

The portions of regional and local traffic expected to approach the casino site from the east (New Jersey) are identified in the distribution table. In addition, a component of the 33% regional traffic approaching from the north (via I-95 southbound) would include traffic originating in New Jersey. In order to expand the distribution of regional traffic using I-95 South, county population data from 2003 Census Data was obtained from the Greater Philadelphia Chamber of Commerce web site. Five New Jersey counties are considered to be part of the Greater Philadelphia area – Burlington, Camden, Gloucester, Salem and Mercer. From the population data, it has been estimated that approximately 33% of the total casino traffic will originate in New Jersey. Subtracting the 8% regional and 8% local traffic arriving from the east via I-676/Ben Franklin Bridge and I-76, the remaining 17% of total site-generated traffic is estimated to originate in New Jersey and approach the casino by way of I-95 southbound.

Site Access, Parking and Circulation

Based on the attached conceptual site plan of the proposed facility provided by Bower, Lewis, Thrower Architects (BLTA), the site will have two primary full-movement access driveways on Delaware Avenue:

- One access driveway will be located on the east side of Delaware Avenue, opposite Spring Garden Street. It is restricted to valet parking and taxi service.

- One access driveway will be located on the east side of Delaware Avenue, opposite Noble Street. It is the access for the majority of automobile site traffic and bus service and this intersection will be signalized as part of this development.

- There will also be a third access which will be a service entrance north of Spring Garden Street. This access will not be available to the patrons of the proposed Riverwalk Casino. This access is solely dedicated for service vehicles.

The garage will be an eight (8) story parking structure (Phase 1A) which will provide spaces for VIP/valet service, self-park and charter buses. Handicapped/accessible parking spaces will also be provided for patrons with disabilities. Under Phase 1B, an additional 700 parking spaces on two additional garage levels will be constructed.

The multi-story parking garage structure will be designed to contain a total of 4,210 (Phase 1A: 3,510 spaces; Phase 1B 700 spaces) parking spaces that will be utilized for designated valet/VIP gamers (710 spaces), self-park (3,500 spaces), charter buses (6 spaces). The parking structure and access from Delaware Avenue will be designed to permit easy access and circulation, bright lighting, enclosed entry to the casino, and a security system to provide a safe and secure environment for patrons. Off-street loading is also provided via a separate access.

Site-generated traffic assigned to both access driveways (opposite of Spring Garden Street and Noble Street) is based on the type and percentage of parking spaces that can be accessed through each entrance. Clear and informative signage will be implemented to inform patrons of the proposed Riverwalk Casino and the type of parking which will be available through each access point. Since the self-park spaces comprise about 85% of the total available parking spaces provided within the site and these parking spaces are not accessible through the access drive opposite of Spring Garden Street, it is expected that a majority of casino patrons who are driving to the site will utilize the access opposite of Noble Street.

It is also noted that there are no anticipated sight distance issues at the driveway accesses. Both the primary entrances to the proposed Riverwalk Casino will be via signalized intersections. There are sufficient sight distances to the adjacent signalized intersections for exiting vehicles. Sufficient sight distances for following vehicles along Delaware Avenue are also observed for entering vehicles. In addition, a dedicated northbound right turn lane on Delaware Avenue will be provided for ease of access and storage of vehicles entering the garage access. Based on the capacity analysis conducted, the storage distance needed for the 95 percent queue of vehicles is100 feet. This requirement is met with the proposed improvements.

The future intersection of Delaware Avenue and the parking garage access is proposed to be signalized. The *Manual on Uniform Traffic Control Devices for Streets and Highways* (Federal Highway Administration, 2003) contains eight warrants to evaluate the need for installation of a traffic signal at a particular location. Warrant 3 – Peak Hour – identifies the minimum peak hour approach volume requirements for consideration of traffic signal installation. Based on the projected post-development peak hour traffic volumes on Delaware Avenue near the parking garage access, the minimum required approach volume exiting the parking garage is 150 vehicles per hour. The total approach volume exiting the garage is expected to be well above 150 vehicles per hour during several hours of a typical day. Per our meeting on October 24, 2005, the Philadelphia City Streets Department approved conceptually a traffic signal at this location.

Parking Ratios
A total of 4,210 parking spaces will be provided on site. Incorporation of the daily vehicle trip generation per Table 1 in the Traffic Impact Study report dated December 2005 for the total site buildout that includes taxi service figures equates to the following parking usage:

Weekday: 9,685 vehicles/4,210 spaces = 2.30 vehicles/day/space

Saturday: 12,980 vehicles/4,210 spaces = 3.08 vehicles/day/space

Based on information from the developer and published research, the average casino patron spends a total of four hours at a casino facility. With a proposed operating schedule of 24 hours per day, parking availability is expected to be more than adequate.

Charter Buses
Riverwalk Casino has realized that the charter bus services utilized will require "over lay" parking during the course of the day when patrons are within the facility. Riverwalk Casino has had discussions with an existing bus depot near Callowhill Street and 2nd Street that could be used for their charter buses. Other bus depot areas will also be explored and discussed with Penn's Landing Corporation and the City of Philadelphia and will be part of the Transportation Management Plan as outlined in this report.

Future "Post-Development" Traffic Conditions
In the December 2005 Traffic Impact Study for the Riverwalk Casino, the results of the post-development evaluations with mitigations indicated that movements at all study intersections will operate at overall Level of Service "D" or better during both weekday and Saturday evening peak hours, *except* for the following movements:

At the intersection of Delaware Avenue and Spring Garden Street, the eastbound left turn movement and northbound through movement will operate at LOS "E" during the weekday evening peak hour. The Synchro software classifies delay between 35 to 55 seconds as LOS "D". The eastbound left turn movement and the northbound through movements have quantifiable delay of 56 seconds and 58 seconds, respectively. Thus, the LOS "E" delay is only slightly higher than a LOS "D".

At Spring Garden Street and Delaware Avenue, this intersection will experience higher levels of pedestrian traffic with the Riverwalk Casino than what exists today, since patrons can arrive via the SEPTA Market-Frankford Rail Line station located at the intersection of Spring Garden Street and 2nd Street. Pedestrian traffic will be controlled by pedestrian signals, and crosswalks and signing will provide guidance for pedestrians crossing Delaware Avenue and Spring Garden Street.

It was suggested by the Philadelphia Gaming Advisory Task Force that the Spring Garden Street and Delaware Avenue intersection operations might be improved if the southbound left turn movement on Delaware Avenue is prohibited. This scenario was tested and the results indicated an improvement on both the eastbound and northbound approaches, such that both movements previously experiencing LOS E improved to LOS D, and LOS D or better remained at all other movements at the study

intersections. Also included in the revised model was the limitation of east-west pedestrian movement to the south side of Spring Garden Street. By requiring pedestrians to cross Delaware Avenue on the south side of Spring Garden Street, crossing movements can occur during the protected eastbound left turn phase, which in turn will provide more time for pedestrians to fully cross Delaware Avenue, and thus reduce the chance of having to stop in the median.

It should also be noted that re-routing the southbound left turn from Delaware Avenue at the valet parking access to the Noble Street intersection had no adverse impact on operations for the southbound left turn at the parking garage access. Attached are the Synchro capacity analysis sheets for the study area intersections.

In addition to the removal of the southbound left turn movement on Delaware Avenue at Spring Garden Street, and the limitation requiring pedestrians to cross Delaware Avenue on the south side of Spring Garden Street, several other physical and operational improvements are proposed as part of the mitigation:

- The intersections of Delaware Avenue with Callowhill Street, Noble Street, Spring Garden Street and North Penn Street were optimized within their existing 90-second cycle length, and LOS D or better resulted for all movements at the study intersections.

- Different signal green times and offsets will be required for the weekday evening and Saturday evening peak hours at the study intersections. The signal timing modifications on a day of week/ time of day basis is permissible with the current signal controller technology.

- There will be the following changes in lane configuration and signal timing as part of the proposed improvements:

At the intersection of ***Delaware Avenue and Spring Garden Street***:

- Two eastbound (Spring Garden Street) left turn lane bays will be provided. This is feasible with the current curb to curb width on Spring Garden Street. There is currently a cross-hatched median that could easily be converted to two left turn lanes.
- Two northbound (Delaware Avenue) left turn lane bays will be provided. This is feasible with the current curb to curb width on Delaware Avenue. There is currently a physical median that can be modified to provide two left turn lanes.
- Three through lanes will be maintained along Delaware Avenue.
- The access to the Riverwalk Casino (Valet Parking Access) will require a dedicated right turn exit lane and a shared through and left turn exit lane. This configuration is based on the estimated pattern and volume of site-generated traffic.
- Signal timing and phasing at this intersection will be adjusted accordingly that is permissible with the current signalized controller technology.

At the intersection of ***Delaware Avenue and Noble Street***:

- A left turn lane bay will be provided for the southbound approach on Delaware Avenue into the site. An existing northbound left turn lane bay is already provided. The left turn lane bays will be positioned to maximize visibility to the opposing traffic due to the permitted/permitted-protected phasing. The northbound left turn lane will require partial removal of concrete median. The southbound left turn lane will require modification of the pavement marking. These modifications are all feasible based on the current Delaware Avenue roadway geometry.
- A dedicated northbound right turn lane into the garage access driveway will be provided.
- Three through lanes will be maintained along Delaware Avenue in each direction.
- The egress from the Riverwalk Casino self-park access will require a dedicated right turn lane and a dedicated left turn lane. This configuration is based on the estimated pattern and volume of site-generated traffic.
- Installation of a new signal that meets the *Manual on Uniform Traffic Control Devices* based on projected peak hour volumes.
- In order to prohibit casino traffic from using Noble Street, the parking garage exit will be signed and pavement-marked for left and right turns only, and no westbound through traffic will be permitted to enter Noble Street. Similarly, eastbound traffic exiting Noble Street will be required to turn left or right, to prevent entering casino traffic from using Noble Street.

