APPENDIX 34

LOCAL IMPACT REPORT, ENGINEERING REPORTS AND TRAFFIC STUDIES, INCLUDING DETAILS OF ANY ADVERSE IMPACT ON TRANSPORTATION, TRANSIT ACCESS, HOUSING, WATER AND SEWER SYSTEMS, LOCAL POLICE AND EMERGENCY SERVICE CAPABILITIES, EXISTING TOURISM, INCLUDING HISTORICAL AND CULTURAL RESOURCES OR OTHER MUNICIPAL SERVICE OR RESOURCE

Attached hereto please find the following:

Exhibit "A"	"The Economic & Fiscal Impacts of Market8 at 8th & Market Streets (Revised)" prepared by Mr. Michael Mariano, Senior Economist with Tourism Economics and Oxford Economics.
Exhibit "B"	Proof of Service and Receipt
Exhibit "C"	Local Infrastructure Impact Study Market8 prepared by Pennoni Associates, Inc.
Exhibit "D"	Traffic Impact Study Market8 prepared by Pennoni Associates, Inc.

TOURISM ECONOMICS

The Economic & Fiscal Impacts of Market8 (Revised)

Report Submitted to:
Market East Associates, L.P.

TOURISM ECONOMICS
AN OXFORD ECONOMICS COMPANY

Contents

1 Executive Summary

Market East Associates, L.P., is applying for the remaining Category 2 gaming license for the City of Philadelphia authorized by the enabling legislation signed by the Governor of Pennsylvania in 2004. The site for the proposed casino and ancillary facilities and amenities, currently being referred to as Market8 ("the Casino" or "Casino"), is a vacant parcel occupying the block bounded by 8th, 9th, Market and Ranstead Streets in the Market Street East section of Center-City Philadelphia. The site is just two blocks from Independence Mall, three blocks from the newly expanded Pennsylvania Convention Center, within easy walking distance to a number of hotels, restaurants, and retailers, and easily accessible by various public transportation options.

This report is an updated report from the original report submitted in November 2012. The updated analysis reflects interim refinements to the project facilities' program. A subsidiary of the Mohegan Tribal Gaming Authority ("Mohegan") has been retained to operate and manage the proposed facility. With extensive gaming operations in both Pennsylvania (Wilkes-Barre) and Connecticut, Mohegan is one of the premier gaming operators in the United States. Their input as operators, both in terms of marketing strategy and operational efficiencies, was strongly considered in the refinements to the project facilities' program.

Figure 1.1 Aerial View of Proposed Market8 Site

1.1 Location Matters

Research indicates that the positive economic impact of casinos is more leveraged when a casino is part of a city's urban core than when it is situated in other parts of a metropolitan region. Market8's specific location within Philadelphia's urban core will create *unmatched synergies between the Casino, local merchants and retailers, and the City's residential, commuter, and tourist markets.* Overall, no other site in the City will be able to match the locational advantages of Market8's proposed site at 8th and Market Streets. In addition to the benefits realized by the Casino itself, the City of Philadelphia, as well as its relatively newly formed gaming market, will both benefit from a Casino located in the heart of Philadelphia's urban core. Main benefits include:

- High concentrations of retailers and food and beverage places immediately surrounding the Casino will give casino patrons a *variety of dining, shopping, and entertainment options*, generating ancillary patron spending at local businesses. Market8's location in the heart of Philadelphia's urban core would maximize this ancillary spending impact, which would be unsurpassed by any other site in the City.
- The positive "ripple" effects of an urban entertainment casino in the heart of Philadelphia would help transform the City and be unmatched by any other site. While these positive benefits would first be seen by retailers and businesses immediately surrounding Market8, due to the Casino's central location, *positive effects would ripple throughout the City*, ultimately benefitting businesses and tourist destinations citywide.
- Philadelphia's most-visited cultural and historic attractions are within a few minutes' walk. The Pennsylvania Convention Center, which hosted more than one million visitors last year, is also within walking distance. Close proximity to and easy access from these cultural tourism and business visitor markets would allow Market8 to produce new gaming revenues from groups that would not be gaming otherwise. These new gaming revenues would effectively *increase the overall size of the gaming market in Philadelphia.*
- Market8 will be well-positioned to capitalize on the City's public transportation system (SEPTA), which would play a key role in providing patrons (both residential, commuter, and visitor) easy access to the Casino. SEPTA's Market-Frankford subway line and Regional Rail trains have a major station at 8th & Market Streets, SEPTA has several bus lines servicing the entire Market East neighborhood, and PATCO (running from Center City Philadelphia to areas in New Jersey) has a station at 8th & Market Streets.
- As the synergies develop between Market8 and the rest of the City, the Casino will help to attract new business visitors, cultural tourists, suburban residents, and portions of the commuter workforce who would not have visited a casino if it had not been for Market8's location in the urban core. Since these gamblers represent net new revenue for Philadelphia's gaming market, Market8's urban core location will ultimately not only increase Philadelphia's aggregate gaming market, but also minimize cannibalization from current Philadelphia casino revenues.

1.2 Economic Impacts

Market8 will generate significant economic impacts as one-time development expenditures, annual operational expenditures, and annual ancillary spending by casino patrons at outside businesses ripple through the local, regional, and state economies. The City of Philadelphia, the five-county Philadelphia Metropolitan Division, and the State of Pennsylvania will all benefit from new economic activity, jobs, and employee salaries and wages.

Market8's development period will generate one-time impacts of $89 million in total economic activity in the City, $389 million in the 5-County Region, and $583 million in the State, as shown in Figure 1.2.

Figure 1.2: Summary One-Time Economic Impacts Attributable to Market8 ($ Millions in 2016 Dollars & Total Jobs)

Description	Philadelphia County	5-County Region	PA State
Total Economic Impact	$89	$389	$583
Total Jobs Impact	662	3,293	5,293
Total Salaries & Wages Impact	$32	$123	$147

Source: Tourism Economics (2013)

Annual operational expenditures at Market8, along with annual ancillary spending by Casino patrons, will generate considerable *ongoing* economic impacts. In Market8's first year of operations, the City will benefit from $404 million in total economic activity, more than 3,400 total jobs, and $114 million in employee salaries and wages. The 5-County Region will benefit from $597 million in total economic activity, including $208 million in employee salaries and wages, supporting 5,600 total jobs. Statewide impacts will include $666 million in total economic activity, including $228 million in employee salaries and wages, supporting nearly 6,200 total jobs, as shown in Figure 1.3.

Figure 1.3: Summary Ongoing Economic Impacts Attributable to Market8 Operations & Ancillary Casino Patron Spending ($ Millions in 2016 Dollars & Total Jobs)

Description	Philadelphia County	5-County Region	PA State
Total Economic Impact	$404	$597	$666
Total Jobs Impact	3,436	5,631	6,167
Total Salaries & Wages Impact	$114	$208	$228

Source: Tourism Economics (2013)

1.3 Fiscal (Tax) Impacts

The economic impacts outlined above will also generate significant fiscal (tax) impacts as they cycle through the local, regional, and statewide economies. In its first year of operations, Market8 will generate nearly $225 million in state and local gaming taxes. Market8's development period will generate a one-time impact of $12.7 million in state and local tax revenues, while annual operations and casino patron ancillary spending will generate ongoing tax benefits of $27.9 million in annual state and local tax revenues.

Figure E.3: Summary One-Time and Ongoing Tax Impacts Attributable to Market8 ($ Millions in 2016 Dollars)

Tax Description	One-Time Impacts	Annual, Ongoing Impacts
Gaming Taxes ($ Millions)		
State Gaming Taxes	NA	$206.9
Local Gaming Taxes	NA	$17.6
Total Gaming Tax Revenue		**$224.5**
Non-Gaming Taxes ($ Millions)		
PA State Personal Income Tax	$3.8	$5.8
PA State Sales and Use Tax	$5.0	$12.6
City of Philadelphia Sales Tax	$0.4	$3.9
City of Philadelphia Wage Tax	$3.5	$5.7
Total Non-Gaming Tax Revenue	**$12.7**	**$27.9**

Source: Tourism Economics (2013)

1.4 Summary Ongoing State Economic & Fiscal Impacts

The State of Pennsylvania will benefit from the following combined economic and fiscal impacts in the Casino's first year of operations:

Figure E.4: Summary Ongoing State Economic & Fiscal (Tax) Impacts Attributable to Market8 Operations & Ancillary Patron Spending, First Year of Operations ($ Millions in 2016 Dollars)

Ongoing Economic Impacts	Amount ($ Millions)
Direct Impacts	$322.33
Indirect & Induced Impacts	$343.51
Total Economic Impacts	**$665.85**
Ongoing Fiscal (Tax) Impacts	Amount ($ Millions)
Gaming Tax Revenues	$224.50
Personal Income Tax Revenues	$5.79
Sales & Use Tax Revenues	$12.59
Total Tax Revenues	**$242.88**
Combined State Economic Impacts & Tax Revenues	**$908.73**

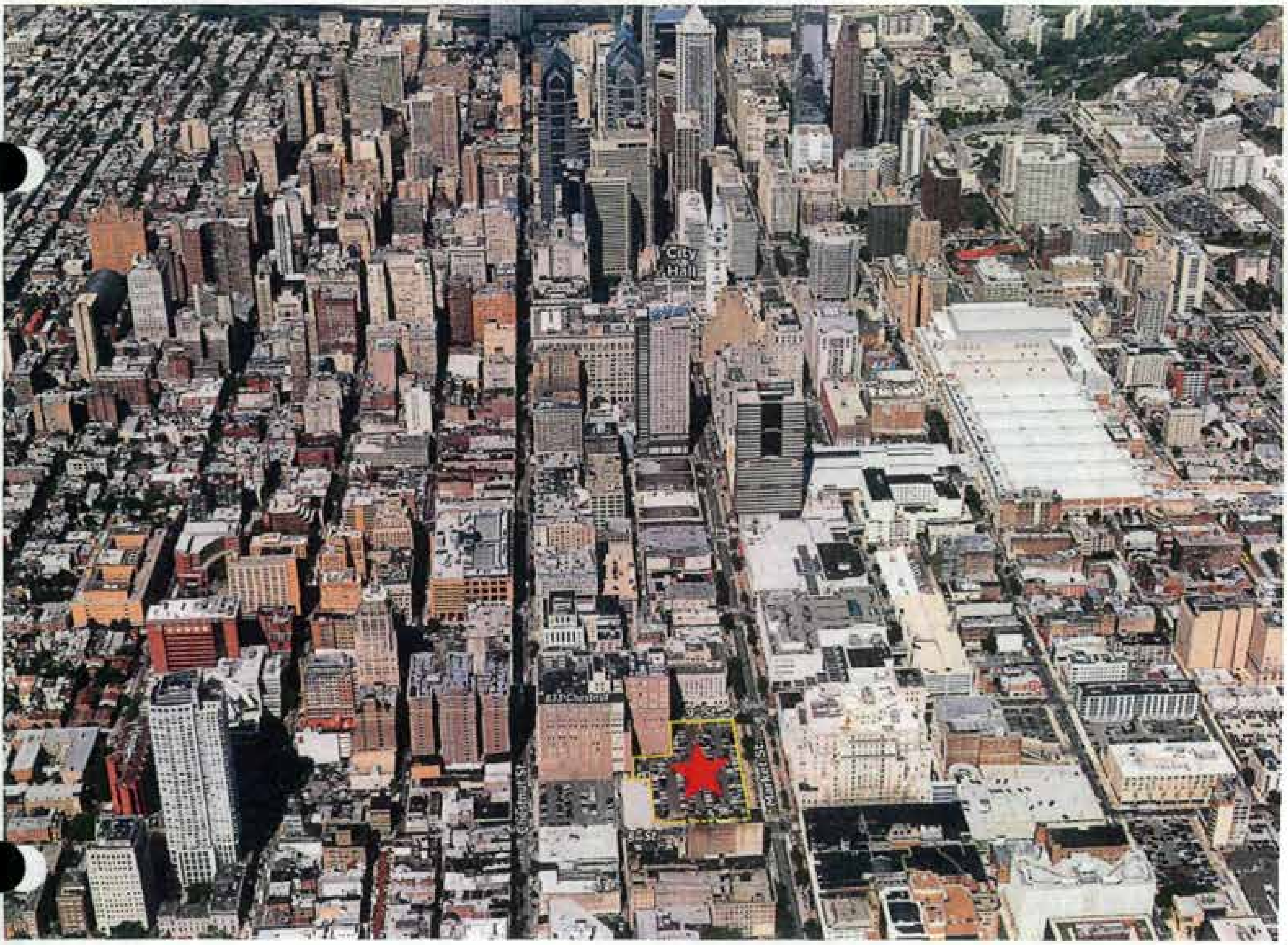
Source: Tourism Economics (2013)

2 Introduction & Project Background

Market East Associates, L.P., ("Market East Associates" or "the Developer") is applying for the remaining Category 2 gaming license for the City of Philadelphia authorized by the enabling legislation signed by the Governor of Pennsylvania in 2004.

The site for the proposed Casino and ancillary facilities and amenities, currently being referred to as Market8 ("the Casino" or "Casino"), is a vacant parcel occupying the block bounded by 8th, 9th, Market and Ranstead Streets in the Market Street East section of Center-City Philadelphia. The site is just two blocks from Independence Mall and three blocks from the newly expanded Pennsylvania Convention Center.

Figure 2.1 Aerial View of Proposed Market8 Site



The revised plans for Market8 provide for 2,400 slot machines, 82 banked table games, and 30 poker tables.

The facility will contain approximately 60,000 square feet of Food and Beverage space as well as 12,500 square feet of a Banquet/Event Room which are distributed throughout the total floor area.

Below grade there will be parking on 4 levels of valet parking totaling approximately 1,000 spaces. Parking will be further supplemented by a 340 space self-parking garage at 733 Chestnut Street.

On the ground level there will be up to 6 retail and restaurant venues.

Floors 2 and 3 are primarily dedicated to the gaming operations supplemented by restaurants, lounges and bars.

The 4th floor consists of a Poker Room, Club/Lounge, Rooftop Terraces and a Banquet/Event Room with the ability to host live performance events.

Above the urban entertainment center, the current plans include a boutique hotel with 168 rooms as part of the structure. The hotel will be financed, owned and operated by a third party (details of which are contained in section 12. Addendum)

Market East Associates, L.P., has retained Tourism Economics, an Oxford Economics company, to evaluate the various potential economic and fiscal (tax) impacts attributable to the proposed Casino. Economic and fiscal impact estimates are based on development budgets and plans provided by Market East Associates, L.P., as well as gaming revenue, expenses, and staffing estimates provided by PKF Consulting.

3 Market8's Locational Advantage

3.1 Gaming Background & History

The benefits from a casino accrue to its host community through a number of avenues. These avenues include market structures, ownership regimes, the region's economic base and the physical location of the casino in relation to the region. The optimization of these factors can maximize the benefit of including casinos into the fabric of a region. Until 2002 only four states[1] permitted land-based casinos independent from tribal casinos. Since that year, more than 13 states have legalized corporate owned land based casinos. Philadelphia is the largest city to permit full-service casinos. Legally no longer bound by geographic constraints, it behooves all concerned to optimize the location of any new casino.

The gaming industry is a political creation and some jurisdictions have intentionally created private monopolies while others have fostered greater competition. The most competitive casino market is Nevada[2], which has had legalized gaming since 1931 and was solely run by small and midsized *operators until the state's passage of the Corporate Gaming Act in 1969 which allowed the entry of* publicly-traded companies. Nevada continued to hold a monopoly on gaming in the US until 1976 when New Jersey legalized gaming in Atlantic City but placed restrictions on size, design and product mix that essentially limited casino ownership to large operators.[3]

A decade later, South Dakota, Colorado and Iowa voters allowed limited stakes gambling in their states followed quickly by the legalization of riverboat gaming in five additional states. Of these states, Mississippi has been the most market driven and least restricted in ownership developing a gambling industry which offers much more in non-gaming amenities than most other riverboat states[4].

Indian casinos opened in 20 states in the 1990s and New Orleans and Detroit added corporate owned, land-based casinos. [5]. While many cite the 1990s as the decade of explosive growth in gaming institutions, this coming decade, with the bringing on line of land based casinos in more than a dozen states,[6] will greatly alter the gambling landscape in the United States.

---

[1] In 2002 these states were Nevada, New Jersey, Louisiana and Michigan.
[2] Eadinton 1999
[3] ibid
[4] ibid
[5] McGowen 2009
[6] Source: http://www.americangaming.org/industry-resources/research/fact-sheets/states-gaming Colorado, Illinois, Indiana, Iowa, Kansas, Maryland, Maine, Mississippi, Missouri, Ohio, Pennsylvania, and West Virginia.

3.2 Literature Review: Positive Impacts of Casinos & the Urban Core

Regardless of location, market structure or ownership regimes, casinos have a positive economic impact on their communities. Local employment at casinos contributes to overall employment[7 8] and stimulates economic growth measured by earnings, employment and per capita income[9] although, income generated by casinos located in rural areas often benefits more those businesses which are located outside the locality than within. [10] Residential property values are also positively affected by casinos. A national study found that casinos have a positive impact on housing prices of about 2 percent in the immediate area and a positive spillover effect of 6 percent.[11]

A meta-analysis of previous economic impact studies on casinos concluded that casinos have significant positive economic impacts. It was also shown that land-based casinos have a greater economic impact than riverboat casinos. The meta-analysis also found that casinos located in healthier economic areas have larger impacts than depressed ones.[12]

The research on casinos shows that the positive economic impact of casinos is more leveraged when the casino is part of the urban fabric than when it is situated in other parts of a metropolitan region. Academics are not the only ones to understand the impact that urban casinos have on the region. In 2009, a majority of Ohio voters approved the locating of four casinos in the state's major cities: Cleveland, Toledo, Columbus and Cincinnati. Massachusetts is also planning urban casinos in Boston and Springfield. There is continuing discussion of urban casinos in Miami, Chicago and New York.

A literature review of the linkage between the urban core and its region follows. As previously mentioned, casinos located in healthier economic areas have larger impacts than those located in depressed ones. Research on the relationship between the urban core and the rest of its metropolitan regions provide insight into this observation. Enhancements to the urban core positively affect local government spending, regional labor productivity and spill over into the surrounding suburbs[13]. For local governments providing infrastructure and ongoing services to a more dense area is less costly on the margin than providing the same services to a more dispersed population.[14] Empirical research conducted in the past fifteen years quantifies productivity increases when areas become denser in jobs, businesses or residents. In the United States doubling employment density increases worker productivity by 6 %[15]; in Europe productivity increases 5%[16] and industry density can explain more than half of the variation in average labor productivity[17]. Innovation also follows employment density as demonstrated by the positive relationship between patents issued per capita and local employment density[18].

[7] Morse & Gross 2007
[8] Garrett (2004)
[9] Rephann etal 1997
[10] Ibid.
[11] Wenz 2007
[12] Rose 1998.
[13] Muro and Puentes (2004)
[14] ibid
[15] Ciccone and Hall (1996)
[16] Ciccone (2002)
[17] Ciccone and Hall (1996)
[18] Carlino (2001)

The correlation between house values and incomes of the city and suburbs has steadily increased [19] despite the greater geographic dispersion of the work force in past decades. Metropolitan areas with strong city cores and higher income levels improve the entire region's income reductions in central city poverty levels leads to overall regional income growth.[20] Center City declines resulting in wide income disparity between the suburbs and the Center City lead to slowed economic growth in both the city and the suburbs.[21]

Detroit has been a city in decline, losing employment and population. The 2010 census shows a decline of nearly 25% from the previous census and for the first time even the regional population declined 2%[22]. Still, positive effects of urban casinos can be seen in Detroit during this time. In 1996 Michigan voters authorized three casinos, to be owned by separate entities, to be built in Detroit. By 2001, MotorCity Casino, MGM Grand Hotel and Greektown Casino Hotel were operating in the urban center less than 2 miles from each other and had combined revenues of more than $1 billion in 2011.[23] A study of the commercial property valued in the area brings insight to the positive affect that the casinos have on the surrounding businesses. Commercial property valuation is based on market rent and retail revenue is reflected in rents. If the casinos had a negative or neutral effect on retail, then the price of commercial property in the area should remain unchanged or even decline. However, a study of the relationship between casino revenue and commercial property values form 2001 to 2008 found that a 1% increase in casino revenues lead to an average increase of 1.236% in retail property values, and appreciation is even stronger for commercial properties within a 5 mile radius of the casinos[24] with much of the benefit accruing to restaurants, service stations and free standing retail properties.

The literature shows that a locally -owned casino competing with other nearby casinos located in the urban core can provide increased employment and income to its immediate neighbors and retain more of the direct, indirect and induced economic impacts through fewer leakages to other regions. More importantly, by being physically located in the center of the city, the urban core casino can best contribute to the region's economy.

[19] Haughton and Inman (2002) analyzed the correlation between growth rates of City and Suburban home values, populations and incomes between 1970 and 1990. For 1970-1980 home value correlation was .712 and for the period 1980-1990 the correlation had increased 15% to .849.
[20] Pastor 2000
[21] Muro and Puentes 2004
[22] US Bureau of the Census
[23] Garrett 2003
[24] Wiley and Walker 2009

3.3 Market8's Unique Location

The Schuylkill River to the Delaware River and the Vine Street Expressway to South Streetis generally accepted as the urban center of the 5-county metro region defined as the Philadelphia Metropolitan Division (consisting of Bucks County, Chester County, Delaware County, Montgomery County, and Philadelphia County). Within this area, with its dense forms of development and infrastructure, and pedestrian friendly environment, one would find locations best suited to avail themselves of the extraordinary "urban core" effects described above. However, not all locations within this urban core have the necessary existing infrastructure to maximize the benefits.

Market8's location at 8th and Market was once the busiest intersection in the United States. It is the heart of the Philadelphia urban core as evidenced by the patterns of development and infrastructure deployment that have occurred over time in the City of Philadelphia. Historically, this area, commonly referred to as Market East, was defined by the Reading Railroad and other transit systems, the department stores of Strawbridges, Lit Brothers, Gimbels and Wanamakers, and a disproportionate number of government offices and historical sites. Over time, whenever a new use needed to be accommodated in the urban core in a manner that maximized its benefits and minimized impacts (like the Philadelphia Convention Center, the Constitution Center, the Jewish History Museum, or the proposed Northeast High Speed Rail Station), it sought to locate at Market East. Urban centers are constantly evolving in their effort to remain vibrant and healthy, but Market East has never ceded its identity as Philadelphia's center of commerce. Whether yesterday, today, or tomorrow, the location of 8th and Market has played the critical role of being at the gravitational center of the Philadelphia universe, and should always be considered as a potential optimal position when locating a new and unique use.

Figure 3.1 provides a summary of retail and service businesses in the immediate vicinity of Market8. Within a 0.2-mile (approximately 2.5 city blocks) radius from the proposed Market8 site, there are nearly 1,000 total establishments. There are a total of 305 retail businesses, including 89 eating and drinking places, 28 food stores, 35 apparel and accessory stores, and 125 miscellaneous retail stores. In addition, there are nearly 380 service establishments, including 3 hotels.

Overall, these 978 establishments employ nearly 17,000 workers within this 2.5 block radius from Market8. Extending this boundary to 0.3 mile (approximately 3.5 city blocks) radius captures a total of nearly 1,700 establishments, including 55 food stores, 162 eating and drinking places, 55 apparel and accessory stores, and seven hotels. The 1,698 establishments within a short, 3.5 block radius from Market8 employ a total of nearly 30,000 total workers.

There are over 5,100 hotel rooms within 0.5 miles and nearly 9,700 hotel rooms within one mile from Market8's proposed site.

Figure 3.1: Summary of Businesses Within 0.2-Mile and 0.3-Mile Distances from Market8

	.2 Miles		.3 Miles	
	Businesses	Employees	Businesses	Employees
Retail Trade Summary	**305**	**3,992**	**496**	**6,522**
General Merchandise Stores	6	267	10	430
Food Stores	28	294	55	535
Apparel & Accessory Stores	35	309	55	471
Furniture & Home Furnishings	20	140	31	234
Eating & Drinking Places	89	1,379	162	2,344
Miscellaneous Retail	127	1,603	183	2,508
Services Summary	**377**	**7,392**	**662**	**12,734**
Hotels & Lodging	3	948	7	1,582
Automotive Services	11	75	20	150
Motion Pictures & Amusements	16	148	31	258
Health Services	54	1,497	113	2,936
Legal Services	65	857	103	1,427
Education Institutions & Libraries	12	334	24	640
Other Services	216	3,533	364	5,741
All Other Establishments	**296**	**5,607**	**540**	**10,116**
Total, All Establishments	**978**	**16,991**	**1,698**	**29,372**

Source: ESRI, Infogroup (2012)

Figures 3.2 and 3.3 map Philadelphia census tracts and the total number of businesses per census tract in 2012. As shown in the maps, the tract that contains the proposed Market8 site, along with the immediately surrounding census tracts, have the highest number of businesses in the City of Philadelphia, reflecting the importance and uniqueness of this corridor.

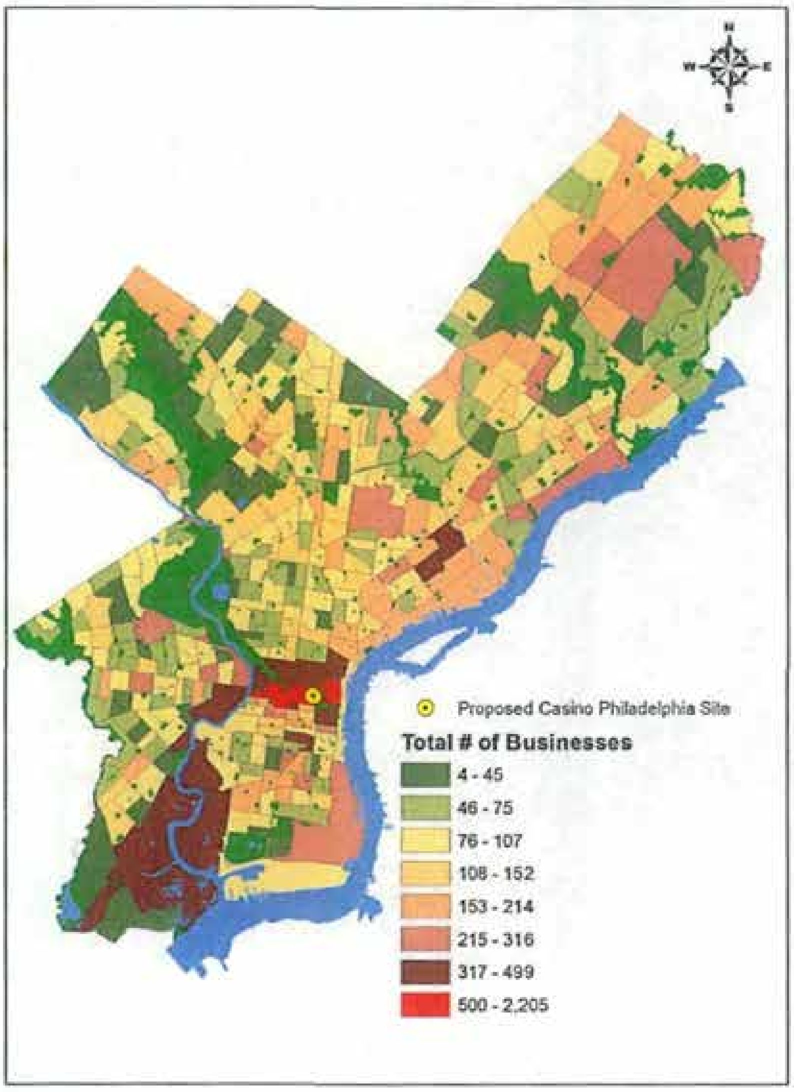
In addition to being surrounded by a high concentration of retail and lodging establishments, the proposed Casino site is a short walk from Independent National Historical Park, which incorporates a number of historical attractions, including Independence Hall, Liberty Bell Center, the National Constitution Center, and Independence Visitors Center. The Independence Visitor Center and the Liberty Bell Center had 2.4 million and 2.3 million visitors, respectively, in 2011. Independence Hall had nearly 695,000 visitors, while the National Constitution Center had nearly 805,000 visitors in 2011. In addition, the Pennsylvania Convention Center, which hosted over one million visitors in the 12 months ended August 31, 2012, is just three blocks away.

Market8 will be well-positioned to capitalize on the City's public transportation system (SEPTA), which would play a key role in providing patrons (residential, commuter, and visitor) easy access to the Casino. SEPTA's Market-Frankford subway line and Regional Rail trains have a major station at 8th & Market Streets, SEPTA has several bus lines servicing the entire Market East neighborhood, and PATCO (running from Center City Philadelphia to areas in New Jersey) has a station at 8th & Market Streets.

Over 38,000 riders pass through the SEPTA and PATCO station at 8th & Market Streets on a daily basis, and nearly 36 million passengers used SEPTA's Regional Rail system in 2011.

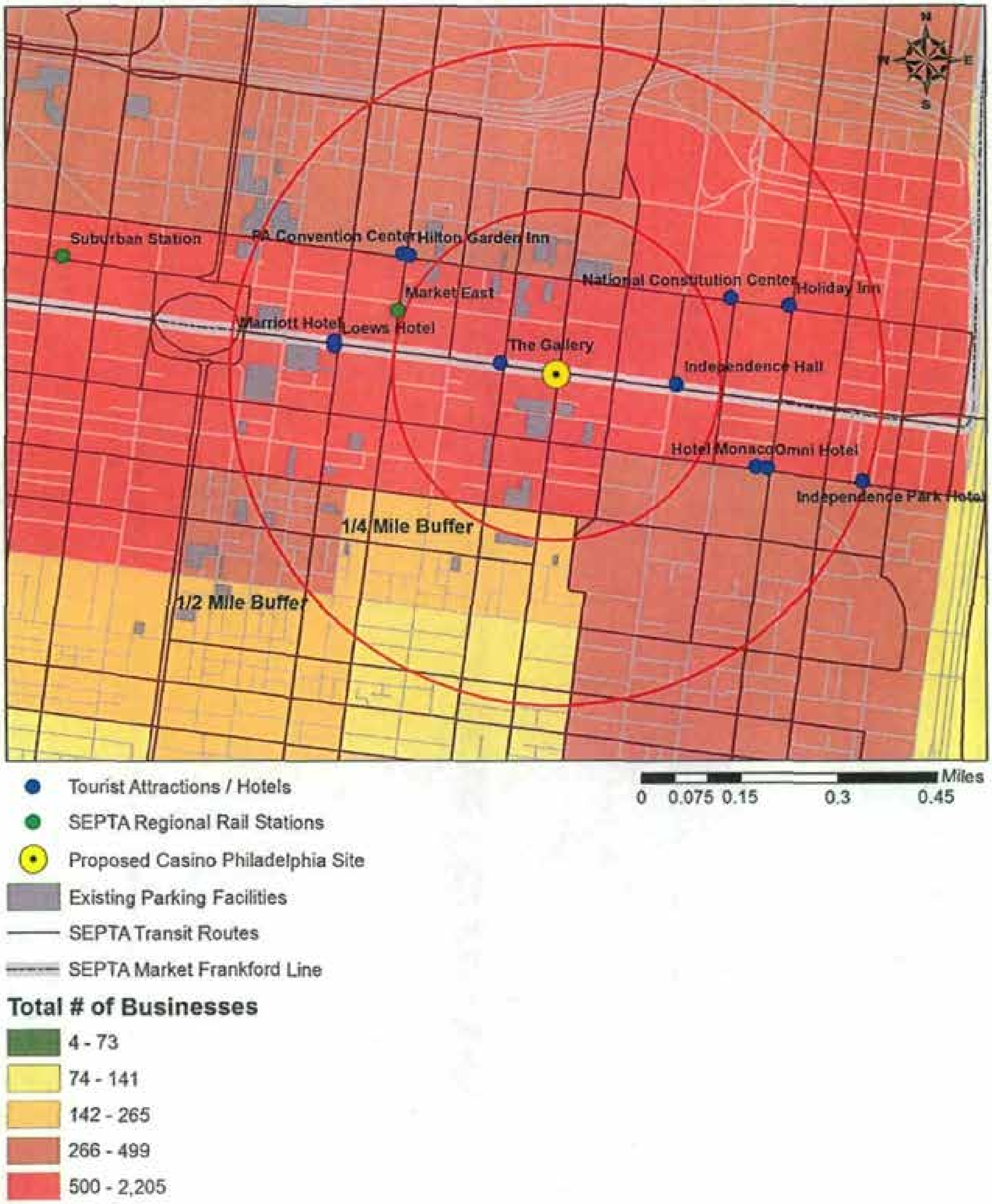
Overall, no other site in the City will be able to benefit from existing infrastructure, easy access to multiple public transportation options (including subway, bus, and rail), close proximity to the Pennsylvania Convention Center and a number of historical tourist attractions, and the densest concentration of retailers in the City. While there are many prosperous areas within the urban core, the Market8 site, with its location in the heart of Philadelphia's urban core, offers a unique opportunity and is most qualified to maximize the "urban effect" described previously.

Figure 3.2: Map of Philadelphia Census Tracts and Total Number of Businesses (2012)



Source: Tourism Economics, ESRI, Infogroup (2012)

Figure 3.3: Map of Total Number of Businesses (by Census Tract) Surrounding Proposed Market8 Site (2012)



4 Economic Impacts Defined

The first step in calculating the economic and fiscal impacts attributable to Market8 is to identify the direct expenditures that will generate economic activity in the local, regional, and statewide economies:

- One-time development/construction expenditures
- Ongoing annual operational expenditures
- Ancillary patron spending at nearby businesses surrounding Market8

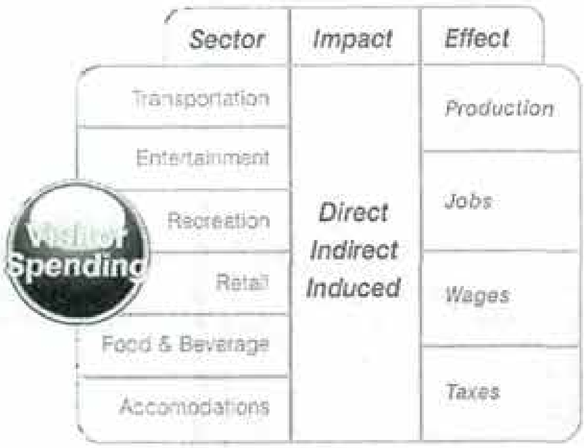
The first main component in the economic impact analysis is the Casino's development and construction expenditures. These expenditures will generate one-time downstream economic activity for a variety of supplier industries in the form of increased sales, jobs, and spending by businesses and employees.

The second main component is Market8's annual operational expenditures. These annual expenditures will generate ongoing impacts in the local, regional, and statewide economies as businesses supply goods and services to maintain operational activities at the Casino. For example, Market8 may hire a local PR/advertising company to assist with marketing efforts, a local law firm to assist with legal matters, or a local food and beverage purveyor to supply goods for the on-site restaurants.

The final impact component is ancillary spending by casino patrons. A portion of patrons at Market8 will also spend time outside the Casino and will spend money at local retail, food and beverage, and recreation/attraction sites. Similar to the casino's development and operational expenditures, ancillary spending will also generate significant economic benefits.

The economic impacts of each component outlined above were estimated using a regional and statewide *Input-Output (I-O) model based on IMPLAN (www.implan.com) models. IMPLAN is recognized as one of* two industry standards in local-level I-O models. An I-O model represents a profile of an economy by measuring the relationships among industries and consumers. For example, an I-O model tracks the flow of the Casino's operational expenditures to wages, profits, capital, taxes and suppliers. The supplier chain is also traced to wholesalers, to suppliers, to professional services firms, and so on. In this way, the I-O model allows for the measurement of the direct and indirect sales generated by Casino operations. The model also calculates the induced impacts of Casino operations. These induced impacts represent benefits to the economy as employees of the Casino and supplier industries spend their wages in the local economy, generating additional output, jobs, taxes, and wages.

Figure 4.1: Illustration of Economic Impact Model



IMPLAN is particularly effective because it calculates these three levels of impact – direct, indirect, and induced – for a broad set of indicators. These include the following:

- Spending
- Wages
- Employment
- Federal Taxes
- State Taxes
- Local Taxes

The modeling process begins with aligning the expenditure measurements with the related sectors in the model (e.g. restaurants, retail, and entertainment). The model is then run to simulate the flow of these expenditures through the economy. In this process, the inter-relationships between consumers and industries generate each level of impact for each economic indicator (sales, wages, employment, etc.).

4.1 Geographic Impact Areas

The economic impact analysis focused on impacts for the following geographic regions:

- City of Philadelphia
- 5-County Pennsylvania Metropolitan Division
    - Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties
- State of Pennsylvania

5 Development/Construction Expenditures

Based on preliminary development budgets provided by Market East Associates, the total development budget for Market8 will amount to $500 million, including $230 million in construction costs, $25 million in contingency costs, and $55 million in soft costs. Hard costs include construction and materials costs, while soft costs include architectural & engineering costs, legal expenses, and other professional services fees.

Figure 5.1: Preliminary Market8 Development Budget ($ Millions)

Description	Budgeted Amount ($ Millions)
Land Acquisition Costs	$65.0
Construction Costs	$230.0
Gaming Licenses	$75.0
Soft Costs	$55.0
Interest and Financing Costs	$50.0
Contingency	$25.0
Total Development Budget	**$500.0**

Source: Market East Associates, L.P. (2013)

Based on data provided by Market East Associates, preliminary plans for Market8 include 60,000 square feet of restaurant space throughout the casino. The restaurant space will be built out and operated by third party entities. We conservatively estimate that it will cost $13 million to build out the restaurant space throughout Market8.

6 Annual Operational Expenditures

6.1 Market8 Casino Operational Expenditures

Based on data provided by PKF Consulting, total annual operational expenditures at Market8 will amount to approximately $174 million (expressed in 2016 dollars) in its first year of operation. The total operating budget includes approximately $102 million in departmental expenses (excluding any taxes on gaming revenues), $46 million in undistributed expenses, $5 million in base management fees, and $21 million in fixed expenses. By its fifth year of operation, Market8's operating budget will amount to nearly $191 million. Figure 6.1 summarizes Market8's operational budget during its first five years of operations.

Figure 6.1: Preliminary Market8 Operational Budget ($ Millions)

Departmental Expenses	Year 1	Year 2	Year 3	Year 4	Year 5
Casino	$61.4	$62.8	$64.1	$65.4	$66.7
Other Operated Departments	$3.4	$3.5	$3.7	$3.8	$3.8
Complimentaries & Promotions	$36.8	$37.9	$39.0	$39.8	$40.6
Total Departmental Expenses	**$101.6**	**$104.2**	**$106.8**	**$109.0**	**$111.2**
Undistributed Expenses	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Administrative & General	$20.0	$20.5	$21.1	$21.5	$21.9
Marketing	$14.9	$15.3	$15.7	$16.0	$16.4
Property Operation & Maintenance	$6.1	$6.6	$7.1	$7.3	$7.4
Utility Costs	$5.4	$5.5	$5.7	$5.8	$5.9
Total Undistributed Expenses	**$46.4**	**$48.0**	**$49.6**	**$50.6**	**$51.6**
Base Management Fee	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Base Management Fee	**$4.9**	**$5.0**	**$5.2**	**$5.3**	**$5.4**
Fixed Expenses	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Property Taxes	$2.2	$2.2	$2.3	$2.3	$2.3
Business Privilege Tax	$0.8	$0.8	$0.8	$0.9	$0.9
Insurance	$3.7	$3.8	$3.9	$4.0	$4.1
Incentive Management Fee	$5.7	$5.8	$6.2	$6.3	$6.4
Slot Machine Leases	$9.0	$9.0	$9.0	$9.0	$9.0
Total Fixed Expenses	**$21.3**	**$21.6**	**$22.2**	**$22.4**	**$22.7**
Total Expenses	**$174.2**	**$178.9**	**$183.8**	**$187.3**	**$190.9**

Source: PKF Consulting (2013)

6.2 On-Site Restaurant & Event/Banquet Operational Expenditures

Restaurants

Based on data provided by Market East Associates, preliminary plans for Market8 include 60,000 square feet of restaurant space throughout the casino. Based on comparable industry data, Market East Associates estimates the restaurants at Market8 will generate $1,100 in sales per sf, with operating expenditures of $800 per sf. This results in $66 million in sales and $48 million in operational expenditures on an annual basis. In addition, Market East Associates estimates that the 60,000 sf of restaurant space will support 200 jobs with an annual payroll of $8.2 million.

Event/Banquet Space

In addition to the 60,000 sf of restaurant space, Market8 will also include 12,500 sf of event/banquet space. Based on industry averages, Market East Associates estimates this banquet space will generate 50 jobs with an annual payroll of $2 million and annual operational expenditures of $5 million.

7 Direct Employment at Market8

Based on data provided by PKF, Market8 will generate more than 1,300 FTE jobs, including nearly 1,000 casino jobs, 260 administrative and general jobs, and 112 retail and valet parking jobs. In addition, restaurants and event/banquet space will support an additional 250 jobs, resulting in a total of nearly 1,600 jobs. Market East Associates estimates there will be $25 million in tip income at Market8, resulting in $87 million in total payroll (including benefits) and tip income.

Figure 7.1: Direct On-Site Jobs, Payroll (Including Benefits), and Tip Income (FTE Jobs & 2016 Dollars)

Description	FTE Jobs	Payroll & Benefits
Casino		
Table Games & Slots	794	$28,336,000
Security & Surveillance	170	$6,482,000
Subtotal	**964**	**$34,818,000**
Administrative & General		
Executives	6	$1,204,000
Accounting	29	$2,247,000
Warehouse	6	$392,000
Mail Room	0	$0
Purchasing	4	$336,000
Human Resources	13	$1,015,000
MIS	7	$560,000
Uniforms	7	$378,000
PBX	4	$217,000
Marketing	75	$4,060,000
Repairs & Maintenance	109	$3,857,000
Subtotal	**260**	**$14,266,000**
Retail & Other		
Valet Parking	101	$2,317,000
Retail Shops	11	$426,552
Subtotal	**112**	**$2,743,552**
Restaurants & Event/Banquet Space		
Restaurants	200	$8,200,000
Event/Banquet Room	50	$2,000,000
Subtotal	**250**	**$10,200,000**
Estimated Tip Income		**$25,000,000**
Total	**1,586**	**$87,027,552**

Source: PKF Consulting & Market East Associates (2013)

8 Economic Impacts

8.1 One-Time Economic Impacts Attributable to Development/Construction Expenditures

8.1.1 Direct Impacts of Development/Construction Expenditures

Based on data provided by Market East Associates, the total development budget for Market8 will amount to $513 million, including an estimated $13 million to build out restaurant space throughout the Casino. Certain line item costs are excluded from the economic impact analysis since they do not represent the transfer of tangible goods and do not generate economic impacts. Expenditures included in the economic modeling include $25 million in soft costs, $230 million in construction costs, $25 million in contingency costs, $20 million in startup costs, and $13 million in restaurant build out costs. We conservatively estimate that 20% of inputs necessary for construction will originate from within the City of Philadelphia, 60% will originate from within the 5-County Region, and 80% will originate from within the State of Pennsylvania. As shown in Figure 8.1, total direct development expenditures in Philadelphia will amount to $63 million. Total direct development expenditures in the 5-County Region and State will amount to $188 million and $250 million, respectively.

Figure 8.1: One-Time Economic Impacts Attributable to Market8 Development/Construction Expenditures ($ Millions and Total Jobs)

Description	Philadelphia County	5-County Region	PA State
Output Impacts			
Direct Expenditures	$62.6	$187.8	$250.4
Indirect & Induced Expenditures	$26.1	$201.0	$332.3
Total Economic Output	$88.7	$388.8	$582.7
Output Multiplier	1.42	2.07	2.33
Job Impacts			
Direct Jobs	427	1,576	2,307
Indirect Jobs	235	1,717	2,986
Total Jobs	662	3,293	5,293
Salary & Wage Impacts			
Direct Salaries & Wages	$21.6	$52.8	$56.6
Indirect Salaries & Wages	$10.3	$70.6	$90.6
Total Salaries & Wages	$31.9	$123.4	$147.2

Source: Tourism Economics (2013)

8.1.2 Total Impacts of Development/Construction Expenditures

City of Philadelphia

In the City of Philadelphia, $62.6 million in direct construction expenditures will generate an additional $26.1 million in indirect and induced expenditures, resulting in a total economic impact of $88.7 million. This total economic impact includes $31.9 million in total salaries and wages, supporting 662 total jobs. The output multiplier for the City of Philadelphia is 1.42, which indicates that each $1 in direct development expenditures will generate an additional $0.42 in indirect and induced expenditures in the City of Philadelphia.

5-County Region

In the 5-County Region, $187.8 million in direct construction expenditures will generate an additional $201.0 million in indirect and induced expenditures, resulting in a total economic impact of $388.8 million. This total economic impact includes $123.4 million in total salaries and wages, supporting nearly 3,300 total jobs. The output multiplier for the 5-County Region is 2.07, which indicates that each $1 in direct development expenditures will generate an additional $1.07 in indirect and induced expenditures in the 5-County Region.

State of Pennsylvania

In the State of Pennsylvania, $250.4 million in direct construction expenditures will generate an additional $332.3 million in indirect and induced expenditures, resulting in a total economic impact of $582.7 million. This total economic impact includes $147.2 million in total salaries and wages, supporting nearly 5,300 total jobs. The output multiplier for the State of Pennsylvania is 2.33, which indicates that each $1 in direct development expenditures will generate an additional $1.33 in indirect and induced expenditures in the State of Pennsylvania.

While the impacts attributable to development/construction expenditures are one-time impacts in the City, region, and State, they represent significant, positive impacts in terms of economic output, total jobs, and salaries and wages.

8.2 Ongoing Economic Impacts Attributable to Annual Operational Expenditures

8.2.1 Direct Impacts of Annual Casino & Restaurant Operational Expenditures

Similar to development expenditures, annual operations at Market8 will also generate significant economic benefits. However, the impacts generated by annual operations represent *ongoing* benefits in the local, regional, and statewide economies. As previously shown, annual operating expenditures at Market8 will amount to approximately $174 million (in 2016 dollars) in the first year of operation, excluding any tax payments on gaming revenues. In addition, operational expenditures of the restaurants throughout the Casino will amount to $48 million, while operational expenditures of the event/banquet space will amount to $5 million. We conservatively assume that 65% of ongoing Casino and restaurant operational expenditures will occur in the City of Philadelphia, 80% will occur in the 5-County Region, and 90% will occur in the State of Pennsylvania. As shown in Figure 8.2, total direct impacts in the City, region, and State amount to $147.7 million, $181.8 million, and $204.5 million, respectively.

Based on staffing and payroll estimates provided by PKF Consulting and Market East Associates, Market8 (including on-site restaurants and event/banquet space) will support a total of 1,586 FTE jobs with a payroll (including benefits) and tip income of $87 million (in 2016 dollars). Based on the U.S. Census Bureau's Journey to Work database (which tracks county-to-county flows of workers based on residence and workplace counties), we estimate that 65% of Market8's employees will originate from the City of Philadelphia, 85% will originate from the 5-County Region, and 90% will originate from the State of Pennsylvania. We assume a similar breakdown for payroll.

Figure 8.2: Ongoing Economic Impacts Attributable to Market8 Annual Operational Expenditures, First Year of Operations ($ Millions in 2016 Dollars and Total Jobs)

Description	Philadelphia County	5-County Region	PA State
Output Impacts			
Direct Impacts	$147.7	$181.8	$204.5
Indirect & Induced Expenditures	$69.4	$169.4	$202.6
Total Economic Output	**$217.1**	**$351.2**	**$407.1**
Output Multiplier	1.47	1.93	1.99
Job Impacts			
Direct Jobs	1,161	1,518	1,607
Indirect Jobs	295	849	984
Total Jobs	**1,456**	**2,367**	**2,591**
Salary & Wage Impacts			
Direct Salaries & Wages	$61.3	$80.2	$84.9
Indirect Salaries & Wages	$19.2	$62.1	$70.2
Total Salaries & Wages	**$80.5**	**$142.3**	**$155.1**

Source: Tourism Economics (2013)

8.2.2 Total Impacts of Annual Operational Expenditures

City of Philadelphia

In the City of Philadelphia, $147.7 million in direct casino and restaurant operational expenditures will generate an additional $69.4 million in indirect and induced expenditures, resulting in a total economic impact of $217.1 million. This total economic impact includes $80.5 million in total salaries and wages, supporting nearly 1,500 total jobs throughout the City. The output multiplier for the City of Philadelphia is 1.47, which indicates that each $1 in direct operational expenditures will generate an additional $0.47 in indirect and induced expenditures in the City of Philadelphia.

5-County Region

In the 5-County Region, $181.8 million in direct casino and restaurant operational expenditures will generate an additional $169.4 million in indirect and induced expenditures, resulting in a total economic impact of $351.2 million. This total economic impact includes $142.3 million in total salaries and wages, supporting nearly 2,400 total jobs throughout the region. The output multiplier for the 5-County Region is 1.93, which indicates that each $1 in direct operational expenditures will generate an additional $0.93 in indirect and induced expenditures in the 5-County Region.

State of Pennsylvania

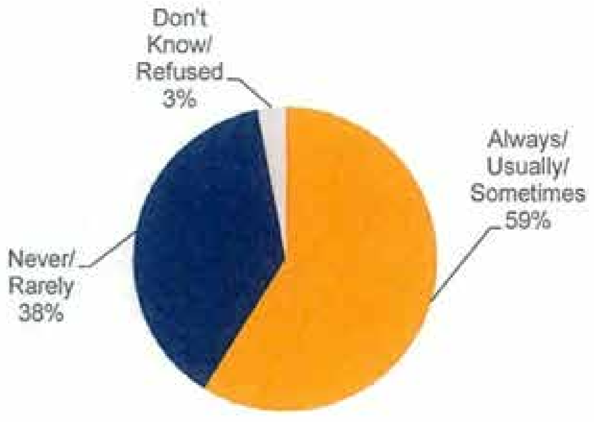
In the State of Pennsylvania, $204.5 million in direct casino and restaurant operational expenditures will generate an additional $202.6 million in indirect and induced expenditures, resulting in a total economic impact of $407.1 million. This total economic impact includes $155.1 million in total salaries and wages, supporting nearly 2,600 total jobs statewide. The output multiplier for the State of Pennsylvania is 1.99, which indicates that each $1 in direct operational expenditures will generate an additional $0.99 in indirect and induced expenditures in the State of Pennsylvania.

8.3 Ongoing Economic Impacts Attributable to Ancillary Patron Spending

Because of Market8's downtown location in Center City Philadelphia, casino patrons will have a wide variety of dining, shopping, and entertainment options within short walking distances from the Casino. Suburban casinos (and other sites throughout the City) are either isolated from the heart of Philadelphia's urban core and/or cannot match the variety (and quality) of options and high concentration of businesses and retail establishments steps away from Market8's doors. Because of Market8's locational advantage in the center of Philadelphia's urban core, no other site would match the ancillary spinoff benefits of patron spending in the surrounding community.

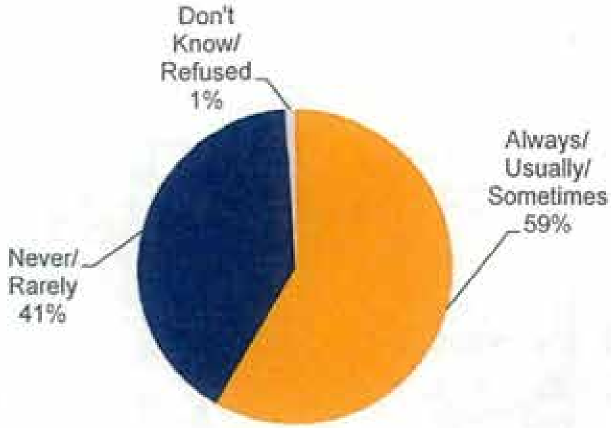
According to the American Gaming Association's ("AGA") 2011 State of the States (The AGA Survey of Casino Entertainment), nearly 60% of responding casino patrons indicated that they visit attractions in the area outside casino properties, as shown in Figure 8.3. In addition, the survey also found that nearly 60% of casino patrons shopped at local retailers and ate at local dining establishments outside casino properties.

Figure 8.3: Percentage of Survey Respondents who Visit Attractions in the Area Outside Casinos



Source: VP Communications, Inc. & Peter D. Hart

Figure 8.4: Percentage of Survey Respondents who Shop or Eat at Establishments Outside Casinos



Source: VP Communications, Inc. & Peter D. Hart

As shown in the AGA's 2011 study, the majority of casino patrons visit entertainment, shopping, and/or dining establishments outside a casino during their gaming visit. Market8's unique location in the heart of Center City will be especially attractive to its gaming (and non-gaming) patrons and will offer a wide variety of dining, retail, and entertainment options within a short walking distance from the Casino. Market8 will be located just west of the popular Independence Mall/Old City/Society Hill area of Center City, which is a popular tourist area but also a center for governmental operations. The Casino site is also within a short walking distance to Philadelphia's famed Avenue of the Arts and Thomas Jefferson University Hospital. The Market Street entrance to the one million square-foot Pennsylvania Convention Center is located just three blocks west of the Casino site. Most of the major office buildings in Center City are located on or just off Market Street to the west of the Casino site. The multi-level Gallery urban shopping center is located along several blocks of Market Street just to the west of the Casino site. Finally, Chinatown is located several blocks northwest of the Casino site.

In addition to spending money inside Market8, patrons and gamers will also spend money at local Philadelphia establishments outside the Casino, including restaurants and bars, hotels, retail and general merchandise stores, entertainment venues, and tourist attractions. Similar to annual Casino operational expenditures, this ancillary spending by Casino patrons will also generate significant economic impacts for the City, Region, and State.

8.3.1 Direct Impacts of Ancillary Patron Spending

Based on estimates provided by PKF Consulting, Market8 patrons will fall under the following four market segments:

- Primary Residential Market: consists of the residents of Philadelphia County plus residents of New Jersey readily accessed by the Benjamin Franklin, Walt Whitman and Betsy Ross Bridges and the PATCO high-speed line.
- Secondary Residential Market: consists of residents desiring to travel to casinos in the area for an evening or day of dining and/or gaming.
- Visitor Market: consists of hotel patrons, tourists, and day visitors to the Pennsylvania Convention Center.
- Commuter Workforce Market: consists of suburban commuters who work in Center City.

Based on PKF's market segment analysis[25], Market8 will have more than 4.7 million patrons in its first year of operation. As shown in Figure 8.5, an estimated 2.7 million patrons will originate from the primary residential market, 1.4 million will originate from the secondary residential market, and 0.5 million and 0.2 million will originate from the visitor and commuter workforce markets, respectively. Due to Market8's unique location in the heart of Philadelphia's urban core, no other site in the city would match the ancillary impacts of Market8 patrons shopping and dining at retailers, restaurants, and entertainment venues immediately outside Casino doors.

We estimate that 60% of patrons from the primary residential market will spend money outside of Market8. Average spending will amount to $40 per patron, resulting in a total of nearly $65 million in spending by primary residential market patrons at establishments outside the Casino.

We estimate that 80% of patrons from the secondary residential market will spend money outside of Market8. At an average of $45 per person, total spending by secondary residential market patrons at establishments outside the Casino will amount to nearly $49 million.

The estimated percentages of the primary and secondary residential markets that will spend money outside the Casino are comparable to the percentages reported in the AGA's 2011 survey of casino patrons. Market8 represents an attractive downtown entertainment destination for patrons originating from the primary and secondary residential markets (2.7 million and 1.4 million patrons, respectively), and

[25] Please refer to PKF's complete report for a comprehensive analysis and description of the methodology underlying Casino Philadelphia's estimated patron base.

a high percentage of these patrons will spend money outside the Casino, thus generating new business at other downtown establishments that otherwise would not have occurred.

While the majority of Market8 patrons from the visitor market are hotel guests or patrons of the Pennsylvania Convention Center, we assume that their trip to Market8 would generate ancillary spending that otherwise would not have occurred. We estimate that 30% of the visitor market will spend an average of $25 per person, resulting in total spending of nearly $4 million at establishments outside the Casino.

Finally, we assume that 30% of the commuter workforce market patrons will spend an average of $15 outside of Market8, resulting in $0.9 million in ancillary spending at establishments outside the Casino.

Spending estimates for each market segment represent *net new* spending by Casino patrons that would not have occurred had it not been for their trip to Market8.

Based on research from Tourism Economics and GTPMC (Greater Philadelphia Tourism Marketing Corporation), average spending per person trip to Philadelphia (including day and overnight visitors from domestic and international markets) is $137, while spending per person trip for domestic overnight visitors is $163. In addition, according to the Bureau of Labor Statistics' (BLS) Consumer Expenditure Survey, consumers in the Northeast spent an annual average of $1,835 on dining away from home and *entertainment fees and admissions in 2011.* Based on these visitor and resident spending averages, the respective per-patron spending estimates, which range from $15 to $35 per person, represent reasonable estimates of ancillary spending at nearby retail, dining, and entertainment establishments. Finally, a 2012 study from the Philadelphia Cultural Alliance found that cultural attendees spend an average of $45 on meals, parking, transportation, and retail goods at local establishments outside cultural/entertainment venues. Compared to these average household and per-visitor spending estimates, the estimates outlined above represent reasonable estimates of average spending of Market8 patrons at nearby establishments.

Based on the estimates outlined above, total ancillary patron spending attributable to Market8 amounts to nearly $118 million, as shown in in Figure 8.5.

Figure 8.5: Estimated Market8 Patrons and Ancillary Spending (First Year of Operation), by Market (in 2016 Dollars)

Market	Estimated Patrons	% of Patrons Who Will Spend $ Outside Market8	Spending per Patron	Total Patron Spending ($ Millions)
Primary Residential Market	2,700,000	60%	$40	**$64.8**
Secondary Residential Market	1,350,000	80%	$45	**$48.6**
Visitor Market	480,000	30%	$25	**$3.6**
Commuter Workforce Market	190,000	30%	$15	**$0.9**
Total Patrons	**4,720,000**			**$117.9**

Source: PKF Consulting & Tourism Economics (2013)

8.3.2 *Total Impacts of Ancillary Patron Spending*

Total ancillary patron spending attributable to Market8 amounts to $117.9 million per year, as shown in in Figure 8.5.

Figure 8.6: Ongoing Economic Impacts Attributable to Market8 Ancillary Patron Spending, First Year of Operations ($ Millions in 2016 Dollars and Total Jobs)

Description	Philadelphia County	5-County Region	PA State
Output Impacts			
Direct Impacts	$117.9	$117.9	$117.9
Indirect & Induced Expenditures	$69.1	$128.0	$140.9
Total Economic Output	**$187.0**	**$245.9**	**$258.7**
Output Multiplier	1.59	2.09	2.20
Job Impacts			
Direct Jobs	1,678	2,313	2,452
Indirect Jobs	302	951	1,124
Total Jobs	**1,980**	**3,264**	**3,576**
Salary & Wage Impacts			
Direct Salaries & Wages	$24.3	$33.8	$35.8
Indirect Salaries & Wages	$9.3	$31.8	$37.5
Total Salaries & Wages	**$33.6**	**$65.7**	**$73.3**

Source: Tourism Economics (2013)

City of Philadelphia

In the City of Philadelphia, $117.9 million in direct ancillary spending will generate an additional $69.1 million in indirect and induced expenditures, resulting in a total economic impact of $187.0 million. This total economic impact includes $33.6 million in total salaries and wages, supporting nearly 2,000 total jobs throughout the City. The output multiplier for the City of Philadelphia is 1.59, which indicates that each $1 in direct operational expenditures will generate an additional $0.59 in indirect and induced expenditures in the City of Philadelphia.

5-County Region

In the 5-County Region, $117.9 million in direct ancillary spending will generate an additional $128.0 million in indirect and induced expenditures, resulting in a total economic impact of $245.9 million. This total economic impact includes $65.7 million in total salaries and wages, supporting nearly 3,300 total jobs throughout the region. The output multiplier for the 5-County Region is 2.09, which indicates that each $1 in direct operational expenditures will generate an additional $1.09 in indirect and induced expenditures in the 5-County Region.

State of Pennsylvania

In the State of Pennsylvania, $117.9 million in ancillary spending will generate an additional $140.9 million in indirect and induced expenditures, resulting in a total economic impact of $258.7 million. This total economic impact includes $73.3 million in total salaries and wages, supporting nearly 3,600 total jobs statewide. The output multiplier for the State of Pennsylvania is 2.20, which indicates that each $1 in direct development expenditures will generate an additional $1.20 in indirect and induced expenditures in the State of Pennsylvania.

9 Fiscal (Tax) Impacts

The economic impacts outlined in previous sections will also generate significant fiscal (tax) impacts as they cycle through the local, regional, and statewide economies.

9.1 Gaming Taxes

PKF Consulting estimates that Market8 will have a win of $518.5 million (in 2016 dollars) in its first year of operation, including $155.5 million in table games revenue and $362.9 million in slots revenue. Based on these estimates, we estimate that Market8 will generate nearly $207.0 million in state gaming tax revenues and nearly $18.0 million in local gaming tax revenues (expressed in 2016 dollars) in its first year of operations. Figure 9.1 provides a detailed breakdown of the various state and local gaming tax components and revenues.

Figure 9.1: State & Local Gaming Tax Revenues Attributable to Market8
($ Millions in 2016 Dollars)

PA State Gaming Tax Revenues					
Tax Description	2016	2017	2018	2019	2020
State Gaming Fund (34% of Slots Revenues)	$123.4	$127.1	$131.0	$133.6	$136.2
Horse Racing Industry (12% of Slots Revenues)	$43.6	$44.9	$46.2	$47.1	$48.1
Economic Development (5% of Slots Revenues)	$18.1	$18.7	$19.3	$19.6	$20.0
General Fund (14% of Tables Revenues, Years 1 & 2) (12% of Tables Revenues, Years 3 to 5)	$21.8	$22.4	$19.8	$20.2	$20.6
Total State Gaming Tax Revenues	**$206.9**	**$213.1**	**$216.2**	**$220.6**	**$225.0**
Local Gaming Tax Revenues					
Tax Description	2016	2017	2018	2019	2020
Local and County Governments (4% of Slots Revenues)	$14.5	$15.0	$15.4	$15.7	$16.0
Local County Municipalities (2% of Tables Revenues)	$3.1	$3.2	$3.3	$3.4	$3.4
Total Local Gaming Tax Revenues	**$17.6**	**$18.2**	**$18.7**	**$19.1**	**$19.5**
Total Gaming Taxes	**$224.5**	**$231.3**	**$235.0**	**$239.7**	**$244.4**

Source: Tourism Economics (2013)

9.2 Non-Gaming Taxes

Based on the estimates of total economic impacts outlined in Section 8, Figure 9.2 outlines the various state and local taxes attributable to the one-time construction period impacts and the annual, ongoing impacts of annual casino operations and ancillary patron spending.

Figure 9.2: State & Local Non-Gaming Tax Revenues Attributable to Market8, First Year of Operations ($ Millions in 2016 Dollars)

Description	PA State Personal Income Tax	PA State Sales and Use Tax	City of Philadelphia Sales Tax	City of Philadelphia Wage Tax	Total Tax Impact
One-Time Tax Revenues					
Construction Period	$3.76	$5.01	$0.43	$3.46	$12.65
Total One-Time Tax Revenues	**$3.76**	**$5.01**	**$0.43**	**$3.46**	**$12.65**
Ongoing Tax Revenues					
Annual Casino Philadelphia Operations (including restaurants)	$4.11	$4.77	$1.59	$4.31	$14.79
Annual Ancillary Patron Spending	$1.67	$7.82	$2.30	$1.35	$13.14
Total Annual, Ongoing Tax Revenues	**$5.79**	**$12.59**	**$3.89**	**$5.66**	**$27.92**

Source: Tourism Economics (2013)

As shown in Figure 9.2, Market8's development/construction activities will generate a total one-time impact of nearly $12.7 million, including $3.8 million in State personal income tax revenue, $5.0 million in State sales tax revenue, more than $0.4 million in City sales tax revenue, and $3.5 million in City wage tax revenue.

Casino operations and ancillary patron spending will generate nearly $28.0 million in state and local taxes on an annual, ongoing basis. This total tax impact will include $6.0 million in State personal income tax revenue, $12.6 million in State sales tax revenue, $3.9 million in City sales tax revenue, and $5.7 million in City wage tax revenue on an annual basis.

10 Qualitative & Local Impacts

10.1 Positive Qualitative Impacts

As outlined in previous sections, Market8 will be located in the heart of Center City's urban core. Market8's prime location will create synergies and complementary benefits for areas surrounding the Casino. As evidenced by research from the American Gaming Association, the majority of casino patrons travel off-site to explore entertainment and dining options outside casino doors. Market8's proximity to various dining establishments, retailers, historic and cultural tourist attractions, and other center city attractions will provide a unique experience for its gaming (and non-gaming) patrons, providing them a variety of destination options outside Market8's doors.

10.2 Local Services

The proposed Casino would directly impact local government service departments, including police, fire, and emergency services. The impacts of the proposed casino should have only minor negative impacts on the neighboring communities and the City government. The areas surrounding the proposed Casino site have sufficient transportation, and there are already a number of parking options, as well as the planned on-site underground parking.

10.2.1 Crime & Police

Research indicates that there is little evidence linking crime rates and gambling and that casinos do not generate increases in the rate of violent crimes in the local community. According to a study from the American Gaming Association, a review of empirical studies found little documentation of a causal relationship between gaming and crime. Much of the literature included in the analysis indicated that communities with casinos are just as safe as communities that don't have casinos[26]. In addition, according to a study that analyzed the impacts of Detroit's downtown casinos, "it appears that Detroit's casinos are effective in contributing to the tourism activity in the community: 1) they are effective in attracting tourists and generating new money in the area. 2) they generate taxes and employment, 3) they contribute to other community tourism-related businesses. On the other hand, crime volume did not increase following casino gaming development in the city. In addition, it was found that bankruptcy filings in Detroit did not increase a year after the casinos opened in the city"[27].

Grant Stitt's federally funded research, which examined the impacts of new casinos in eight jurisdictions in Illinois, Iowa, and Mississippi, found that casinos did not appear to have any general or

[26] Casinos and Crime: An Analysis of the Evidence, American Gaming Assocation
[27] Moufakkir, Omar, and Holecek, Donald. *Impacts of Detroit Casinos on the Local Community.*2002.

dramatic effect on crime, especially in communities that did not have a high concentration of casinos. The research also found that minor crimes were more likely to increase than major crimes.

While the above references suggest that Market8 would not necessarily lead to an increase in crime rate, there may be increases in overall crime *levels*. If there is an increase in the number of crimes, Market8's location at 8th and Market Streets is in the heart of Philadelphia's urban core and is already well-served by a large police presence. The Philadelphia Police Department is the nation's fourth largest police department, and the headquarters of the Department's 6th District is only five blocks away from the site of the proposed Casino. While the presence of a 24-hour casino may require the Police Department to modify staffing and schedules, it would not have negative impacts or degrade the quality of services currently provided by the Police Department.

10.2.2 Fire Department

The Philadelphia Fire Department services Market Street in Center City with crews out of fire houses in the 4th Battalion, of the First Division in the Fire Department. The 4th Battalion includes engine and/or ladder companies at two locations within five blocks from the proposed Casino site and an additional three companies within 15 blocks. With twelve additional battalions, there are multiple redundancies for servicing the proposed Casino site.

10.3 Traffic Impact

Pennoni Associates, Inc., conducted a comprehensive Traffic Impact Study for the proposed site of Market8. The analysis found that Market8 is in a prime location to access several modes of transit. In addition, the prime location allows easy access to I-95 and I-676 for regional access by vehicular traffic. *Delays due to casino vehicular traffic would be limited to less than 10 seconds at all intersections* included in Pennoni's analysis. Available parking immediately adjacent to the proposed site, combined with proposed underground parking at the Casino, exceeds the parking requirements of the zoning code.

10.4 Public Transportation

Due to Market8's location in one of the major thoroughfares in the City, there are already a multitude of *existing public transportation options, including bus, rail, taxis, and subway. Please refer to the Traffic* Impact Study for further details.

10.5 Social Costs

Various studies indicate that one clear social impact of casino development is the increase in problem gambling that results[28]. According to a 2010 study, 1.2% of adults are pathological gamblers at any point in their lifetime, while another 1.5% are problem gamblers. The likelihood of being a pathological or problem gambler increases for persons living within 50 miles of a casino.

Current Pennsylvania statutes require slot machine licensees to submit a Compulsive and Problem Gambling Plan to the State. Market8 will create a plan that will include provisions for employee training on identifying and dealing with compulsive gamblers, signage for toll-free help numbers and other helpful information, and other controls to effectively handle any increases in pathological and problem gamblers.

It is not anticipated that Market8 will cause an increased demand for public health care, child care, public transportation, affordable housing or social services

Market8 will be located in downtown Philadelphia, where there is already a well-established business and residential community with existing infrastructure, high concentrations of retailers, companies, and workers, steady levels of pedestrians and foot traffic, and an existing historic/cultural tourism base. Since the proposed site is in one of the major thorofares in the City, there will be minimal impacts on the neighboring communities, including Chinatown.

While there have been many studies analyzing the socio-economic impacts of casino development, there have been few studies examining the cultural impacts of casinos. In his 2010 paper, "Casino Development in Gettysburg: Social, Economic and Heritage Impacts", Professor Duarte B. Morais cites a study that argued that "visitors attracted to the (Upper Mississippi River corridor) for gaming, will frequently stay longer to experience other opportunities, such as touring historic, scenic, or recreation sites." In addition, a research firms studying the profile of visitors to Vicksburg, MI found that respondents interviewed in Casinos reported also visiting Vicksburg's historic/cultural attractions. Due to its location within walking distance of many of Philadelphia's famous historical landmarks (including Independence Hall, the Liberty Bell, Independence Visitors Center, and the National Constitution Center), Market8 will generate new visitors to these historic attractions. While these new visits will generate new revenues and economic benefits for the historic attractions, they could also create increased costs and pressures in infrastructure to satisfy the new demand.

[28] "The Social Impact of Casinos: Literature Review and Cost Estimates", Community Research Partners, 2010.

11 Company Background

Tourism Economics is an Oxford Economics company with a singular objective: combine an understanding of tourism dynamics with rigorous economics in order to answer the most important questions facing destinations, developers, and strategic planners. By combining quantitative methods with industry knowledge, Tourism Economics designs custom market strategies, destination recovery plans, tourism forecasting models, tourism policy analysis, and economic impact studies.

With over four decades of experience of our principal consultants, it is our passion to work as partners with our clients to achieve a destination's full potential.

Oxford Economics is one of the world's leading providers of economic analysis, forecasts and consulting advice. Founded in 1981 as a joint venture with Oxford University's business college, Oxford Economics enjoys a reputation for high quality, quantitative analysis and evidence-based advice. For this, its draws on its own staff of 50 highly-experienced professional economists; a dedicated data analysis team; global modeling tools, and a range of partner institutions in Europe, the US and in the United Nations Project Link. Oxford Economics has offices in New York, Philadelphia, London, Oxford, Dubai, and Singapore.

Michael Mariano is a Senior Economist and Director of Geospatial Analytics with Tourism Economics and Oxford Economics. Michael has over 13 years of experience in economic and statistical consulting, and his research interests include economic and fiscal impact modeling, econometric forecasting, retail market studies, and GIS (Geographic Information Systems) modeling and geospatial analytics.

Mr. Mariano has consulted and provided expert testimony for various public, private, and non-profit clients and has managed projects examining public housing, economic development, tax policy, market analysis, and real estate impacts. He has worked on economic impact studies for hotels, casinos, and retail parks nationwide and has extensive experience providing job impact estimates for project funding through the U.S. government's EB-5 immigrant investor program.

Prior to joining Tourism Economics, Michael was Managing Director of Geospatial Analytics and GIS Solutions at Econsult Corporation, an economic consulting firm based in Philadelphia. Michael received a Bachelor of Science in economics and marketing from the Wharton School and a Master of Science in Urban Spatial Analytics from The University of Pennsylvania.

12 Addendum

The analysis that follows summarizes the potential impacts generated by the addition of a 168-room hotel (including six penthouse suites) to be built on top of Market8 with direct connection to the Casino. Preliminary plans indicate the hotel will be built, owned, and operated by a third party. The hotel will offer an amenities floor with spa, fitness club, meeting rooms, lobby with registration, lounge for light fare, and a back of house including a buffet kitchen.

Based on a report from PKF Consulting, the hotel will achieve a stabilized level of occupancy of 75 percent and open in 2016 with an ADR (average daily rate) of $184 (expressed in 2016 dollars). Based on information provided by Mohegan, PKF estimates the following:

- An average of 1.25 adult guests per occupied room
- Approximately 75 percent of all hotel guests will play in Market8 during their visit
- Some 80 percent of the hotel's occupied rooms will be provided on a complimentary basis on Friday and Saturday nights
- Some 25 percent of the hotel's occupied rooms will be provided on a complimentary basis on other nights of the week
- Each comped hotel guest will have a gaming budget of $500
- Each non-comped hotel guest will have a gaming budget of $100

12.1 One-Time Economic Impacts Attributable to Hotel Development Expenditures

Preliminary estimates indicate the hotel will have a total development budget of $69.3 million, as shown in Figure 12.1.

Figure 12.1: Estimated Hotel Development Costs ($ Millions)

Description	Amount
Construction	$52.4
Furniture, Fixtures, and Equipment	$3.4
Opening & Soft Costs	$5.0
Construction Interest & Loan Fees	$4.5
Contingency	$4.0
Total	**$69.3**

Source: Market East Associates (2013)

Certain line item costs are excluded from the economic impact analysis since they do not represent the transfer of tangible goods and do not generate economic impacts. Expenditures excluded from the economic modeling include $4.5 million in construction interest and loan fees. We conservatively estimate that 20% of inputs necessary for construction will originate from within the City of Philadelphia, 60% will originate from within the 5-County Region, and 80% will originate from within the State of Pennsylvania. As shown in Figure 12.2, total direct development expenditures in Philadelphia will amount to $12.2 million. Total direct development expenditures in the 5-County Region and State will amount to $36.5 million and $48.7 million, respectively.

Figure 12.2: One-Time Economic Impacts Attributable to Hotel Development Expenditures ($ Millions and Total Jobs)

Description	Philadelphia County	5-County Region	PA State
Output Impacts			
Direct Expenditures	$13.0	$38.9	$51.9
Indirect & Induced Expenditures	$5.4	$41.6	$68.9
Total Economic Output	$18.4	$80.5	$120.8
Output Multiplier	1.42	2.07	2.33
Job Impacts			
Direct Jobs	88	327	479
Indirect Jobs	49	355	619
Total Jobs	137	682	1,098
Salary & Wage Impacts			
Direct Salaries & Wages	$4.5	$10.9	$11.7
Indirect Salaries & Wages	$2.1	$14.6	$18.8
Total Salaries & Wages	$6.6	$25.5	$30.5

Source: Tourism Economics (2013)

<u>City of Philadelphia</u>

In the City of Philadelphia, $13.0 million in direct construction expenditures will generate an additional $5.4 million in indirect and induced expenditures, resulting in a total economic impact of $18.4 million. This total economic impact includes $6.6 million in total salaries and wages, supporting nearly 140 total jobs. The output multiplier for the City of Philadelphia is 1.42, which indicates that each $1 in direct development expenditures will generate an additional $0.42 in indirect and induced expenditures in the City of Philadelphia.

<u>5-County Region</u>

In the 5-County Region, $38.9 million in direct construction expenditures will generate an additional $41.6 million in indirect and induced expenditures, resulting in a total economic impact of $80.5 million. This total economic impact includes $25.5 million in total salaries and wages, supporting more than 680 total jobs. The output multiplier for the 5-County Region is 2.07, which indicates that each $1 in direct development expenditures will generate an additional $1.07 in indirect and induced expenditures in the 5-County Region.

State of Pennsylvania

In the State of Pennsylvania, $51.9 million in direct construction expenditures will generate an additional $68.9 million in indirect and induced expenditures, resulting in a total economic impact of $120.8 million. This total economic impact includes $30.5 million in total salaries and wages, supporting nearly 1,100 total jobs. The output multiplier for the State of Pennsylvania is 2.33, which indicates that each $1 in direct development expenditures will generate an additional $1.33 in indirect and induced expenditures in the State of Pennsylvania.

While the impacts attributable to the hotel development/construction expenditures are one-time impacts in the City, region, and State, they represent significant, positive impacts in terms of economic output, total jobs, and salaries and wages.

12.2 Ongoing Economic Impacts Attributable to Incremental Casino Operational Expenditures

Figure 12.3 summarizes the increase in operational expenditures attributable to the proposed hotel. As shown, the hotel leads to an additional $18.4 million in operational expenditures. In its stabilized year of operations, the hotel will generate approximately $8.8 million in room revenue.

Figure 12.3: Estimated Casino Operational Expenditures With and Without Hotel ($ Millions)

Departmental Expenses	Without Hotel	With Hotel	Difference
Casino	$55.3	$61.0	$5.7
Food & Beverage	$0.0	$2.4	$2.4
Rooms	$0.0	$1.8	$1.8
Other Operated Departments	$3.7	$3.8	$0.2
Complimentaries & Promotions	$39.0	$43.8	$4.8
Total Departmental Expenses	**$98.0**	**$112.8**	**$14.8**
Undistributed Expenses	**Year 1**	**Year 2**	**Year 1**
Administrative & General	$21.1	$22.0	$0.9
Marketing	$15.7	$17.0	$1.3
Property Operation & Maintenance	$7.1	$7.5	$0.4
Utility Costs	$5.7	$6.0	$0.3
Total Undistributed Expenses	**$49.6**	**$52.6**	**$3.0**
Base Management Fee	**Year 1**	**Year 2**	**Year 1**
Base Management Fee	**$5.2**	**$5.7**	**$0.5**
Fixed Expenses	**Year 1**	**Year 2**	**Year 1**
Property Taxes	$2.3	$2.3	$0.1
Business Privilege Tax	$0.8	$0.9	$0.0
Insurance	$3.9	$4.0	$0.1
Incentive Management Fee	$6.2	$6.2	$0.0
Slot Machine Leases	$9.0	$9.0	$0.0
Total Fixed Expenses	**$22.2**	**$22.3**	**$0.2**
Total Expenses	**$175.0**	**$193.4**	**$18.4**

Source: PKF Consulting (2013)

We conservatively assume that 65% of the incremental operational expenditures will occur in the City of Philadelphia, 80% will occur in the 5-County Region, and 90% will occur in the State of Pennsylvania. As shown in Figure 12.4, total direct impacts in the City, region, and State amount to $12.0 million, $14.7 million, and $16.6 million, respectively.

Figure 12.4: Ongoing Economic Impacts Attributable to Incremental Operational Casino Expenditures Generated by the Hotel ($ Millions in 2012 Dollars and Total Jobs)

Description	Philadelphia County	5-County Region	PA State
Output Impacts			
Direct Impacts	$12.0	$14.7	$16.6
Indirect & Induced Expenditures	$6.6	$15.2	$18.0
Total Economic Output	**$18.6**	**$29.9**	**$34.5**
Output Multiplier	1.55	2.03	2.09
Job Impacts			
Direct Jobs	33	43	46
Indirect Jobs	25	41	52
Total Jobs	**58**	**84**	**98**
Salary & Wage Impacts			
Direct Salaries & Wages	$1.5	$2.0	$2.1
Indirect Salaries & Wages	$0.6	$1.8	$2.0
Total Salaries & Wages	**$2.1**	**$3.8**	**$4.1**

Source: Tourism Economics (2013)

City of Philadelphia

In the City of Philadelphia, $12.0 million in incremental casino operational expenditures will generate an additional $6.6 million in indirect and induced expenditures, resulting in a total economic impact of $18.6 million. This total economic impact includes $2.1 million in total salaries and wages, supporting 58 total jobs throughout the City. The output multiplier for the City of Philadelphia is 1.55, which indicates that each $1 in direct incremental operational expenditures will generate an additional $0.55 in indirect and induced expenditures in the City of Philadelphia.

5-County Region

In the 5-County Region, $14.7 million in incremental casino operational expenditures will generate an additional $15.2 million in indirect and induced expenditures, resulting in a total economic impact of $29.9 million. This total economic impact includes $3.8 million in total salaries and wages, supporting 84total jobs throughout the region. The output multiplier for the 5-County Region is 2.03, which indicates that each $1 in direct incremental operational expenditures will generate an additional $1.03 in indirect and induced expenditures in the 5-County Region.

State of Pennsylvania

In the State of Pennsylvania, $16.6 million in incremental casino operational expenditures will generate an additional $18.0 million in indirect and induced expenditures, resulting in a total economic impact of

$34.5 million. This total economic impact includes $4.1 million in total salaries and wages, supporting nearly 100 total jobs statewide. The output multiplier for the State of Pennsylvania is 2.08, which indicates that each $1 in direct incremental operational expenditures will generate an additional $1.08 in indirect and induced expenditures in the State of Pennsylvania.