Transportation Management Plan

The Riverwalk Casino is committed to implementing a Transportation Management Plan (TMP) that will provide a means to manage traffic operations both internally to the site and externally on the transportation infrastructure. One of the first tasks is to designate a Transportation Coordinator (TC) who will develop a plan not only for the opening day and special events, but for monitoring normal operations.

A TMP can be defined as an active program to foster more efficient commuting/trip patterns. The intent of the plan is to reduce vehicular traffic generated by a site by providing incentives for employees and patrons to use alternative modes of transportation rather than drive alone. TMPs are designed to assess the existing transportation characteristics; set goals and objectives; identify measures of effectiveness; suggest strategies to obtain goals and objectives; monitor the changing transportation characteristics, and assist the Transportation Coordinator (TC) to implement strategies.

A TMP usually 1) documents current travel modes used, 2) provides goals and objectives, 3) recommends strategies to encourage commuting characteristics that reduce the number of single occupancy vehicles, and 4) provides a guideline for a monitoring system that can be used to evaluate the effectiveness of strategies in place.

Initiating the plan for the transportation management of the Riverwalk Casino, as part of a new Commercial Entertainment District (CED), or individually may generally consist of steps as outlined

in Attachment B. A designated Transportation Coordinator (TC) should develop a plan that is more site specific once the Riverwalk Casino is operational. A commitment is required by the owner to allow the TC to carry out the actions necessary to fulfill those responsibilities. At first, the duties of the TC may consume most of the coordinator's time. As the program matures and success is achieved, the TC time effort may reduce to conduct the data collection, perform the analysis and implement the strategies. The strategies noted in Attachment B are suggestions formulated to provide the TC with ideas to achieve the goals and objectives. It is the TC's responsibility to investigate the feasibility and applicability of the strategies. The strategies are not mandated but encouraged to foster ideas that the TC can develop to meet the goals and objectives of a detailed TMP.

Attachment B also includes guidelines to monitor the transportation mode changes and measures of effectiveness of the implemented strategies. The purpose of the monitoring is to provide data to determine if the TMP objectives are met. Baseline transportation information should be determined during the first year of operation, at which time specific goals and objectives are set for future years. An analysis should be performed at regular intervals thereafter to determine if objectives are achieved. If the objectives are not achieved, additional strategies should be implemented and measures of effectiveness should be re-evaluated to ensure the objectives are maintained.

The Riverwalk Casino is ready to prepare a site specific TMP upon the successful application with the Pennsylvania Gaming Control Board, and will work closely with the PennDOT, City Streets Department, Penn's Landing Corporation, and other interested agencies along the Delaware Waterfront for traffic management.

Conclusions and Recommendations

This letter report has been prepared to provide clarifications to the Traffic Impact Study report that was prepared in December 2005 and per additional discussions with Riverwalk Casino and City of Philadelphia Casino Task Force. While there will be added delay time imposed by the additional traffic generated by the proposed Riverwalk Casino development, mitigations efforts listed above and within the Traffic Impact Study dated December 2005 will be undertaken to ensure that the increase in traffic volumes will not significantly affect the operations of the subject intersections. As such, the proposed improvements ensure that the development is in compliance with the City of Philadelphia Zoning Code, Chapter 14-1803(3)(a)(.1).

Sincerely yours,

PENNONI ASSOCIATES, INC

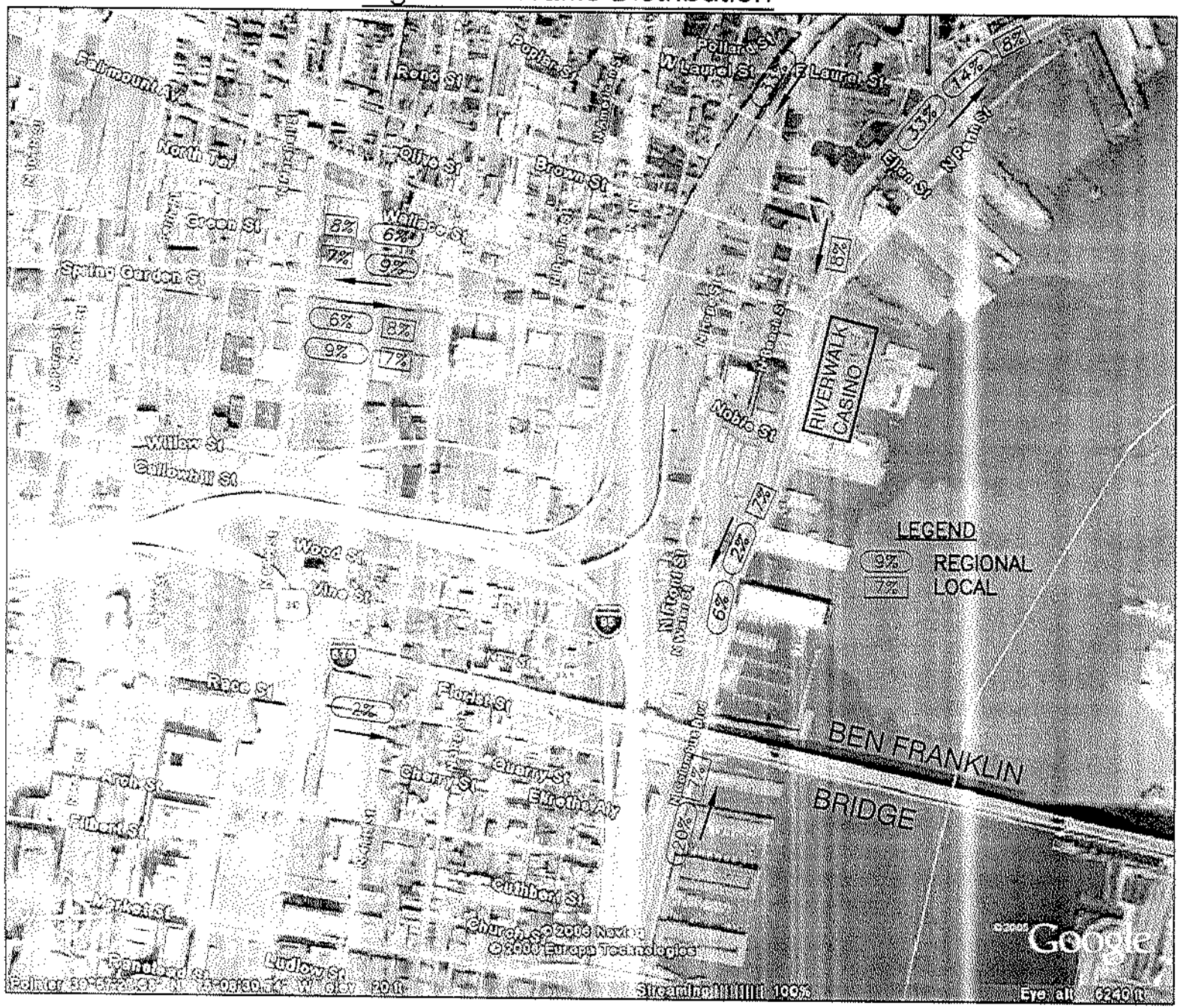
Stewart R. Gordon
Project Manager

Jacinta M. Vrabel, P.E.
Transportation Division

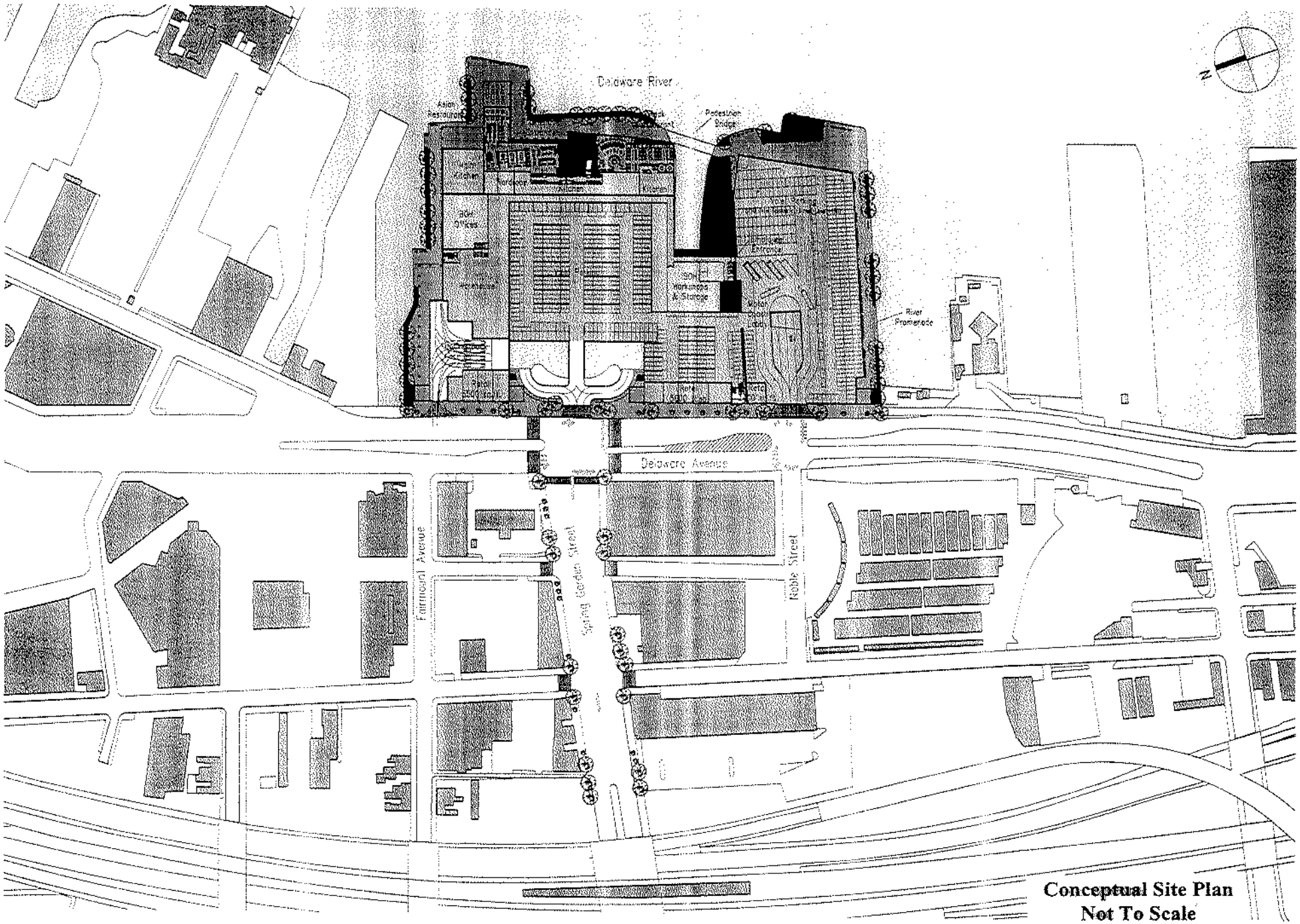
ATTACHMENTS

RIVERWALK CASINO

Figure A - Traffic Distribution



SITE PLAN



Conceptual Site Plan
Not To Scale

SYNCHRO CAPACITY ANALYSIS

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.91	0.91	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	0.95	1.00		1.00	1.00	
Satd. Flow (prot)	1770	1583		5085	5085	
Flt Permitted	0.95	1.00		1.00	1.00	
Satd. Flow (perm)	1770	1583		5085	5085	
Volume (vph)	275	109	0	2372	974	0
Peak-hour factor, PHF	0.78	0.78	0.90	0.90	0.86	0.86
Adj. Flow (vph)	353	140	0	2636	1133	0
RTOR Reduction (vph)	0	72	0	0	0	0
Lane Group Flow (vph)	353	68	0	2636	1133	0
Turn Type		custom				
Protected Phases	4	4		2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	21.0	21.0		58.0	58.0	
Effective Green, g (s)	23.0	23.0		59.0	59.0	
Actuated g/C Ratio	0.26	0.26		0.66	0.66	
Clearance Time (s)	6.0	6.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	452	405		3334	3334	
v/s Ratio Prot	c0.20	0.04		c0.52	0.22	
v/s Ratio Perm						
v/c Ratio	0.78	0.17		0.79	0.34	
Uniform Delay, d1	31.2	26.1		11.1	6.9	
Progression Factor	1.00	1.00		1.00	0.54	
Incremental Delay, d2	8.5	0.2		2.0	0.3	
Delay (s)	39.7	26.2		13.1	4.0	
Level of Service	D	C		B	A	
Approach Delay (s)	35.9			13.1	4.0	
Approach LOS	D			B	A	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	0.97	1.00	1.00		1.00	1.00	0.97	0.91			0.91	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00	1.00			0.92	
Flpb, ped/bikes	1.00	1.00	1.00		0.94	1.00	1.00	1.00			1.00	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00			0.95	
Flt Protected	0.95	1.00	1.00		0.99	1.00	0.95	1.00			1.00	
Satd. Flow (prot)	3433	1863	1583		1729	1583	3433	5061			4427	
Flt Permitted	0.95	1.00	1.00		0.91	1.00	0.95	1.00			1.00	
Satd. Flow (perm)	3433	1863	1583		1587	1583	3433	5061			4427	
Volume (vph)	938	37	522	14	41	48	564	2031	67	0	531	257
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	987	39	549	15	45	52	613	2208	73	0	577	279
RTOR Reduction (vph)	0	0	1	0	0	5	0	4	0	0	97	0
Lane Group Flow (vph)	987	39	548	0	60	47	613	2277	0	0	759	0
Confl. Peds. (#/hr)			150	150								150
Turn Type	Prot		pt+ov	Perm		Perm	Prot					
Protected Phases	7	4	4 5		8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)	25.0	38.0	61.0		7.0	7.0	17.0	40.0			17.0	
Effective Green, g (s)	27.0	40.0	63.0		9.0	9.0	19.0	42.0			19.0	
Actuated g/C Ratio	0.30	0.44	0.70		0.10	0.10	0.21	0.47			0.21	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)	1030	828	1108		159	158	725	2362			935	
v/s Ratio Prot	c0.29	0.02	c0.35				0.18	c0.45			0.17	
v/s Ratio Perm					0.04	0.03						
v/c Ratio	0.96	0.05	0.49		0.38	0.29	0.85	0.96			0.81	
Uniform Delay, d1	30.9	14.2	6.2		37.9	37.6	34.1	23.3			33.8	
Progression Factor	1.00	1.00	1.00		1.00	1.00	0.98	0.45			0.93	
Incremental Delay, d2	18.6	0.0	0.3		1.5	1.0	0.9	1.7			7.5	
Delay (s)	49.5	14.2	6.5		39.4	38.6	34.3	12.1			39.1	
Level of Service	D	B	A		D	D	C	B			D	
Approach Delay (s)		33.7			39.0			16.8			39.1	
Approach LOS		C			D			B			D	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑↑		↰	↑↑↑	↰	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	1.00		1.00	1.00	0.93	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	5085		1770	5085	1695	
Flt Permitted	1.00		0.06	1.00	0.98	
Satd. Flow (perm)	5085		103	5085	1695	
Volume (vph)	3018	0	21	745	29	29
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3280	0	23	810	32	32
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	3280	0	23	810	62	0
Turn Type			Perm			
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	71.5		71.5	71.5	7.5	
Effective Green, g (s)	72.5		72.5	72.5	9.5	
Actuated g/C Ratio	0.81		0.81	0.81	0.11	
Clearance Time (s)	5.0		5.0	5.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	4096		83	4096	179	
v/s Ratio Prot	c0.64			0.16	c0.04	
v/s Ratio Perm			0.22			
v/c Ratio	0.80		0.28	0.20	0.35	
Uniform Delay, d1	4.8		2.2	2.0	37.4	
Progression Factor	0.66		1.00	1.00	1.00	
Incremental Delay, d2	0.6		8.1	0.1	1.2	
Delay (s)	3.7		10.3	2.1	38.5	
Level of Service	A		B	A	D	
Approach Delay (s)	3.7			2.4	38.5	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	4.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00		1.00	1.00	0.91	1.00	1.00	0.91	
Frt		0.93		1.00		0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95		1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1695		1770		1583	1770	5085	1583	1770	5083	
Flt Permitted		0.98		0.75		1.00	0.24	1.00	1.00	0.08	1.00	
Satd. Flow (perm)		1695		1404		1583	452	5085	1583	143	5083	
Volume (vph)	3	0	3	90	0	497	3	2662	377	293	1026	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	0	3	98	0	540	3	2893	410	318	1115	3
RTOR Reduction (vph)	0	3	0	0	0	1	0	0	79	0	0	0
Lane Group Flow (vph)	0	3	0	98	0	539	3	2893	331	318	1118	0
Turn Type	Perm			custom		custom	Perm		Perm	pm+pt		
Protected Phases		4				1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		10.0		10.0		28.0	47.0	47.0	47.0	70.0	70.0	
Effective Green, g (s)		11.0		11.0		30.0	48.0	48.0	48.0	71.0	71.0	
Actuated g/C Ratio		0.12		0.12		0.33	0.53	0.53	0.53	0.79	0.79	
Clearance Time (s)		5.0		5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		207		172		598	241	2712	844	456	4010	
v/s Ratio Prot						c0.19		c0.57		0.15	0.22	
v/s Ratio Perm		0.00		0.07		0.15	0.01		0.21	0.40		
v/c Ratio		0.02		0.57		0.90	0.01	1.07	0.39	0.70	0.28	
Uniform Delay, d1		34.7		37.3		28.6	9.9	21.0	12.4	34.1	2.6	
Progression Factor		1.00		1.00		1.00	0.49	0.67	0.23	0.73	1.79	
Incremental Delay, d2		0.0		4.3		16.8	0.1	36.1	0.9	4.0	0.1	
Delay (s)		34.8		41.6		45.4	4.9	50.2	3.8	28.8	4.8	
Level of Service		C		D		D	A	D	A	C	A	
Approach Delay (s)		34.8			44.8			44.5			10.1	
Approach LOS		C			D			D			B	