12.3 Ongoing Economic Impacts Attributable to Hotel Guest Spending

In addition to the positive impacts of increased gaming revenue, the proposed hotel will also generate additional, positive economic impacts as hotel guests spend money at local businesses and establishments outside the casino. As previously outlined, preliminary estimates from PKF indicate the 168-room hotel will achieve a stabilized level of occupancy of 75 percent , with an average occupancy of 1.25 adult guests per room. Based on these estimates, there would be a total of 43,116 adult hotel guests per year. We conservatively assume that each hotel guest will spend an average of $50 per day outside the casino, resulting in $2.2 million in total guest spending.

Figure 12.5: Ongoing Economic Impacts Attributable to Hotel Guest Spending
($ Millions in 2012 Dollars and Total Jobs)

Description	Philadelphia County	5-County	PA State
Output Impacts			
Direct Impacts	$2.2	$2.2	$2.2
Indirect & Induced Expenditures	$1.3	$2.3	$2.6
Total Economic Output	**$3.4**	**$4.5**	**$4.7**
Output Multiplier	1.59	2.09	2.20
Job Impacts			
Direct Jobs	31	42	45
Indirect Jobs	6	17	21
Total Jobs	**36**	**60**	**65**
Salary & Wage Impacts			
Direct Salaries & Wages	$0.4	$0.6	$0.7
Indirect Salaries & Wages	$0.2	$0.6	$0.7
Total Salaries & Wages	**$0.6**	**$1.2**	**$1.3**

Source: Tourism Economics (2013)

City of Philadelphia
In the City of Philadelphia, $2.2 million in hotel guest spending will generate an additional $1.3 million in indirect and induced expenditures, resulting in a total economic impact of $3.4 million. This total economic impact includes $0.6 million in total salaries and wages, supporting 36 total jobs throughout the City. The output multiplier for the City of Philadelphia is 1.59, which indicates that each $1 in direct hotel guest spending will generate an additional $0.59 in indirect and induced expenditures in the City of Philadelphia.

5-County Region
In the 5-County Region, $2.2 million in hotel guest spending will generate an additional $2.3 million in indirect and induced expenditures, resulting in a total economic impact of $4.5 million. This total economic impact includes $1.2 million in total salaries and wages, supporting 60 total jobs throughout the region. The output multiplier for the 5-County Region is 2.09, which indicates that each $1 in hotel guest spending will generate an additional $1.09 in indirect and induced expenditures in the 5-County Region.

State of Pennsylvania

In the State of Pennsylvania, $2.2 million in hotel guest spending will generate an additional $2.6 million in indirect and induced expenditures, resulting in a total economic impact of $4.7 million. This total economic impact includes $1.3 million in total salaries and wages, supporting 65 total jobs statewide. The output multiplier for the State of Pennsylvania is 2.20, which indicates that each $1 in hotel guest spending will generate an additional $1.20 in indirect and induced expenditures in the State of Pennsylvania.

12.4 Gaming Tax Impacts Attributable to the Proposed Hotel

Based on preliminary estimates from PKF, there will be $12.6 million in incremental casino revenue attributable to the proposed hotel in the first year of operation. Assuming 30% of the incremental revenue will be table revenue and 70% will be slots revenue, there will be a total of $5.5 million in incremental gaming tax revenue in the first year of operation. This $5.5 million in incremental gaming tax revenue will include $5.0 million in state gaming tax revenue and $0.5 million in local gaming tax revenue, as shown in Figure 12.6.

Figure 12.6: Gaming Tax Revenues Attributable to Incremental Gaming Revenues Generated by the Hotel ($ Millions in 2012 Dollars)

Incremental PA State Gaming Tax Revenues	
Tax Description	Year 1
State Gaming Fund (34% of Slots Revenues)	$3.0
Horse Racing Industry (12% of Slots Revenues)	$1.1
Economic Development (5% of Slots Revenues)	$0.4
General Fund (14% of Tables Revenues, Years 1 & 2) (12% of Tables Revenues, Years 3 to 5)	$0.5
Total Incremental State Gaming Tax Revenues	**$5.0**
Incremental Local Gaming Tax Revenues	
Tax Description	Year 1
Local and County Governments (4% of Slots Revenues)	$0.4
Local County Municipalities (2% of Tables Revenues)	$0.1
Total Incremental Local Gaming Tax Revenues	**$0.4**
Total Incremental Gaming Taxes	**$5.5**

Source: Tourism Economics (2013)

12.5 Non-Gaming Tax Impacts Attributable to the Proposed Hotel

Based on the economic impacts attributable to hotel development expenditures, incremental casino operational expenditures, hotel/casino operational expenditures, and hotel guest spending (as outlined in Sections 12.1, 12.2, and 12.3), Figure 12.7 summarizes the non-gaming fiscal (tax) impacts generated by the proposed hotel.

<u>One-Time Tax Revenues</u>
We estimate that the hotel construction period will generate nearly $2.5 million in total tax revenue, including $0.7 million in PA State personal income tax revenue, nearly $1.0 million in PA State sales and use tax revenue, and nearly $0.7 million in City wage tax revenue.

Annual, Ongoing Tax Revenues

We estimate that incremental casino operations and hotel guest spending will generate nearly $2.5 million in total tax revenue on an annual basis, including more than $1.2 million in PA State sales, use, and hotel occupancy tax revenue, nearly $0.9 million in City sales and use tax revenue, and 0.2 million in City wage tax revenue[29].

Figure 12.7: State & Local Non-Gaming Tax Revenues Attributable to Hotel Development Expenditures, Incremental Casino Operational Expenditures & Hotel Guest Spending ($ Millions in 2012 Dollars)

Description	PA State Personal Income Tax	PA State Sale, Use, & Hotel Occupancy Tax	City of Philadelphia Sales & Use Tax	City of Philadelphia Wage Tax	Total Tax Impact
One-Time Tax Revenues					
Hotel Construction Period	$0.73	$0.97	$0.08	$0.67	$2.46
Total One-Time Tax Revenues	**$0.73**	**$0.97**	**$0.08**	**$0.67**	**$2.46**
Ongoing Tax Revenues					
Incremental Casino Operations	$0.14	$0.46	$0.10	$0.16	$0.86
Hotel Guest Spending & Hotel Operations	$0.03	$0.76	$0.79	$0.04	$1.62
Total Annual, Ongoing Tax Revenues	**$0.17**	**$1.22**	**$0.89**	**$0.20**	**$2.49**

Source: Tourism Economics (2013)

[29] PA State Sales, Use & Hotel Occupancy Tax revenue and City of Philadelphia Sales & Use tax revenue includes tax revenues generated by hotel room revenue.

PHILADELPHIA
303 Lancaster Avenue, Suite 1b
Wayne PA 19087, USA
Tel: +1 610 995 9600

OXFORD
Abbey House, 121 St Aldates
Oxford, OX1 1HB, UK
Tel: +44 1865 268900

LONDON
Broadwall House, 21 Broadwall
London, SE1 9PL, UK
Tel: +44 207 803 1400

BELFAST
Lagan House, Sackville Street
Lisburn, BT27 4AB, UK
Tel: +44 28 9266 0669

NEW YORK
817 Broadway, 10th Floor
New York, NY 10003, USA
Tel: +1 646 786 1863

SINGAPORE
No.1 North Bridge Road
High Street Centre #22-07
Singapore 179094
Tel: +65 6338 1235

PARIS
9 rue Huysmans
75006 Paris, France
Tel: + 33 6 79 900 846

email: info@tourismeconomics.com

www.tourismeconomics.com

TOURISM
ECONOMICS

PROOF OF SERVICE

I, Kevin C. Hayes, hereby certify that a true and correct copy of the local impact report entitled "The Economic & Fiscal Impacts of Market8 at 8^{th} & Market St (Revised)" as prepared by Mr. Michael Mariano and on behalf of Market East Associates, LP, was duly served upon the City of Philadelphia by Hand-Delivering the same on the 7^{th} day of February 2013 to the following official at his address of record:

Mr. Duane H. Bumb
Senior Deputy Director of Commerce
Philadelphia Department of Commerce
1515 Arch Street, 12th Floor
Philadelphia, PA 19102

By: ______________________

Kevin C. Hayes, Esquire
Doherty Hayes, LLC
1000 Bank Towers
321 Spruce Street
Scranton, PA 18503
(570) 346-7651 (phone)
(570) 344-1542 (fax)

RECEIPT

I, Kimberly Seamon, of the City of Philadelphia hereby acknowledge receipt of a copy of "The Economic & Fiscal Impacts of Market8 (Revised)" as authored by Michael Mariano of Tourism Economics on behalf of Market East Associates, LP on this 7th day of February 2013:

CITY OF PHILADELPHIA

Kimberly Seamon

By:

Date: 2-7-13

LOCAL INFRASTRUCTURE IMPACT STUDY MARKET8

8th and Market Streets / Center City
Philadelphia, Pennsylvania

Prepared For:

Market East Associates, L.P.
350 Sentry Parkway
Building 630, Suite 300
Blue Bell, PA 19422

Prepared By:

Pennoni Associates Inc.
3001 Market Street, Suite 200
Philadelphia, PA 19104-2897

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
THOMAS J. FRIESE
ENGINEER
No.37336-E

2-6-13

Updated February 14, 2013
MEAS 1201

Thomas J. Friese, P.E.

Pennoni

TABLE OF CONTENTS

PAGE

APPENDICES

INTRODUCTION

Appendix 34 of the Application and Disclosure Information requires a local impact report describing the impact of the proposed development on the municipality. This report describes the potential impacts to City of Philadelphia infrastructure, emergency services and the site in general. *Specifically we are providing statements on the following:*

I. Utility Service Availability
II. Emergency Services
III. Traffic Impacts (Summary of TIS)
IV. Public Transportation
V. Natural Resources
VI. Adjacent Land Uses

I. UTILITY SERVICE AVAILABILITY

Will-serve letters requesting confirmation from utility owners that the proposed casino complex can be serviced have been sent to utility owners. Copies of these letters and, where appropriate, attachments are included in Appendix A. To date, the Philadelphia Water Department has responded that existing infrastructure, with minor replacements, is satisfactory to provide sanitary and storm sewer service. Given the project in Center City, we anticipate all utilities will have reserve capacity so can service the proposed casino.

Specifics of the various utilities are provided below:

A. Sanitary and Storm Sewers

Sanitary and storm sewer service is provided by the City of Philadelphia Water Department (PWD.) The Department provides integrated water, wastewater and stormwater services. The sewers in this area of the City are "combined" in that they collect and convey sanitary effluent and stormwater runoff in the same pipe network.

1. Stormwater Runoff

Runoff from the site has historically been collected and conveyed to a 24" diameter vitrified clay pipe in Ranstead Street, at the southeast corner of the site. The Ranstead sewer connects downstream to the 8th Street sewer system, which connects to the Walnut Street system running east. Walnut Street connects to a 9'-6" x 11'-0" reinforced concrete box culvert that extends north on Front Street to an intercepting chamber at Ionic Street. At this point, low flows are directed to a separate intercepting sanitary sewer that runs south to the Southeast Treatment Plant. High flows to the intercepting chamber are passed through the structure to a pair of 9'-0"x11'-8" box culverts which outfall at the Delaware River.

The existing site condition is 100% impervious-surface draining to a system of pipes and inlets, so runoff during storms is significant, uncontrolled and untreated. Since the parking lot was constructed, the City has adopted stormwater management regulations that require management of stormwater discharge rates, volume and quality. The subject site is in the Delaware South Watershed, Management District Zone A. Therefore, the rate of runoff of all storms must not be exceeded from the pre-construction to post-construction condition, and must be decreased for the 2-year storm to the 1-year post-development condition. Additionally, the project currently proposes a significant green roof area which will help control runoff as well as provide water quality treatment. For these reasons, the proposed project will have a positive impact on the existing stormwater sewer infrastructure. Based on feedback from the PWD, the vitrified clay sewer in Ranstead Street may need to be reconstructed as the condition of the pipe is in question. Also, we anticipate that stormwater discharge will have to be routed to more than one receiving sewer.

2. Sanitary Sewer Service

As described above, the sanitary sewer service for this site is through a combined sewer system. The existing use does not include a sanitary sewer discharge. Options for the Casino include the storm sewer conveyance described above, and also discharge to the 30" diameter reinforced concrete pipe in 9th Street. This sewer joins the 5'-6"x5'-6" reinforced concrete box culvert following east in Market Street which eventually discharges into an intercepting chamber. As with the stormwater flows, low flow is directed to an intercepting sanitary sewer with eventual discharge to the Southeast Treatment Plant. Higher flows pass through the chamber with discharge to the Delaware River.

The sewer systems designed to handle sanitary effluent as well as stormwater runoff generally have significant excess capacity for the sanitary flows, and the Southeast Treatment Plant has excess capacity. The proposed Casino is expected to generate 150,000 to 200,000 gallons per day of sanitary flow which will not over tax the available sewer systems in this urban environment. Discharges are expected to be standard effluent from entertainment and restaurant venues so special discharge permits are not anticipated. An email from the PWD is attached in Appendix A and indicates that the "existing sewer system should be adequate for anticipated sanitary flow." An exhibit showing the existing sewers adjacent to the site is in Appendix B.

3. Water Service

As stated above, the Philadelphia Water Department is responsible for potable and fire protection water supply and distribution. Water is sourced from the Schuylkill and Delaware Rivers, and treated and distributed from three plants: Belmont, Queen Lane and Baxter. The three systems are interconnected although generally valved off to create separate districts.

The properties along Market Street east of City Hall are supplied directly or indirectly from a 12" main running in Market Street. This 12" main is supplied to the east from a 48" main running north/south in Broad and Juniper Streets, respectively. From the west, the 12" main is interconnected with a 48" main running north/south in 3rd Street. Both 48" mains are fed from the Baxter Water Treatment Plant located in Northeast Philadelphia, with an intake from the Delaware River.

With the major interconnections described, and other smaller interconnections at each cross-street along Market Street, the water services have redundancy and capacity to serve the proposed Casino Property. An exhibit showing the existing water mains adjacent to the site is in Appendix C.

II. EMERGENCY SERVICES

The Philadelphia Fire Department has been serving the City of Philadelphia as a professional fire fighting force since 1870. Market Street in Center City is generally serviced by crews out of fire houses in the 4th Battalion, of the First Division in the Fire Department. Battalion 4 includes engine and/or ladder companies at 101 North 4th Street and 133 North 10th Street, both within five blocks of the proposed Casino, as well as three others within 15 blocks. And with twelve other battalions, there are multiple redundancies for servicing the subject premises.

The extent of firefighting and medic unit facilities would appear to be adequate based on the current ability to service Center City; however, we have reached out to the Fire Department to verify that the proposed casino will not negatively impact "emergency service capabilities." We were asked to provide project information via email to Deputy Fire Commissioner Ernest Hargett of the Department. That correspondence is included in Appendix B.

The Philadelphia Police Department is the nation's fourth largest police department with 6,600 sworn members and 800 civilian personnel. The Department is divided into twenty-two districts which comprise six divisions. The subject property is located in the 6th District with headquarters at 235 North 11th Street, only five blocks removed from the proposed Casino. The proposed facility is in the heart of the City's retail and commercial business district, so has a large police presence today.

The addition of another business on Market Street, one open 24-hours per day will likely require modification to area police staffing and schedules, but would not be expected to impact the quality or otherwise degrade the services provided by the Police Department.

We contacted the 6th District Police Headquarters in order to verify that the proposed casino will not have "an adverse impact" on local police service capabilities. We were directed to the office of the City Solicitor, in particular Carlton Cummings, who offered to help ascertain whom we should be contacting from the City. A copy of the email request to Mr. Cummings is in Appendix B.

III. TRAFFIC IMPACT STUDY

A Traffic Impact Study has been completed for the proposed Casino. Rather than repeat the report at length here, the Executive summary has been copied below.

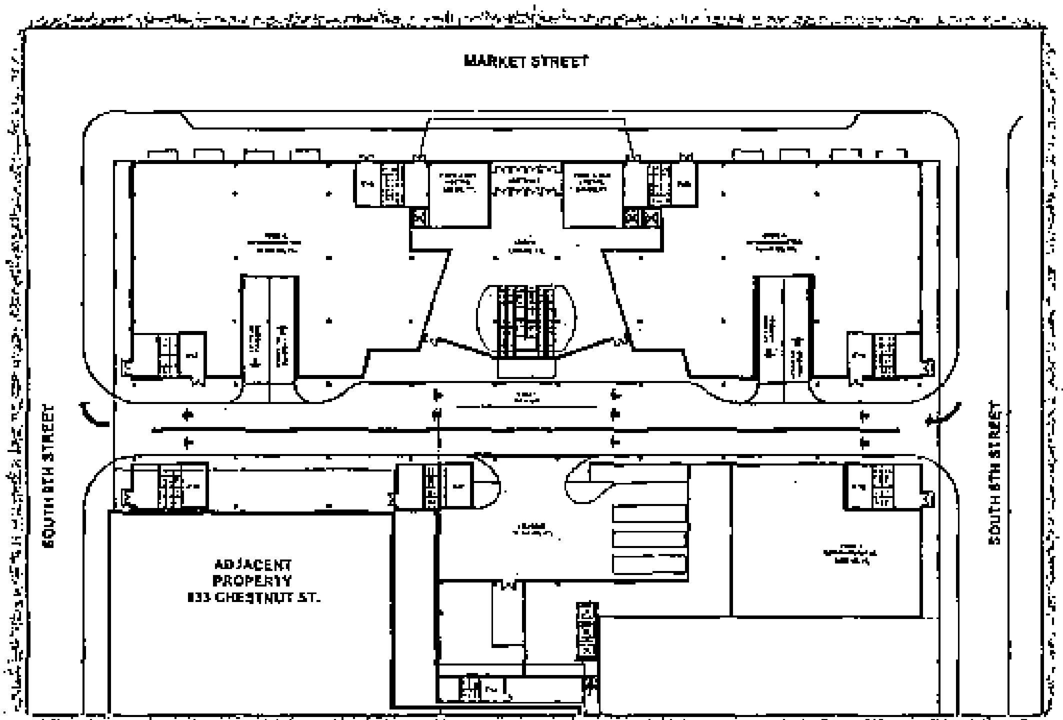
EXECUTIVE SUMMARY

Market East Associates, L.P. has plans to construct a casino complex, MARKET8, along the south side of Market Street (SR 2004) between South 8th Street and South 9th Street in the Market East section of City Center, Philadelphia. The MARKET8 casino complex is anticipated to include:

- 2400 slot machines,
- 82 table games,
- 30 poker tables,
- Food/beverage and entertainment venues, and
- 30,000 GSF quality restaurants.

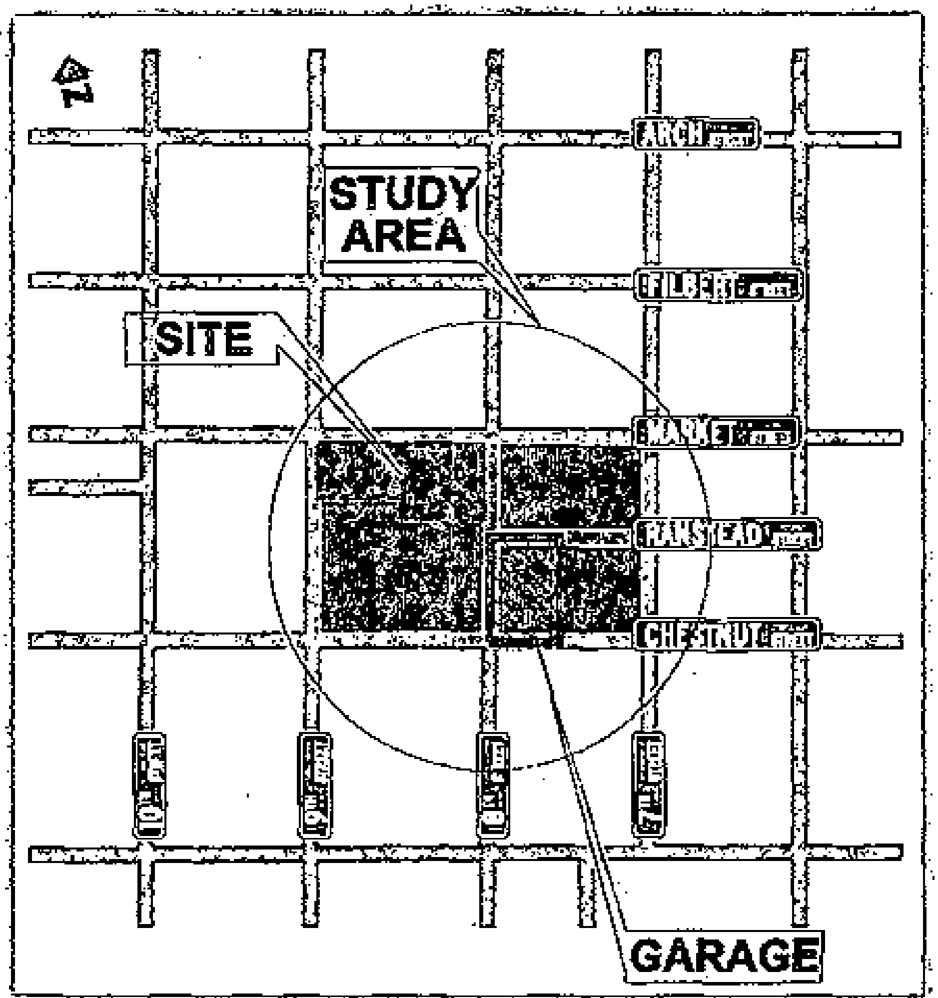
Two floors of gaming (approximately 80,000 GSF), and a 1000 space underground parking garage complete the proposed casino footprint. In addition, MARKET8 will provide 340 parking spaces at 733 Chestnut Street *to complement the main casino complex parking.*

Figure ES-1. Site Access – Street Level



The ingress access for the proposed main casino complex parking garage will be located on the west side of South 8th Street; with the corresponding egress onto 9th Street (See **Figure ES-1**). The ingress and egress point for the additional parking at 733 Chestnut Street will be located on the east side of South 8th Street and the north side of Chestnut Street. **FIGURE ES-2** indicates the primary study area for this proposed casino complex within Center City, Philadelphia.

Figure ES-2. Study Area



Turning movement counts, including heavy vehicles and buses, pedestrians and bicycles were conducted on a (non-event) Friday (October 19, 2012 and January 11, 2013 with schools in session) from 3:00 PM – 8:00 PM and on Saturday (October 20, 2012 and January 12, 2013) from 3:00 PM - 8:00 PM at the following intersections:

1. *Market Street at South 7th Street, South 8th Street and South 9th Street; and*
2. Chestnut Street and South 7th Street, South 8th Street and South 9th Street.

These study periods were chosen to coincide with peak traffic periods on the adjacent roadway network (typically 4:00 pm to 6:00 pm) on a typical weekday. The peak hours of trip generation for a casino complex during the weekends are anticipated to occur between the hours of 6:00 pm and 8:00 pm on Friday and Saturday evenings.

FINDINGS & RECOMMENDATIONS

Findings

- Development trips will be comprised of two main components: the 80,000 GSF Casino (with 3192 gaming positions, buffet, meeting room space) and approximately 30,000 GSF of Quality Restaurants *(ITE Land Use code 931, Trip Generation, 9th edition)* as part of the proposed complex. Projected peak hour trips for the casino for Friday and Saturday evening peak periods are based on research and information obtained from other casino traffic studies within the Philadelphia area and nationally.

- The capacity analyses performed herein indicates that the site traffic will have an insignificant impact on those intersections bordering the site. All study intersections operate at an overall and approach LOS of C or better for both the horizon year "No Build" and "Build" conditions.

- The site driveway exiting onto 9th Street (STOP controlled "right-out-only") will operate at LOS B in the Build condition. Subsequently, considering a "diminishing return" of impacts as traffic is distributed farther from the border intersections, these results would indicate that MARKET8 would have similar, nominal impacts at other intersections along primary ingress and egress transportation routes.

- Comparing the net "As-of-Right" vehicle trips to those for the proposed casino shows a significant increase in traffic if the proposed Market East site were to be developed per existing land use development guidelines. Specifically, 79% more traffic would typically be generated during the weekday PM Peak Hour (versus MARKET8 traffic) and 6% more traffic would be generated during the Saturday Peak Hour.

- The City's Zoning Code *(§14-405 SP-ENT Entertainment Special Purpose District - Licensed Gaming Facilities)* requires 4 parking spaces for every 5 slot machine or gaming positions provided for patrons and guests. Accordingly, the proposed complex would thus need to accommodate 2,554 parking spaces within or immediately adjacent to the proposed casino complex site.

- There are currently in excess of 2,800 parking spaces within a 5 minute walk available after 5:00 PM on an average (non-event) Friday and on an average (non-event) Saturday after 6:00 PM. Combined with the 1000 main casino complex parking spaces and the additional proposed 340 spaces at 733 Chestnut Street, the proposed complex can accommodate approximately 4,000 vehicles; immediately adjacent to the site, on an average Friday or Saturday evening.

Recommendations

The following recommendations will significantly improve the traffic operations within the study area, while allowing safe, unimpeded egress from the casino parking garage.

- Restrict of on-street parking along the east side of 9th Street 100 feet south of the facility exit drive north to the Market Street intersection to provide a separate northbound right turn lane;

- Optimization of the traffic signal timing at all study area intersections;

- Enhance trail-blazing signage to/from regional transportation routes to ensure "positive guidance" to/from the casino complex and primary travel routes for non-local drivers;

- Encourage greater use of mass transit as an alternative to driving via advertising and/or casino promotions;

- Work with SEPTA and Center City hotels to increase the frequency of bus and shuttle stops to the casino and/or creating a direct connection to the mass transit hub within the study area (8^{th} and Market Street);

Finally, the City of Philadelphia's Zoning Codes states that "parking provided in this (Special Purpose) District must be adequately served by high-capacity roads or driveways approved by the Streets Department as being adequate to safely serve the ingress and egress of patrons and guests using the facility." This requirement is clearly met given the close proximity of the proposed casino site to I-95 and the Vine Street Expressway. Suggested parking utilization strategies that would further reduce the need for on-site parking spaces would include:

1. *"Real-time" parking management for Casino parking;*
2. Shuttle bus service to/from the Casino and Center City Parking, Shopping venues, Hotels;
3. Proposed VIP and/or Valet Parking, and
4. Off-site Parking Accommodation for Casino employees.

Conclusions

Based on the findings indicated in this study:

- Transit service to the 8th and Market location is extraordinary. The proposed casino is in a prime location to access several modes of transit including: buses, subways, and regional rail. As a regional transit hub, the site is well served as a destination, and functions as one of the region's major points of transfer between transit facilities.

- The proposed casino is in a prime location to access I-95 and I-676 for regional access by *vehicular traffic.*

- Overall intersection delays due to casino vehicular traffic experience increases of less than 10 seconds beyond "No Build" conditions at all studied intersections. Levels of service (LOS) for the "Build" conditions meet or exceed typical LOS requirements for urban settings.

- If Office and General Retail space were developed at the proposed casino site, per "as-of-right" regulations, significantly more future traffic would be generated.

- The available parking immediately adjacent to the site, combined with the proposed parking within the site, significantly exceeds the parking requirements of the zoning code. The site, located within the City of Philadelphia's urban core, provides excellent flexibility for development program modifications through maximization strategies for on-site parking, or greater utilization rates benefitting nearby, off - site parking facilities.

If those recommendations suggested above are implemented as part of the MARKET8 project, there will be nominal impacts on the surrounding transportation system with the Center City section of Philadelphia.

IV. PUBLIC TRANSPORTATION

The casino is in a prime location to access several modes of transit including buses, subways, and regional rail, all of which are immediately adjacent to the site.

Please refer to Part III, Traffic Impact Study for further information and details.

V. NATURAL RESOURCES

The proposed Casino site is located in a very urban area, Center City Philadelphia. The site is currently being used as a parking lot (approximately 280 vehicles) for hourly/daily/weekly/monthly rentals. There are no natural resources on the property which is entirely paved with bituminous and cement concrete. Stormwater runoff, as described above, is unmanaged and conveyed to the City pipe system and infrastructure. The current environmental impacts of the site are air pollution from the vehicles using the facility and the unmanaged stormwater runoff.

The proposed use will entail construction of a building over the entire site. There will be multiple levels of parking below grade in mechanically ventilated garage space, currently estimated to include 1,000 spaces. As there will be an increase in the volume of traffic to the site and parking of vehicles whether by valet or self-parking, some degradation to the air quality can be expected. However, relative to the number of daily vehicular trips experienced along Market and other perimeter streets, and the Center City area, the impact will not be significant. As the project entails construction of parking for more than 250 vehicles in the Central Business District, the project will require "Complex Source" approval and permitting, including submission of a traffic impact study and air quality impacts statement. The Applicant will comply with air quality design criteria.

As the site construction will disturb more than 5,000 SF and one acre, erosion and sediment controls will be necessary and the project will require erosion and sediment control, and stormwater management permits from the City and State Department of Environmental Protection (PADEP). The permits will require design in accordance with PADEP rules and guidelines to ensure no loss of soil and sediment during construction and proper post-construction stormwater management for long term runoff control. The applicant will apply for and receive the required permits prior to beginning construction and adhere to the permit requirements during and post-construction.

As there will be below grade parking proposed for this development, a significant volume of soil will be excavated and disposed of off-site. In accordance with Pennsylvania Clean Fill Law criteria, the soil will be tested and characterized so proper handling and disposal regimes can be designed. All excavated materials will be disposed of as required by law at legally permitted disposal sites.

VI. ADJACENT LAND USES

Adjacent land uses are those that would be expected in an urban, city location. On the same block exists a twelve-story office building with ground floor retail. Recorded easements will require the proposed Casino building to be set-back from some property lines shared with this building, thus minimizing potential impacts. This building has truck loading/service entrance/exit on 8th Street which is adjacent to the proposed Casino loading/service driveway, thus consolidating service activities on the block. The loss of parking spaces and some increased traffic is expected; however, the peak traffic generation and parking needs for the two uses occur at different times reducing competition for parking. A more thorough review of traffic and parking conditions is included in the Pennoni Associate's Traffic Impact Study provided with the Casino Application. This study also illustrates the many parking options within a short walking distance of this property, which can off-set the loss of public parking. Across Market Street are building structures ranging from six to twelve stories, again typically with retail on the ground floor and office uses above. The addition of a destination business in the block will increase foot traffic past and potential patrons to area establishments. The 24-hour nature of the Casino enterprise and its high level of security will enliven the block while maintaining a safe corridor. The proposed dining establishments associated with the Casino will also draw patrons to the area.

The United States Post Office maintains a facility across 9th Street from the proposed Casino. The loss of the parking lot immediately adjacent to the facility will likely result in postal employees who use the lot having to park further from their place of employment; however, as discussed in the Traffic Impact Study, there are many alternatives for parking within a short walking distance.

Across 8th Street are a pharmacy, Burger King fast food restaurant and a public parking lot. All three of these establishments will be affected positively by the addition of a pedestrian and vehicular traffic generator on the subject premises.

As detailed in the Traffic Impact Study, this Casino location has an extraordinary number of options for mass transit. This results in increased pedestrian traffic as users complete or start their commutes/trips which is one goal of the City to enliven blocks, particularly downtown. The ability to use mass transit also will help reduce any impact to local business from the loss of public parking spaces associated with the Casino operations.

P:\Projects\MEAS\1201-8th and Market Mixed Use\DOCUMENTS\REPORTS\LOCAL INFRASTRUCTURE IMPACT\Infrastructure Report 02-14-13.docx

APPENDIX A

Pennoni

PENNONI ASSOCIATES INC
CONSULTING ENGINEERS

MEAS1201

February 5, 2013

Ms. Nancy Spence
AT&T
AT&T Local Services
2315 Salem Rd F11
Conyers, GA 30013

RE: **REQUEST FOR CONFIRMATION OF UTILITY AVAILABILITY**
8TH STREET AND MARKET STREET, PHILADELPHIA, PA

Dear Ms. Spence:

Market East Associates, LLP has plans to construct a casino complex -- Casino Philadelphia - to be located on the south side of Market Street between 8th Street and 9th Street in the Market East section of City Center, Philadelphia. The Casino Philadelphia casino complex is anticipated to be comprised of a four story building including:

- 2400 slot machines
- 82 table games
- 30 poker tables
- Food/beverage and entertainment venues, and
- 60,000 GSF quality restaurants.

Two floors of gaming (approximately 80,000 GSF), and a 1000 space, four level underground parking garage complete the proposed casino footprint. The facility is anticipated to include a 168-room hotel in an 8 to 10 story structure on the same block. Additional parking will be provided in an existing garage at the northeast corner of 8th and Chestnut Streets.

Due to the aggressive nature of the project we are requesting a timely response to this request for confirmation of telecommunications utility service availability.

Thank you for your cooperation in this matter. Should you have any questions or comments, please contact us at 215-222-3000.

Sincerely,

PENNONI ASSOCIATES INC.

Lawrence E. Leso, Jr., PE, PLS
CC: Colin Jones

Pennoni

PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

MEAS1201

February 5, 2013

Ms. Suzette Walker
Verizon Pennsylvania Inc
900 Race Street, 6th floor
Philadelphia, PA 19107

RE: REQUEST FOR CONFIRMATION OF UTILITY AVAILABILITY
8TH STREET AND MARKET STREET, PHILADELPHIA, PA

Dear Ms. Walker:

Market East Associates, LLP has plans to construct a casino complex – Casino Philadelphia - to be located on the south side of Market Street between 8th Street and 9th Street in the Market East section of City Center, Philadelphia. The Casino Philadelphia casino complex is anticipated to be comprised of a four story building including:

- 2400 slot machines
- 82 table games
- 30 poker tables
- Food/beverage and entertainment venues, and
- 60,000 GSF quality restaurants.

Two floors of gaming (approximately 80,000 GSF), and a 1000 space, four level underground parking garage complete the proposed casino footprint. The facility is anticipated to include a 168-room hotel in an 8 to 10 story structure on the same block. Additional parking will be provided in an existing garage at the northeast corner of 8th and Chestnut Streets.

Due to the aggressive nature of the project we are requesting a timely response to this request for confirmation of telecommunications utility service availability.

Thank you for your cooperation in this matter. Should you have any questions or comments, please contact us at 215-222-3000.

Sincerely,

PENNONI ASSOCIATES INC.

Lawrence E. Leso, Jr., PE, PLS
CC: Colin Jones

Pennoni
PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

MEAS1201

February 5, 2013

Mr. William Lindquist
Veolia Energy Philadelphia, Inc.
2600 Christian Street
Philadelphia, PA. 19146

RE: REQUEST FOR CONFIRMATION OF UTILITY AVAILABILITY
8TH STREET AND MARKET STREET, PHILADELPHIA, PA

Dear Mr. Lindquist:

Market East Associates, LLP has plans to construct a casino complex – Casino Philadelphia - to be located on the south side of Market Street between 8th Street and 9th Street in the Market East section of City Center, Philadelphia. The Casino Philadelphia casino complex is anticipated to be comprised of a four story building including:

- 2400 slot machines
- 82 table games
- 30 poker tables
- Food/beverage and entertainment venues, and
- 60,000 GSF quality restaurants.

Two floors of gaming (approximately 80,000 GSF), and a 1000 space, four level underground parking garage complete the proposed casino footprint. The facility is anticipated to include a 168-room hotel in an 8 to 10 story structure on the same block. Additional parking will be provided in an existing garage at the northeast corner of 8th and Chestnut Streets.

Due to the aggressive nature of the project we are requesting a timely response to this request for confirmation of steam utility service availability.

Thank you for your cooperation in this matter. Should you have any questions or comments, please contact us at 215-222-3000.

Sincerely,

PENNONI ASSOCIATES INC.

Lawrence E. Leso, Jr., PE, PLS
CC: Colin Jones

Pennoni

PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

MEAS1201

February 5, 2013

Mr. Jeffery Simmet
Philadelphia Water Department
1101 Market Street
2nd Floor ARA Tower
Philadelphia, PA. 19107-2994

RE: REQUEST FOR CONFIRMATION OF UTILITY AVAILABILITY
8TH STREET AND MARKET STREET, PHILADELPHIA, PA

Dear Mr. Simmet:

Market East Associates, LLP has plans to construct a casino complex – Casino Philadelphia - to be located on the south side of Market Street between 8th Street and 9th Street in the Market East section of City Center, Philadelphia. The Casino Philadelphia casino complex is anticipated to be comprised of a four story building including:

- 2440 slot machines,
- 83 table games which includes 25 poker tables
- Poker and baccarat rooms,
- Food/beverage and entertainment venues, and
- 30,000 GSF quality restaurants.

Two floors of gaming (approximately 80,000 GSF), and a 1000 space, four level underground parking garage complete the proposed casino footprint. The facility is anticipated to include a 150-room hotel in an 8 to 10 story structure on the same block. Additional parking will be provided in an existing garage at the northeast corner of 8th and Chestnut Streets.

Due to the aggressive nature of the project we are requesting a timely response to this request for confirmation of water and stormwater sewer utility availability.

Thank you for your cooperation in this matter. Should you have any questions or comments, please contact us at 215-222-3000.

Sincerely,

PENNONI ASSOCIATES INC.

Lawrence E. Leso, Jr., PE, PLS
CC: Colin Jones

Frick, Allyson

From: Friese, Thomas J.
Sent: Wednesday, February 06, 2013 10:36 AM
To: Frick, Allyson
Subject: FW: Mixed-Use Project- 8th and Market

From: Jeffrey.Simmet@phila.gov [mailto:Jeffrey.Simmet@phila.gov]
Sent: Monday, November 05, 2012 2:04 PM
To: Friese, Thomas J.
Cc: Markham, James
Subject: Re: Mixed-Use Project- 8th and Market

Tom,

The existing sewer system should be adequate for anticipated sanitary flow. Site drainage may need to be distributed and may also require reconstruction of the sewer in Ranstead Street.

Jeff

"Friese, Thomas J." <TFriese@Pennoni.com>

11/05/2012 11:05 AM

To "Jefferey Simmet (jeffrey.simmet@phila.gov)" <jeffrey.simmet@phila.gov>
cc "Markham, James" <JMarkham@Pennoni.com>
Subject Mixed-Use Project- 8th and Market

Jeff- As we discussed, Pennoni is working with a developer for a mixed-use redevelopment of the parking lot on the south side of Market Street, between 8th and 9th Streets. We would like to determine if there are any know issues with the storm/sanitary sewers that service the property.

Stormwater should remain as-is or be reduced from current flows as the new development will have to comply with PWD stormwater management regulations. The existing development does not provide stormwater management beyond collection and conveyance. Sanitary sewage flows have not been fully determined but are anticipated to be in the area of 150,000 to 200,000 GPD.

Thank you for taking a look at this. We look forward to your email response.

Tom

Thomas J. Friese, PE
Land Development Division Manager
Pennoni Associates Inc.
One Drexel Plaza
3001 Market Street, Suite 200
Philadelphia, PA 19104
Office 215-222-3000 x7781 | Direct 215-254-7781
Fax 215-222-0598 | Mobile 267-693-8048
http://www.pennoni.com | tfriese@pennoni.com

Consulting Engineers providing...
Environmental – Geotechnical – Inspection & Testing – Land Development – MEP
Landscape Architecture – Structural – Survey – Transportation – Water/Wastewater

PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

MEAS1201

February 5, 2013

Mr. Eric Ponert
Philadelphia Water Department
1101 Market Street
2nd Floor ARA Tower
Philadelphia, PA. 19107-2994

RE: REQUEST FOR CONFIRMATION OF UTILITY AVAILABILITY
8TH STREET AND MARKET STREET, PHILADELPHIA, PA

Dear Mr. Ponert:

Market East Associates, LLP has plans to construct a casino complex – Casino Philadelphia - to be located on the south side of Market Street between 8th Street and 9th Street in the Market East section of City Center, Philadelphia. The Casino Philadelphia casino complex is anticipated to be comprised of a four story building including:

- 2400 slot machines
- 82 table games
- 30 poker tables
- Food/beverage and entertainment venues, and
- 60,000 GSF quality restaurants.

Two floors of gaming (approximately 80,000 GSF), and a 1000 space, four level underground parking garage complete the proposed casino footprint. The facility is anticipated to include a 168-room hotel in an 8 to 10 story structure on the same block. Additional parking will be provided in an existing garage at the northeast corner of 8th and Chestnut Streets.

Due to the aggressive nature of the project we are requesting a timely response to this request for confirmation of sanitary sewer capacity availability.

Thank you for your cooperation in this matter. Should you have any questions or comments, please contact us at 215-222-3000.

Sincerely,

PENNONI ASSOCIATES INC.