Intersection Summary			
HCM Average Control Delay	35.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.91	0.91	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	0.95	1.00		1.00	1.00	
Satd. Flow (prot)	1770	1583		5085	5085	
Flt Permitted	0.95	1.00		1.00	1.00	
Satd. Flow (perm)	1770	1583		5085	5085	
Volume (vph)	344	66	0	1293	914	0
Peak-hour factor, PHF	0.78	0.78	0.90	0.90	0.86	0.86
Adj. Flow (vph)	441	85	0	1437	1063	0
RTOR Reduction (vph)	0	30	0	0	0	0
Lane Group Flow (vph)	441	55	0	1437	1063	0
Turn Type		custom				
Protected Phases	4	4		2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	26.2	26.2		52.8	52.8	
Effective Green, g (s)	28.2	28.2		53.8	53.8	
Actuated g/C Ratio	0.31	0.31		0.60	0.60	
Clearance Time (s)	6.0	6.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	555	496		3040	3040	
v/s Ratio Prot	c0.25	0.03		c0.28	0.21	
v/s Ratio Perm						
v/c Ratio	0.79	0.11		0.47	0.35	
Uniform Delay, d1	28.3	22.0		10.1	9.2	
Progression Factor	1.00	1.00		1.00	0.66	
Incremental Delay, d2	7.7	0.1		0.5	0.3	
Delay (s)	36.0	22.1		10.7	6.4	
Level of Service	D	C		B	A	
Approach Delay (s)	33.7			10.7	6.4	
Approach LOS	C			B	A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	0.97	1.00	1.00		1.00	1.00	0.97	0.91			0.91	
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00	1.00			0.94	
Flpb, ped/bikes	1.00	1.00	1.00		0.94	1.00	1.00	1.00			1.00	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99			0.96	
Flt Protected	0.95	1.00	1.00		0.99	1.00	0.95	1.00			1.00	
Satd. Flow (prot)	3433	1863	1583		1730	1583	3433	5023			4591	
Flt Permitted	0.95	1.00	1.00		0.92	1.00	0.95	1.00			1.00	
Satd. Flow (perm)	3433	1863	1583		1618	1583	3433	5023			4591	
Volume (vph)	250	51	627	18	54	63	580	1024	91	0	433	139
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	263	54	660	20	59	68	630	1113	99	0	471	151
RTOR Reduction (vph)	0	0	2	0	0	56	0	11	0	0	64	0
Lane Group Flow (vph)	263	54	658	0	79	12	630	1201	0	0	558	0
Confl. Peds. (#/hr)			150	150								150
Turn Type	Prot		pt+ov	Perm		Perm	Prot					
Protected Phases	7	4	4 5		8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)	10.5	31.0	59.2		14.5	14.5	22.2	47.0			18.8	
Effective Green, g (s)	12.5	33.0	61.2		16.5	16.5	24.2	49.0			20.8	
Actuated g/C Ratio	0.14	0.37	0.68		0.18	0.18	0.27	0.54			0.23	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)	477	683	1076		297	290	923	2735			1061	
v/s Ratio Prot	0.08	0.03	c0.42				c0.18	0.24			c0.12	
v/s Ratio Perm					0.05	0.01						
v/c Ratio	0.55	0.08	0.61		0.27	0.04	0.68	0.44			0.53	
Uniform Delay, d1	36.1	18.6	7.9		31.6	30.3	29.5	12.3			30.3	
Progression Factor	1.00	1.00	1.00		1.00	1.00	0.60	0.60			0.92	
Incremental Delay, d2	1.4	0.0	1.0		0.5	0.1	0.9	0.2			1.9	
Delay (s)	37.5	18.6	8.9		32.0	30.3	18.7	7.6			29.7	
Level of Service	D	B	A		C	C	B	A			C	
Approach Delay (s)		17.2			31.2			11.4			29.7	
Approach LOS		B			C			B			C	

Intersection Summary

HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑↑		↰	↑↑↑	↰	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frt	1.00		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	5085		1770	5085	1701	
Flt Permitted	1.00		0.16	1.00	0.97	
Satd. Flow (perm)	5085		303	5085	1701	
Volume (vph)	1339	0	26	511	40	34
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1455	0	28	555	43	37
RTOR Reduction (vph)	0	0	0	0	26	0
Lane Group Flow (vph)	1455	0	28	555	54	0
Turn Type			Perm			
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	72.1		72.1	72.1	6.9	
Effective Green, g (s)	73.1		73.1	73.1	8.9	
Actuated g/C Ratio	0.81		0.81	0.81	0.10	
Clearance Time (s)	5.0		5.0	5.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	4130		246	4130	168	
v/s Ratio Prot	c0.29			0.11	c0.03	
v/s Ratio Perm			0.09			
v/c Ratio	0.35		0.11	0.13	0.32	
Uniform Delay, d1	2.2		1.7	1.8	37.7	
Progression Factor	0.10		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.9	0.1	1.1	
Delay (s)	0.4		2.7	1.8	38.8	
Level of Service	A		A	A	D	
Approach Delay (s)	0.4			1.9	38.8	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	2.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↰		↱	↰	↑↑↑	↱	↰	↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00		1.00	1.00	0.91	1.00	1.00	0.91	
Frt		0.93		1.00		0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95		1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1695		1770		1583	1770	5085	1583	1770	5085	
Flt Permitted		0.98		0.75		1.00	0.23	1.00	1.00	0.10	1.00	
Satd. Flow (perm)		1695		1404		1583	433	5085	1583	181	5085	
Volume (vph)	3	0	3	117	0	648	3	1695	515	356	1065	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	0	3	127	0	704	3	1842	560	387	1158	1
RTOR Reduction (vph)	0	3	0	0	0	1	0	0	163	0	0	0
Lane Group Flow (vph)	0	3	0	127	0	703	3	1842	397	387	1159	0
Turn Type	Perm			custom		custom	Perm		Perm	pm+pt		
Protected Phases		4				1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		12.6		12.6		38.9	36.1	36.1	36.1	67.4	67.4	
Effective Green, g (s)		13.6		13.6		40.9	37.1	37.1	37.1	68.4	68.4	
Actuated g/C Ratio		0.15		0.15		0.45	0.41	0.41	0.41	0.76	0.76	
Clearance Time (s)		5.0		5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		256		212		790	178	2096	653	620	3865	
v/s Ratio Prot						c0.27		c0.36		0.19	0.23	
v/s Ratio Perm		0.00		0.09		0.17	0.01		0.25	0.28		
v/c Ratio		0.01		0.60		0.89	0.02	0.88	0.61	0.62	0.30	
Uniform Delay, d1		32.5		35.7		22.5	15.7	24.4	20.7	19.2	3.4	
Progression Factor		1.00		1.00		1.00	0.76	0.80	0.61	1.04	0.74	
Incremental Delay, d2		0.0		4.5		12.0	0.2	5.2	3.9	1.8	0.2	
Delay (s)		32.5		40.2		34.5	12.1	24.7	14.4	21.7	2.7	
Level of Service		C		D		C	B	C	B	C	A	
Approach Delay (s)		32.5			35.3			22.3			7.5	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

ATTACHMENT B

TRANSPORTATION MANAGEMENT PLAN

ATTACHMENT B

Transportation Management Plan (TMP) Guideline

I. Assessment of the Transportation Access for the Riverwalk Casino

The Riverwalk Casino is an electronic gaming facility which will be located on the Delaware waterfront on Pier's 27, 31, 32, 33, 34, and 35 in the City Philadelphia. The proposed development will consist of a total of 5,000 gaming units which will be installed in two phases: Phase 1A (3,000 gaming units) and Phase 1B (2,000 gaming units).

The proposed Riverwalk Casino will also contain other uses such as food and beverage areas, entertainment, amenity retail, employee facilities, public circulation and support space. The total site will be approximately 400,000 square feet, with a parking garage structure (which will be constructed in Phase 1A) consisting of 3,200 spaces.

The site is situated along the Delaware waterfront at the terminus of Spring Garden Street north of the Ben Franklin Bridge. The site will be highly visible from both Interstate 95 and the Benjamin Franklin Bridge. Excellent highway access is provided via I-95 to the northeast and southwest to bridges to the north and south into New Jersey, and via Interstate 76, to the Atlantic City Expressway. In addition, access to the site is also available via the Southeastern Pennsylvania Transportation Authority (SEPTA) via several transit alternatives for access to/from the waterfront properties: SEPTA bus services along Delaware Avenue (Route 25) and Spring Garden Street (Route 43) provide direct connections to the proposed gaming facility; a SEPTA subway station for the Market-Frankford El is located at the intersection of Spring Garden Street and 2nd Street, which is two city blocks away from the proposed development. Additionally, taxi services and charter and private bus companies contracted by the Riverwalk Casino will also provide transportation for the proposed development. The proposed Riverwalk Casino is also within close proximity to Old City and the Historic District.

The TC should revise and update the information provided herein as part of the baseline conditions document, and ensure the following items are included:

1. The assessment should provide a description of the sites transportation related infrastructure, services, and amenities. This analysis includes the number, price, capacity/demand and location of parking by type: identification and evaluation of existing mass transit services; transportation programs of nearby developments; bicycle and pedestrian facilities; and highway access.