Lawrence E. Leso, Jr., PE, PLS
CC: Colin Jones

PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

MEAS1201

February 5, 2013

Mr. James Bochanski
Philadelphia Gas Works
Address: 800 W Montgomery Ave
Philadelphia, PA. 19122

RE: REQUEST FOR CONFIRMATION OF UTILITY AVAILABILITY
8TH STREET AND MARKET STREET, PHILADELPHIA, PA

Dear Mr. Bochanski:

Market East Associates, LLP has plans to construct a casino complex – Casino Philadelphia - to be located on the south side of Market Street between 8th Street and 9th Street in the Market East section of City Center, Philadelphia. The Casino Philadelphia casino complex is anticipated to be comprised of a four story building including:

- 2400 slot machines
- 82 table games
- 30 poker tables
- Food/beverage and entertainment venues, and
- 60,000 GSF quality restaurants.

Two floors of gaming (approximately 80,000 GSF), and a 1000 space, four level underground parking garage complete the proposed casino footprint. The facility is anticipated to include a 168-room hotel in an 8 to 10 story structure on the same block. Additional parking will be provided in an existing garage at the northeast corner of 8th and Chestnut Streets.

Due to the aggressive nature of the project we are requesting a timely response to this request for confirmation of gas utility service availability.

Thank you for your cooperation in this matter. Should you have any questions or comments, please contact us at 215-222-3000.

Sincerely,

PENNONI ASSOCIATES INC.

Lawrence E. Leso, Jr., PE, PLS
CC: Colin Jones

PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

MEAS1201

February 5, 2013

Mr. David Milowicki
PECO Energy Company, Philadelphia Region
830 S. Schuylkill Avenue
Philadelphia, PA 19146-2395

RE: REQUEST FOR CONFIRMATION OF UTILITY AVAILABILITY
8TH STREET AND MARKET STREET, PHILADELPHIA, PA

Dear Mr. Milowicki:

Market East Associates, LLP has plans to construct a casino complex – Casino Philadelphia - to be located on the south side of Market Street between 8th Street and 9th Street in the Market East section of City Center, Philadelphia. The Casino Philadelphia casino complex is anticipated to be comprised of a four story building including:

- 2400 slot machines
- 82 table games
- 30 poker tables
- Food/beverage and entertainment venues, and
- 60,000 GSF quality restaurants.

Two floors of gaming (approximately 80,000 GSF), and a 1000 space, four level underground parking garage complete the proposed casino footprint. The facility is anticipated to include a 168-room hotel in an 8 to 10 story structure on the same block. Additional parking will be provided in an existing garage at the northeast corner of 8th and Chestnut Streets.

Due to the aggressive nature of the project we are requesting a timely response to this request for confirmation of electric utility service availability.

Thank you for your cooperation in this matter. Should you have any questions or comments, please contact us at 215-222-3000.

Sincerely,

PENNONI ASSOCIATES INC.

Lawrence E. Leso, Jr., PE, PLS
CC: Colin Jones
Enclosed: Meter Request

PECO
Application for Electric Service & Meter

PECO. An Exelon Company

M-24175 (front) Rev. 5/10

INSTRUCTIONS:

Please complete the *front* page of this request and return to the PECO Regional Office *(listed below)* in the area service is required. Incomplete information may result in a delay in processing.

All work must comply with PECO Electric Service Requirements manual and be inspected by an approved inspection agency. (City of Philadelphia requests may be shared with Licenses & Inspections). Not all service voltages are available in all areas. ***Before purchasing electrical equipment or proceeding with any wiring,*** information regarding service availability and meter location should be obtained from the company.

A credit application and agreement must be completed ***if the customer has not had PECO service within the last 60 days.*** The company reserves the right to *cancel* this request if no further communication is received from the customer *within 90 days* of PECO's response date.

NEW BUSINESS SERVICES (1-800-454-4100) http://www.peco.com

PHILADELPHIA COUNTY
830 S. Schuylkill Ave.
Phila, PA 19146-2395
(215) 731-2340
Fax # (215) 731-2327

DELAWARE & CHESTER COUNTIES
1050 W. Swedesford Rd.
Berwyn, PA 19312
(610) 725-7160
Fax # (610) 725-1416

BUCKS & MONTGOMERY COUNTIES
400 Park Ave.
Warminster, PA, 18974
(215) 956-3270
Fax # (215) 956-3240
** Lower Merion is served by Del/Chester Region

NEW RESIDENTIAL CONSTRUCTION
(All Counties)
400 Park Ave.
Warminster, PA 18974
(215) 956-3010
Fax # (215) 956-3380

CUSTOMER NAME: Colin A. Jones
Tax ID # or SSN or Driver's License No.:
*ADDRESS TO BE SERVED: 800-838 Market Street
APARTMENT / LOT #:
POST OFFICE: Philadelphia
ZIP CODE: 19107
*UTILITY POLE #:
*SUBDIVISION / DEVELOPMENT:
TOWNSHIP/MUNICIPALITY/WARD #:
* If Applicable
** Please use this address when applying for underwriter's inspection

CUSTOMER'S BILLING ADDRESS: 350 Sentry Parkway Bldg 60 Ste 300
PECO ENERGY ACCOUNT #:
POST OFFICE: Blue Bell, PA
ZIP CODE: 19422
TELE. #: 610-260-1452

SEND REPLY TO:

ELECTRICIAN'S OR BUILDER'S NAME: Pennoni Associates
ADDRESS: 3001 Market Street, 2nd Floor
Reply Requested by: / /
POST OFFICE: Philadelphia, PA
ZIP CODE: 19104
TELE. #: 215-222-3000
FAX #: 215-222-0598

CURRENT CONSTRUCTION STATUS:
☒ Not Started - Date Customer Will Start Work 6 / 1 / 14 ☐ In Progress ☐ Completed

Approximate Date Service Requested: 6 / 1 / 15

CUSTOMER COMMENTS / DESCRIPTION OF WORK:

Preliminary Design - Requesting "Will Serve" response at this time.

SUBMITTED BY: John C. Medendorp IV DATE: 02/05/2013
Enclosures: ☒ Site Plans ☐ Single Line Diagram ☐ Substation Arrangement

TYPE OF REQUEST
☒ New Service ☐ Load Increase / Decrease ☐ Reintroduction of Service
☐ Temporary Service ☐ Upgrade / Changes ☐ Demolition (Remove Service)
☐ Separation of Wiring ☐ Service Relocation ☐ Make-Safe (De-energize / Cover)

TYPE OF SERVICE: Please include site plan.
☐ RESIDENTIAL: ☐ Single House ☐ Mobile Home ☐ Apartment ☐ Modular Home ☐ Duplex ☐ Town House ☐ Other ______
☒ COMMERCIAL: ☐ Store ☐ Office ☐ Industrial ☐ Warehouse ☐ Restaurant ☒ Other Casino/Hotel
Area of Building 512,000 Sq. Ft.

SERVICE CHARACTERISTICS:
☐ Underground ☐ Aerial

	PHASE	VOLTS	WIRES
☐	1	120	2
☐	1	120/240	3
☐	2	120/240	5

	PHASE	VOLTS	WIRES
☐	3	240	3
☐	3	120/240	4
☐	3	120/208	4
☐	3	277/480	4
☐	3	13200	3 or 4
☐	3	33000	3 or 4

AMPS ______

METER INFO:
☐ Single Meter Required ☐ Two Meters, Commercial (General/Totalizer) ☐ Multiple Meters Total No. ______

HEATING / AIR CONDITIONING:
☐ Heat Pump ____ Tons ☐ Resistance ☐ Natural Gas ☐ Other ______
☐ Central Air ____ Tons ☐ Propane Type Back-up ______

CHARACTERISTICS OF NEW OR ADDITIONAL LOAD:

TYPE	CONNECTED LOAD (KW)	PECO ENERGY USE ONLY (DEMAND) SUMMER (KW)	WINTER (KW)
LIGHTING			
HEATING			
AIR COND.			
TANKLESS WATER HTR			
MISC.			
TOTAL			

Include single line diagram and substation arrangement if appropriate.

LARGEST MOTOR SPECIFICATIONS

QUANTITY	
SIZE (HP)	
LOCKED ROTOR CURRENT	
MOTOR CODE LETTER	
PHASE	
VOLTAGE	
FREQ. OF STARTING (per hr.)	
PURPOSE	

TOTALIZER LOAD: ______ kW

GENERAL LOAD: 5,000 kW

INFORMATION BELOW WILL BE FILLED IN BY PECO:

Service Request No.

USMAJ ACCT REP	TELEPHONE	DATE RECEIVED	DESIGNER	TELEPHONE	DATE RECEIVED

POL SUB	RATE	RIDER	CONTRACT LIMITS	SIC NUMBER	I NUMBER	DATE REPLY COMPLETED

AMPS	WIRES	VOLTAGE	PHASE	CIRCUIT	C-QUAD	T-QUAD	LOAD (KVA)
							SUMMER ___ WINTER ___

SERVICE CHARACTERISTICS – Select One from Each

SERVICE TYPE

☐ Aerial ☐ Underground ☐ URD

RATE:

☐ Residential ☐ Comm (Non-Demand) ☐ Comm (Demand) ☐ HT/PD

GENERATION PROCUREMENT CLASS:

☐ Class 1 (Residential) ☐ Class 2 (Commerical, less than 100kW)

☐ Class 3 (Commercial, 100kW to 500kW) ☐ Class 4 (Commerical, greater than 500kW)

NOTE: The customer's initial Procurement Class will be determined by PECO, based on peak load estimates for the first year of service. The customer's Procurement Class will be adjusted each year, based on actual usage

METER TYPE:

☐ KWH ☐ IND DEMAND ☐ RECORDER ☐ TOU

SERVICE PHASING:

☐ SINGLE PHASE ☐ TWO PHASE ☐ THREE PHASE

POLE # / MH # LOCATION

CUT THROUGH DATE

SERVICE REQUIREMENTS:

☐ Present Service OK ☐ Loop Only

☐ Tape Only ☐ See Job # ___________

METERING LOCATION AND REQUIREMENTS:

☐ Present Location: Meter # ________ ☐ CTs - ____ ☐ PTs - ____

☐ Indoor ☐ Outdoor ☐ On ____ Wall, ____ Ft. From ____ Wall, ____ ft. Above Ground

ADVANCE NOTIFICATIONS:

Underwriter's Cert. Required ☐ Yes ☐ No

Customer to Trench ☐ Yes ☐ No

Permit Required ☐ Yes ☐ No ☐ State ☐ Other ________

ACT 222 Cert. Required ☐ Yes # ________ ☐ No ☐ N/A

PA One Call # ____ ____________ ____ Date ____ ______

☐ Gas ☐ BTCO ☐ CATV ☐ Other ____ ______ ______ Date ________

CUSTOMER BILLING:

Advance Billing Required ☐ Yes $ ________ ☐ No

Customer Charges: $__________ __________

Cust. # ________ ________ Date ____________

BTCO # ____________ Date ____________

CATV # ____________ Date ____________

Other ________ ________ Date ________ ________

SKETCH / INSTRUCTIONS

Pennoni
PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

MEAS1201

February 5, 2013

Mr. Pat Lavin
Comcast Cable
4400 Wayne Ave
Philadelphia, PA. 19140

RE: REQUEST FOR CONFIRMATION OF UTILITY AVAILABILITY
8TH STREET AND MARKET STREET, PHILADELPHIA, PA

Dear Mr. Lavin:

Market East Associates, LLP has plans to construct a casino complex – Casino Philadelphia - to be located on the south side of Market Street between 8th Street and 9th Street in the Market East section of City Center, Philadelphia. The Casino Philadelphia casino complex is anticipated to be comprised of a four story building including:

- 2400 slot machines
- 82 table games
- 30 poker tables
- Food/beverage and entertainment venues, and
- 60,000 GSF quality restaurants.

Two floors of gaming (approximately 80,000 GSF), and a 1000 space, four level underground parking garage complete the proposed casino footprint. The facility is anticipated to include a 168-room hotel in an 8 to 10 story structure on the same block. Additional parking will be provided in an existing garage at the northeast corner of 8th and Chestnut Streets.

Due to the aggressive nature of the project we are requesting a timely response to this request for confirmation of communications utility service availability.

Thank you for your cooperation in this matter. Should you have any questions or comments, please contact us at 215-222-3000.

Sincerely,

PENNONI ASSOCIATES INC.

Lawrence E. Leso, Jr., PE, PLS
CC: Colin Jones

APPENDIX B

Friese, Thomas J.

From:	Friese, Thomas J.
Sent:	Tuesday, January 29, 2013 3:53 PM
To:	carlton.cummings@phila.gov
Cc:	francois.dutchie@phila.gov; Markham, James; Colin Jones (cjones@GOLDENBERGgroup.com)
Subject:	Casino Philadelphia- 8th and Market

Carlton- I appreciate your taking my call this afternoon and playing the phone tag until we could connect. As we discussed, Pennoni is providing consulting engineering services to the developer who is vying for a casino license for the property at 8th and Market Streets in Philadelphia. As part of that license application, applicants are asked to provide all types of information including a report on local infrastructure impacts. In this particular case, we are inquiring to find out the City's opinion as to "any adverse impact" on "local police and emergency service capabilities," from operation of the proposed casino. Specifics of the proposed casino at this location are as follows:

> *Market East Associates, LLP has plans to construct a casino complex – Casino Philadelphia - to be located on the south side of Market Street between 8th Street and 9th Street in the Market East section of City Center, Philadelphia. The Casino Philadelphia casino complex is anticipated to be comprised of a four story building including:*
>
> *2440 slot machines,*
> *83 table games which includes 25 poker tables*
> *Poker and baccarat rooms,*
> *Food/beverage and entertainment venues, and*
> *30,000 GSF quality restaurants.*
>
> *Two floors of gaming (approximately 80,000 GSF), and a 1000 space, four level underground parking garage complete the proposed casino footprint. The facility is anticipated to include a 150-room hotel in an 8 to 10 story hotel on the same block. Additional parking will be provided in an existing garage at the northeast corner of 8th and Chestnut Streets.*

Please let us know if you can provide the requested information or if we need to turn to other authorities. As discussed, we have already reached out to the Fire Department, and the call to you resulted from a conversation with someone at the Police Department 6th District Station.

Thank you,

Tom

Thomas J. Friese, PE
Land Development Division Manager

Pennoni Associates Inc.
One Drexel Plaza
3001 Market Street, Suite 200
Philadelphia, PA 19104
Office 215-222-3000 x7781 | Direct 215-254-7781
Fax 215-222-0598 | Mobile 267-693-8046
http://www.pennoni.com | tfriese@pennoni.com

Consulting Engineers providing...
Environmental – Geotechnical – Inspection & Testing – Land Development – MEP
Landscape Architecture – Structural – Survey – Transportation – Water/Wastewater

Friese, Thomas J.

From:	Friese, Thomas J.
Sent:	Tuesday, January 29, 2013 4:03 PM
To:	ernest hargett@phila.gov
Cc:	deborah.mannix@phila.gov; Markham, James, Colin Jones (cjones@GOLDENBERGgroup.com)
Subject:	Proposed Casino- 8th and Market

Dep. Commissioner Hargett- I spoke yesterday to your assistant Debbie Mannix who said that you might be the right person to talk to about the proposed Philadelphia Casino to be located on the old Gimbals store site at 8th and Market Streets.

Pennoni Associates has been retained by the developer to prepare various infrastructure documentation, in particular relating to the application criteria for a casino license. The Pennsylvania Gaming Control Board published an *"Application and Public Disclosure Information Form"* outlining all the data and information to be submitted with an application. One of the interests of the Board is the impact the proposed casino facility will have on "emergency service capabilities," if any. Given the significant Fire Department presence in Center City, we would not anticipate a degradation in service created by this development, or an inability to service the proposed casino, but of course would like to have that discussion with the Fire Department.

Market East Associates, LLP has plans to construct a casino complex – Casino Philadelphia - to be located on the south side of Market Street between 8th Street and 9th Street in the Market East section of City Center, Philadelphia . The Casino Philadelphia casino complex is anticipated to be comprised of a four story building including:

- 2440 slot machines,
- 83 table games which includes 25 poker tables
- Poker and baccarat rooms,
- Food/beverage and entertainment venues, and
- 30,000 GSF quality restaurants.

Two floors of gaming (approximately 80,000 GSF), and a 1000 space, four level underground parking garage complete the proposed casino footprint. The facility is anticipated to include a 150-room hotel in an 8 to 10 story structure on the same block. Additional parking will be provided in an existing garage at the northeast corner of 8th and Chestnut Streets.

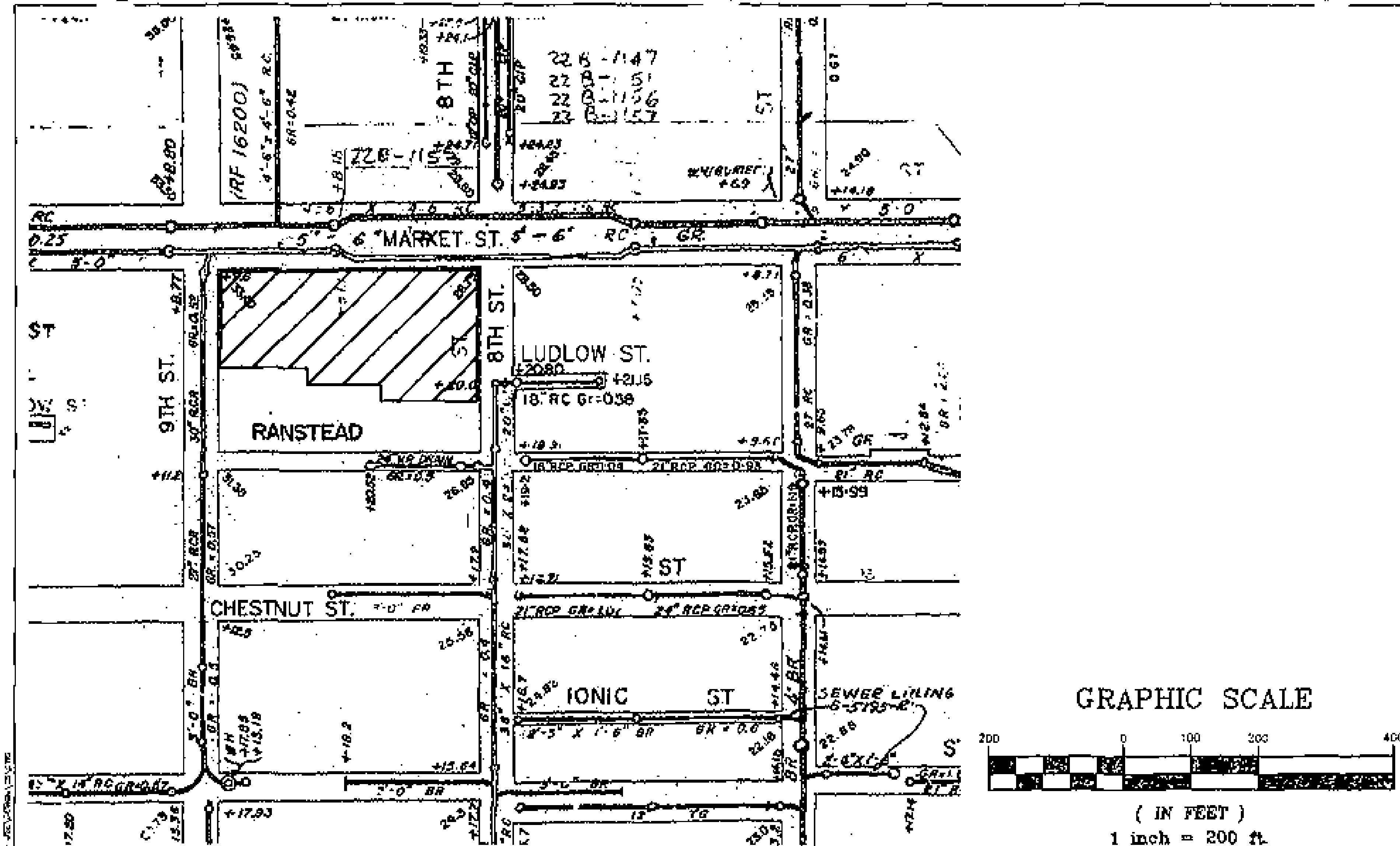
Please let us know your thoughts.

Thomas J. Friese, PE
Land Development Division Manager

Pennoni Associates Inc.
One Drexel Plaza
3001 Market Street, Suite 200
Philadelphia, PA 19104
Office 215-222-3000 x7781 | Direct 215-254-7781
Fax 215-222-0598 | Mobile 267-693-8048
http://www.pennoni.com | tfriese@pennoni.com

Consulting Engineers providing...
Environmental – Geotechnical - Inspection & Testing – Land Development – MEP
Landscape Architecture - Structural – Survey – Transportation – Water/Wastewater

APPENDIX C



Pennoni

Pennoni Associates Inc
Consulting Engineers

One Drexel Plaza
3001 Market Street
Philadelphia, PA 19104

PROPOSED MIXED-USE DEVELOPMENT

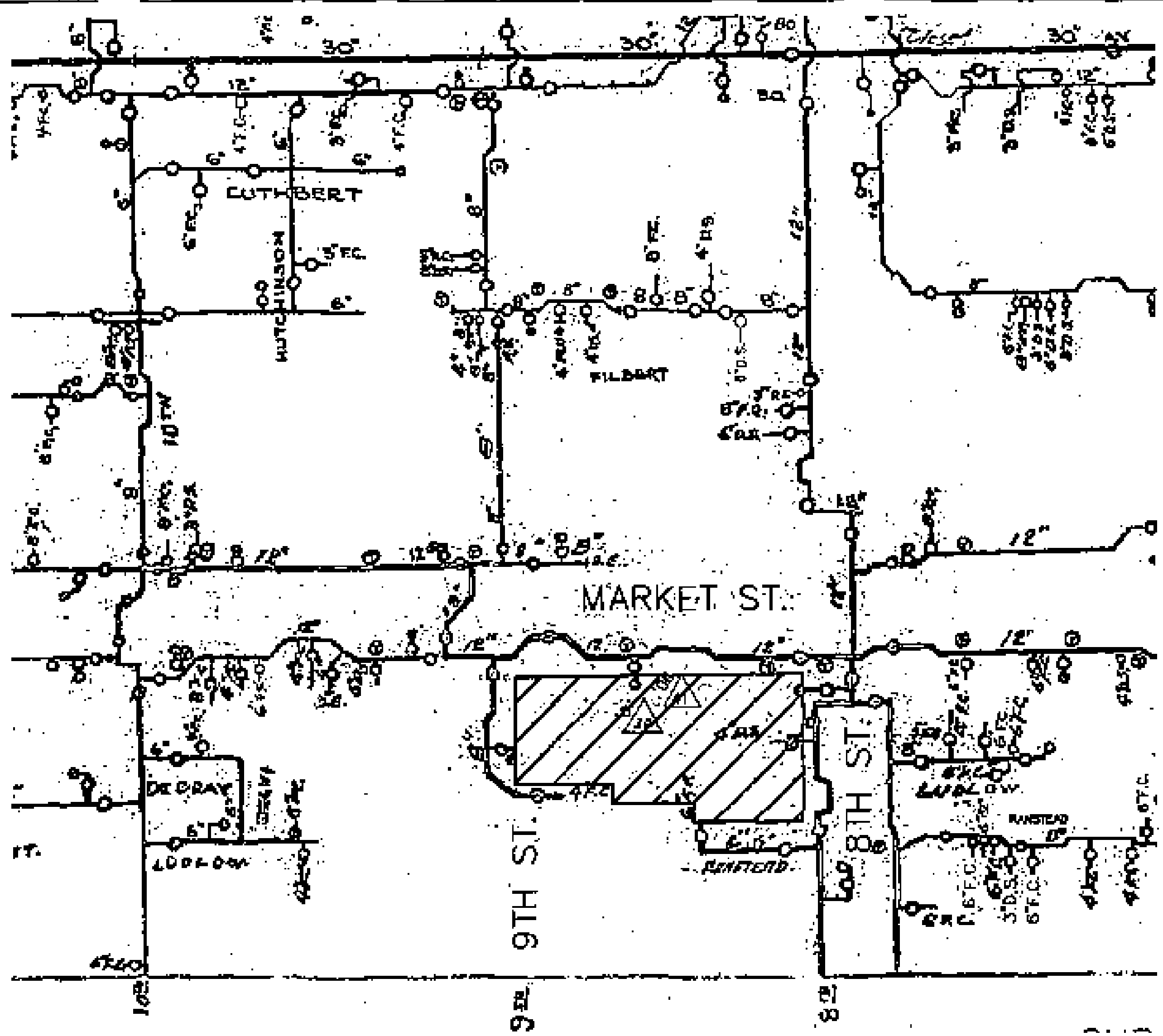
8TH AND MARKET STREETS
PHILADELPHIA, PHILADELPHIA COUNTY, PENNSYLVANIA

SEWER EXHIBIT

MARKET EAST ASSOCIATES, L.P.

SUITE 300, 350 SENTRY PARKWAY
BLUE BELL, PENNSYLVANIA 19422

SCALE: 1" = 200'
DATE: 11/06/2012
DWN BY: JCM
REV:
REV BY: TJF
DWG #: EX-2
JOB #: MEAS1201
SHEET 2 OF 2



Pennoni

Pennoni Associates Inc.
Consulting Engineers

One Drexel Plaza
3001 Market Street
Philadelphia, PA 19104

PROPOSED MIXED-USE DEVELOPMENT

8TH AND MARKET STREETS
PHILADELPHIA, PHILADELPHIA COUNTY, PENNSYLVANIA

WATER EXHIBIT

MARKET EAST ASSOCIATES, L.P.

SUITE 300, 350 SENTRY PARKWAY
BLUE BELL, PENNSYLVANIA 19422

SCALE:	NTS
DATE:	11/06/2012
DWN BY:	JCM
REV:	
REV BY:	TJF
DWG #:	EX-1
JOB #:	MEAS1201
SHEET	1 OF 2

Pennoni

MARKET8
TRAFFIC IMPACT STUDY

Market Street /
Center City

Philadelphia,
Pennsylvania

February 2013
MEAS 1201

Prepared For:
Market East Associates, L.P.
350 Sentry Parkway
Building 630, Suite 300
Blue Bell, PA 19422

Prepared By:
Pennoni Associates Inc.
3001 Market Street, Suite 200
Philadelphia, PA 19104-2897

James Markham, PE
PENNSYLVANIA REG. No. PE 061283

Anthony Castellone, PE, PTOE
PENNSYLVANIA REG. No. PE 051756E

TABLE OF CONTENTS PAGE

APPENDICES

LIST OF TABLES

LIST OF FIGURES

REFERENCES

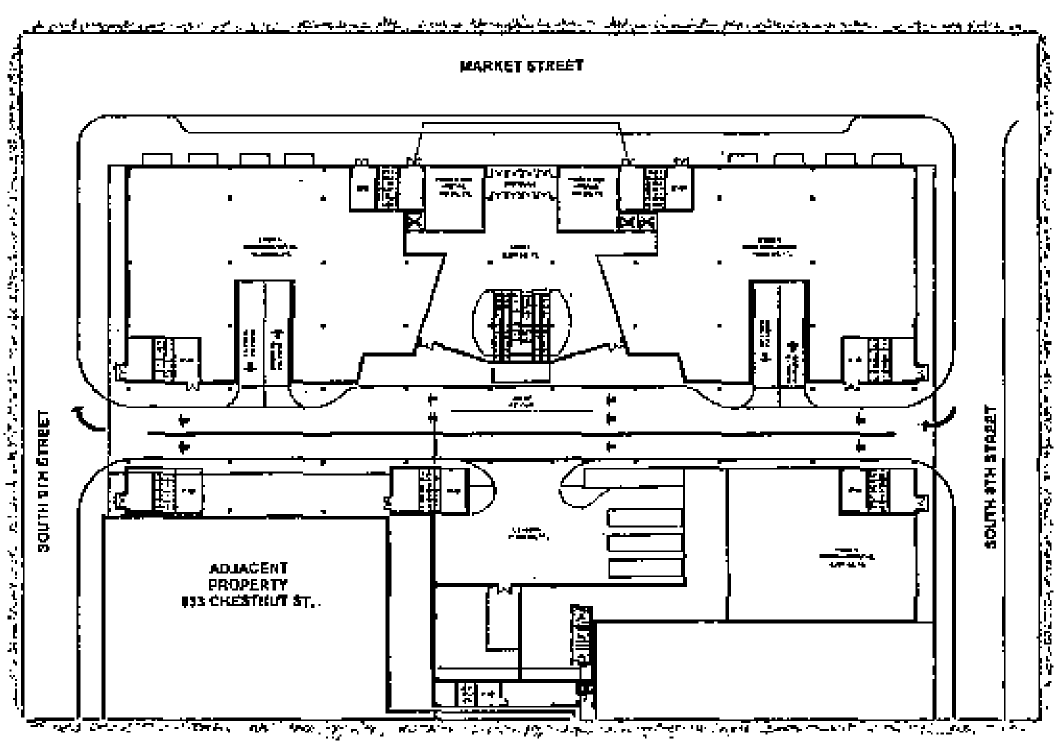
EXECUTIVE SUMMARY

Market East Associates, L.P. has plans to construct a casino complex, MARKET8, along the south side of Market Street (SR 2004) between South 8th Street and South 9th Street in the Market East section of City Center, Philadelphia. The MARKET8 casino complex is anticipated to include:

- 2400 slot machines,
- 82 table games,
- 30 poker tables,
- Food/beverage and entertainment venues, and
- 30,000 GSF quality restaurants.

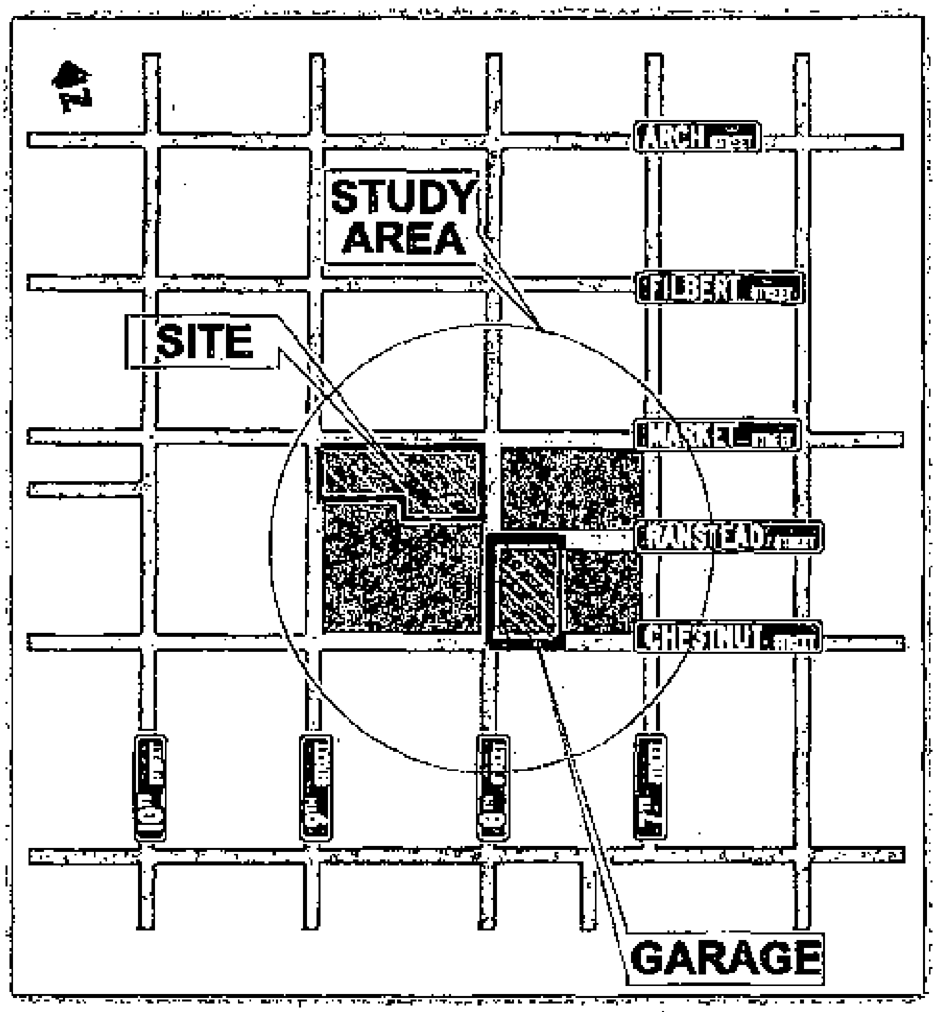
Two floors of gaming (approximately 80,000 GSF), and a 1000 space underground parking garage complete the proposed casino footprint. In addition, MARKET8 will provide 340 parking spaces at 733 Chestnut Street to complement the main casino complex parking.

Figure ES-1. Site Access – Street Level



The ingress access for the proposed main casino complex parking garage will be located on the west side of South 8th Street; with the corresponding egress onto 9th Street (See **Figure ES-1**). The ingress and egress point for the additional parking at 733 Chestnut Street will be located on the east side of South 8th Street and the north side of Chestnut Street. **FIGURE ES-2** indicates the primary study area for this proposed casino complex within Center City, Philadelphia.

Figure ES-2. Study Area



Turning movement counts, including heavy vehicles and buses, pedestrians and bicycles were conducted on a (non-event) Friday (October 19, 2012 and January 11, 2013 with schools in session) from 3:00 PM – 8:00 PM and on Saturday (October 20, 2012 and January 12, 2013) from 3:00 PM - 8:00 PM at the following intersections:

1. Market Street at South 7th Street, South 8th Street and South 9th Street; and
2. Chestnut Street and South 7th Street, South 8th Street and South 9th Street.

These study periods were chosen to coincide with peak traffic periods on the adjacent roadway network (typically 4:00 pm to 6:00 pm) on a typical weekday. The peak hours of trip generation for a casino complex during the weekends are anticipated to occur between the hours of 6:00 pm and 8:00 pm on Friday and Saturday evenings.

FINDINGS & RECOMMENDATIONS

Findings

- Development trips will be comprised of two main components; the 80,000 GSF Casino (with 3192 gaming positions, buffet, meeting room space) and approximately 30,000 GSF of *Quality Restaurants (ITE Land Use code 931, Trip Generation, 9th edition)* as part of the proposed complex. Projected peak hour trips for the casino for Friday and Saturday evening peak periods are based on research and information obtained from other casino traffic studies within the Philadelphia area and nationally.

- The capacity analyses performed herein indicates that the site traffic will have an insignificant impact on those intersections bordering the site. All study intersections operate at an overall and approach LOS of C or better for both the horizon year "No Build" and "Build" conditions.

- The site driveway exiting onto 9th Street (STOP controlled "right-out-only") will operate at LOS B in the Build condition. Subsequently, considering a "diminishing return" of impacts as traffic is distributed farther from the border intersections, these results would indicate that MARKET8 would have similar, nominal impacts at other intersections along primary ingress and egress transportation routes.

- Comparing the net "As-of-Right" vehicle trips to those for the proposed casino shows a significant increase in traffic if the proposed Market East site were to be developed per existing land use development guidelines. Specifically, 79% more traffic would typically be generated during the weekday PM Peak Hour (versus MARKET8 traffic) and 6% more traffic would be generated during the Saturday Peak Hour.

- The City's Zoning Code *(§14-405 SP-ENT Entertainment Special Purpose District - Licensed Gaming Facilities)* requires 4 parking spaces for every 5 slot machine or gaming positions provided for patrons and guests. Accordingly, the proposed complex would thus need to accommodate 2,554 parking spaces within or immediately adjacent to the proposed casino complex site.

- There are currently in excess of 2,800 parking spaces within a 5 minute walk available after 5:00 PM on an average (non-event) Friday and on an average (non-event) Saturday after 6:00 PM. Combined with the 1000 main casino complex parking spaces and the additional proposed 340 spaces at 733 Chestnut Street; the proposed complex can accommodate approximately 4,000 vehicles, immediately adjacent to the site, on an average Friday or Saturday evening.

Recommendations

The following recommendations will significantly improve the traffic operations within the study area, while allowing safe, unimpeded egress from the casino parking garage.

- Restrict of on-street parking along the east side of 9th Street 100 feet south of the facility exit drive north to the Market Street intersection to provide a separate northbound right turn lane;

- Optimization of the traffic signal timing at all study area intersections;

- Enhance trail-blazing signage to/from regional transportation routes to ensure "positive guidance" to/from the casino complex and primary travel routes for non-local drivers;

- Encourage greater use of mass transit as an alternative to driving via advertising and/or casino promotions;

- Work with SEPTA and Center City hotels to increase the frequency of bus and shuttle stops to the casino and/or creating a direct connection to the mass transit hub within the study area (8th and Market Street);

Finally, the City of Philadelphia's Zoning Codes states that "parking provided in this (Special Purpose) District must be adequately served by high-capacity roads or driveways approved by the Streets Department as being adequate to safely serve the ingress and egress of patrons and guests using the facility." This requirement is clearly met given the close proximity of the proposed casino site to I-95 and the Vine Street Expressway. Suggested parking utilization strategies that would further reduce the need for on-site parking spaces would include:

- "Real-time" parking management for Casino parking;
- Shuttle bus service to/from the Casino and Center City Parking, Shopping venues, Hotels;
- Proposed VIP and/or Valet Parking, and
- *Off-site Parking Accommodation for Casino* employees.

Conclusions

Based on the findings indicated in this study:

- Transit service to the *8th and Market location* is extraordinary. The proposed casino is in a prime location to access several modes of transit including: buses, subways, and regional rail. As a regional transit hub, the site is well served as a destination, and functions as one of *the region's major points of transfer between transit facilities.*

- The proposed casino is in a prime location to access I-95 and I-676 for regional access by *vehicular traffic.*

- Overall intersection delays due to casino vehicular traffic experience increases of less than *10 seconds beyond "No Build" conditions at all studied intersections. Levels of service (LOS)* for the "Build" conditions meet or exceed typical LOS requirements for urban settings.

- If Office and General Retail space were developed at the proposed casino site, per "as-of-right" regulations, significantly more future traffic would be generated.

- The available parking immediately adjacent to the site, combined with the proposed parking within the site, significantly exceeds the parking requirements of the zoning code. The site, located within the City of Philadelphia's urban core, provides excellent flexibility for development program modifications through maximization strategies for on-site parking, or greater utilization rates benefitting nearby, off - site parking facilities.

If those recommendations suggested above are implemented as part of the MARKET8 project, there will be nominal impacts on the surrounding transportation system with the Center City section of Philadelphia.

INTRODUCTION

Market East Associates, L.P. has plans to construct a casino complex, MARKET8, along the south side of Market Street (SR 2004) between 8th Street and 9th Street in the Market East section of Center City, Philadelphia. The MARKET8 complex is anticipated to include:

- 2400 slot machines,
- 82 table games,
- 30 poker tables,
- Food/beverage and entertainment venues, and
- 30,000 GSF quality restaurants.

Two floors of gaming (approximately 80,000 GSF), and a 1000 space underground parking garage complete the proposed casino footprint. In addition, MARKET8 will provide 340 parking spaces at 733 Chestnut Street to complement the main casino complex parking. The proposed site plan is shown in FIGURE 1.

The ingress access for the proposed casino's parking garage will be located on the west side of 8th Street; with the corresponding egress access onto 9th Street (See Figure 2). As 8th Street and 9th Street are one-way pairs, southbound and northbound, respectively, all casino-related traffic, including valet and trucks, will be entering or exiting via the Market Street intersections with 8th and 9th Streets. Loading docks will be located inside the entrance to the main complex parking garage, opposite the valet pick-up/by-pass. The ingress and egress points for the additional parking at 733 Chestnut Street will be located on the east side of 8th Street and the north side of Chestnut Street. As 8th Street is one-way southbound, the majority of casino-related traffic using the 8th Street/Chestnut Street garage will be entering via the Market Street intersection with 8th Street. As Chestnut Street is one-way eastbound, the majority of traffic exiting the 8th Street/Chestnut Street garage will be exiting via 8th Street and Chestnut Street to 7th Street to Market Street.

This Transportation Impact Study (TIS) addresses the anticipated impact of the proposed casino complex along the adjacent roadway system, recommends potential improvements, and evaluates sight distance of the proposed access drive(s) onto the existing roadway system. The TIS will establish existing, baseline ("no build" without casino traffic) and "build" (with casino traffic) conditions. The scope of the TIS was developed to satisfy the requirements of the Pennsylvania Gaming Control Board (PGCB) casino license application, Philadelphia Streets Department (and eventually the Pennsylvania Department of Transportation (PennDOT) Transportation Impact Study Guidelines).