2. Identify the existing programs and policies for reducing travel by single-occupant vehicle. This would include the name of the Transportation Coordinator (TC), current level of resources, services offered, alternative work hour policy, transit subsidy program and its participation level, parking assignment and pricing policies. Local Transportation Management Associations (TMA) and other sources may able to provide information about existing levels of participation.

II. Evaluate Employee and Patron Behavior

Since transportation characteristics of the employees and patrons of the casino are unknown, it is suggested that specific information be gathered, six months to a year after the opening. After the information is gathered, the TC can set specific goals and objectives, identify measures of effectiveness and monitor changing characteristics. The TC should collect information on current travel behaviors via surveys, and vehicle counts. The surveys should document place of origin, work schedules for employees, distance of travel, travel mode, vehicle occupancy and whether a driver or passenger, and number of employees or patrons in vehicle. In addition, information regarding employee and patron attitudes to determine their wiliness and ability to modify travel characteristics as new options become available should be collected. This would include willingness and ability to carpool, use charter buses, use transit, pay for parking and additional strategies such as use of water taxis, and subsidies. The analysis of the surveys and traffic counts should document percentage of employees and patrons for each travel mode, clusters of employees or patrons, and mode specific counts.

III. Establish Goals and Objectives

Once the surveys are conducted, the results should be used to modify the realistic goals and objectives.

1. Goals: The TC should set broad management statements of the plan's mission. We recommend the initial goals be:

   - Reduce traffic congestion by seeking to reduce the number of single occupancy vehicles to and from the Riverwalk Casino during commuter peak hours.
   - Make best use of limited on-site parking and travel ways.
   - Encourage employees and patrons to change modes transportation to non-single occupancy vehicle transportation modes.
   - Increase overall average vehicle occupancy.

2. Objectives: Initially, the most important objective of the TMP is to formalize the duties of the TC, provide a basis of measurement of the success of the TMP, and to ensure the TMP allows the TC the flexibility necessary to implement strategies to achieve the specific objectives of the TMP. Once the surveys are conducted, the results should be used to develop specific objectives. The objectives are measurable criteria by which the plan's effiecetivness can be judged. They should tell you who is doing what and when to achieve how much of a result and how the result will be measured. They should take multiple directions. Such as:

   - Increase percentage of employees and patrons using transit to XX% by end of first year (as measured by a pre-plan/post survey).
   - Increase the percentage of Charter Bus from XX% to XX% by end of first year.

IV. TMP Measures of Effectiveness

Measures of Effectiveness (MOE) are used to evaluate the travel demand strategies. There are several was to determine the MOEs for a TMP. Usually they are based on transportation mode split percentage or an average vehicle occupancy (AVO) rate. Since there are a certain percentage of single occupancy vehicle (SOV) employee and patrons that can not be eliminated, a combination of measures is recommended. A sample table may look like Table A.

Table A

Measure of Effectiveness (MOE) Mode	Year 2007 (Percent or Rate)	Objective Year (2008) (Percent or Rate)
Drive Alone	Given Value	Decrease
Drive in Car Pool	Given Value	Increase
Ride in Car Pool	Given Value	Increase
SEPTA Bus	Given Value	Increase
Charter Bus	Given Value	Increase
Walk or Bicycle	Given Value	Increase
Water Taxi	Given Value	Increase

Other MOEs may be:

- How many requests for assistance were served?
- How many transit passes were sold?
- How has the parking demand been affected?
- How has the vehicle mile of travel changed? or
- What was the change in average passenger occupancy?

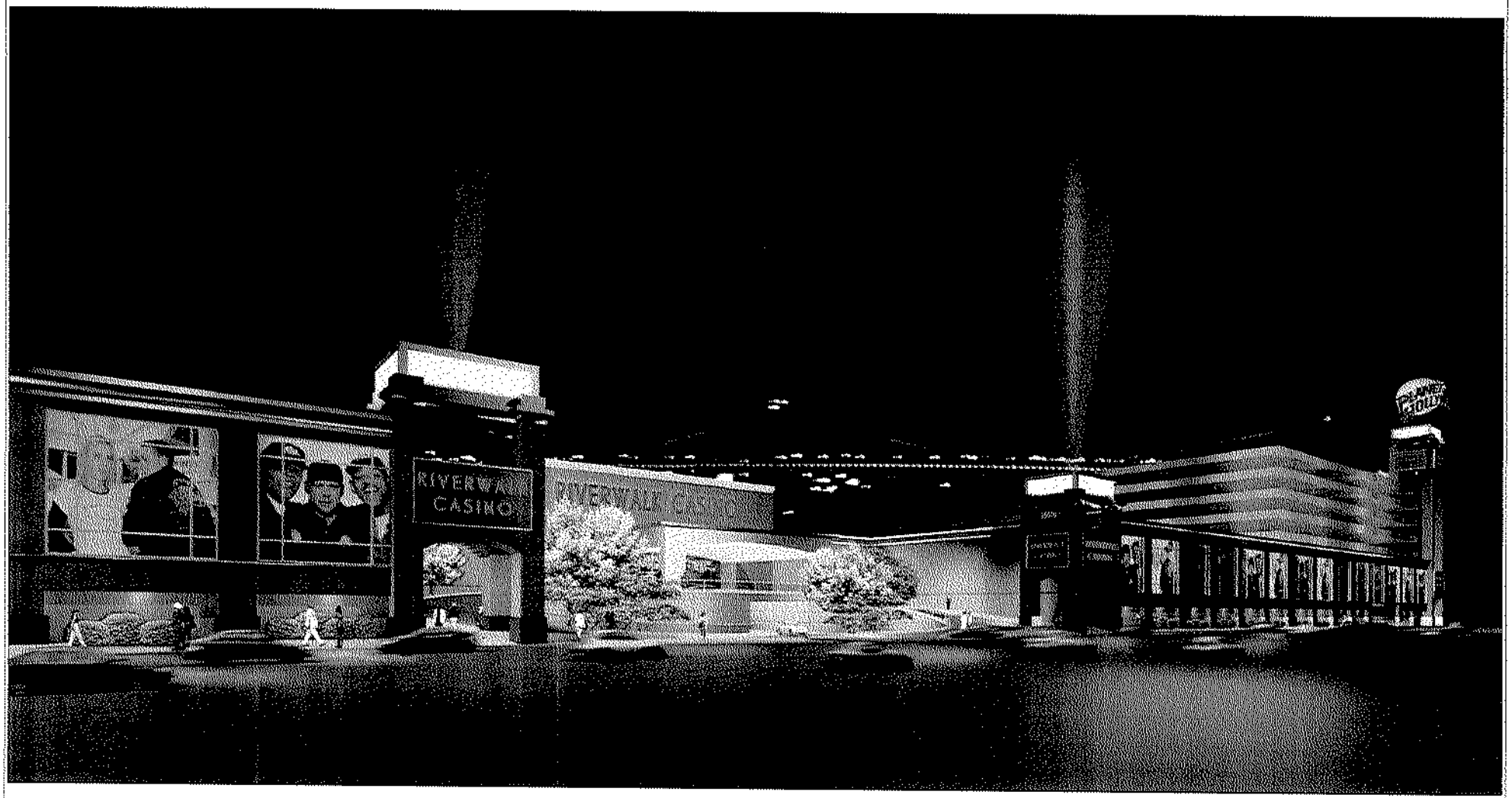
V. TMP Strategies

Many strategies have been developed to discourage SOV use and encourage ridesharing and public transportation. In order for the strategies to be successful, the strategies considered by the TC should depend on program objectives, and the needs and preferences of the employees and patrons.

The list of suggested strategies below should be considered as a starting point for the TC. The TC should consult with other TCs to gain an understanding of effectiveness, application, benefits, and complementary measures of each. Some may not be applicable at this time but may be more relevant in the future.

- Bus Charters, and parking areas upon drop-off
- Alternative Work Hours,
- Personalized Assistance Rideshare Match program,

- Van and Bus Pooling,
- Guaranteed Ride Home Programs,
- Public Transportation Services,
- Parking Management Program,
- Bicycling/Walking,
- Subsidies,
- Marketing (multimedia ads, brochures),
- Travel kiosks,
- Public Transportation Incentives,
- Parking Management Incentives (preference prices and spaces for ridesharers),
- Ancillary parking and transit services for special event days,
- Shuttles for park-in-rides or fringe lots,
- Transit travel allowances for frequent patrons, such as SEPTA's Commuter's Choice that permits three options: ComPass, TransitChek, and WageWorks that offer employers and employees choices to help save taxable dollars on their commute,
- Vouchers and special offers for patrons arriving during non-peak hours, and
- Shuttle services from the airport or transportation hubs.