Based on Pennoni's previous casino-oriented TIS experience, including that with the Philadelphia Gaming Advisory Task Force, combined with our knowledge of casino traffic operations, we studied the Friday and Saturday afternoon/evening periods, analyzing a combination of street peak and casino peak hours. Friday and Saturday evenings were identified as the peak casino periods by the Philadelphia Gaming Advisory Task Force, while Friday (late afternoon) and Saturday mid-afternoon periods have the highest street traffic. This Peak Hour selection is critical to our analyses as the Peak Hours of Adjacent Street Traffic and Casino Peak Trip Generation do not typically coincide, and most importantly, the peak parking demands for the casino complex will dovetail nicely with Off-Peak Weekday and Saturday parking availability.

According to Cincinnati's Bridging Broadway Study commissioned to study the impact area of a casino in an urban center, "to achieve the level of connectivity required to create a new downtown destination that positively enhances the surrounding area, it is necessary to avoid isolating the casino site. The streets surrounding the site must not act as barriers, and the casino's architectural design must face outward with non-gaming uses exposing the exterior". This TIS shows that MARKET8 not only address those key connectivity issues noted above, but the proposed venue enhances and complements the vibrant Market East section of Center City, Philadelphia.

STUDY METHODOLOGY

The analysis contained herein will be conducted in accordance with guidelines presented in Pennsylvania Department of Transportation (PennDOT) *Policies and Procedures for Transportation Impact Studies*, dated January 28, 2009. As required, three analysis years are considered: existing baseline traffic conditions, opening year analysis and design horizon year analysis (5 years after the opening year). The opening year and horizon year analyses include an assessment of the operational conditions of the study intersections under "no build" and "build" scenarios. Mitigation is assessed for intersections that experience an overall level of service drop and delay increase of more than ten (10) seconds from the "no build" to "build" conditions. *Level of service* is a measure of operating conditions discussed in detail on page 19 of this report.

Specific elements included in this study are:

- An inventory of the roadway facilities in the vicinity of this project, including the existing physical and traffic operating characteristics;
- Manual turning movement counts performed at the study intersections during afternoon peak traffic hours;
- Crash analysis of study area intersections;
- Calculation of vehicular trip generation for the proposed casino complex and other planned developments (if applicable) within the study area based on empirical and/or historical data obtained for casino's throughout the United States as well as trip generation rates contained in the Institute of Transportation Engineers (ITE) manual entitled *Trip Generation*, an ITE Information Report (9th Edition, 2012).
- Distribution of development-generated traffic onto the study area roadways in accordance with current travel patterns, empirical data obtained from research of similar facilities and anticipated traffic behavior changes
- Assessment of 2012, 2016 and 2021 traffic conditions based on capacity, level of service and queuing analyses performed for the study intersections.

As the Pennoni team is familiar with the Market Street corridor, we already have an understanding of the existing traffic conditions and travel patterns, and we are familiar with City of Philadelphia and PennDOT TIS and HOP permitting requirements.

Initially, this TIS is intended for inclusion in the Market East Associates, L.P.'s PGCB application for a casino license. Pennoni performed an analyses that reflects logical multi-modal trip reduction strategies (based on "Mode of Arrival" assumptions) and anticipated parking utilization within our study area. The analyses also consider trip reduction resulting from internal trips within the multi-use development. The internal trip reductions were applied using ITE internal trip reduction methodology as outlined in the *Trip Generation Handbook*.

The study also evaluates parking through a *Parking Utilization* analysis and distribution assessment that addresses the land-use parking requirements per Philadelphia's Zoning Code. Specifically, the study evaluates available parking through the examination of three adjacent parking facilities (within a 5-minute walking radius of the proposed casino complex).

STUDY AREA

FIGURE 2 indicates the primary study area within the Center City District of Philadelphia for this TIS.

Turning movement counts, including heavy vehicles and buses, pedestrians and bicycles were conducted on a (non-event) Friday (October 19, 2012 with schools in session) from 3:00 PM – 8:00 PM and on Saturday (October 20, 2012) from 3:00 PM - 8:00 PM at the following intersections:

1. Market Street and 8th Street;
2. Market Street and 9th Street;
3. South 8th Street and Chestnut Street; and
4. South 9th Street and Chestnut Street.

Additional turning movement counts, including heavy vehicles and buses, pedestrians and bicycles were conducted on a (non-event) Friday (January 11, 2013 with schools in session) from 3:00 PM – 8:00 PM and on Saturday (January 12, 2013) from 3:00 PM - 8:00 PM at the following intersections:

5. Market Street and 7th Street;
6. South 7th Street and Chestnut Street.

These study periods were chosen to coincide with peak traffic periods on the adjacent roadway network (typically 4:00 PM to 6:00 PM) on a typical weekday. The peak hours of trip generation for a casino complex during the weekends are anticipated to occur between the hours of 6:00 PM and 8:00 PM on Friday and Saturday evenings.

The study area also incorporates a Parking Utilization analysis of those parking facilities within a 5-15 minute walking radius of the proposed casino complex. Hotels within this 5-15 minute walking radius of the site will also be identified in order to support vehicular reductions of "new" trips due to alternate modes of arrival to the proposed MARKET8 complex (e.g., Pedestrians, Hotel Shuttles, etc.). A project area map showing a walking radius up to 15-minutes to/from the proposed casino site is shown in **FIGURE 3**.

Copies of available traffic signal permit plans for the signalized study area intersections were obtained from the City of Philadelphia, and existing traffic signal timings were verified in the field.

EXISTING TRAFFIC CONDITIONS

Regional Transportation Routes

The proposed site is located in the vicinity of the I-95 corridor, I-676 and I-76 limited access highway that run through Philadelphia. The I-95 corridor is a limited access, multi-lane, major arterial that runs in the general north/south direction. The I-95 corridor runs from the New England States to Florida providing access to the site from New York to the north and New Jersey and Delaware to the south. The Vine Street Expressway (I-676) is a limited access, major arterial that runs in a general east/west and provide a direct connection between I-76 (Schuylkill Expressway) and I-95, as well as the Ben Franklin Bridge into New Jersey.

Primary Ingress Routes

Based on Pennoni's experience with traffic patterns among major corridors within the City of Philadelphia – the result of many traffic impact studies performed – we have determined that the primary inbound routes for casino vehicular traffic would be:

From I-95
- Southbound I-95 to the Callowhill Street exit.
- West on Callowhill Street (6 blocks) to 8th Street.
- South on 8th Street (6 blocks) to the proposed site.
- Northbound I-95 to the Callowhill Street exit.
- West on Callowhill Street (5 blocks) to 8th Street.
- South on 8th Street (6 blocks) to the proposed site.

From I-76 via I-676
- Eastbound on I-676 to the 8th Street exit.
- South on 8th Street (5 blocks) to the proposed site.

From I-676 from New Jersey (Ben Franklin Bridge)
- West on I-676 to the 8th Street exit.
- South on 8th Street (5 blocks) to the proposed site.

These routes have been driven by Pennoni staff as part of this TIS and the proposed casino facility is located within minutes from each major facility during "off peak" periods.

Primary Egress Routes

Alternatively, outbound routes for vehicular traffic would likely be:

To I-95
- From the proposed site, north on 9th Street (5 blocks) to Vine Street.
- East on Vine Street to 7th Street.
- North on 7th Street to I-676 to north bound I-95.
- From the proposed site, north on 9th Street (5 blocks) to Vine Street.
- East on Vine Street to 7th Street.
- North on 7th Street to I-676 to south bound I-95.

To I-76 via I-676
- From the proposed site, north on 9th Street (5 blocks) to Vine Street.
- East on Vine Street to Franklin Street.
- North to the West bound I-676 entrance.
- I-676 west to I-76 east or west bound.

To I-676 to New Jersey (Ben Franklin Bridge)
- From the proposed site, north on 9th Street (4 blocks) to Race Street.
- East Race Street (3 blocks) to the I-676 entrance and the Benjamin Franklin Bridge.

The ingress and egress routes to the proposed site to and from the regional transportation routes are illustrated on **FIGURE 4** and **FIGURE 5**, respectively.

Public Transportation

In the vicinity of the site, multiple modes of public transportation can be utilized by casino patrons to access the proposed site. This access is provided by the regional public transportation providers.

Subway and Light Rail

South Eastern Pennsylvania Transportation Authority (SEPTA) provides public transportation services to the southeastern portion of Pennsylvania, which included Philadelphia and the surrounding five counties. Service within Philadelphia and to the surrounding counties is provided by SEPTA's regional rail line and light rail lines. Service within Philadelphia is also provided by means of the SEPTA's subway lines and bus routes. The regional rail lines within Center City, Philadelphia are accessible at the three Center City stations, 30th Street Station, Suburban Station and Market East Station. There are multiple accesses to the SEPTA subway line along Market Street. Access to the surface bus routes are provided along multiple bus stops along Market Street.

The regional rail lines run in a general east/west direction to and from the three Center City stations, 30th Street Station, Suburban Station and Market East Station. Within the study area, access to the regional rail line would be via the Market East Station, located at 11th Street and Market Street. Access to the Market East station can also be made through the Gallery Mall (nearest entrance located at 10th Street and Market Street) and the 8th Street Station, located at 8th Street and Market Street.

The Market Frankford Subway Line (MFL) runs in a general east/west direction along Market Street from Front Street to 30th Street, and beyond providing service to and from the northern and western sections of the city. Access to the MFL, within in the vicinity of the site can be made at the 8th Street and Market Street Station. From this same location access is possible to the Broad-Ridge Spur and the PATCO High Speed Line.

The PATCO high speed line provides regional rail service between Philadelphia, Pennsylvania and Camden, New Jersey via the Benjamin Franklin Bridge. Service runs from the bridge north/south along 8th Street to Locust Street and east/west from 8th Street to 15th/16th Street. As provably stated, access to PACTO from the site can be made at the 8th Street and Market Street station.

Surface Transportation

SEPTA provides bus transportation along Market Street in the east and west bound directions, south bound along 8th Street and northbound along 9th Street. Addition, north and southbound bus routes are provided on 7th Street (northbound), 11th Street (northbound) and 12th Street (southbound) within the five to ten walking radii of the proposed site. Chestnut Street and Walnut Street (to the south) and Arch Street (to the north) have bus routes that run in the general east and west bound directions.
While not directly accessible from the site or within walking distance, the Amtrak 30th Street Station is located within a mile and a half of the proposed site. Access to the site can be made from the SETPA Market Frankford Subway Line, the Regional Rail Lines, bus and taxi.

New Jersey Transit also provides surface bus route service to Center City from New Jersey via the Benjamin Franklin Bridge. Service is provided from 6th Street along Market Street to Broad Street with multiple stops in the westbound direction only, within the vicinity of the proposed site.

Additionally, sightseeing tour routes are provided by the Philadelphia Phlash bus, Philadelphia Trolley Works *(which runs Trolley and the Big Bus tour) through the Center City district. While these tours do not have* designed stops along Market Street, there are stops within five and ten minute walking distances to the proposed casino.

The schedules for the surface transportation (buses), subway and light rail (regional rail) were reviewed to *obtain the number of transit trips, directional of travel, and frequency (in minutes) that passes directly adjacent* to the site or within the 5 and 10 minutes walking radii. The specific public transportation routes that were reviewed are as follows:

SEPTA
- Market Street Bus Routes.
- Chestnut Street/Walnut Street Bus Routes.
- 7th, 8th and 9th Street Bus Routes.
- Market Frankford Subway Line.
- Broad Ridge Spur Subway Line.
- Regional Rail Routes.

New Jersey Transit
- Market Street Bus Routes.

PATCO
- High Speed Line Subway.

From the route schedules it was determined that there are approximately 126 buses during the Weekday PM peak period and 87 buses during the Saturday PM peak period that pass directly adjacent to the proposed site via Market, Chestnut, 8th and 9th Streets. Accessible from the 8th Street Station, located at the corner of Market Street and 8th Street, there are approximately 52 subway trains (during the Weekday PM peak period) and 22 subway trains (during the Weekday PM peak period), that run on the Market Frankford Subway, Broad Ridge Spur Subway and PATCO High Speed Lines.

The SEPTA Market East regional rail station is located at Market Street and 11th Street and is within the 10 walking radius to the proposed site. There are approximately 40 trains during the weekday PM peak period and 25 trains during the Saturday PM peak periods that pass through the Market East Station to and from the Philadelphia suburbs via the SEPTA regional rail system.

In total there are approximately 218 and 134 transit options, by various modes (surface transportation, subway and light rail) that are directly accessible from the proposed site or within the 10 minute walking radius, during the Weekday PM and Saturday PM peak periods, respectively.

A summary of the Transit Trips are provided in **TABLE 1.** The SEPTA, PATCO, and Amtrak service routes in relation to the proposed site are illustrated in **FIGURE 6.** SEPTA, PATCO, and tour route maps are provided in **APPENDIX A.**

TABLE 1: TRANSIT TRIPS
PUBLIC TRANSPORTATION SERVICE PROVIDERS

Service Provider	Street / Service Line	Type	Route Number(s)	TRANSIT TRIPS (In vicinity of the proposed Site			
				Weekday PM Peak Hour		Saturday PM Peak Hour	
				# Of Trips, Direction	Frequency In Minutes	# Of Trips, Direction	Frequency In Minutes
SEPTA	Market Street	Bus	17	14 EB/14 WB	5	6 EB/6 WB	10
			33	9 EB/9 WB	6	2 EB/2 WB	34
			44	5 EB /5 WB	10	2 EB/2 WB	30
			48	-	-	6 EB/-	10
			62	-/3 WB	20	-/-	-
	8th / 9th Streets		47m	3 NB/-	20	-/-	-
			61	5 NB/5 SB	10	4 NB/4 SB	20
	8th / 7th Streets		47	No Service	-	5 NB/5 SB	10
	Chestnut / Walnut Streets		9	5 EB/5 WB	14	2 EB/2 WB	30
			21	8 EB/8 WB	8	10 EB/10 WB	10
			38	4 EB/4 WB	17	2 EB/2 WB	30
			42	8 EB/8 WB	8	6 EB/6 WB	10
	Market Frankford Line	Subway	NA	10 EB/10 WB	6	6 EB/6 WB	10
	Broad Ridge Spur		NA	8 NB/8 SB	7	3 NB/3 SB	20
PATCO	High Speed Line	Subway	NA	10 EB/6 WB	10	4 EB/4 WB	15
NJ Transit	Market Street	Bus	406	4 WB	30	1 WB	-
			409, 417, 418	4 WB	40	1 WB	-
			401, 402, 410, 412	8 WB	10	3 WB	20
SEPTA	Regional Rail	Light Rail	Varies	20 EB/21 WB	4	13 EB/12 WB	3

Note: Direction = NB - Northbound, SB – Southbound, EB – Eastbound, WB – Westbound.

Existing Roadway Facilities

Market Street (SR 2004) is a two-way, primary arterial that runs in a general east/west direction, with three eastbound and two westbound through lanes. The eastbound and westbound right turn lanes are designated as buses/bicycles and right turns only. There is no on-street parking on Market Street and the posted speed limit is 25 miles per hour. Chestnut Street (SR 3008) is one-way roadway that runs in the general eastbound direction with two travel lanes and one parallel parking lane on the northern side of the roadway. The southern travel lane of Chestnut Street is a dedicated bus/bicycle-only lane. The posted speed limit on Chestnut Street is 25 mph.

7^{th} **Street** is a one-way, local roadway that runs in the general northbound direction, with two through lanes. On-street parking is permitted on the west side of 7^{th} Street, from Chestnut Street to Market Street. The speed limit on 7^{th} Street, in the vicinity of the proposed site, is not posted.

8^{th} **Street** is a one-way, local roadway that runs in the general southbound direction, with two through lanes. On-street parking is permitted on the west side of 8^{th} Street, from Market Street and Ranstead Street and parking is prohibited from Ranstead Street to Chestnut Street. The speed limit on 8^{th} Street, in the vicinity of the proposed site, is not posted.

9^{th} **Street** is a one-way, local roadway that runs in the general northbound direction, with two through lanes. On-street parking is permitted on the east side of 9^{th} Street, from Chestnut Street to Market Street. The speed limit on 9^{th} Street, *in the vicinity of the proposed site, is not posted.*

The following signalized intersections were analyzed for existing and future capacity as part of this study:

- **Market Street (SR 2004) and 7^{th} Street** - At the signalized intersection with Market Street, 7^{th} Street has two, one-way northbound travel lanes. There is on-street parking, along the western side of 7^{th} Street in the northbound direction. The speed limit on 7^{th} Street is not posted.

- **Market Street (SR 2004) and 8^{th} Street** - At the signalized intersection with Market Street, 8^{th} Street has two, one-way southbound travel lanes. There is no parking along 8^{th} Street north of Market Street. South of Market Street there is on-street parking along the western side of 8^{th} Street. The speed limit on 8^{th} Street is not posted.

- **Market Street (SR 2004) and 9^{th} Street** - At the signalized intersection with Market Street, 9^{th} Street has two, one-way northbound travel lanes. There is on-street parking, along 9^{th} Street in the northbound direction approaching Market Street. There is no on-street parking along 9^{th} Street, north of Market Street. The speed limit on 9^{th} Street is not posted.

- **Chestnut Street (SR 3008) and 7^{th} Street.** The intersection of Chestnut and 7^{th} Streets is a *two-way signalized intersection. At the intersection with 7^{th} Street, the northern travel lane of* Chestnut Street operates as a shared through/left turn lane. 7^{th} Street is one-way northbound, containing two travel lanes and one parallel parking lane on the western side of the roadway. At Chestnut Street, the eastern travel lane operates as a shared through/right turn lane.

- **Chestnut Street (SR 3008) and 8^{th} Street** - The intersection of Chestnut and 8^{th} Streets is a two-way signalized intersection. At the intersection with 8^{th} Street, the northern travel lane operates as a shared through/left turn lane. 8^{th} Street is one-way southbound, containing two travel lanes and one parallel parking lane on the western side of the roadway. At Chestnut Street, the eastern travel lane operates as a shared through/left turn lane.

- **Chestnut Street (SR 3008) and 9^{th} Street.** The intersection of Chestnut and 9^{th} Streets is a two-way signalized intersection. At the intersection with 9^{th} Street, the northern travel lane operates as a shared through/left turn lane. 9^{th} Street is one-way northbound, containing two travel lanes and one parallel parking lane on the eastern side of the roadway. At Chestnut Street, the eastern travel lane operates as a shared through/right turn lane.

Existing Traffic Volumes

According to Pennsylvania Department of Transportation, 2011 Traffic Volume Map (dated November 2012) for Philadelphia County, the two-directional Annual Average Daily Traffic volume on Market Street (SR 2004) in the vicinity of the site is 16,000 vehicles per day (between 8^{th} and 9^{th} Streets).

Manual turning movement counts were conducted at the study intersections using hand-held electronic count boards. The counts were conducted during Weekday PM and Saturday PM peak hour periods from 3:00 PM to 8:00 PM on October 19^{th} and 20^{th}, 2012 and January 11^{th} and 12^{th}, 2013.

The existing turning movement traffic volumes for the intersections within the study area are illustrated on **FIGURE 7**. Copies of the manual traffic count data are provided in **APPENDIX B**.

Existing Levels of Service/Queue Analysis

The performance of the study intersections under existing conditions was evaluated through a qualitative measure of operating conditions called Levels of Service. Six levels of Service (LOS) are defined with letter designations from 'A' to 'F'. Level of Service 'C' or better is considered acceptable, with a threshold of Level of Service 'D' in urban areas. Levels of Service are determined through analysis procedures outlined in the 2010 *Highway Capacity Manual* (Transportation Research Board, Washington, D.C.).

Levels of Service for signalized intersections are based on average delay experienced by motorists passing the intersection. The delay is based on the results of the capacity analysis (rate of demand flow to capacity) and other important variables such as quality of progression, cycle length, and ratio of green time. Level of Service Criteria is provided in **APPENDIX C**. It should be noted that all intersections included in this study are signalized intersections. Copies of the existing traffic signal permit plans were obtained from the City of *Philadelphia, and are provided in* **APPENDIX D**. *Field observations were conducted, at the study* intersections, to verify the existing traffic signal, phasing, cycle lengths, green times and clearance intervals. The field verified timings were utilized to evaluate the operation of the intersections.

The operational analyses of the study intersections under all conditions were performed using *Synchro* (Version 8.0, build 803) software. Based upon the output of the *Synchro* analyses, all of the study intersections *currently operate at an overall intersection level of service of B or better during the Weekday PM and Saturday* PM peak periods. The current delays range from 6.3 seconds for the eastbound approach at 8^{th} and Market Street in the Saturday PM peak to 25.1 seconds for the northbound approach at 7^{th} and Market Street in the Friday PM peak.

A summary Existing Condition Levels of Service data and the 95^{th} percentile queue lengths of all the study intersections are provided in **TABLE 2** and illustrated in **FIGURE 8**. Detailed outputs of the 2012 "Existing" conditions analyses are provided in **APPENDIX E**.

TABLE 2: LEVEL OF SERVICE SUMMARY
EXISTING 2012 CONDITIONS

Intersection		FRIDAY PM PEAK HOUR			SATURDAY PM PEAK HOUR			Storage Capacity (Feet)
		Delay (Secs)	LOS	95th % (Feet)	Delay (Secs)	LOS	95th % (Feet)	
7th Street & Market Street	Overall Intersection	18.8	B	-	14.8	B	-	-
	EB Thru	17.5	B	277	14.6	B	213	450
	WB Thru/Right	9.0	A	58	9.0	A	60	450
	NB Left/Thru/Right	25.1	C	196	19.8	B	125	565
7th Street & Chestnut Street	Overall Intersection	15.2	B	-	13.5	B	-	-
	EB Thru/Left	16.7	B	138	14.4	B	128	450
	NB Thru/Right	13.7	B	108	12.5	B	76	285
8th Street & Market Street	Overall Intersection	12.9	B	-	11.1	B	-	-
	EB Thru/Right	8.5	A	83	6.3	A	36	450
	WB Thru	19.8	B	m236	15.8	B	172	450
	SB Left/Thru/Right	14.8	B	115	14.5	B	107	750
8th Street & Chestnut Street	Overall Intersection	8.6	A	-	7.5	A	-	-
	EB Thru/Right	9.4	A	71	7.7	A	41	450
	SB Left/Thru	8.0	A	62	7.3	A	43	565
9th Street & Market Street	Overall Intersection	13.0	B	-	11.9	B	-	-
	EB Thru	16.7	B	202	14.5	B	154	450
	WB Thru/Right	9.8	A	99	11.0	B	77	450
	NB Left/Thru/Right	10.1	B	72	9.2	A	54	565
9th Street & Chestnut Street	Overall Intersection	15.1	B	-	14.0	B	-	-
	EB Thru/Left	16.5	B	170	14.8	B	135	450
	NB Thru/Right	14.0	B	115	13.4	B	101	285

Crash Analysis

Crash histories, engineering extracts, summary and resume pages for the length of the affected area were requested from PennDOT's Bureau of Highway Safety and Traffic Engineering and the City of Philadelphia. Both the PennDOT and City data represents the five year period from 2007 to 2011 inclusive and is the most recent data available from both agencies at the time of preparation of this report. The information provided is covers the approaches and intersections of Market Street (SR 2004) and Chestnut Street (SR 3008) with 7th Street, 8th Street and 9th Street (6 intersections total).

The engineering extract summary from PennDOT classifies accident data into various categories. Accidents are broken down by year, roadway conditions, time of day, type of vehicle, severity of the accident, month and probable cause among many other categories. For each category, data is presented by number of vehicles per year and by the percentage of total vehicles in the time frame. An itemization of all PennDOT reportable accidents by location, type and severity is provided in **APPENDIX G**. The engineering extract summaries from the City of Philadelphia provide similar information to PennDOT, but in a different format. Philadelphia also includes Non-Reportable crashes (minor property damage only – no death, injury or towing required). The non-reportable crashes were not analyzed as part of this study.

The results of the crash analysis for the study period show that the vast majority of crashes involved pedestrians. The analysis also shows that driver error, such as too fast for conditions, running red light, driver distracted and turning from the wrong lane were typically the contributing action. Environmental conditions (daylight/dark, dry/wet etc.) were not reported as contributing factors. Other than generally driver error being the fault, there were no other discernible patterns discovered.

The traffic signals are timed correctly for vehicular volumes and pedestrian crossings. Pavement markings and pavement are in adequate condition. Continued enforcement, driver education and pedestrian education are the only recommended actions to improve safety and reduce crash rates at these locations.

FUTURE NO BUILD TRAFFIC CONDITIONS

Programmed Roadway Improvements

For the purposes of this study, and based on recent traffic studies performed by Pennoni in close proximity of the proposed casino site, it is our assumption for this TIS that there are no Programmed Roadway Improvements projects within the study area.

No Build Traffic Volumes

In order to account for general traffic growth in the area, an annual background growth rate is typically applied to existing traffic volumes on the study area roadways. An annual background growth rate of 0% per year has been established by PennDOT's *Bureau of Planning and Research* for urban, non-interstate roadways in the study area. A copy of the documentation on annual growth rates is provided in **APPENDIX F**.

Traffic volumes associated with specific developments in the study area are typically added to the background traffic to determine the opening year (2016) and horizon (2021) "pre-development" traffic volumes. According to information from the Philadelphia Planning Commission, there are no planned developments within the study area. Therefore, given PennDOT's 0% annual growth rate, results for analysis of the 2016 and 2021 No Build conditions are identical and are reported concurrently.

The 2016 and 2021 No Build peak hour traffic volumes are illustrated in **FIGURE 9**.

No Build Levels of Service/Queue Analysis

Operations of the study intersections during the peak hours were evaluated for the No Build traffic scenario. **TABLE 3** provides a summary of the results of the No Build analyses which is illustrated in **FIGURE 10**. It should be noted that because of the 0% growth within the City of Philadelphia, the outputs for the 2016 No Build condition are the same as the 2021 No Build condition.

Based upon the output of the *Synchro* analyses, all of the study intersections will operate at an overall intersection level of service of B or better during the Weekday PM and Saturday PM peak periods under future no build conditions. The delays range from 6.3 seconds for the eastbound approach at 8^{th} and Market Street in the Saturday PM peak to 25.1 seconds for the northbound approach at 7^{th} and Market Street in the Friday PM peak.

Detailed outputs of the 2016 and 2021 "No Build" conditions analyses are provided in **APPENDIX H**.

TABLE 3: LEVEL OF SERVICE SUMMARY
2016, 2021 NO BUILD CONDITIONS

Intersection		FRIDAY PM PEAK HOUR			SATURDAY PM PEAK HOUR			Storage Capacity (Feet)
		Delay (Secs)	LOS	95th % (Feet)	Delay (Secs)	LOS	95th % (Feet)	
7th Street & Market Street	Overall Intersection	18.8	B	-	14.8	B	-	-
	EB Thru	17.5	B	277	14.6	B	213	450
	WB Thru/Right	9.0	A	58	9.0	A	60	450
	NB Left/Thru/Right	25.1	C	195	19.8	B	125	565
7th Street & Chestnut Street	Overall Intersection	15.2	B	-	13.5	B	-	-
	EB Thru/Left	16.7	B	138	14.4	B	128	450
	NB Thru/Right	13.7	B	108	12.5	B	76	285
8th Street & Market Street	Overall Intersection	12.9	B	-	11.1	B	-	-
	EB Thru/Right	8.5	A	83	6.3	A	36	450
	WB Thru	19.8	B	m236	15.8	B	172	450
	SB Left/Thru/Right	14.8	B	115	14.5	B	107	750
8th Street & Chestnut Street	Overall Intersection	8.6	A	-	7.5	A	-	-
	EB Thru/Right	9.4	A	71	7.7	A	41	450
	SB Left/Thru	8.0	A	62	7.3	A	43	565
9th Street & Market Street	Overall Intersection	13.0	B	-	11.9	B	-	-
	EB Thru	16.7	B	202	14.5	B	154	450
	WB Thru/Right	9.8	A	99	11.0	B	77	450
	NB Left/Thru/Right	10.1	B	72	9.2	A	54	565
9th Street & Chestnut Street	Overall Intersection	15.1	B	-	14.0	B	-	-
	EB Thru/Left	16.5	B	170	14.8	B	135	450
	NB Thru/Right	14.0	B	115	13.4	B	101	285

FUTURE BUILD TRAFFIC CONDITIONS

The ingress access for the proposed casino's parking garage will be located on the west side of 8th Street; with the corresponding egress access onto 9th Street (See Figure 1). As 8th Street and 9th Street are one-way pairs, southbound and northbound, respectively, all casino-related traffic, including valet and trucks, will be entering or exiting via the Market Street intersections with 8th and 9th Streets. Loading docks will be located inside the entrance to the main complex parking garage, opposite the valet pick-up/by-pass. The ingress and egress points for the additional parking at 733 Chestnut Street will be located on the east side of 8th Street and the north side of Chestnut Street. As 8th Street is one-way southbound, the majority of casino-related traffic using the 8th Street/Chestnut Street garage will be entering via the Market Street intersection with 8th Street. As Chestnut Street is one-way eastbound, the majority of traffic exiting the parking at 733 Chestnut Street will be exiting via 8th Street and Chestnut Street to 7th Street to Market Street.

Trip Generation

Development trips were generated for the site based on two main components: the 80,000 GSF Casino (with 3192 gaming positions, buffet, meeting room space) and approximately 30,000 GSF of Quality Restaurants. The number of gaming positions for the Casino is broken down as follows:

- 2400 slot machines
- 30 poker tables (10 seats/table) = 300 gaming positions
- 82 table games (6 seats/table) = 492 gaming positions
- **Total Gaming Positions = 3192**

Projected peak hour trips (per gaming position) for the casino's Friday and Saturday evening peak periods are based on research and information obtained from other casino traffic studies; both within the Philadelphia area and nationally. We have also compared these rates to ITE's latest Trip Generation manual for Casino/Video Lottery Establishments (Land Use Code 473); however, ITE's Land Use description does not exactly match that of this development. For this project, Pennoni recommends using the "SugarHouse" Trip Generation Rates for each proposed gaming position. Projected peak hour trips for the Quality Restaurant uses are based on data provided in ITE's *Trip Generation, 9th edition*. (See REFERENCES).

A summary of empirical trip generation data and research for various casinos is shown in TABLE 4.

TABLE 4: CASINO TRIP GENERATION COMPARISONS

Source	CASINO TRIP GENERATION / GAMING POSITION					
	WEEKDAY PM PEAK			SATURDAY PM PEAK		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Penn National Hollywood Casino (East Hanover Twp, PA)	45%	55%	0.336	59%	41%	0.424
*SugarHouse Casino (Philadelphia, PA)**	*43%*	*57%*	*0.282*	*52%*	*48%*	*0.282*
Philadelphia Park (Bucks County, PA)	52	48	0.358	53	47	0.477
Foxwoods (Philadelphia, PA)	54%	46%	0.55	51%	49%	0.65
Hollywood Casino (Columbus, OH)	53%	47%	0.49	62%	38%	0.56
Mohegan Sun (Connecticut)	-	-	0.35	-	-	0.45
Casino St Charles (St. Louis, MO)	54%	46%	0.54	53%	47%	0.64
ITE Land Use #473 (Adjusted from GSF)**	56%	44%	0.306	n/a	n/a	n/a
USE:	43%	57%	0.282	52%	48%	0.282

** Based on actual count data obtained by Pennoni, October 2010 **n/a = Not Available*

Multi-Use Development Internal Trip Reductions

The overall trip generation for the site considers trip reduction resulting from internal trips within the multi-use development. The internal trip reductions were applied using ITE internal trip reduction methodology as outlined in the *Trip Generation Handbook*. In particular, this study has considered the internal trip generation between the Casino gaming and Quality Restaurant uses. These internal trips will thus reduce the number of external trips entering and exiting the proposed site. Results of the internal trip reduction analysis yields internal capture rates of 9% for the Friday peak hour, and 11% for the Saturday peak hour. The multi-use internal trip reduction calculations and applicable ITE *Trip Generation Handbook* data is included in **REFERENCES**.

Multi-Modal Trip Reductions

A reduction in trips was applied to account for increased multi-modal accessibility due the site's Center City location. Based on the research of other casino establishments, the "SugarHouse" casino would most emulate projected trips for MARKET8 when compared to the other casinos listed in **TABLE 4**; casino's that for the most part are outside of Central Business District limits, within suburban locations and/or have limited multi-modal accessibility. Subsequently, the following Multi-Modal splits occur during Weekday PM Peak periods:

- 56% Auto/Limo
- 20% Public Transit (Subway, Light Rail, Bus)
- 11% Taxi
- 8% Private Charter + Casino/Hotel Shuttle
- 5% Pedestrian Traffic (Hotels, Local Venues).

These splits are consistent with those projected "Modes of Arrival" contained within the Philadelphia Gaming Advisory Task Force's "Interim Report of Findings" (See **REFERENCES**). For Saturdays, Pennoni suggests a slightly lower non-vehicular trip reduction as more patrons would tend to drive into the City for leisure activities and transit service is typically less frequent during weekends. For Saturday, the multi-modal split will be assumed to be:

- 65% Auto/Limo
- 10% Public Transit (Subway, Light Rail, Bus)
- 10% Private Charter + Casino/Hotel Shuttle
- 10% Taxi
- 5% Pedestrian Traffic (Hotels, Local Venues).

These rates represent an approximate 15% and 10% reduction in overall vehicular Trip Generation for Weekday PM and Saturday PM Peaks, respectively, when compared to empirical Trip Generation data collected by Pennoni for Sugarhouse Casino (See **REFERENCES**). Note, a reduction in modes of arrival for a Penn's Landing versus a Center City casino site reflects a 15% decrease in Auto traffic for Center City; according to the aforementioned Philadelphia Gaming Advisory Task Force's interim report. These vehicular trip reduction assumptions are reflected in **TABLE 5**.

These reductions account for an assumed increase in pedestrian and subway traffic due to the CBD location of the proposed facility and closer proximity to Transit hubs and hotels. As noted in a recent Transportation & Access study commissioned by the Center City District and Central Philadelphia Development Corporation, "The combined average weekday number of passengers traveling to and from Center City by SEPTA, PATCO and NJ Transit in 2011 increased to the highest number in over a decade". Again, as noted in the aforementioned "Existing Conditions" section of this study:

- There are approximately 126 bus and 87 buses that pass directly adjacent to the proposed site, via Market, Chestnut, 8th and 9th Streets, during the Weekday PM and Saturday PM peak periods, respectively.

- Transit accessibility from the 8th Street Station, located at the corner of Market Street and 8th Street, is robust given the approximately 52 subway trains (during the Weekday PM peak period) and 22 subway trains (during the Weekday PM peak period), that run on the Market Frankford Subway, Broad Ridge Spur Subway and PATCO High Speed Lines.

- Within a 10 minute walking radius to the proposed site, there are 72 and 80 trains that pass through the Market East station to and from the Philadelphia suburbs via the SEPTA regional rail system, during the Weekday PM and Saturday PM peak periods, respectively.

- In total there are approximately 218 and 124 transit options, by various modes (surface transportation, subway and light rail) that are directly accessible from the proposed site or within the 10 minute walking radius, during the Weekday PM and Saturday PM peak periods, respectively.

Similar modal split assumptions noted above were utilized for a proposed City of Pittsburgh casino location and reviewed by the PA Gaming Control Board; however this location was not in the Central Business District. While the proposed location in Pittsburgh included Light Rail access, HOV lane access/parking, Taxi, Incline (Pedestrians) and vehicular access, the proposed Market East location for MARKET8 is a Transit hub and includes 16 hotels within a fifteen-minute walking distance of the complex (See **REFERENCES**). Subsequently, these trip reduction assumptions are conservative and less "new" vehicle trips will actually be generated for the proposed casino complex.

TABLE 5 summarizes the anticipated peak hour trips to/from the proposed casino during the Weekday PM and Saturday PM peaks and outlines the reduction in trips due to internal capture and multi-modal transportation use.

TABLE 5: SITE TRIP GENERATION

LAND USE DESCRIPTION	TRIP GENERATION					
	WEEKDAY PM PEAK			SATURDAY PM PEAK		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Casino (3192 Gaming Positions @ 0.282 Trips per Gaming Position)	387	513	900	468	432	900
ITE Land Use #931 Quality Restaurants @ 30,000 GSF	168	103	271	191	134	325
Total Estimated Casino Complex Trip Generation	*555*	*616*	*1171*	*659*	*566*	*1225*
Multi-Use Internal Trip Reductions (-9% Friday PM / -11% Saturday PM)	-55	-55	-110	-65	-65	-130
Total External Trips After Internal Trip Reductions	*500*	*561*	*1061*	*594*	*501*	*1095*
Trip Reduction due to Non-Vehicular Modes of Travel (-15% Friday PM / -10% Saturday PM)	-75	-84	-159	-59	-50	-110
NET Estimated MARKET8 External Vehicle Trips	425	477	902	535	451	986

As - Of - Right Trip Generation Comparison

In order to assess the potential traffic impact from a trip generation perspective in comparison to the proposed casino use, we have generated trips for the site based on the current zoning and potential build out. Given the allowable land uses for this zoning, this site would have the potential to develop approximately 1,250,000 SF of office space and 60,000 SF of retail space. **Table 6** below shows potential site trip generation if the site was developed with office and retail uses instead of the proposed Casino.

TABLE 6: AS - OF - RIGHT TRIP GENERATION COMPARISON

LAND USE DESCRIPTION	TRIP GENERATION					
	WEEKDAY PM PEAK			SATURDAY PM PEAK		
	IN	OUT	TOTAL	IN	OUT	TOTAL
ITE Land Use #710 - General Office (1,250,000 sf)	251	1227	1478	290	248	538
ITE Land Use #820 - Shopping Center (60,000 sf)	204	221	425	326	301	627
Total Estimated As-of-Right Trip Generation	455	1448	1903	616	549	1165
Trip Reduction due to Non-Vehicular Modes of Travel (-15% Friday PM / -10% Saturday PM)	-68	-217	-285	-62	-55	-117
NET Estimated As-of-Right External Vehicle Trips	387	1231	1618	554	494	1049

Note: No reduction was applied for internal trips as internal capture rate is negligible for these uses/size ratios per ITE methodology.

Comparing the net "As-of-Right" vehicle trips to those for the proposed casino shows a significant increase in traffic if the proposed Market East site were to be developed per existing land use development guidelines. Specifically, 79% more traffic would typically be generated during the weekday PM Peak Hour (versus MARKET8 traffic) and 6% more traffic would be generated during the typical Saturday Peak Hour.

Trip Distribution and Assignment

The new vehicle trips generated by the site development were distributed and assigned to the roadway network based on a review of existing count data, regional traffic routes, and existing travel patterns. Detailed traffic distribution percentages and volumes for the proposed development are illustrated in **FIGURE 11**. A generalized summary of the anticipated distribution of site traffic is shown in **TABLE 7**.

TABLE 7: ENTER/EXIT DISTRIBUTION OF SITE TRAFFIC

Direction of Approach	
From the North on 8th Street	67%
From the West on Market Street	18%
From the West on Chestnut Street	5%
From the East on Walnut Street	5%
From the South on 9th Street	5%
Direction of Departure	
To the North on 9th Street	67%
To the West on Market Street	18%
To the East on Market Street	5%
To the East on Chestnut Street	5%
To the South on 9th Street	5%

Build Traffic Volumes

The traffic volumes generated by the proposed site were added to the 2016 and 2021 No Build traffic volumes to provide the Build traffic volumes. These traffic volumes are illustrated on **FIGURE 12** for the weekday morning and afternoon peak hours, respectively. As PENNDOT has established a 0% per year growth rate in Philadelphia County, volumes for the 2016 and 2021 Build conditions are identical and are reported concurrently.

Build Levels of Service/Queue Analysis

Based upon the output of the Synchro 8.0 analysis, it is predicted that all of the study intersections will operate at an overall intersection level of service of B or better during the 2016 and 2021 Build, Weekday PM and Saturday PM peak period conditions. Analysis results show only minor increase in approach delays with additional site traffic.

In order to offset the impact of the proposed site and mitigate any queuing issues, we recommend the following mitigation measures.

- Traffic signal timing optimization (adjustments to the split times, no offset or cycle length timing changes are recommended to maintain traffic progression).
- Restrict on-street parking along the east side of 9th Street to provide a separate north bound right turn lane at the intersection with Market Street for approximately 100 feet.

Results of the 2016 and 2021 Build conditions analysis are summarized in **TABLE 8** and illustrated in **FIGURE 13**. Results of the 2016 and 2021 Build conditions "with mitigation" analysis are summarized in **TABLE 9** and also illustrated in **FIGURE 13**. Detailed outputs of the 2016 and 2021 "Build" conditions analyses are provided in **APPENDIX I**. Detailed outputs of the 2016 and 2021 "Build w/Mitigation" conditions analyses are provided in **APPENDIX J**.