BOWER LEWIS THROWER ARCHITECTS

PLANET HOLLYWOOD
RIVERWALK CASINO
PHILADELPHIA, PENNSYLVANIA

VIEW LOOKING SOUTH ON DELAWARE AVENUE

08/16/2006

BOWER
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THROWER
ARCHITECTS

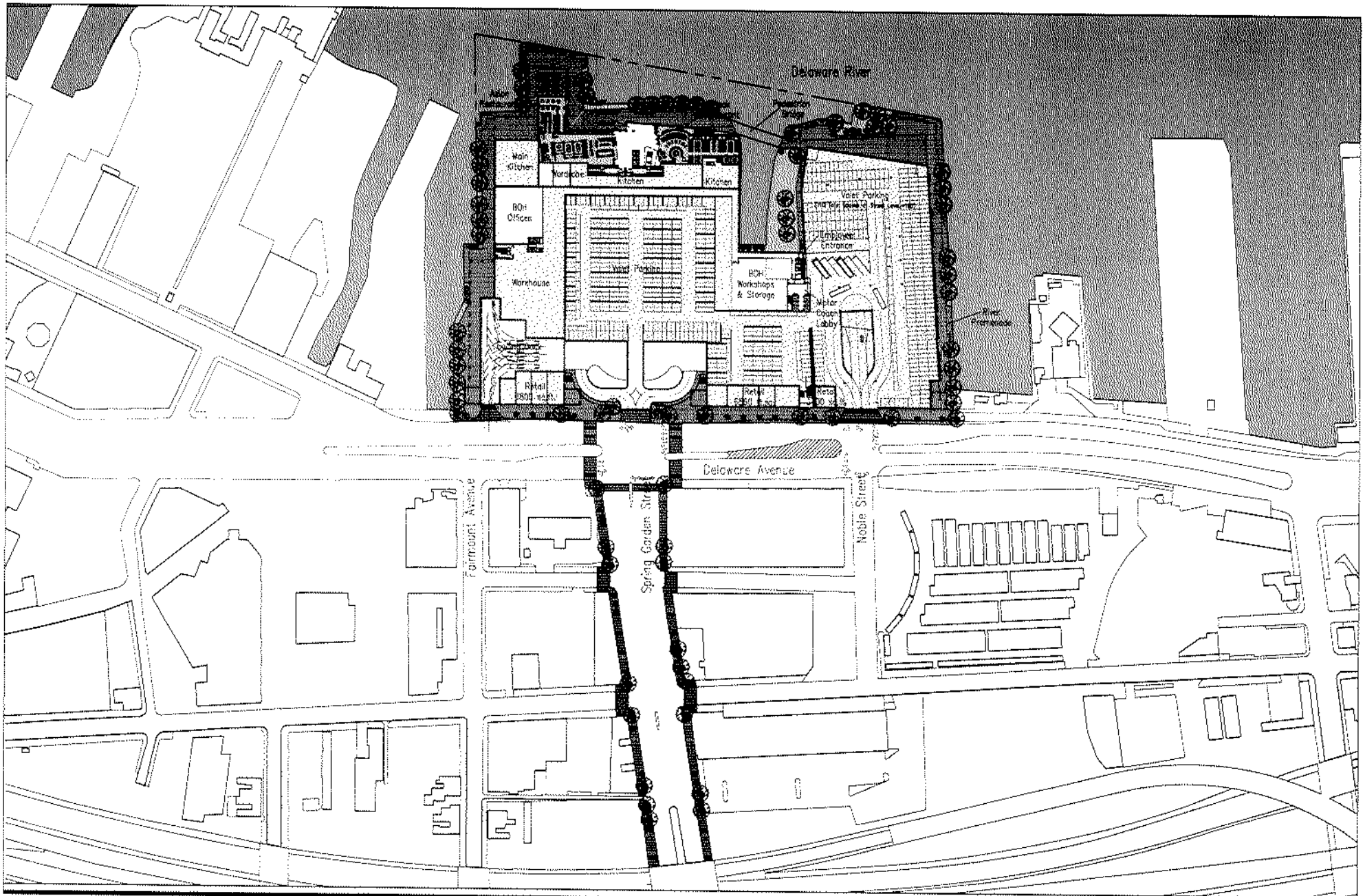
PLANET HOLLYWOOD
RIVERWALK CASINO
PHILADELPHIA, PENNSYLVANIA

SITE
LOCATOR

05/26/2006

0 100 200 400 600

N



BOWER LEWIS THROWER ARCHITECTS

PLANET HOLLYWOOD RIVERWALK CASINO

PHILADELPHIA, PENNSYLVANIA

STREET LEVEL

09/26/2006

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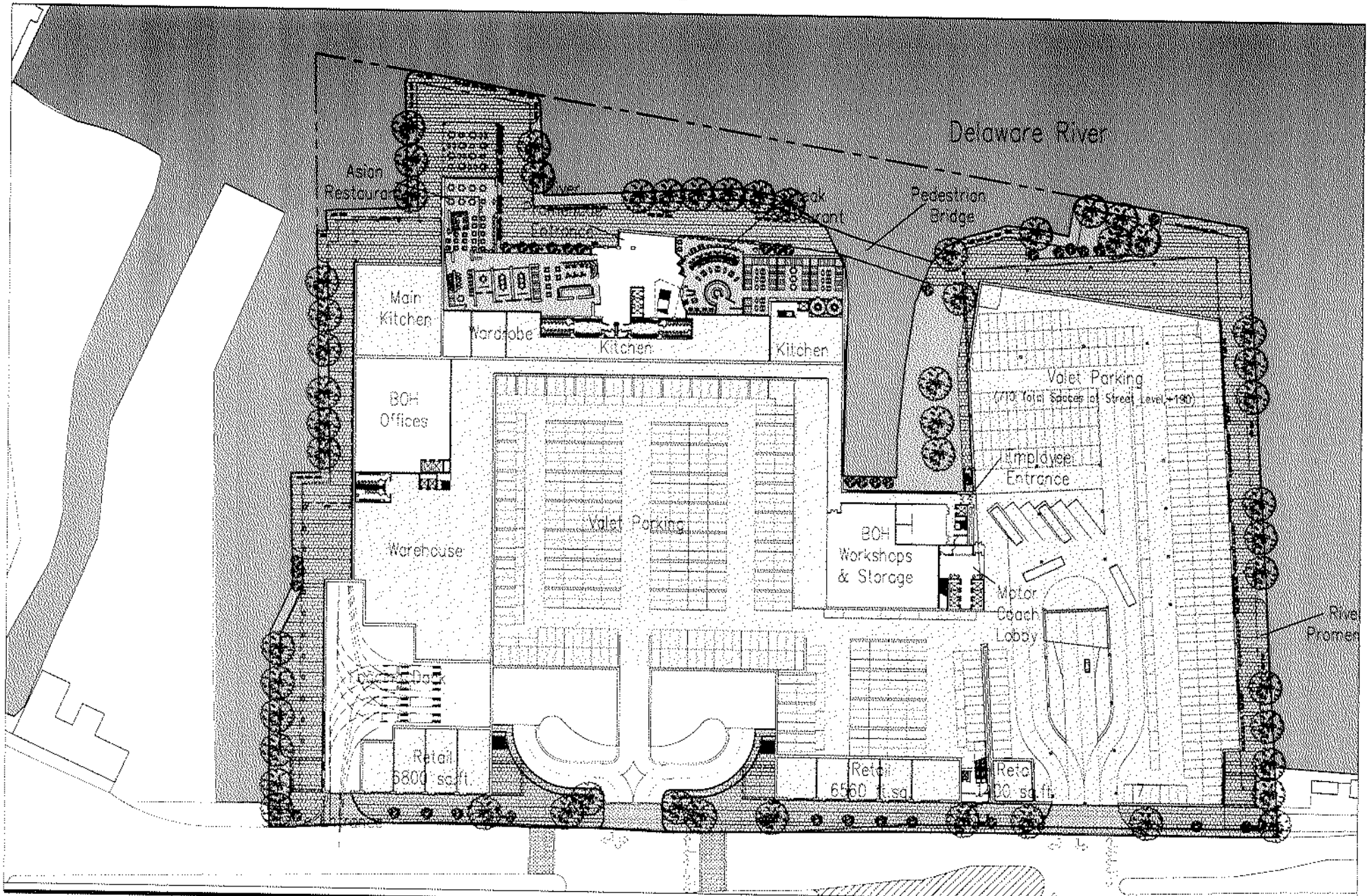

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PLANET HOLLYWOOD RIVERWALK CASINO

PHILADELPHIA, PENNSYLVANIA

STREET LEVEL

05/26/2006

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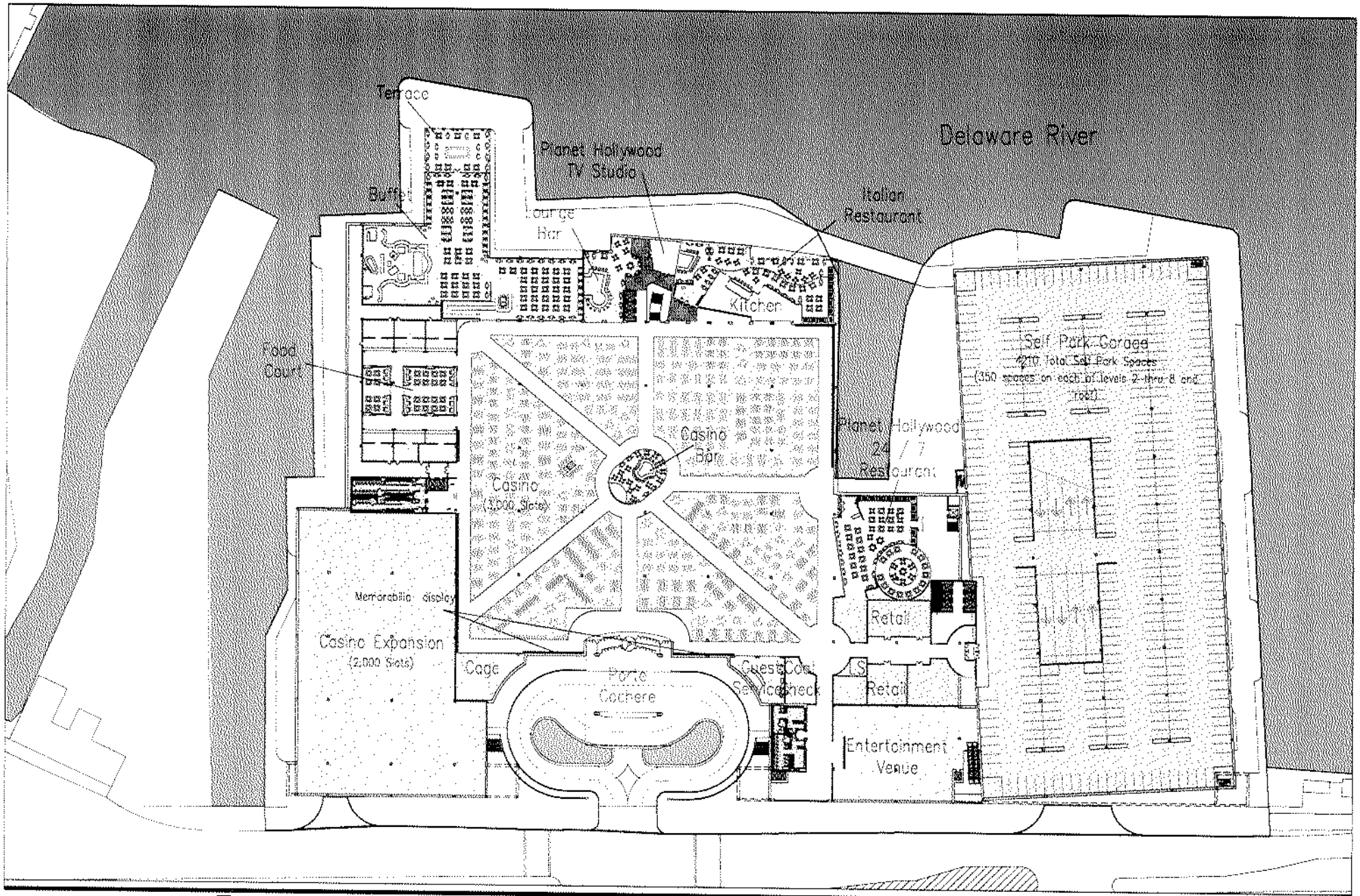

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PLANET HOLLYWOOD RIVERWALK CASINO

PHILADELPHIA, PENNSYLVANIA

SECOND LEVEL

09/26/2006

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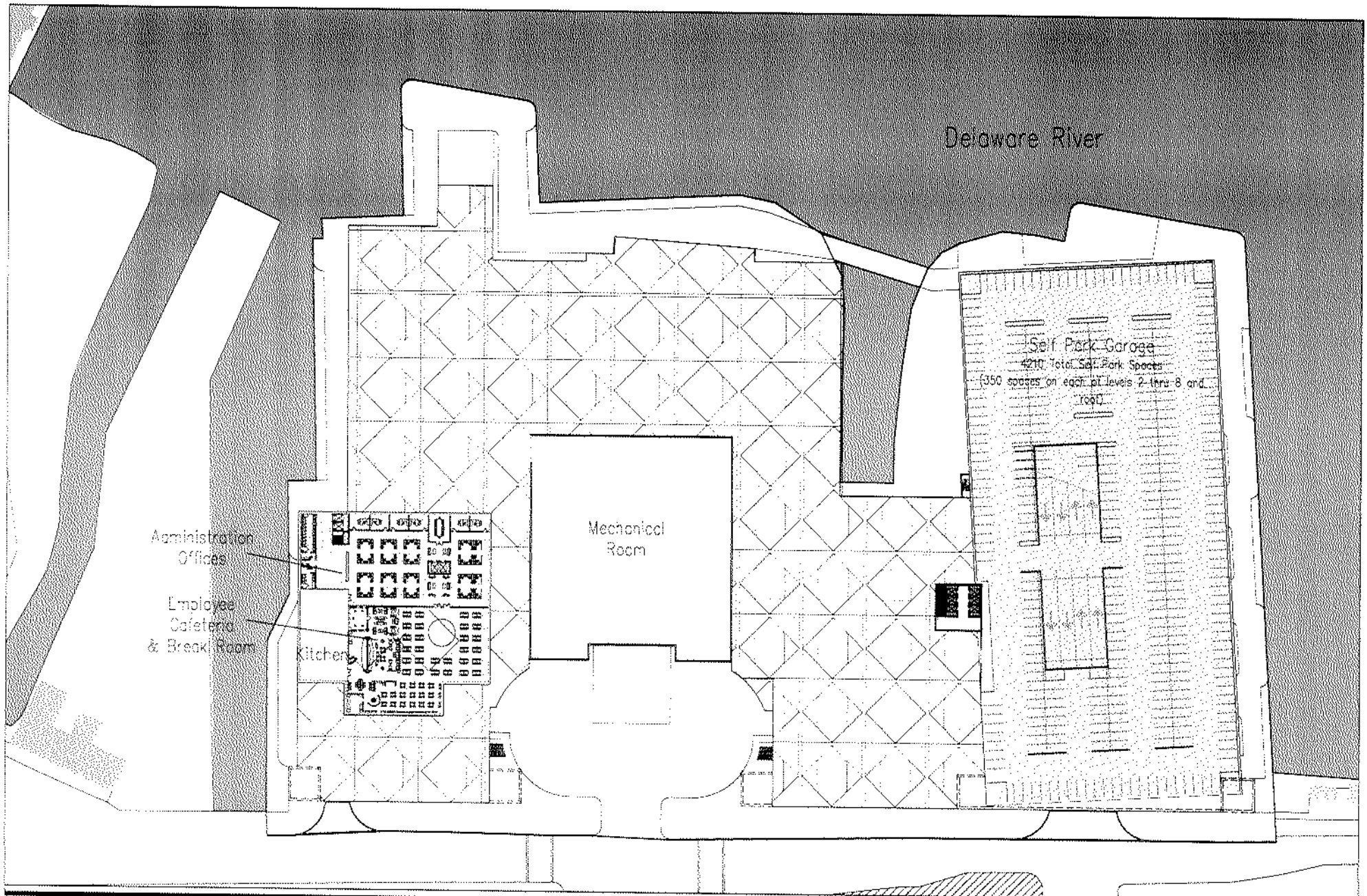