TABLE 8: LEVEL OF SERVICE SUMMARY - 2016, 2021 BUILD CONDITIONS

Intersection		FRIDAY PM PEAK HOUR			SATURDAY PM PEAK HOUR			Storage Capacity (Feet)
		Delay (Secs)	LOS	95th % (Feet)	Delay (Secs)	LOS	95th % (Feet)	
7th Street & Market Street	Overall Intersection	14.2	B	-	15.8	B	-	-
	EB Thru	15.3	B	104	15.5	B	221	450
	WB Thru/Right	11.6	B	68	9.6	A	62	450
	NB Left/Thru/Right	13.9	B	152	20.1	C	135	565
7th Street & Chestnut Street	Overall Intersection	15.4	B	-	13.5	B	-	-
	EB Thru/Left	10.8	B	180	11.3	B	165	450
	NB Thru/Right	21.2	C	134	16.6	B	90	285
8th Street & Market Street	Overall Intersection	14.0	B	-	13.7	B	-	-
	EB Thru/Right	11.1	B	m129	9.7	A	m85	450
	WB Thru	13.3	B	129	18.9	B	185	450
	SB Left/Thru/Right	18.8	B	193	15.6	B	186	750
8th Street & Chestnut Street	Overall Intersection	10.9	B	-	10.5	B	-	-
	EB Thru/Right	9.2	A	61	8.2	A	42	450
	SB Left/Thru	12.1	B	133	11.8	B	116	565
9th Street & Market Street	Overall Intersection	17.6	B	-	16.6	B	-	-
	EB Thru	19.9	B	236	15.8	B	182	450
	WB Thru/Right	11.3	B	107	12.9	B	117	450
	NB Left/Thru/Right	18.9	B	#175	19.5	B	#163	565
9th Street & Chestnut Street	Overall Intersection	15.8	B	-	14.7	B	-	-
	EB Thru/Left	13.8	B	161	13.5	B	136	450
	NB Thru/Right	17.4	B	138	15.6	B	121	285
8th Street & Site Entrance	SB Thru/Right	0.0	A	0	0.0	A	0	-
8th Street & Parking Garage	WB Left	29.8	D	103	32.0	D	107	-
	SB Left/Thru	1.3	A	8	1.5	A	10	-
9th Street & Site Exit	WB Right	12.3	B	57	11.7	B	50	-
	NB Thru	0.0	A	0	0.0	A	0	-

Notes: m – Volume for 95th percentile queue is metered by upstream signal.
- 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

TABLE 9: LEVEL OF SERVICE SUMMARY - 2016, 2021 BUILD CONDITIONS w/MITIGATION

Intersection		FRIDAY PM PEAK HOUR			SATURDAY PM PEAK HOUR			Storage Capacity (Feet)
		Delay (Secs)	LOS	95th % (Feet)	Delay (Secs)	LOS	95th % (Feet)	
7th Street & Market Street	Overall Intersection	13.6	B	-	15.9	B	-	-
	EB Thru	14.1	B	103	15.9	B	221	450
	WB Thru/Right	11.6	B	68	9.6	A	62	450
	NB Left/Thru/Right	13.9	B	152	20.1	C	135	565
7th Street & Chestnut Street	Overall Intersection	15.4	B	-	13.5	B	-	-
	EB Thru/Left	10.8	B	180	11.3	B	165	450
	NB Thru/Right	21.2	C	134	16.6	B	90	285
8th Street & Market Street	Overall Intersection	13.5	B	-	13.7	B	-	-
	EB Thru/Right	10.2	B	117	9.8	A	80	450
	WB Thru	13.3	B	129	18.9	B	185	450
	SB Left/Thru/Right	18.8	B	193	15.6	B	186	750
8th Street & Chestnut Street	Overall Intersection	11.0	B	-	10.6	B	-	-
	EB Thru/Right	9.2	A	61	8.2	A	42	450
	SB Left/Thru	12.1	B	133	11.9	B	116	565
9th Street & Market Street	Overall Intersection	14.9	B	-	14.0	B	-	-
	EB Thru	16.8	B	220	14.7	B	175	450
	WB Thru/Right	9.9	A	106	12.1	B	116	450
	NB Left/Thru	14.9	B	130	13.7	B	114	-
	NB Right	18.3	B	108	16.7	B	95	150
9th Street & Chestnut Street	Overall Intersection	15.8	B	-	14.7	B	-	-
	EB Thru/Left	13.8	B	161	13.5	B	136	450
	NB Thru/Right	17.4	B	138	15.6	B	121	285
8th Street & Site Entrance	SB Thru/Right	0.0	A	0	0.0	A	0	-
8th Street & Parking Garage	WB Left	29.8	D	103	32.0	D	107	-
	SB Left/Thru	1.3	A	9	1.5	A	10	-
9th Street & Site Exit	WB Right	12.3	B	57	11.7	B	50	-
	NB Thru	0.0	A	0	0.0	A	0	-

Notes: m – Volume for 95th percentile queue is metered by upstream signal.
- 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

SIGHT DISTANCE ANALYSIS

All turning movements exiting the site will be required to make a right-turn and travel north toward Market Street since 9th Street is a one way northbound street. Per PennDOT standards, the recommended safe sight distance for passenger cars exiting driveways onto a two lane four to six-lane *unsignalized* roadway is 250 feet looking to the left. Adequate sight distance exists to see from the proposed site driveway to the adjacent traffic signal at the intersection of 9th Street and Chestnut Street.

It should be noted that the adjacent traffic signal at 9th Street/Chestnut will "meter" traffic by providing gaps in the traffic stream to exiting the site. The proposed driveway will be approximately 200 feet south of the 9th Street and Market Street intersection.

PARKING UTILIZATION ASSESSMENT

Below is a summary of those public parking facilities within 5, 10 and 15-minute walking radii of the proposed casino complex. The following total existing parking spaces within these walking times to/from the proposed casino location are as follows:

- 5-Minute Walk: 5,416 spaces,
- 10-Minute Walk: 11,719 spaces,
- 15-Minute Walk: 20,277 spaces.

An analysis of the available three (3) public parking garages in the immediate vicinity surrounding the project site was conducted to determine the parking utilization during the peak hours of the proposed development. Parking vacancy counts were performed on Friday, October 26, 2012 on every hour from 3:00 PM to 8:00 PM and on Saturday, October 27, 2012 on every half-hour from 5:00 PM to 8:00 PM. The total amount of vacant spaces at each garage was counted for each time period. The counts were conducted at the parking garages located at 801 Filbert Street, at 781 Chestnut Street and on the southeast corner of the Chestnut Street & 9th Street intersection. **FIGURE 14** indicates the location of the three parking garages where vacancy counts were conducted. The three parking garages analyzed have a total capacity of 2,337 spaces. **TABLE 10** summarizes the total capacity for each garage included in the analysis. **FIGURE 14** indicates the location of the parking facilities which total 20,277 spaces within the Center City urban area surrounding the proposed site.

TABLE 10: STUDY AREA PARKING GARAGE SUMMARY

Parking Garage	Location	Capacity
A	801 Filbert Street	1,222
B	781 Chestnut Street	383
C	Chestnut Street & 9th Street	732
Total		2,337

During the Friday survey period, the peak occupancy for the parking supply was 65% (1,527 total vehicles parked and 810 spaces available) occurring from 3:00 PM to 4:00 PM. The parking occupancy rates decreased throughout the period. The average occupancy was 48% (1,116 total vehicles and 1,221 spaces available). During the Saturday period, the peak occupancy for the parking supply was 56% (1,303 total vehicles parked and 1,034 spaces available) occurring from 5:00 PM to 5:30 PM. The parking occupancy rates decreased throughout the period. The average occupancy was 47% (1,089 total vehicles and 1,248 spaces available).

Although Pennoni feels that a good portion of Casino patrons will be not require "existing" parking, either because they traveled to the site via transit, walking, casino shuttle or taxi, statistical data is not readily available to support any specific reduction in *parking* generation for a Central Business District casino venue. As indicated in **FIGURE 15**, the Center City area of Philadelphia contains numerous hotels (approximately 9,678 hotel rooms) and it is anticipated that many patrons of these hotels can and will visit MARKET8 at some *point during their stay. As detailed in the "Trip Generation" section of this report, however, it can be assumed* that of the total number of casino patrons visiting the complex on a Friday or Saturday evening, approximately 56-65% respectively will be arriving via automobile.

The City's Zoning Code *(§14-405 SP-ENT Entertainment Special Purpose District - Licensed Gaming Facilities)* requires 4 parking spaces for every 5 slot machine or gaming positions provided for patrons and guests. Accordingly, the proposed complex would thus need to accommodate 2,554 parking spaces.

Pennoni's Parking Utilization analysis shows that there are currently in excess of 2,800 parking spaces within a 5 minute walk available after 5:00 PM on an average (non-event) Friday and on an average (non-event) Saturday after 6:00 PM. Combined with the 1000 main casino complex parking spaces and the additional proposed 340 spaces at 733 Chestnut Street, the proposed complex can accommodate approximately 4,000 vehicles, immediately adjacent to the site, on an average Friday or Saturday evening. Extrapolating Pennoni's Parking Utilization analysis to those parking facilities within 5, 10 and 15-minute walking distances of MARKET8, the Center City area of Philadelphia will have more than adequate parking capacity to accommodate a proposed urban casino locale (See **TABLE 11**).

TABLE 11: WEEKEND PEAK HOUR PARKING AVAILIBILITY WITH PROPOSED SITE

Walking Distance to Parking	Parking Capacity (spaces)	Parking Availability* (spaces)
5 Minutes	5,416 +1000 – 293 +340 = 6,463	4,056
10 Minutes	11,734	7,395
15 Minutes	20,292	11,940
Spaces Required per Zoning	2,554	2,554
Total Excess Capacity Within 15-min Walk:	**17,738**	**9,386**

*After 5:00 PM on Fridays and 6:00 PM on Saturdays, based on avg. occupancy of 47% for existing facilities.

Suggested strategies that would further mitigate the need for an additional parking "immediately adjacent" to the site might include:

- "Real-time" parking management for casino parking;
- Shuttle bus service to/from MARKET8 and Center City Parking and/or Hotel Venues; and
- Off-site Parking Accommodation for Casino employees.

As noted, based on the approximate 50% availability of the three facilities studied herein, available parking for casino patrons will not be problematic. The available parking immediately adjacent to the site combined with the proposed underground parking within the site, and the additional proposed 340 spaces at 733 Chestnut Street exceeds *the parking requirements of the zoning code.*

FINDINGS AND RECOMMENDATIONS

Findings

Development trips will be comprised of two main components: the 80,000 GSF Casino (with 3192 gaming positions, buffet, meeting room space) and approximately 30,000 GSF of Quality Restaurants as part of the proposed complex. Projected peak hour trips for the casino for Friday and Saturday evening peak periods are based on research and information obtained from other casino traffic studies within the Philadelphia area and nationally. Projected peak hour trips for the Quality Restaurant uses are based on data provided in ITE's *Trip Generation, 9th edition.*

The ingress access for the proposed casino's parking garage will be located on the west side of 8th Street; with the corresponding egress access onto 9th Street (See Figure 2). As 8th Street and 9th Street are one-way pairs, southbound and northbound, respectively, all casino-related traffic, including valet and trucks, will be entering or exiting via the Market Street intersections with 8th and 9th Streets. Loading docks will be located inside the entrance to the main complex parking garage, opposite the valet pick-up/by-pass. The ingress and egress points for the additional parking at 733 Chestnut Street will be located on the east side of 8th Street and the north side of Chestnut Street. As 8th Street is one-way southbound, the majority of casino-related traffic using the 8th Street/Chestnut Street garage will be entering via the Market Street intersection with 8th Street. As Chestnut Street is one-way eastbound, the majority of traffic exiting the 8th Street/Chestnut Street garage will be exiting via 8th Street and Chestnut Street to 7th Street to Market Street.

All study intersections are projected to operate at an overall and approach LOS of C or better for both the horizon year "No Build" and "Build" conditions. The following improvements can be implemented to minimize delay increases at the 9th Street and Market Street intersection under build conditions: optimize the traffic signal timings, restrict on-street parking along the east side of 9th Street to provide a separate north bound right turn lane. The site driveway exiting onto 9th Street (stop controlled right out only) will operate at LOS B in the Build condition. Subsequently, considering a "diminishing return" of impacts as traffic is distributed farther from the border intersections, these results would indicate that MARKET8 would have similar, nominal impacts at other intersections along primary ingress and egress transportation routes.

Comparing the net "As-of-Right" vehicle trips to those for the proposed casino shows a significant increase in traffic if the proposed Market East site were to be developed per existing land use development guidelines. Specifically, 79% more traffic would typically be generated during the weekday PM Peak Hour (versus MARKET8 traffic) and 6% more traffic would be generated during the typical Saturday Peak Hour.

The City's Zoning Code *(§14-405 SP-ENT Entertainment Special Purpose District - Licensed Gaming Facilities)* requires 4 parking spaces for every 5 slot machine or gaming positions provided for patrons and guests. Accordingly, the proposed complex would thus need to accommodate 2,554 parking spaces. Pennoni's Parking Utilization analysis shows that there are currently in excess of 2,800 parking spaces within a 5 minute walk available after 5:00 PM on an average (non-event) Friday and on an average (non-event) Saturday after 6:00 PM. Combined with the 1000 main-casino complex parking spaces and the additional proposed 340 spaces at 733 Chestnut Street, the proposed complex can accommodate approximately 4,000 vehicles, immediately adjacent to the site, on an average Friday or Saturday evening. In fact, as the casino might not necessarily be a primary destination for all patrons (e.g., casino's often provide "after" dinner or "after" show entertainment), Pennoni feels that the zoning requirement for this urban center location may be conservative

Recommendations

Transportation

The following traffic management strategies are suggested for the proposed MARKET8 site:

- Restriction of on-street parking along the east side of 9th Street 100 feet south of the facility exit drive north to the Market Street intersection to provide a separate north bound right turn lane.

This recommendation will significantly improve the operations of the 9th Street and Market Street intersection, while allowing safer, unimpeded egress from the casino parking garage.

Based on the analyses contained herein, Pennoni would also recommend minor mitigation measures for study intersections, specifically, optimization of the traffic signal timing at the intersections of:

- Market Street and 7th Street;
- Market Street and 8th Street;
- Market Street and 9th Street;
- South 7th Street and Chestnut Street;
- South 8th Street and Chestnut Street; and
- South 9th Street and Chestnut Street.

To ensure "positive guidance" to/from the casino complex and primary travel routes for non-local drivers, it is suggested that enhanced trail-blazing signage to and from the regional transportation routes be provided.

We also acknowledge the potential impact of realistic long-term traffic reduction strategies, such as:

- Encouraging greater use of mass transit as an alternative to driving via advertising and/or casino promotions;

- Working with SEPTA and Center City hotels to increase the frequency of bus and shuttle stops to the casino and/or creating a direct connection to the mass transit hub within the study area (8th and Market Street);

Parking

The Zoning Codes states that "parking provided in this (Special Purpose) District must be adequately served by high-capacity roads or driveways approved by the Streets Department as being adequate to safely serve the ingress and egress of patrons and guests using the facility." This requirement is clearly met given the close proximity of the proposed casino site to I-95 and the Vine Street Expressway.

Suggested parking utilization strategies that would further reduce the need for on-site parking spaces would include:

- "Real-time" parking management for Casino parking;
- Shuttle bus service to/from the Casino and Center City Parking, Shopping venues, Hotels,
- Proposed VIP and/or Valet Parking, and
- Off-site Parking Accommodation for Casino employees.

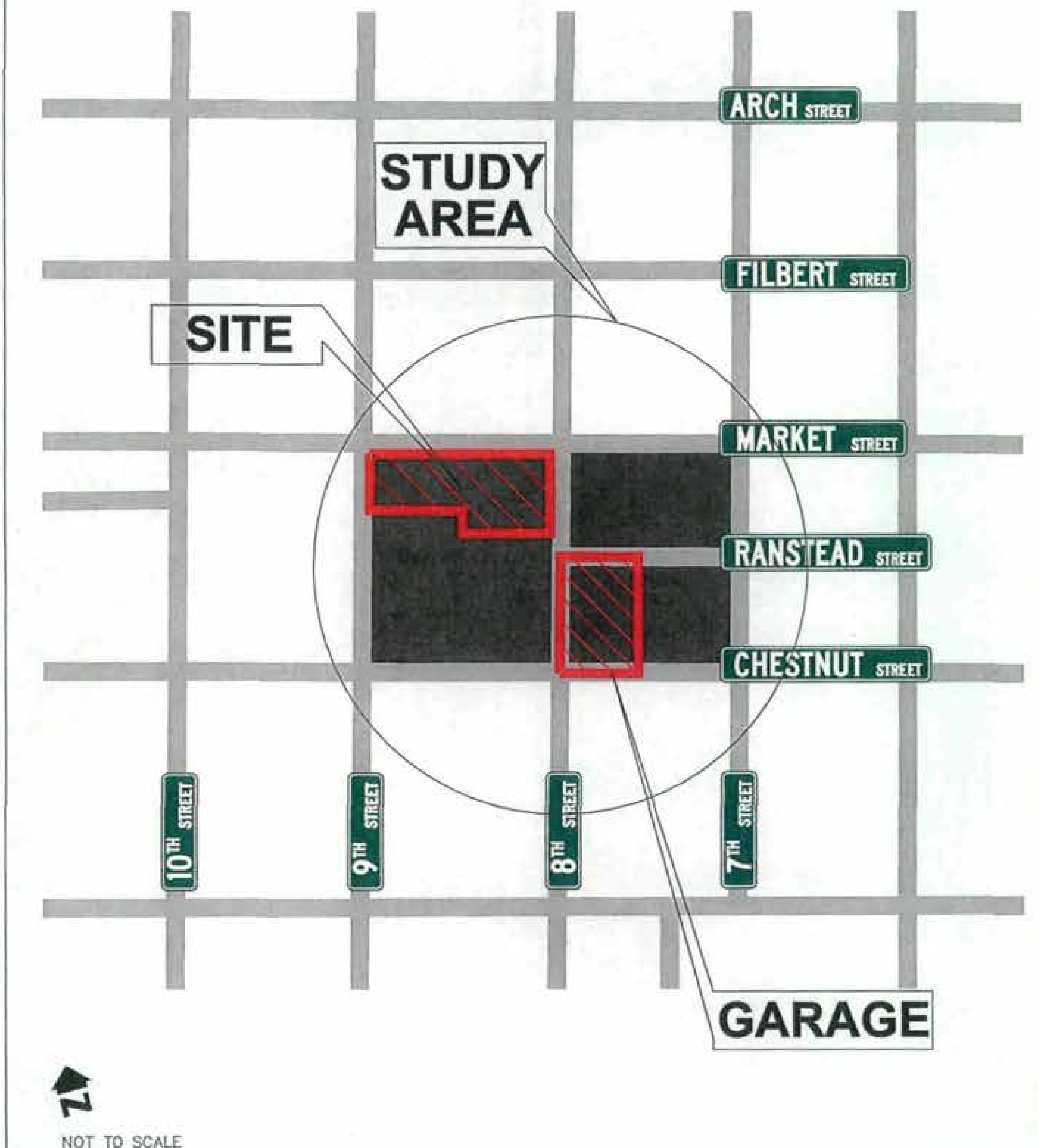
Conclusions

Based on the findings indicated in this study:

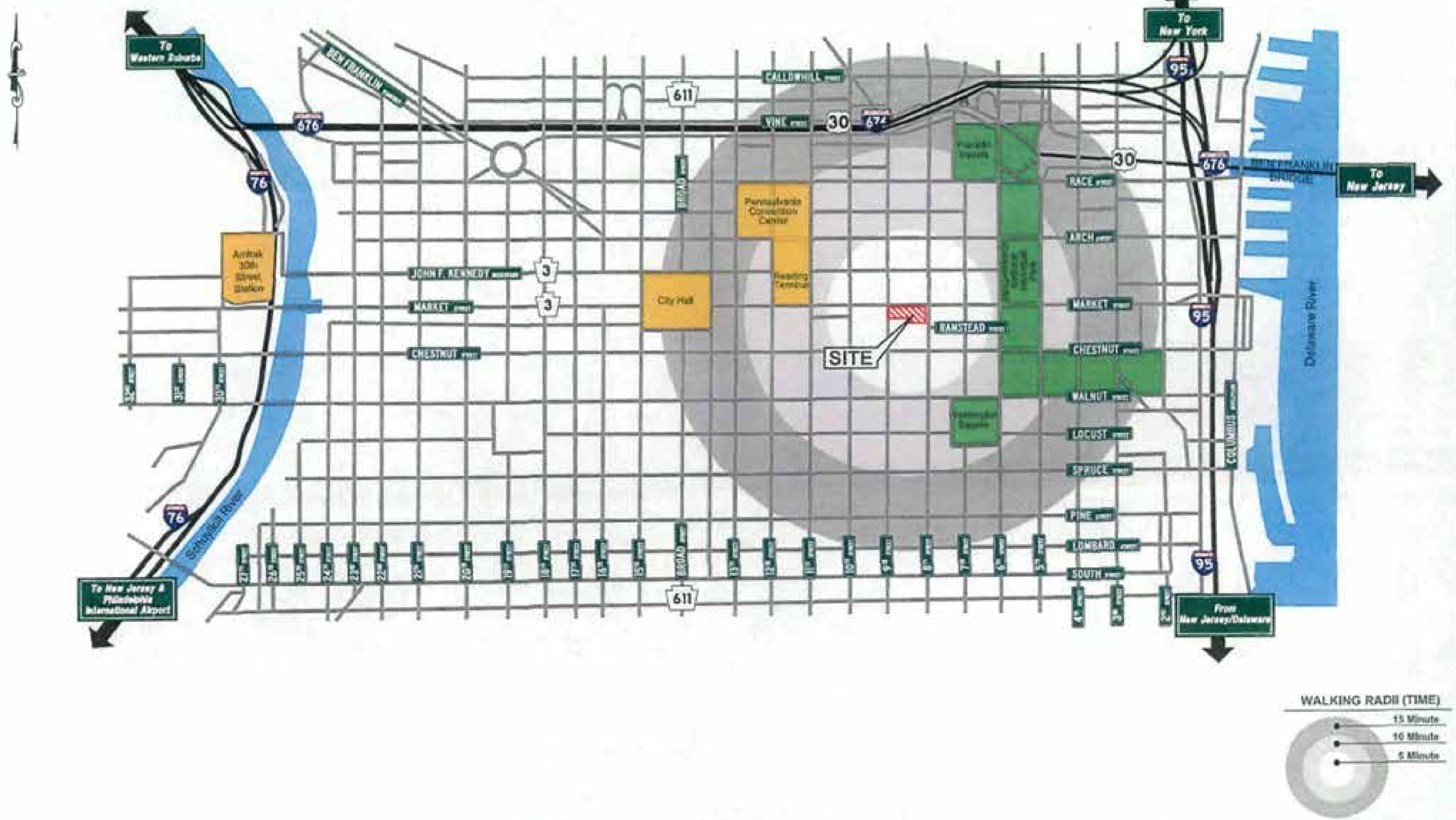
- Transit service to the 8th and Market location is extraordinary. The casino is in a prime location to access several modes of transit including buses, subways, and regional rail. As a regional transit hub, the site is well served as a destination, and functions as one of the region's major points of transfer between transit facilities.
- The casino is in a prime location to access I-95 and I-676 for regional access by vehicular traffic.
- Delays due to casino vehicular traffic are limited to less than 10 seconds beyond "no build" conditions at all studied intersections. Levels of service (LOS) for the "Build" conditions meet or exceed typical LOS requirements for urban settings.
- The available parking immediately adjacent to the site combined with the proposed parking within the site exceeds the parking requirements of the zoning code. The site, located within the City of Philadelphia's urban core, provides excellent flexibility for development program modifications through maximization strategies for on-site parking, or greater utilization rates benefitting nearby, off-site parking facilities.

If those recommendations suggested above are implemented as part of the MARKET8 project, there will be nominal impacts on the surrounding transportation system with the Center City section of Philadelphia.

FIGURES



Pennoni — PENNONI ASSOCIATES INC. CONSULTING ENGINEERS 3001 MARKET STREET PHILADELPHIA, PA 19104 MEAS 1201	MARKET8 City of Philadelphia Philadelphia County, PA	**FIGURE 2** STUDY AREA



NOT TO SCALE

Pennoni

PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS
3001 MARKET STREET
PHILADELPHIA, PA 19104

MARKET8
City of Philadelphia
Philadelphia County, PA

FIGURE 3
PROJECT AREA MAP

FROM EAST BOUND 676

- Exit I-676 onto 8th Street
- South on 8th Street (5 blocks) to SITE

FROM WEST BOUND 676

- Exit I-676 onto 8th Street
- South on 8th Street (5 blocks) to SITE

FROM NORTH BOUND 95

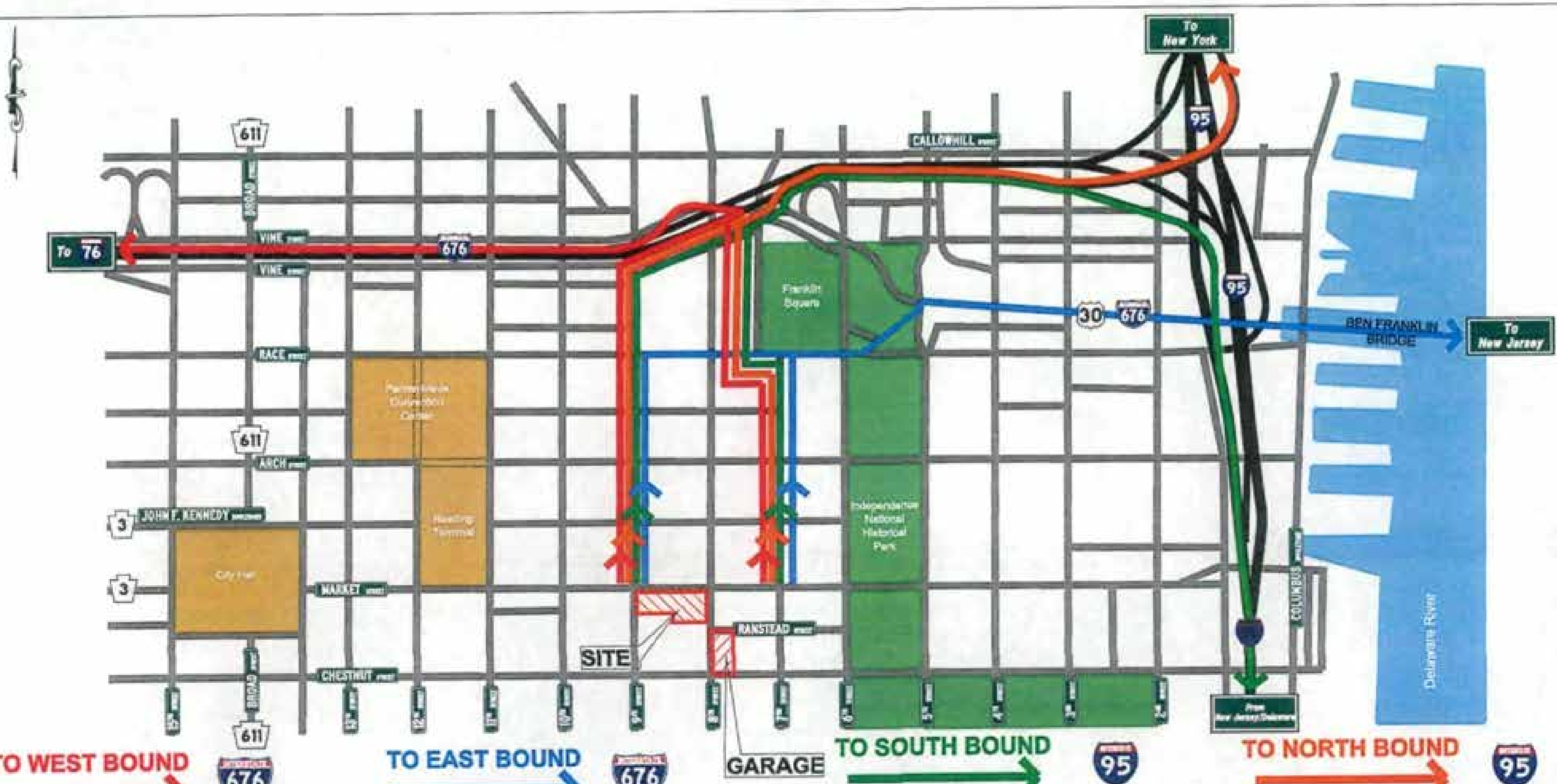
- Exit I-95 onto Callowhill Street
- West on Callowhill Street to 8th Street
- South on 8th Street (5 blocks) to SITE

FROM SOUTH BOUND 95

- Exit I-95 onto Callowhill Street
- West on Callowhill Street to 8th Street
- South on 8th Street (5 blocks) to SITE

NOT TO SCALE

Pennoni — PENNONI ASSOCIATES INC. CONSULTING ENGINEERS 3001 MARKET STREET PHILADELPHIA, PA 19104	MARKET8 City of Philadelphia Philadelphia County, PA	FIGURE 4 INGRESS ROUTES TO SITE FROM REGIONAL ROUTES



TO WEST BOUND 676

- North on 9th Street (5 blocks) to Vine Street
- East on Vine Street to 7th Street
- North on 7th Street to I-676

From 8th/Chestnut Garage

- East on Chestnut Street (1 block)
- North on 7th Street to I-676 (6 blocks)

TO EAST BOUND 676

- North on 9th Street (4 blocks) to Race Street
- East on Race Street (3 blocks) to I-676 entrance and the Benjamin Franklin Bridge

From 8th/Chestnut Garage

- East on Chestnut Street (1 block)
- North on 7th Street (4 blocks) to Race Street
- East on Race Street (1 block) to I-676 entrance and the Benjamin Franklin Bridge

TO SOUTH BOUND 95

- North on 9th Street (5 blocks) to Vine Street
- East on Vine Street to 7th Street
- North on 7th Street to I-676

From 8th/Chestnut Garage

- East on Chestnut Street (1 block)
- North on 7th Street (6 blocks) to I-676

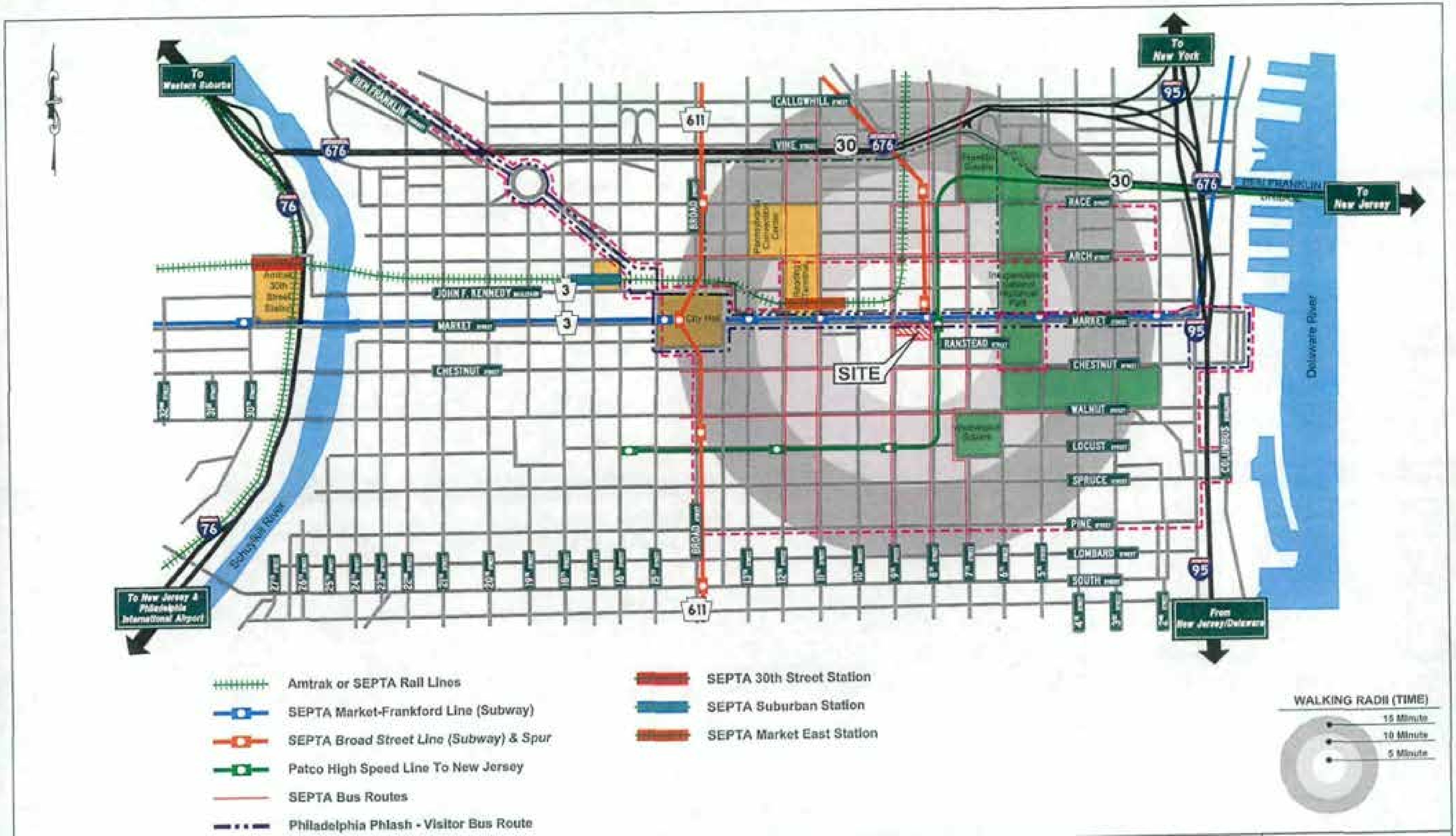
TO NORTH BOUND 95

- North on 9th Street (5 blocks) to Vine Street
- East on Vine Street to 7th Street
- North on 7th Street to I-676

From 8th/Chestnut Garage

- East on Chestnut Street (1 block)
- North on 7th Street (6 blocks) to I-676

Pennoni — PENNONI ASSOCIATES INC. CONSULTING ENGINEERS 3001 MARKET STREET PHILADELPHIA, PA 19104	MARKET8 City of Philadelphia Philadelphia County, PA	FIGURE 5 EGRESS ROUTES FROM SITE TO REGIONAL ROUTES

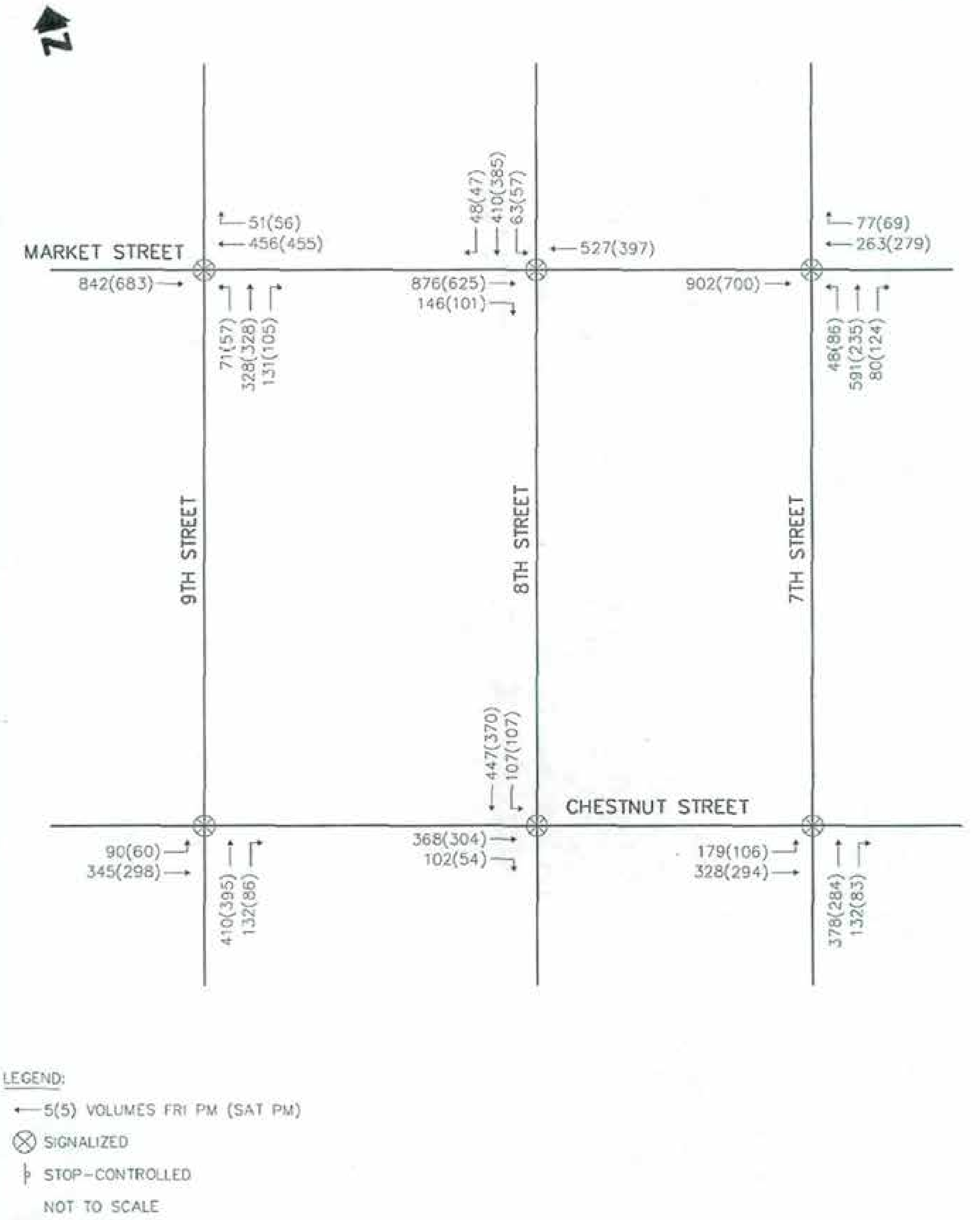


Pennoni

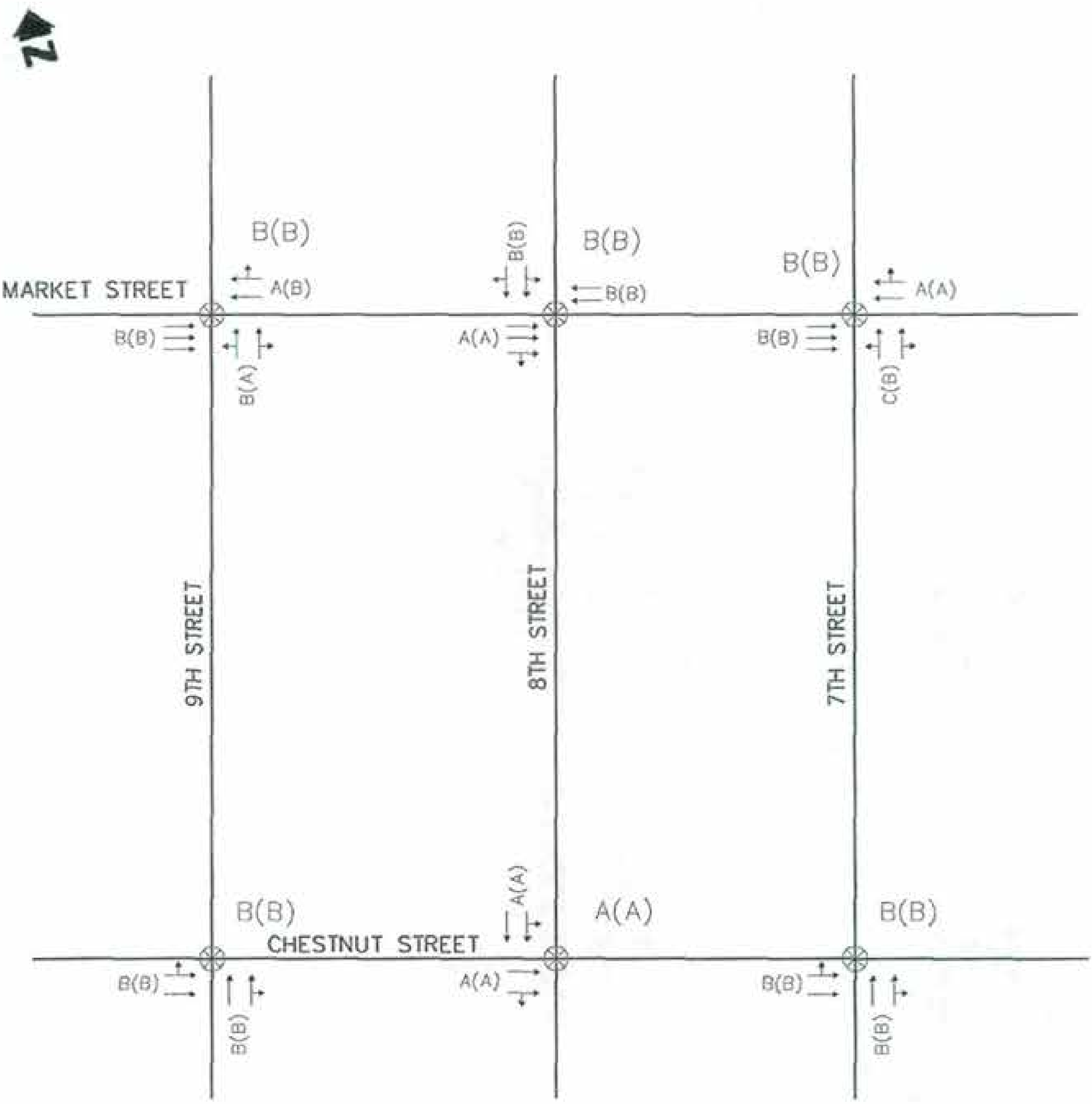
PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS
3001 MARKET STREET
PHILADELPHIA, PA 19104

MARKET8
City of Philadelphia
Philadelphia County, PA

FIGURE 6
TRANSIT ROUTES



Pennoni — PENNONI ASSOCIATES INC. CONSULTING ENGINEERS 3001 MARKET STREET PHILADELPHIA, PA 19104 MEAS 1201	MARKET8 City of Philadelphia Philadelphia County, PA	**FIGURE 7** 2012 EXISTING PEAK HOUR VOLUMES



LEGEND:

A(A) OVERALL LEVELS OF SERVICE FRI PM (SAT PM)

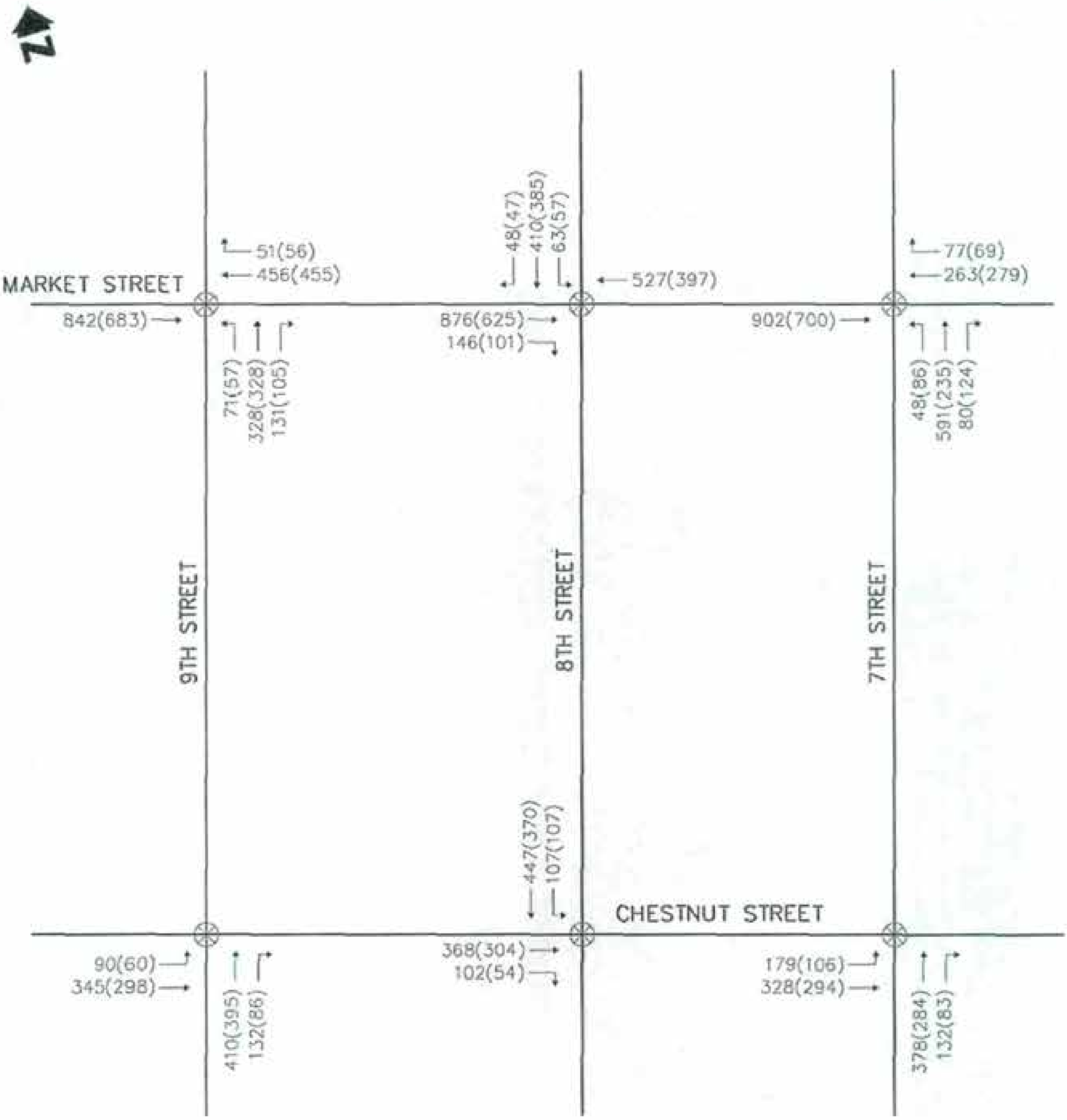
A(A) LEVELS OF SERVICE FRI PM (SAT PM)

SIGNALIZED

STOP-CONTROLLED

NOT TO SCALE

Pennoni PENNONI ASSOCIATES INC. CONSULTING ENGINEERS 3001 MARKET STREET PHILADELPHIA, PA 19104 MEAS 1201	MARKET8 City of Philadelphia Philadelphia County, PA	FIGURE 8 2012 EXISTING PEAK HOUR LEVELS OF SERVICE



LEGEND:

5(5) VOLUMES FRI PM (SAT PM)

SIGNALIZED

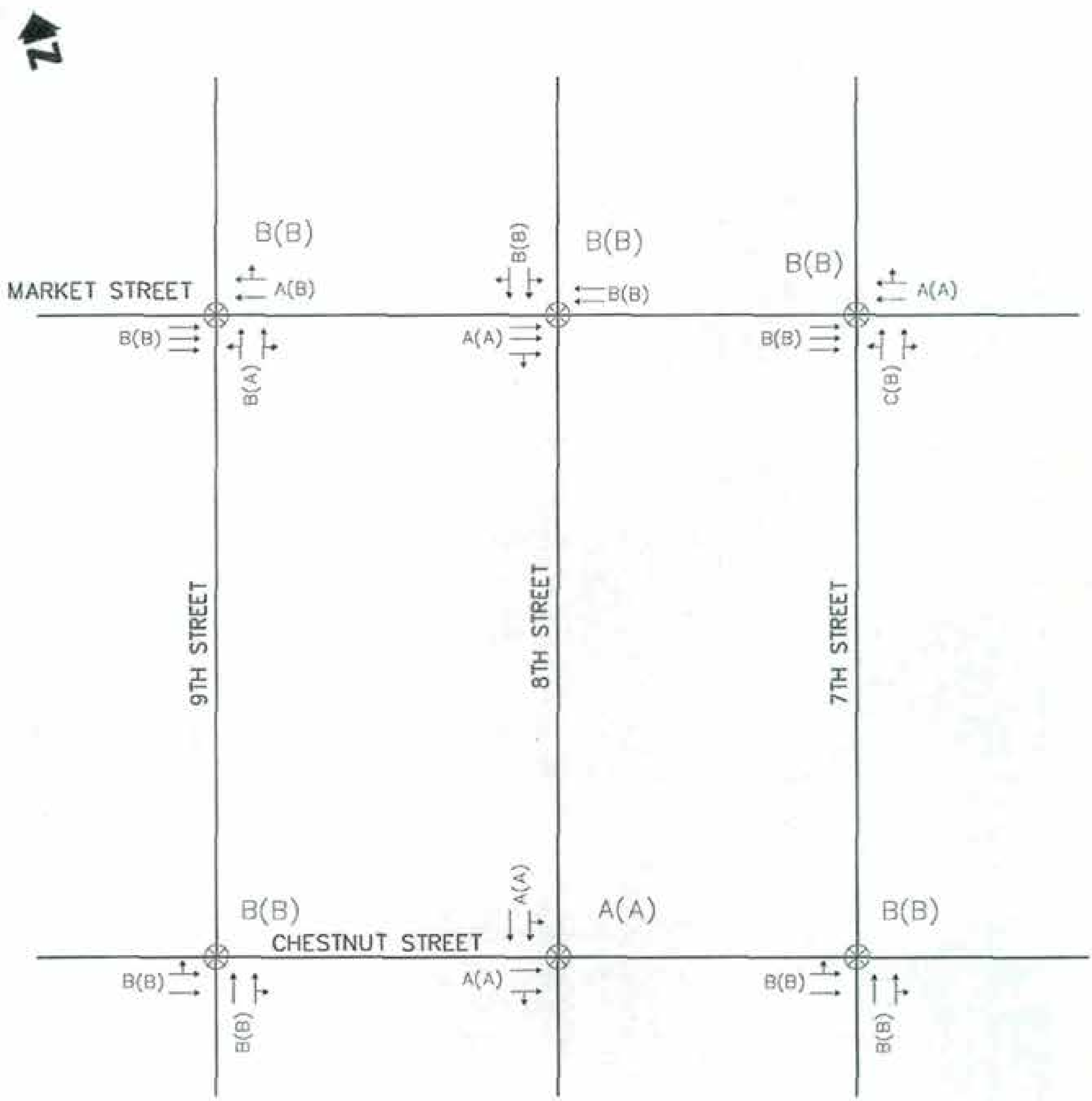
STOP-CONTROLLED

NOT TO SCALE

Assumptions:

- 0% growth rate based on PennDOT Growth Factors Table for Sept. 2012 to July 2013
- No other development in study area

Pennoni PENNONI ASSOCIATES INC. CONSULTING ENGINEERS 3001 MARKET STREET PHILADELPHIA, PA 19104 MEAS 1201	MARKET8 City of Philadelphia Philadelphia County, PA	FIGURE 9 2016 OPENING DAY & 2021 DESIGN YEAR NO-BUILD PEAK HOUR VOLUMES



LEGEND:

A(A) OVERALL LEVELS OF SERVICE FRI PM (SAT PM)

A(A) LEVELS OF SERVICE FRI PM (SAT PM)

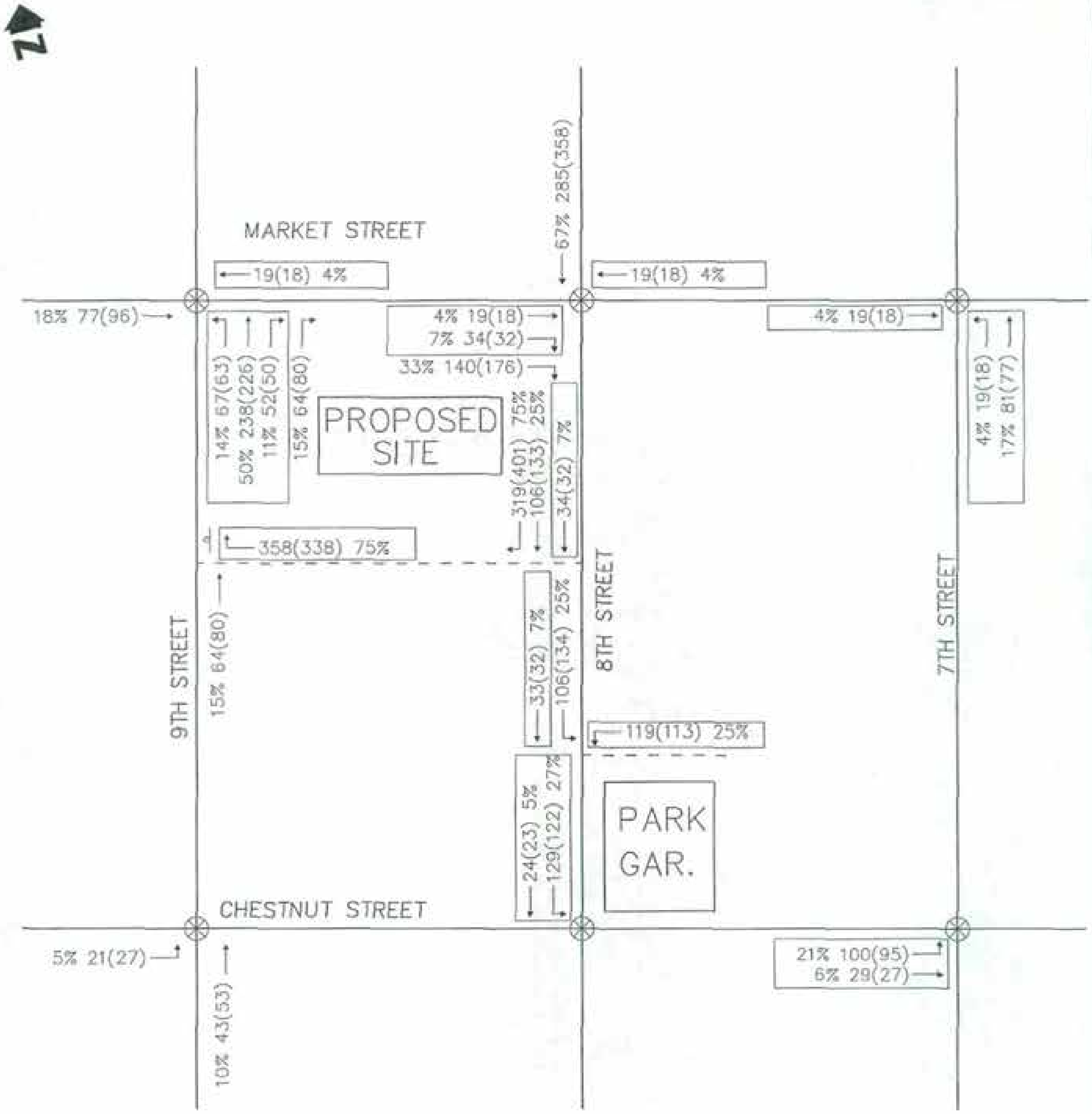
SIGNALIZED

STOP-CONTROLLED

NOT TO SCALE

Assumptions:
- 0% growth rate based on PennDOT Growth Factors Table for Sept. 2012 to July 2013
- No other development in study area

Pennoni PENNONI ASSOCIATES INC. CONSULTING ENGINEERS 3001 MARKET STREET PHILADELPHIA, PA 19104 MEAS 1201	MARKET8 City of Philadelphia Philadelphia County, PA	FIGURE 10 2016 OPENING DAY & 2021 DESIGN YEAR NO-BUILD PEAK HOUR LEVELS OF SERVICE



LEGEND:

5(5) ENTERING VOLUMES FRI PM (SAT PM)

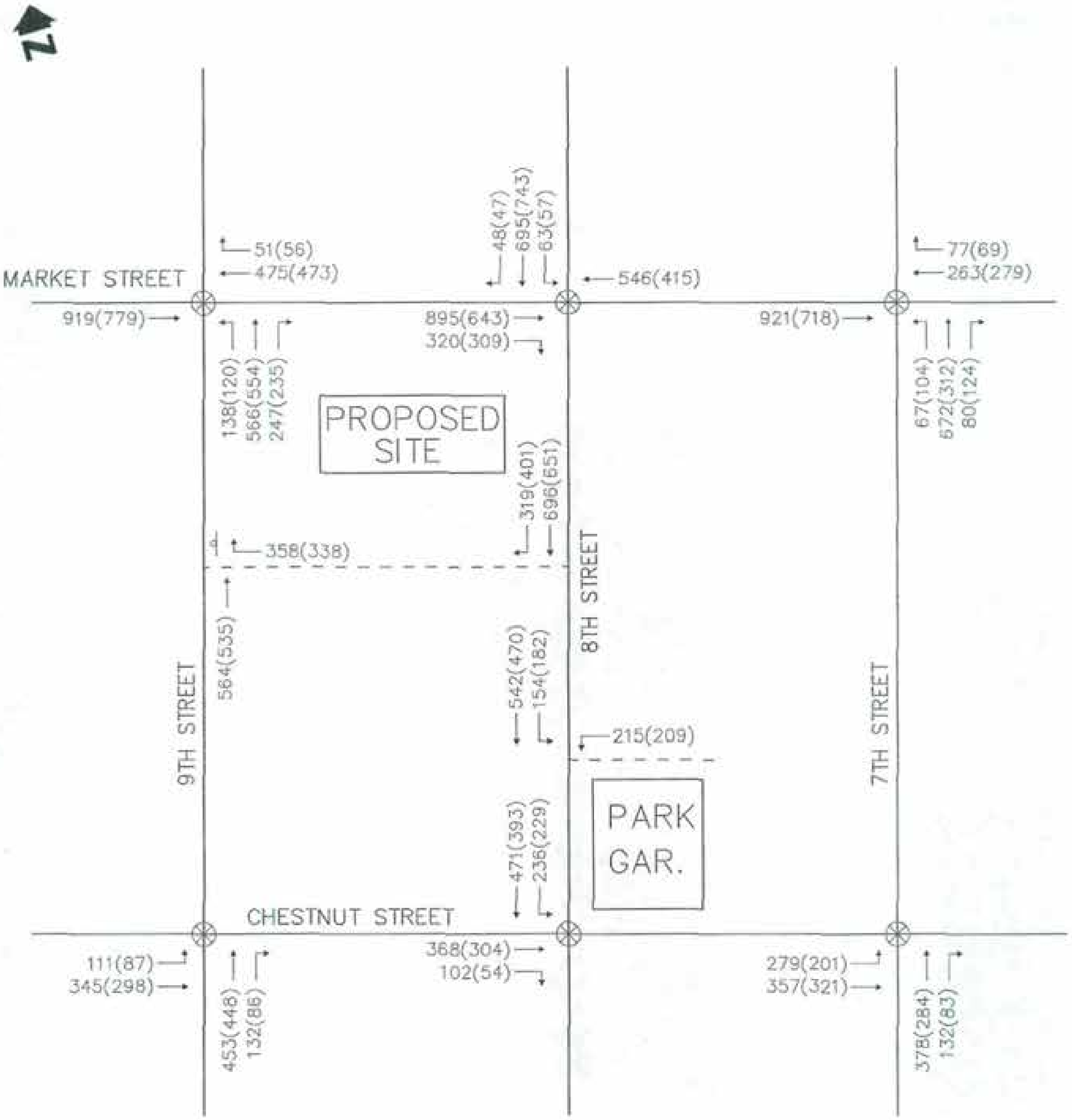
5(5) EXITING VOLUMES FRI PM (SAT PM)

SIGNALIZED

STOP-CONTROLLED

NOT TO SCALE

Pennoni — PENNONI ASSOCIATES INC. CONSULTING ENGINEERS 3001 MARKET STREET PHILADELPHIA, PA 19104 MEAS 1201	**MARKET8** City of Philadelphia Philadelphia County, PA	**FIGURE 11** TRIP DISTRIBUTION PEAK HOUR VOLUMES



LEGEND:

5(5) VOLUMES FRI PM (SAT PM)

SIGNALIZED

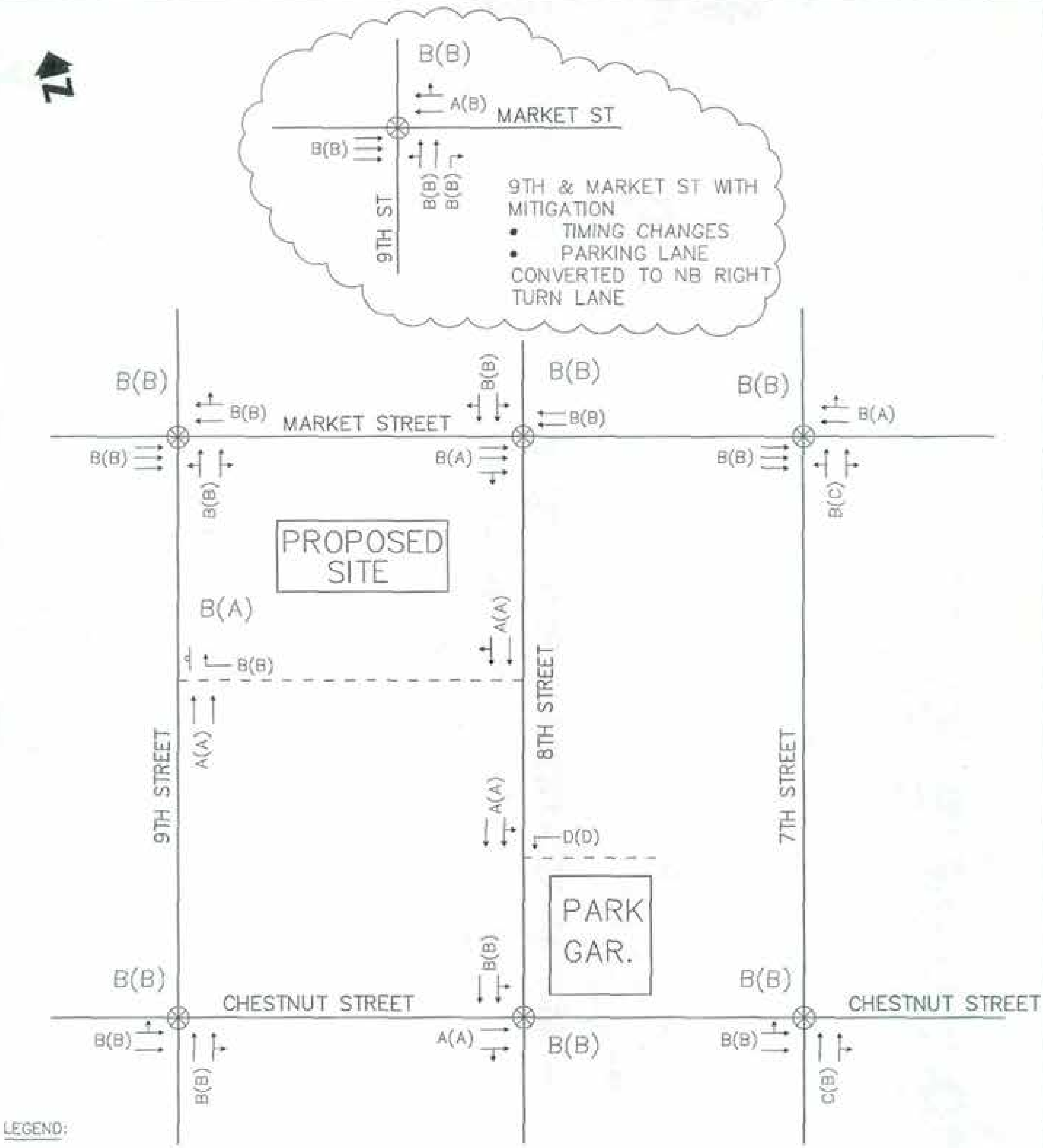
STOP-CONTROLLED

NOT TO SCALE

Assumptions:

- 0% growth rate based on PennDOT Growth Factors Table for Sept. 2012 to July 2013
- No other development in study area

Pennoni — PENNONI ASSOCIATES INC. CONSULTING ENGINEERS 3001 MARKET STREET PHILADELPHIA, PA 19104 MEAS 1201	MARKET8 City of Philadelphia Philadelphia County, PA	FIGURE 12 2016 OPENING DAY & 2021 DESIGN YEAR BUILD PEAK HOUR VOLUMES



LEGEND:

A(A) OVERALL LEVELS OF SERVICE FRI PM (SAT PM)

← A(A) LEVELS OF SERVICE FRI PM (SAT PM)

⊗ SIGNALIZED

STOP-CONTROLLED

NOT TO SCALE

Assumptions:
- 0% growth rate based on PennDOT Growth Factors Table for Sept. 2012 to July 2013
- No other development in study area

Pennoni

PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS
3001 MARKET STREET
PHILADELPHIA, PA 19104
MEAS 1201

MARKET8
City of Philadelphia
Philadelphia County, PA

FIGURE 13
2016 OPENING DAY & 2021 DESIGN YEAR BUILD PEAK HOUR LEVELS OF SERVICE

5 Minute Walking Radius / Capacity = X

47, 65, 69, 75, 121
155, 187, 732, 293, 330
383, 437, 450, 850, 1222

10 Minute Walking Radius / Capacity = X

26, 45, 54, 109, 125, 128, 140, 179
150, 220, 222, 232, 271, 300, 455, 455
500, 616, 625, 656, 735, –, –, –

15 Minute Walking Radius / Capacity = X

39, 40, 47, 60, 75, 162, 180, 275, 350, 354
450, 450, 541, 615, 663, 862, –, –, –, –
–, –, –, 90, 114, 63, –, –, –, –

>15 Minute Walking Radius / Capacity = X

39, 80, 110, 127
344, 492, 535, 615, 866
–, –, –, –, –

WALKING RADII (TIME)

15 Minute
10 Minute
5 Minute

INDICATES THE LOCATIONS OF THE PARKING FACILITIES WHERE VACANCY COUNTS WERE CONDUCTED.
– DENOTES PARKING FACILITIES WERE PARKING CAPACITY DATA WAS NOT OBTAINED.

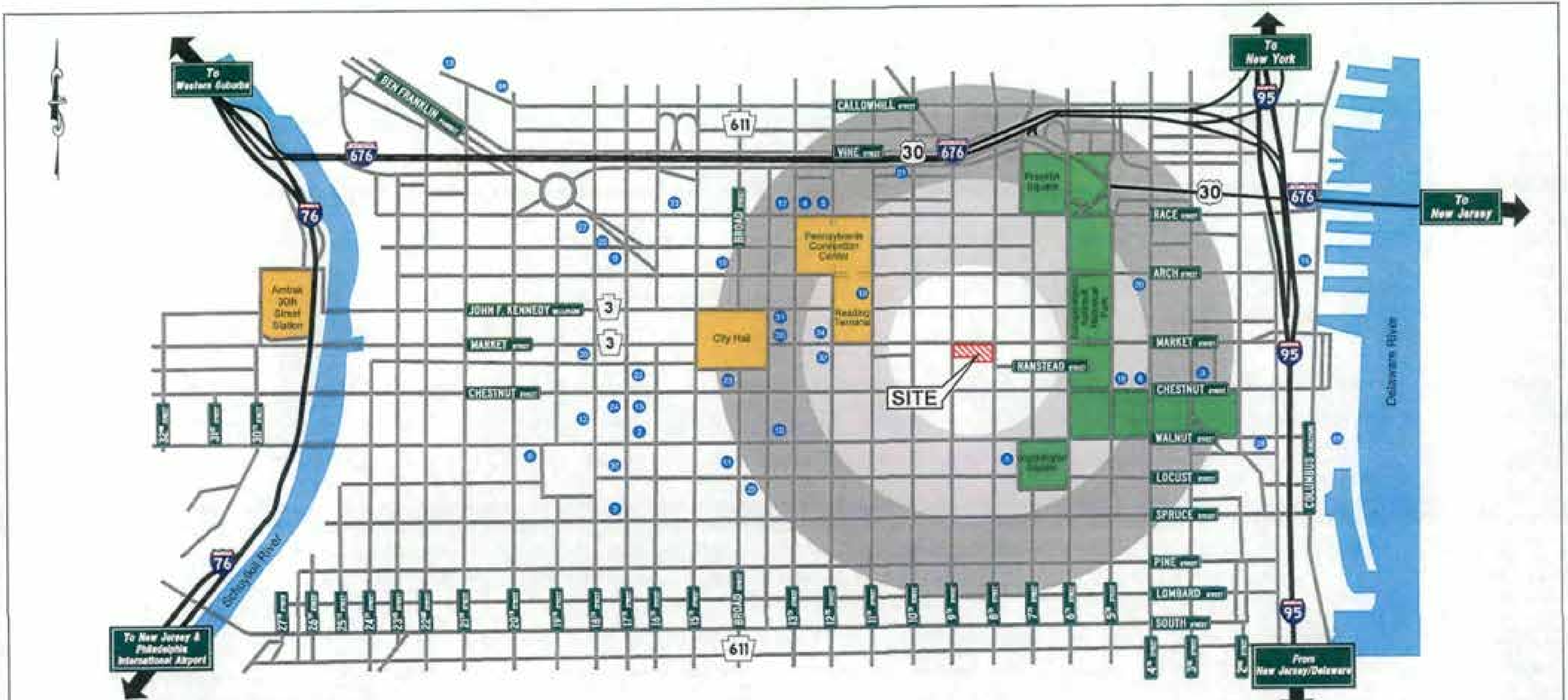
NOT TO SCALE

Pennoni

PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS
3001 MARKET STREET
PHILADELPHIA, PA 19104

MARKET8
City of Philadelphia
Philadelphia County, PA

FIGURE 14
CENTER CITY
PARKING FACILITIES



	Hotels	# of Rooms
1	Morris Hotel	15
2	Rittenhouse 1715	23
3	Best Western Plus Independence Park Hotel	36
4	Travelodge	50
5	Four Points by Sheraton	92
6	Rittenhouse Hotel	93
7	The Latham Hotel	138
8	The Omni at Independence Park	150
9	Windsor Suites	150
10	Holiday Inn Express - Midtown	166
11	Hyatt at the Bellevue	170
12	AKA Rittenhouse Square	181
13	Best Western Hotel	183
14	Comfort Inn Downtown/H Downtown Historic	185
15	Hotel Palomar	194
16	Le Meridien	202
17	Hampton Inn	250
18	Monaco Philadelphia	268
19	Hilton Garden Inn	279
20	Embassy Suites Hotel	288
21	Grandview Suites	294
22	The Westin Philadelphia Hotel	294
23	Ritz-Carlton Hotel	300
24	Sofitel Philadelphia	306
25	Residence Inn Marriott	350
26	Holiday Inn - Independence Mall	364
27	Four Seasons Hotel	365
28	Sheratown Society Hill	365
29	Doubletree Hotel	425
30	Sonesta Hotel	445
31	Courtyard by Marriott	500
32	Loews Hotel	600
33	Sheraton Philadelphia Center City Hotel	757
34	Philadelphia Marriot Hotel	1200
35	Hyatt Regency Penns Landing	
36	Korman Suites - Buttonwood Square	
37	Radisson Plaza	

NOT TO SCALE

WALKING RADII (TIME)

15 Minute
10 Minute
5 Minute

Pennoni

PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS
3001 MARKET STREET
PHILADELPHIA, PA 19104

MARKET8
City of Philadelphia
Philadelphia County, PA

FIGURE 15
CENTER CITY
HOTELS

REFERENCE

ITE Trip Generation Data

Land Use: 931
Quality Restaurant

Description

This land use consists of high quality, full-service eating establishments with typical duration of stay of at least one hour. Quality restaurants generally do not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires reservations and is generally not part of a chain. Patrons commonly wait to be seated, are served by a waiter/waitress, order from menus and pay for meals after they eat. While some of the study sites have lounge or bar facilities (serving alcoholic beverages), they are ancillary to the restaurant. High-turnover (sit-down) restaurant (Land Use 932) is a related use.

Additional Data

Truck trips accounted for approximately 1 to 4 percent of the weekday traffic. The average for the sites that were surveyed was approximately 1.6 percent.

Vehicle occupancy ranged from 1.59 to 1.98 persons per automobile on an average weekday. The average for the sites that were surveyed was approximately 1.78.

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

The sites were surveyed between the 1970s and the 1990s throughout the United States.

Source Numbers

13, 73, 88, 90, 98, 100, 126, 172, 260, 291, 301, 338, 339, 368, 437, 440

Quality Restaurant
(931)

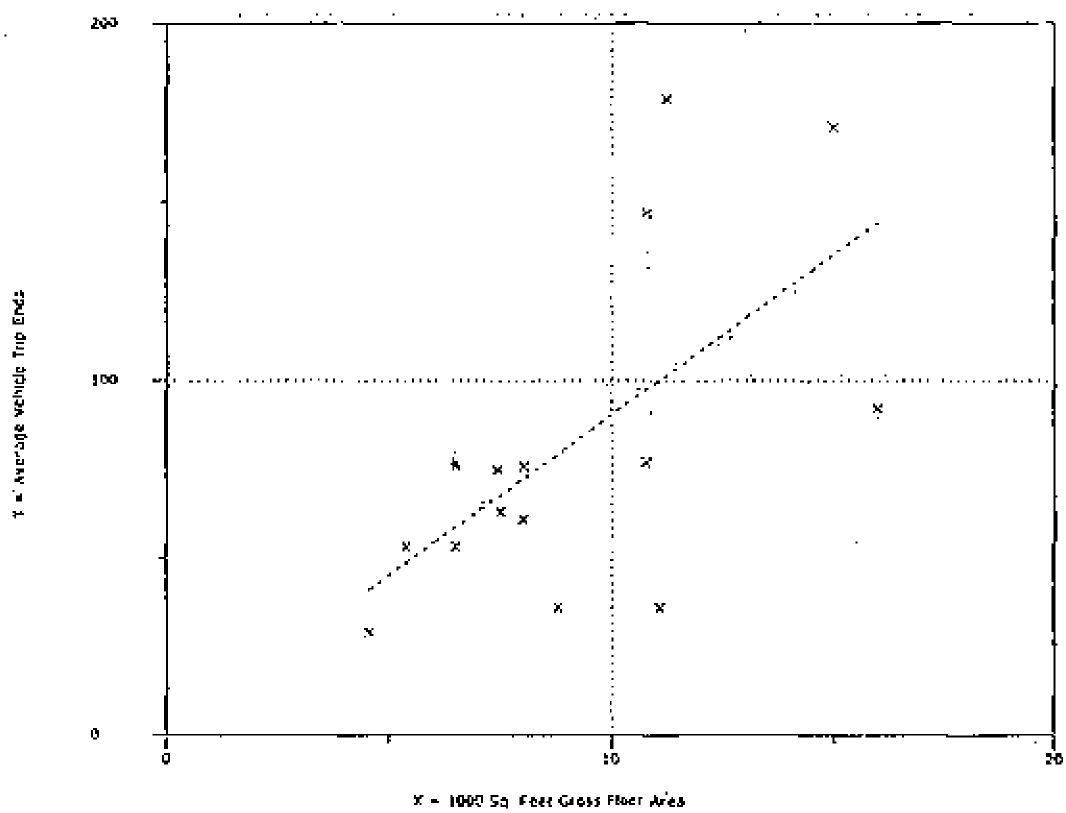
Average Vehicle Trip Ends vs:	1000 Sq. Feet Gross Floor Area
On a:	Weekday
	P.M. Peak Hour of Generator

Number of Studies:	16
Average 1000 Sq. Feet GFA:	9
Directional Distribution:	62% entering, 38% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
9.02	3.24 - 15.69	4.55

Data Plot and Equation



X Actual Data Points · Omitted Data Points —— Fitted Curve - - - - - - Average Rate
O Custom Data Points

Fitted Curve Equation: Not Given R² = ****

Quality Restaurant
(931)

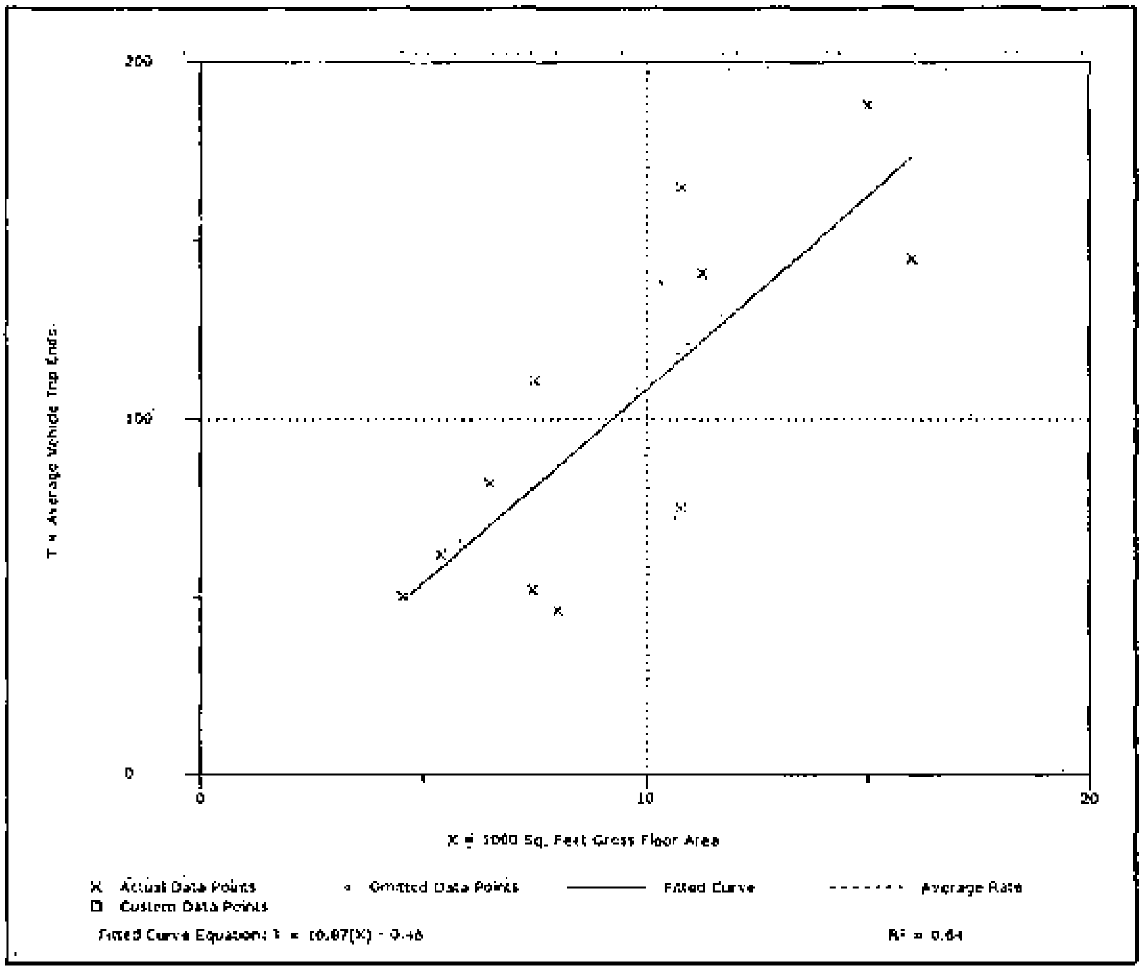
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Saturday**
Peak Hour of Generator

Number of Studies: 11
Average 1000 Sq. Feet GFA: 9
Directional Distribution: 59% entering, 41% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
10.82	5.75 - 15.28	4.38

Data Plot and Equation



Trip Generation, 6th Edition

Land Use: 473
Casino/Video Lottery Establishment

Description

Casino/video lottery establishments are businesses that provide electronic or manually-controlled slot machines. These facilities exist for the primary purpose of deriving revenue from gaming operations. Full food service is generally not provided at these facilities; however, refreshments and alcoholic beverages may be served. These facilities do not include full-service casinos or casino/hotel facilities such as those located in Las Vegas, Nevada or Atlantic City, New Jersey. Riverboat casinos are not included in this land use category.

Additional Data

Trip generation rates for full-service casinos and casino/hotel facilities are not included in this land use.

The sites were surveyed in the 1990s in South Dakota.