BOWER LEWIS THROWER ARCHITECTS

PLANET HOLLYWOOD RIVERWALK CASINO

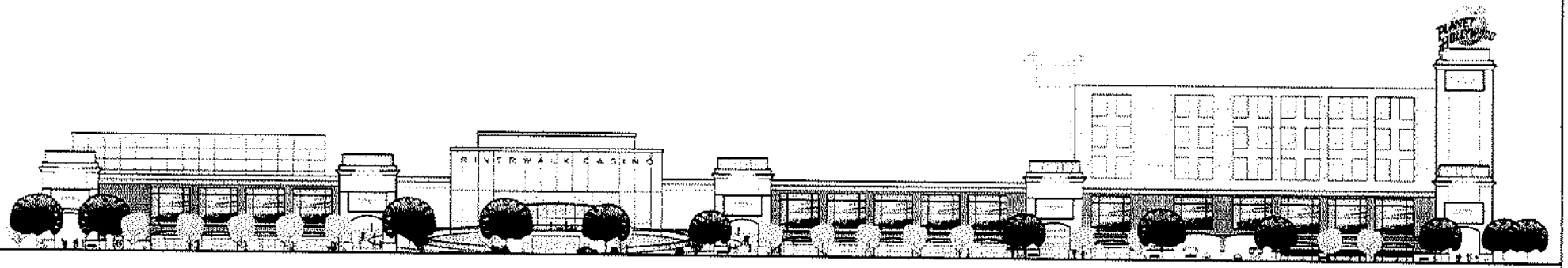
PHILADELPHIA, PENNSYLVANIA

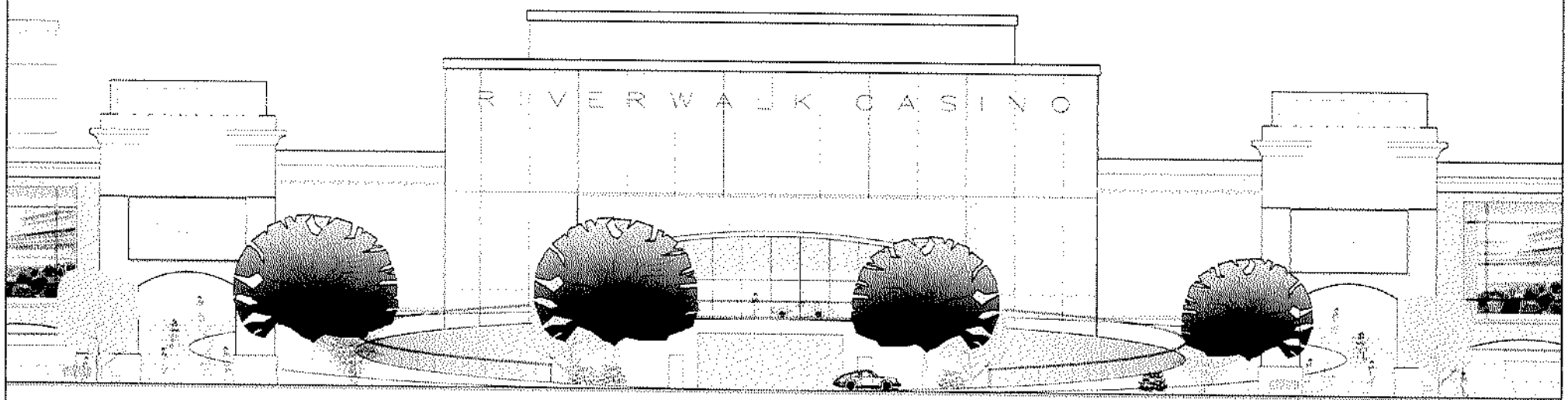
THIRD LEVEL

09/26/2006

0 16 32 64 128

N





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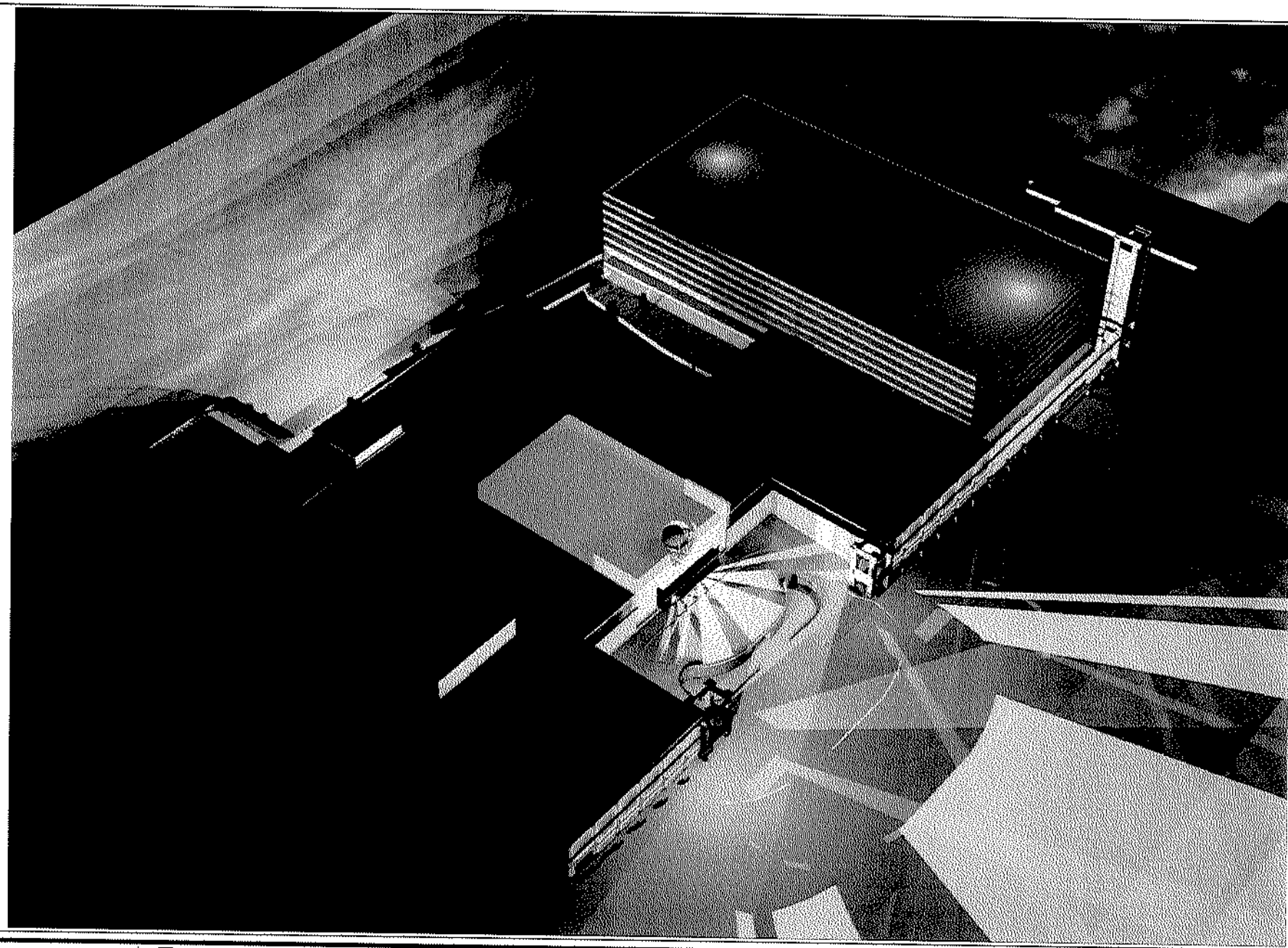
PLANET HOLLYWOOD
RIVERWALK CASINO
PHILADELPHIA, PENNSYLVANIA

DELAWARE
ELEVATION



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PLANET HOLLYWOOD
RIVERWALK CASINO
PHILADELPHIA, PENNSYLVANIA

AERIAL VIEW
LOOKINGSOUTH EAST

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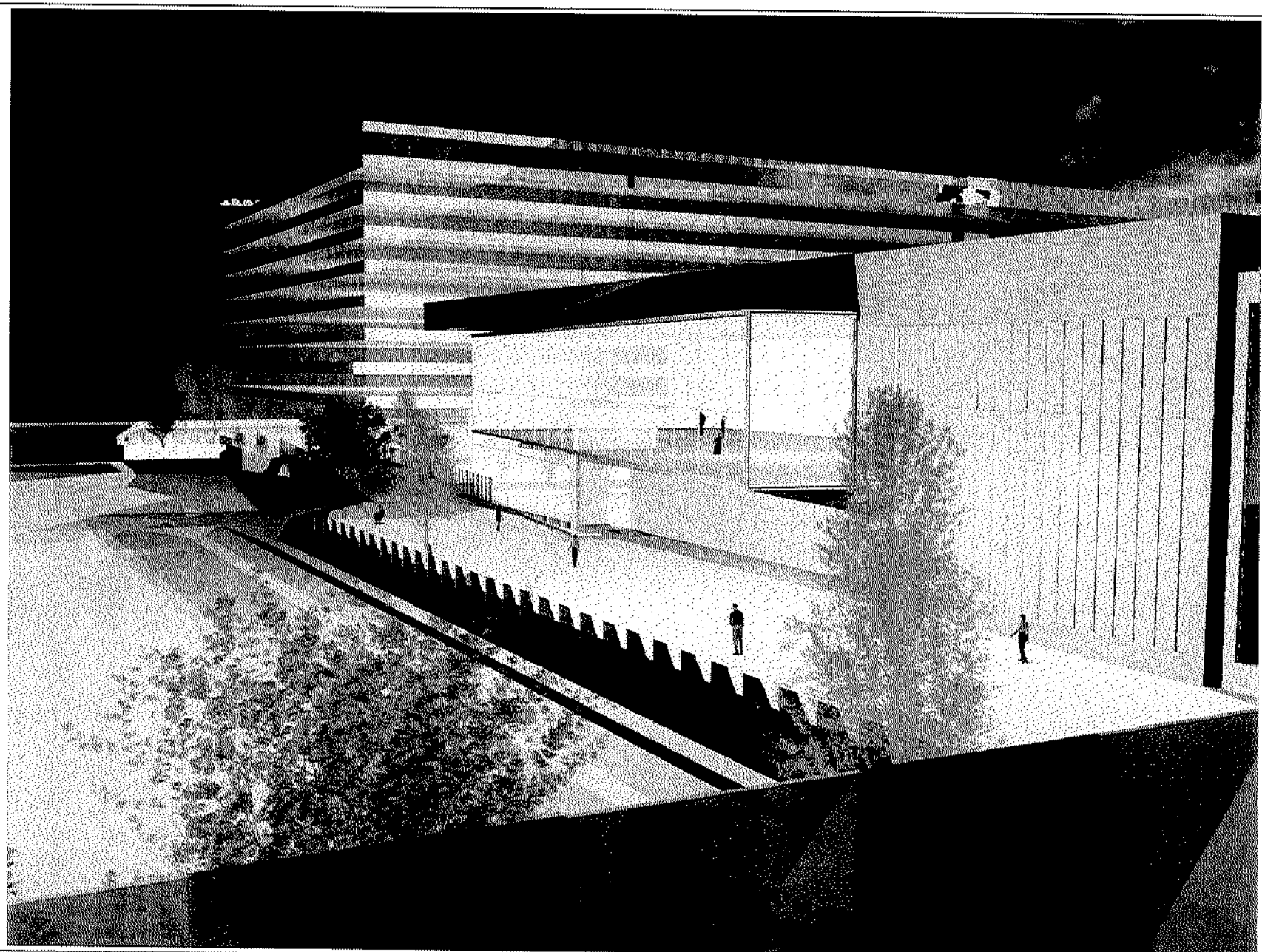
RIVERWALK CASINO
PHILADELPHIA, PENNSYLVANIA

VIEW ALONG RIVER
PROMENADELOOKING
NORTH

09/26/2006



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PLANET HOLLYWOOD
RIVERWALK CASINO
PHILADELPHIA, PENNSYLVANIA

VIEW FROM TERRACE
LOOKING SOUTH

09/26/2006