Source Number

359

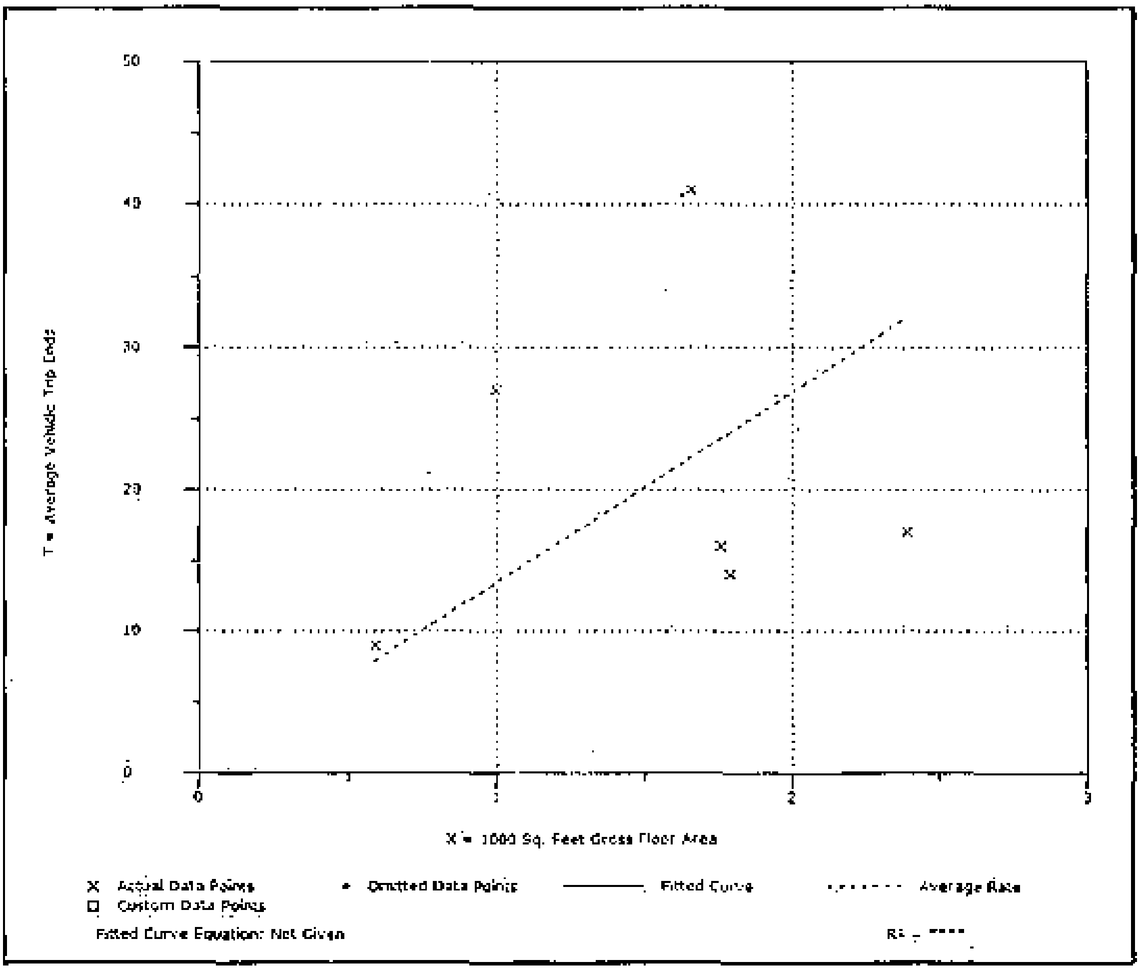
Casino/Video Lottery Establishment
(473)

Average Vehicle Trip Ends vs:	**1000 Sq. Feet Gross Floor Area**
On a:	**Weekday**
	Peak Hour of Adjacent Street Traffic
	One Hour Between 4 and 6 p.m.
Number of Studies:	6
Average 1000 Sq. Feet GFA:	2
Directional Distribution:	56% entering, 44% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
13.43	7.68 - 27.00	8.65

Data Plot and Equation



ITE Multi-Use Development

Trip Generation

and Internal Capture Summary

Analyst Tcm

Date 2-4-13

MULTI-USE DEVELOPMENT TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

Name of Dvlpt

Time Period Fri Peak Hour

LAND USE A CASINO

ITE LU Code Site Data

Size 3192 gaming positions

	Total	Internal	External
Enter	387	21	366
Exit	513	34	479
Total	900	55	845
%	100%	6%	94%

Exit to External

Enter from External

Demand 20% 103 | Demand 20% 77

Balanced 34 | Balanced 21

Demand 20% 34 | Demand 20% 21

Demand % | Demand %

Balanced | Balanced

Demand % | Demand %

LAND USE B Restaurants

ITE LU Code 931 - Quality Restaurants

Size 20,000 s.f.

	Total	Internal	External
Enter	168	34	134
Exit	103	21	82
Total	271	55	216
%	100%	20%	80%

Exit to External

Enter from External

Demand % | Balanced | Demand %

Demand % | Balanced | Demand %

LAND USE C

ITE LU Code

Size

	Total	Internal	External
Enter			
Exit			
Total			
%			

Enter from External

Exit to External

Net External Trips for Multi-Use Development

	LAND USE A	LAND USE B	LAND USE C	TOTAL
Enter	366	134		500
Exit	479	82		561
Total	845	216		1061
Single-Use Trip Gen. Est.	900	271		1171

Source: Kaku Associates, Inc.

INTERNAL CAPTURE 9.4%

9%

Analyst TLM
Date 3-4-13

MULTI-USE DEVELOPMENT TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

Name of Dvlpt
Time Period SAT Peak Hour

LAND USE A CASINO

ITE LU Code Site Data
Size 3192 gaming positions

	Total	Internal	External
Enter	468	27	441
Exit	432	38	394
Total	900	65	835
%	100%	7%	93%

Exit to External
Enter from External

Between Land Use A and Land Use B:

20% 86 Demand
38 Balanced
20% 38 Demand

20% 94 Demand
27 Balanced
20% 27 Demand

Between Land Use A and Land Use C:

% Demand
Balanced
% Demand

% Demand
Balanced
% Demand

LAND USE B Restaurants

ITE LU Code 931 - Quality Restaurants
Size 30,000 SF

	Total	Internal	External
Enter	191	38	153
Exit	134	27	107
Total	325	65	260
%	100%	20%	80%

Exit to External
Enter from External

Between Land Use B and Land Use C:

Demand %
Balanced
Demand %

% Demand
Balanced
% Demand

LAND USE C

ITE LU Code
Size

	Total	Internal	External
Enter			
Exit			
Total			
%			

Enter from External
Exit to External

Net External Trips for Multi-Use Development

	LAND USE A	LAND USE B	LAND USE C	TOTAL
Enter	441	153		594
Exit	394	107		501
Total	835	260		1095
Single-Use Trip Gen. Est.	900	325		1225

INTERNAL CAPTURE
10.6%

11%

Source: Kaku Associates, Inc.

Philadelphia Gaming Advisory Task Force

Interim Report of Findings

Executive Summary of the

INTERIM REPORT OF FINDINGS

Philadelphia Gaming Advisory Task Force

TABLE 3: Casino Visitation Patterns by Time of Day

		Morning	Afternoon	Adj. To	Rush Hour	Evening	Night	Graveyard	Adj. To
		8-11a	11a-4p	3-hour period	4p-7p	7p-10p	10p-1a	1a-8a	3-hour period
Monday – Thursday	average	8%	30%	18%	17%	18.5%	14.5%	12%	5.1%
	peak	10%	33%	19.8%	20%	20%	17%	14%	6.0%
Friday	average	7%	18%	10.8%	12%	18%	18%	27%	11.6%
	peak	9%	21%	12.6%	15%	22%	20.5%	30%	12.9%
Saturday	average	9%	24%	14.4%	15%	17.5%	16.5%	18%	7.7%
	peak	11.5%	26.5%	15.9%	17.5%	22%	19%	20.5%	8.8%
Sunday	average	7.5%	29%	17.4%	20%	18.5%	14%	11%	4.7%
	peak	10%	31.5%	18.9%	22.5%	21%	16%	13%	5.6%

Source: Innovation Group

Mode of Arrival

With up to 5,000 slot machines per gaming facility and between 12,000 and 36,000 visitors per day, traffic and parking demands generated by Philadelphia slots-only casinos will be substantial. Understanding how gamers are likely to arrive at Philadelphia slots parlors is a necessary first step in assessing the potential traffic impacts associated with casino development. Graph 2 displays the expected typical distribution of transportation modes for a casino located in a given area of the City.

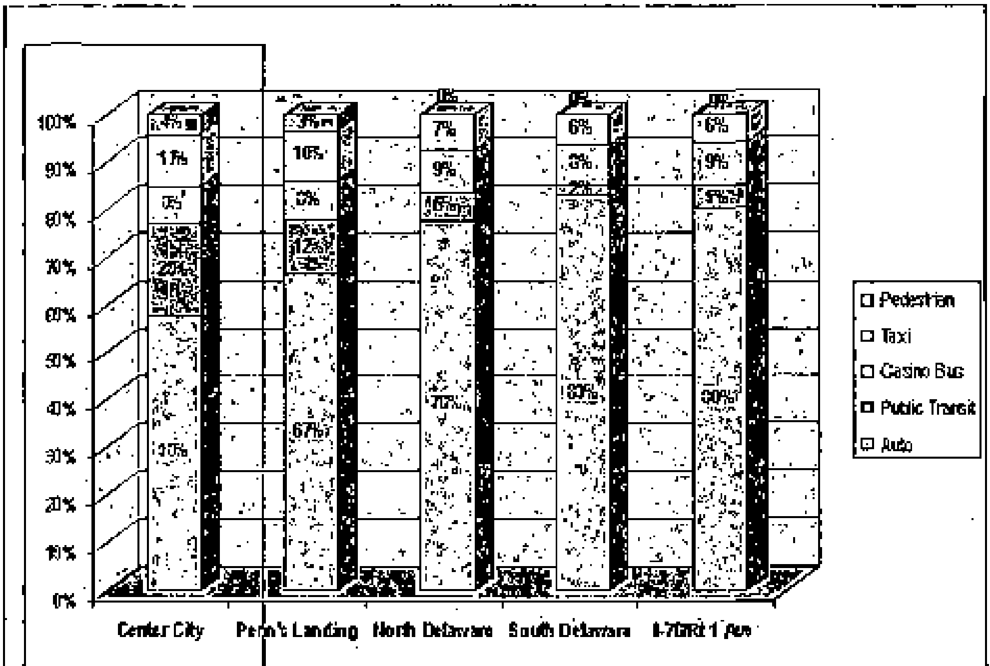
Private automobile will be the overwhelming preferred mode of arrival at Philadelphia gaming sites, with more than half of gamers expected to drive to a casino in or near Center City, and more than three-quarters arriving by car at other sites in the city. Philadelphia casinos are expected to rely on chartered buses significantly less than Atlantic City, but still will draw approximately 8 percent of their visitors by coach.

Public transit share would be significant only for casinos located in Center City and, to a lesser degree, at Penn's Landing. Despite Philadelphia's extensive transit infrastructure, it is anticipated that no more than 20 percent of casino customers would arrive via transit at a Center City site, and as little as two percent for a site along the South Delaware.

More than half of regional survey respondents (52 percent) claim that having public transportation proximate to a Philadelphia casino would be important to them. However, current behavior heavily favoring personal automobile use – 83 percent of respondents said they drive into the city for leisure activity – suggests that while people may think transit is important in general or for others, they personally will continue to drive.

Pedestrian volume to Philadelphia casino locations will be minimal except for Center City or Penn's Landing locations, and taxi volumes would be maximized at sites in, or close to, Center City.

GRAPH 2: Mode of Arrival



Source: Innovation Group

Transportation Access Analysis

In order to assess traffic impacts, the Task Force conducted a detailed analysis of existing and projected traffic volumes on streets surrounding potential gaming sites, as well as an engineering review of the capacity of those streets and intersections to carry the increased volumes. A summary of current traffic volumes on major roads near potential gaming sites and the projected additional traffic demand generated by casino development at each site are presented in Tables 4 and 5. For each site, the numbers in the first row are current traffic volumes based on electronic counts of vehicles conducted during May 2005. The second row shows the estimated number of additional vehicles on weekdays and Saturdays if a slots-only casino were to be placed at that location. The estimates vary between sites for two main reasons: (1) Based on Task Force projections, different sites will experience different levels of visitation based on their varying proximity and accessibility to patrons and (2) it is estimated that some sites will draw more patrons by public transit and therefore the number of automobiles would be less.

It is important to note that conclusions about potential congestion problems at these sites cannot be drawn without analyzing projected traffic volumes within the context of existing roadway and intersection capacity and without an understanding of peak traffic volumes. A projected sharp increase in traffic volume at a given site may or may not be accompanied by sufficient roadway and intersection capacity, and this capacity may or may not be strained at peak volumes. These variables are considered in-depth in the full analysis included in the Interim Report of Findings.

TABLE 4: Current and Projected

24-Hour Traffic Volumes at Potential Gaming Sites

Sheetmetal Workers Site	Weekday	Saturday
Current traffic volume (Columbus south of Washington)	44,579	49,119
Projected additional casino volume	11,000	25,200
South Delaware Site		
Current traffic volume (Columbus south of Washington)	44,579	49,119
Projected additional casino volume	10,800	24,700
Penn's Landing Site		
Current traffic volume (Columbus south of Market)	31,045	32,171
Projected additional casino volume	9,630	21,950
Old Incinerator Site		
Current traffic volume (Columbus south of Spring Garden)	28,467	29,007
Projected additional casino volume	12,100	27,500
Fishtown Site		
Current traffic volume (N. Delaware north of Berks)	24,414	19,353
Projected additional casino volume	9,540	21,740
Navy Yard Site		
Current traffic volume (S. Broad north of Tasker)	26,252	26,136
Projected additional casino volume	8,330	21,150
Center City/Market East Site		
Current traffic volume (Market west of 12th)	22,539	23,506
Projected additional casino volume	10,070	23,900
Budd Site		
Current traffic volume (Wissahickon north of Hunting Park)	15,502	12,914
Projected additional casino volume	11,670	28,230
Adam's Mark Site		
Current traffic volume (City Avenue east of Monument)	58,599	54,264
Projected additional casino volume	11,670	28,230

Source: Urban Systems

Casino Trip Generation Comparisons

Phase 2 Site Plan Breakdown

Usage Breakdown		
Casino	2,500	positions
Phase II Showroom	15,750	
Retail	36,750	
Office	*42,000*	

Friday PM Peak Adj. Street Traffic

ITE Code	Description	Rate	Trips	
473	Casino/Video Lottery Establishment	0.3	750	
932	Quality Restaurant	0.009	142	
820	Shopping Center	EQN	325	"=0.67*LN(40,050/1000)+3.37"
715	Single Tenant Office *Building*	*EQN*	*99*	*"=1.52*(60,304/1000)+34.88"*
	Total		1316	

Phase 2 Site Plan Breakdown

Usage Breakdown		
Casino	2,500	positions
Phase II Showroom	15,750	
Retail	36,750	
Office	42,000	

Saturday PM Adj. Street Traffic

ITE Code	Description	Rate	Trips	
473	Casino/Video Lottery Establishment	0.3	750	
932	Quality Restaurant	0.01082	170	
820	Shopping Center	EQN	447	"=0.65*LN(40,050/1000)+3.76"
720	General Office Building	0.00041	17	"=1.52*(60,304/1000)+34.88"
	Total		1385	

Enter/Exit Distribution

	Volume In	Volume Out	Volume Total	In	Out
Sugarhouse TIS					
Friday PM Peak					
Interim.- 1500 Slots	221	256	477	46%	54%
Phase I - 3000 Slots	382	456	838	46%	54%
Phase II - 5000 Slots, Event Center, Hotel	698	675	1373	51%	49%
Phase III - Hotel Expansion	771	757	1528	50%	50%
Orth-Rodgers Foxwoods TIS					
Friday Late Afternoon (3 PM)					
Phase I - 3000 Slots	440	210	650	68%	32%
Phase II - 5000 Slots	572	273	845	68%	32%
Friday Late Evening (10 PM)					
Phase I	875	760	1635	54%	46%
Phase II	1138	988	2126	54%	46%
Saturday Late Afternoon (3 PM)					
Phase I	690	425	1115	62%	38%
Phase II	966	595	1561	62%	38%
Saturday Late Evening (10 PM)					
Phase I	1000	960	1960	51%	49%
Phase II	1400	1344	2744	51%	49%
SugarHouse November 2010					
Friday Late Afternoon (3-6 PM)					
1700 Gaming positions	600	792	1392	43%	57%
Saturday Early Afternoon (12-4 PM)					
1700 Gaming positions	964	882	1846	52%	48%
ITE Code 473 - Casino/Video Lottery Establishment					
Weekday PM Peak Hour of Adjacent Street Traffic				56%	44%

	Volume				
	In	Out	Total	In	Out
Orth-Rodgers Foxwoods TIS					
Friday Late Afternoon (3 PM)					
Phase I - 3000 Slots	440	210	650	68%	32%
Phase II - 5000 Slots	572	273	845	68%	32%
Saturday Late Afternoon (3 PM)					
Phase I - 3000 Slots	690	425	1115	62%	38%
Phase II - 5000 Slots	966	595	1561	62%	38%
South Philadelphia Penns Landing					
Friday Late Afternoon (3 PM)					
Phase 1A - 1700 Gaming Positions	193	257	450	43%	57%
Phase 1B - 2500 Gaming Positions	323	427	750	43%	57%
Saturday Late Afternoon (3 PM)					
Phase 1A - 1700 Gaming Positions	234	216	450	52%	48%
Phase 1B - 2500 Gaming Positions	390	360	750	52%	48%

Foxwoods/Orth-Rodgers

Peak Hour	Total trips	Slot Positions	Trips/Position
Friday 3 PM	650	3000	0.22
Friday 10 PM	1635	3000	0.55
Saturday 1 PM	1115	3000	0.37
Saturday 10 PM	1960	3000	0.65
Friday 3 PM	*845*	*5000*	*0.17*
Friday 10 PM	*2126*	*5000*	*0.43*
Saturday 1 PM	*1561*	*5000*	*0.31*
Saturday 10 PM	*2744*	*5000*	*0.55*

Total trips derived from developer, no rate calculation used in trip generation

SugarHouse

Phase	Total trips	Slot Positions	Trips/Position
Interim	477	1500	0.32
Phase I Casino	838	3000	0.28
Event Center/Hotel	1373	5000	0.27
Hotel Tower	1528	5000	0.31

SugarHouse - November 2010

	Avg. Trips/Hr	Slot Positions	Trips/Position	
Friday 3-6 PM	464	1700	0.282 ~~0.27~~	actual counts
Saturday 12-4 PM	462	1700	0.282 ~~0.27~~	actual counts

Bensalem - Parx

Peak Hour	Total trips	Slot Positions	Trips/Position
Weekday Evening	1074	3000	0.36
Saturday Midday	756	3000	0.25
Saturday Evening	1431	3000	0.48

Rates derived from ITE articles and Delaware Park counts

Sugar House Casino Count Data Summary, November 2010

Time Period		South Casino Driveway			Main Casino Driveway			North Casino Driveway			Casino Total		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Friday 11-19-10	3:00	1	2	3	27	18	45	39	46	85	67	65	133
	3:15	0	1	1	20	18	38	28	29	57	48	50	98
	3:30	2	3	5	27	21	48	32	53	85	61	77	138
	3:45	2	5	7	20	18	38	36	54	90	58	77	135
	4:00	0	1	1	18	31	49	31	46	77	49	78	127
	4:15	0	4	4	20	18	38	31	46	77	51	68	119
	4:30	2	2	4	25	24	50	38	43	81	66	69	135
	4:45	3	5	8	18	15	33	39	24	63	60	44	104
	5:00	0	1	1	23	18	41	25	47	72	48	66	114
	5:15	1	3	4	25	25	50	29	50	79	55	78	131
	5:30	0	2	2	29	24	53	42	43	85	71	69	140
	5:45	2	1	3	19	19	38	35	30	65	56	50	106

Friday PM Peak	
3:00-4:00	504
3:15-4:15	499
3:30-4:30	519
3:45-4:45	516
4:00-5:00	485
4:15-5:15	472
4:30-5:30	486
4:45-5:45	495
5:00-6:00	493

Time Period		South Casino Driveway			Main Casino Driveway			North Casino Driveway			Casino Total		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Saturday 11-13-10	9:00	1	9	10	48	35	83	34	58	92	83	102	185
	9:15	4	3	7	50	33	83	45	61	106	99	97	196
	9:30	1	6	7	30	41	71	28	47	75	59	94	153
	9:45	7	6	13	54	43	97	43	72	115	104	121	225
	10:00	9	6	15	47	48	95	34	69	103	90	123	213
	10:15	6	6	12	41	35	76	29	52	81	76	93	169
	10:30	4	7	11	36	42	78	42	42	84	82	91	173
	10:45	5	5	10	43	39	82	46	54	100	94	98	192
	12:00	2	0	2	32	12	44	35	54	89	69	66	135
	12:15	2	2	4	28	14	42	34	34	68	64	50	114
	12:30	2	2	4	31	11	42	27	23	50	60	36	95
	12:45	1	3	4	34	13	47	23	33	56	58	49	107
	1:00	0	4	4	20	17	37	23	32	55	43	48	91
	1:15	2	3	5	21	11	32	17	30	47	40	44	84
	1:30	2	7	9	25	17	42	32	14	46	59	38	97
	1:45	4	3	7	25	17	42	33	28	61	62	48	110
	2:00	3	5	8	15	32	47	32	49	81	70	66	136
	2:15	4	0	4	31	26	57	37	29	66	72	55	127
	2:30	1	6	7	29	25	54	16	36	52	46	67	113
	2:45	5	4	9	36	19	55	22	34	56	63	57	120
	3:00	4	7	11	32	16	48	22	28	50	58	51	109
	3:15	4	2	6	13	35	48	33	30	63	65	51	117
	3:30	1	7	8	30	22	52	35	41	76	66	70	136
	3:45	1	4	5	33	29	57	35	52	87	69	85	154

Saturday Peak	
9:00-9:15	759
9:15-10:15	787
9:30-10:30	760
9:45-10:45	780
10:00-11:00	717
12:00-1:00	452
12:15-1:15	403
12:30-1:30	378
12:45-1:45	379
1:00-2:00	392
1:15-2:15	427
1:30-2:30	470
1:45-2:45	486
2:00-3:00	496
2:15-3:15	469
2:30-3:30	453
2:45-3:45	487
3:00-4:00	516

Phase 2 Site Plan Breakdown					Friday PM Peak Generator				
Floor Use	Area (SF)				ITE Code	Description	Rate	Trips	
First Floor									
Casino Floor	58,067				473	Casino/Video Lottery Establishment	0.01343	780	
Phase IB Casino	23,429				473	Casino/Video Lottery Establishment	0.01343	315	
Phase II Casino	9,250				473	Casino/Video Lottery Establishment	0.01343	124	
High Limit Tables	2,148				473	Casino/Video Lottery Establishment	0.01343	29	
Asian Gaming	4,200				473	Casino/Video Lottery Establishment	0.01343	50	
Grab n Go	2,480				933	Fast-Food Restaurant w/o Drive-Through Restaurant	0.0524	130	
Noodle Bar	2,545				932	High Turnover Sit Down Restaurant	0.01849	47	
Phase II Buffet	19,350				932	High Turnover Sit Down Restaurant	0.01849	358	
Phase II Restaurant	2,000				932	High Turnover Sit Down Restaurant	0.01849	37	
[redacted]	[redacted]	Central location			925	Drinking Place	0.01549	31	
[redacted]	[redacted]				925	Drinking Place	0.01549	81	
Phase II Retail	1,900				820	Shopping Center	EQN	45	"=0.67*LN(1,900/1000)+3.37"
Phase II Retail	1,400				820	Shopping Center	EQN	36	"=0.67*LN(1,400/1000)+3.37"
Detached									
Phase II Retail	17,500	Columbus			820	Shopping Center	EQN	198	"=0.67*LN(17,500/1000)+3.37"
Phase II Retail	19,250	Columbus			820	Shopping Center	EQN	211	"=0.67*LN(19,250/1000)+3.37"
Second Floor									
Admin	5,354				715	Single Tenant Office Building	EQN	43	"=1.52*(5,354/1000)+34.88"
Phase II Meeting Rooms	5,200				715	Single Tenant Office Building	EQN	43	"=1.52*(5,200/1000)+34.88"
Phase II Conf Center	42,000				715	Single Tenant Office Building	EQN	99	"=1.52*(42,000/1000)+34.88"
Phase II Meeting Rooms	7,750				715	Single Tenant Office Building	EQN	47	"=1.52*(7,750/1000)+34.88"
[redacted]	[redacted]	Bar/gaming?			925	Drinking Place	0.01549	46	
Steakhouse	5,000	Luxury restaurant			931	Quality Restaurant	0.009	45	
Phase II Restaurant	4,250				932	High Turnover Sit Down Restaurant	0.01849	79	

Phase 2 Site Plan Breakdown		Friday PM Peak Generator				
Floor Use	Area (SF)	ITE Code	Description	Rate	Trips	
Phase II Restaurant	96,000	932	High Turnover Sit Down Restaurant	0.01849	111	
			Total		2991	
Usage Breakdown						
Casino	97,094	473	Casino/Video Lottery Establishment	0.01343	1304	
Restaurant	41,635	932	High Turnover Sit Down Restaurant	0.01849	770	
Retail	40,050	820	Shopping Center	EQN	345	"=0.67*LN(40,050/1000)+3.37"
[illegible]	[illegible]	925	Drinking Place	0.01549	159	
Office	60,304	715	Single Tenant Office Building	EQN	127	"=1.52*(60,304/1000)+34.88"
			Total		2704	
	91,941	820	Shopping Center	EQN	603	

1 2 3 4 5 6 7 8 9 10

Nov 18 2011

Making the Most of a Downtown Casino

BACKGROUND

On November 3, 2009, Ohio voters approved a constitu amendment (Issue 3) to allow four casinos to be built in state. The amendment specified that the Cincinnati casi would be located downtown on a 20 acre parking lot wh abuts the Central Business District and four very divers neighborhoods. *Particularly because of the casino's uni* location, Cincinnati residents, business owners and loc stakeholders asked how the investment and energy of t *casino development* could create a positive and synergi relationship with the residential neighborhoods and business districts that surround it.

gai consultants
transforming ideas into reality

RECEIVED
NOV 14 2006
PGCB OCC OFFICE

November 13, 2006

Project C050619

Mr. Frank T. Donaghue
Chief Counsel
Pennsylvania Gaming Control Board
303 Walnut Street Strawberry Square
Verizon Towers 5th Floor
Harrisburg, PA 17101

Traffic Impact Study Correspondence 11/8/06
Harrah's Station Square Casino
City of Pittsburgh
Allegheny County, PA

Dear Mr. Donaghue:

Thank you for your correspondence on November 9, 2006 (copy enclosed) regarding our traffic impact study. The study submitted to the Pennsylvania Gaming Control Board (PGCB) was an initial study. We have completed and submitted an expanded and updated report dated October 2006 and Addendum 1 dated November 2006, which addresses design year 2018 traffic conditions. The expanded and updated report and Addendum 1 were developed based on scoping meetings with the City of Pittsburgh and PennDOT and comments contained in the initial review by McCormick Taylor dated September 7, 2006.

The following are our responses to the comments contained in the November 8, 2006 letter from Mr. Albert Federico of McCormick Taylor to Mr. Glenn Rowe of the Pennsylvania Department of Transportation (copy enclosed).

Comment 1 (Approach): It would be appropriate for the engineer preparing this analysis to have stamped and signed the report. *The applicant has indicated that the pending revised study will be stamped and sealed by a licensed engineer.*

Response: An expanded and updated study report and Addendum 1 have been developed. They have been stamped and signed by a licensed engineer.

Comment 2 (Approach): The analysis included an evaluation of two peak periods: the weekday evening and Saturday late-evening. *The applicant has indicated that the pending revised study will include a third evaluation period: Friday evening.*

Response: An expanded and updated study report and Addendum 1 have been developed and include a Friday evening evaluation period. The Friday peak hour to be studied (4:30 pm – 5:30 pm) was determined at a meeting with staff of the City of Pittsburgh Planning Department.

Comment 3 (Approach): The analysis did not address impacts to the intersection(s) of Carson Street and the West End Bridge (West End Circle). The evaluation of the operation of these intersections is considered appropriate. *The applicant has indicated that a pending revised study will include an evaluation if this intersection.*

Response: Traffic data has been collected at the intersections of the West End Circle and at the north end of the West End Bridge. Both the existing and the planned new configurations of the West End Circle have been analyzed for 2008 and planned new configuration only for 2018 design year conditions. The results are included in our expanded and updated study report and Addendum 1 as requested.

Comment 4 (Data Collection): All intersections, except for the entrance to the Wabash Tunnel, were counted manually. *The applicant has indicated that the pending revised study will include counts of this intersection.*

Response: The Wabash Tunnel (HOV facility) intersection at W. Carson Street has been counted from 4:00 PM to 6 PM on a non-Friday weekday, from 4:00 PM to 6:00 PM on a Friday, and on a Saturday from 5 PM to 7 PM. During these time periods, the tunnel is open to outbound traffic only. Traffic count data for this intersection has been included in Volume 2 of 2 (Appendices) of our expanded and updated study report. The left turns and right turns into the tunnel were counted. The through volumes were balanced based on counts at adjacent intersections.

Comment 5 (Data Collection): The study did not include manual turning movement traffic count data within the technical appendix.

Response: All manual turning movement count data is included in Volume 2 of 2 (Appendices) of the expanded and updated study report.

Comment 6 (Trip Generation):Due to the lack of available data in ITE Trip Generation regarding gaming facilities, the trip generation estimates for the gaming facility were based upon patronage and employment figures provided by Harrah's. However, no documentation of these figures is included in the technical appendix.

Response: Documentation of the trip estimates is included in the expanded and updated traffic study report. The trip generation estimates were developed based upon patronage and employment estimates provided by Harrah's, Downtown travel characteristics developed in conjunction with the City of Pittsburgh Planning Department and hourly distribution estimates from traffic studies of existing casinos documented by the Institute of Transportation Engineers (ITE). The patronage estimates provided by Harrah's are higher than those used for other gaming facilities in Pennsylvania. The travel characteristics for patrons and employees reflect the travel modes currently available at Station Square and vehicle occupancy surveys conducted at existing gaming facilities. These characteristics, which are documented in the report, were reviewed with the City of Pittsburgh Planning Department and modified based upon their input.

Comment 7 (Trip Generation): When comparing trip generation estimates for the gaming component of the three Pittsburgh gaming sites, the trip generation for Harrah's Station Square Casino is significantly lower than that for the other gaming sites. Factors that may be contributing to the assumed lower trip generation may include:

> **- The significant percentage of patrons assumed to utilize non-automotive modes of travel: 30 percent of patrons and 50 percent of employees.** *The applicant has indicated that the pending revised study will include revised modal splits.*

Response: The expanded and updated traffic study report includes revised modal splits. As previously stated in the October 12, 2006 response to comments:

Station Square is currently a transportation hub served by many forms of public transportation (e.g. Light Rail, Bus and Incline Rail) as well as private services such as charter bus service and shuttle bus service to/from the Downtown and Southside. Our previous traffic study estimated the following mode split for casino patrons during peak hours on design days:

70% Auto/Taxi/Limo
15% Public Transit (Light Rail and Bus)
10% Private Charter, Downtown Shuttle and South Side Shuttle
5% Inclines, Boat Service, Bicycle and Walk

We met with the City of Pittsburgh Planning Department and they agreed that these percentages were acceptable for peak-hour design conditions for weekdays at Station Square. However, the City recommended that a lower percentage be used for Public Transit on Saturdays because there is less service to Station Square on weekends. After reviewing transit schedules for Saturdays, we are using the following mode split for the peak design hour on Saturdays:

77.5% Auto/Taxi/Limo
7.5% Public Transit (Light Rail and Bus)
10% Private Charter, Downtown Shuttle and South Side Shuttle
5% Inclines, Boat Service, Bicycle and Walk

The use of public transportation modes (light rail and bus) is estimated to be higher for casino employees than for casino patrons based upon the current Downtown Pittsburgh employee travel characteristics. The City of Pittsburgh Planning Department has reviewed and accepted these updated mode split percentages for casino patrons and employees.

-The low percentage of daily patrons assumed to arrive during the peak period: 5.9 percent of the daily patrons during the evening peak hour.

Response: The existing peak traffic volumes on the streets in the Station Square study area occur between 4:30 pm and 5:30 pm on weekdays and between 5:45 pm and 6:45 pm on Saturdays. Those were the peak traffic periods selected for analysis in discussion with the City of Pittsburgh. A study of gaming casino traffic by Paul C. Box and William Bunte published in ITE Journal in March 1998 identified the hourly distribution of inbound and outbound traffic to casinos (with 24 hour operations) on weekdays and weekends. That study identified the following hourly distributions for gaming casino traffic:

		Inbound	Outbound
Weekday	5:00-6:00 pm	5.9%	6.6%
Saturday	6:00-7:00 pm	7.8%	6.9%

These percentages were used in the Station Square transportation analysis. Higher percentages of patron traffic occur on weekdays after 6:00 pm based upon the Box/Bunte study results, but the traffic volumes on the streets in the study area are lower during these periods. The 4:30 -5:30 pm period was the critical weekday traffic period. The Saturday percentages represent the highest hour of the day and reflect that 5:45 pm – 6:45 pm is when traffic is currently highest at Station Square.

- **The assumed vehicle occupancy of 2.5 persons per vehicle for patrons and 1.1 persons per vehicle for employees.**

Response: In the expanded and updated study, documentation is provided of vehicle occupancy surveys that were conducted at existing gaming facilities. This information is presented below:

Surveys of Vehicle Occupancy Rates at Existing Gaming Facilities

Casino Application	Existing Casino Surveyed	Size	Location	Survey Results
Presque Isle Downs - Erie	The Mountaineer Track & Gaming	80,000 sf of gaming 3,200 slot machines	Chester, West Virginia	2.60 patrons/ vehicle
Chester Downs Philadelphia	Atlantic City Casinos	13 Major Casinos 1.3 Million SF	Atlantic City, New Jersey	2.40 patrons/ vehicle
Majestic Star Pittsburgh	Casino Niagara	95,000 sf of gaming	Ontario, Canada	2.30 patrons/ vehicle
Trump Casino Philadelphia	Delaware Park	2,500 slot machines	New Castle, Delaware	2.25 patrons/ vehicle
Poconos Downs Racing	Saratoga Raceway	55,000 sf of gaming 1,300 slot machines	Saratoga, New York	2.20 patrons/ vehicle
Isle of Capri Pittsburgh	San Pablo Lytton Casino	800 slot machines 30 table games	San Pablo, California	1.18 patrons/ vehicle

Based upon these findings and review and input from The City of Pittsburgh Planning Department, a vehicle occupancy factor of 2.35 persons per vehicle was selected to convert patron person trips to vehicle trips. No specific surveys were conducted for current employees at Station Square, but it was expected that the employee vehicle occupancies will be much lower and closer to national averages of 1.1 per vehicle.

- **The significant 20% reduction assumed for interaction between gaming patrons and the existing Station Square uses.** *The applicant has indicated that the pending revised study will include revised capture assumptions accounting for the significantly larger generation from the gaming site.*

Response: Our determination of new trips for the Casino considered the capture of existing trips generated by Station Square. Existing development at Station Square includes 30 retail shops, 25 restaurants and night clubs, 400 hotel rooms and related meeting/banquet facilities, office space and the Gateway Clipper fleet docks. During survey hours on weekdays and Saturdays, peak hour traffic counts at the Station Square driveways ranged from between 1100 vehicles per hour to 1218 vehicles per hour. Many of these current visitors will be attracted to extend their stays and visit the Casino as part of their activities at Station Square.

Internal capture rate refers to the percentage of internal trips that occur within a mixed-use development as a result of interaction between compatible land uses. The rate reflects the percentage of trips generated by one of the uses that will visit other uses within the development without requiring additional external trips. The Institute of Transportation Engineers (ITE) presents discussion of internal capture rates in their Trip Generation Handbook and provides guidelines and procedures for utilizing these rates.

Although data surveys of internal capture rates are limited, the Institute of Transportation Engineers provides guidelines for capture rates within a mixed-use development. For different types of retail uses within a mixed-use development, they identify three internal capture rates:

Midday Peak Hour	29%
PM Peak Hour	20%
Daily	30%

Station Square is currently a mixed-use development and will continue to be a mixed-use development in the future with the proposed Harrah's Casino. Given the compatibility of the Casino with the existing restaurant and night club uses, this interaction is expected to be significant. The 20% internal capture rate identified by ITE for PM peak hour trips was used to reflect existing Station Square patrons who will visit the casino while at Station Square. PennDOT has accepted the 20% internal capture between uses in other mixed-use projects that include casinos. Our analysis used the 20% reduction for the lower of the existing inbound or outbound movement, resulting in less than a 20% capture rate. The calculations for internal capture are listed below:

	Internal Capture Rate		
	Inbound	Outbound	Total
Design Weekday (4:30 – 5:30 PM)			
Existing Station Square Trips	281	819	1100
Internal Capture Trips	56	56	112 (10%)
Design Friday (4:30 – 5:30 PM)			
Existing Station Square Trips	489	729	1218
Internal Capture Trips	98	98	196 (16%)
Design Saturday (5:45 – 6:45 PM)	863	294	1157]
Existing Station Square Internal Capture Trips	59	59	118 (10%)

Comment 8 (Trip Generation): The overall concept plan for Harrah's Station Square *includes retail, restaurant and hotel uses ("Phase 2") not accounted for in the project trip* generation.

Response: The project trip generation analysis for 2008 conditions identified trips generated by patrons and employees of the casino, which included trips to the ancillary retail and restaurant uses within the casino. Major retail and restaurant uses already exist at Station Square and their traffic is included in the background traffic counts. The patronage and employment forecasts by Harrah's include casino and ancillary retail and restaurant facilities. The Harrah's patronage forecasts were very high when compared to other gaming facilities proposed for Pennsylvania. The 2008 trip estimates did not include new hotel rooms because the Sheraton Hotel already exists at Station Square and the additional hotel rooms were not proposed until after 2008. In the expanded and updated transportation analysis that includes 2018 traffic conditions, additional traffic generation is included for new hotel rooms, as well as, residential units that are proposed on the East parcel. At the same time the existing restaurant and night club uses on the East Parcel are to be eliminated. Also, commuter parking that is currently permitted at Station Square will be eliminated in order to have sufficient parking for the development program. The traffic generation associated with the restaurant/night club uses on the East Parcel and the commuter parking operations were taken out of the existing background traffic numbers for 2018.

Comment 9 (Analytical Approach): Verification of the base peak hour volumes and related factors utilized in the analysis could not be completed as the manual turning movement traffic count data were not provided.

Response: All manual turning count data is included in Volume 2 of 2 (Appendices) of the expanded and updated study report.

Comment 10 (Analytical Approach): The lane configuration and geometry of the intersections appear to be modeled appropriately for existing conditions; however several improvements proposed to mitigate traffic impacts which are noted in the body of the study do not appear to incorporated into the "build" condition models (i.e. additional Carson Street left turn lane at the Main Access).

Response: These discrepancies have been addressed in the expanded and updated study report.

Comment 11 (Analytical Approach): Based on the information provided it appears that the signal phasing operations at the traffic signals appear to be modeled appropriately in Synchro, with the following exceptions.

> **- Numerous reports include phases noted as having been modeled with phasing conflicts; however the reporting format (HCM) used by the applicant did not provide sufficient information to verify the validity of these errors.**

Response: Conflicts were reported at some locations due to non-standard NEMA phasing. These locations were viewed on SymTraffic and observed to run correctly with no vehicular conflicts.

> **- The green time allocated to selected phases at several signalized intersections is below the seven second minimum typically required by PennDOT. It should be noted that this may be a result of the reporting format (HCM) used by the applicant and not necessarily an error in the modeling.**

Response: This has been addressed in the expanded and updated traffic study report and Addendum 1.

Comment 12 (Analytical Approach): The capacity analysis utilizes the maximum permissible peak hour factor (1.00) without supporting justification. The applicant has indicated that the factors were derived from the counted volumes; however factors of 1.00 indicate a perfectly balanced traffic flow over an entire hour and are not typically encountered with such frequency. The use of a higher than appropriate peak hour factor can significantly influence the results of the capacity analysis.

Response: The peak hour factors were derived from the manual turning movement counts. They were determined based on the peak 15 minute volumes of the total intersection within the peak hour, not the individual peak hour of each approach. All manual turning count data is included in Volume 2 of 2 (Appendices) of the expanded and updated study report.

Comment 13 (Analytical Approach): The study does not include an evaluation of future conditions 10 years after the project build out, which is typically required by PennDOT for a highway occupancy permit (HOP) submission. *The applicant has indicated that the pending revised study will include the 10 year build out analysis.*

Response: Addendum 1 to the expanded and updated traffic study report contains evaluations of the 2018 design year traffic conditions. This includes future hotel and residential condominium trip generation.

Comment 14 (Analytical Approach): The analysis did not provide an evaluation of vehicle queuing and determinations regarding the adequacy of existing and/or proposed turn lane lengths. *The applicant has indicated that the pending revised study will include queuing analyses.*

Response: The addendum to the expanded and updated traffic study report will contain an evaluation of existing and proposed turn lane and through lane lengths.

Comment 15 (Analytical Approach): The analysis does not address the issues associated with potential staging of parking during facility construction, specifically how the removal of the West Lot will be addressed.

Response: Currently, the West Lot is primarily used for event parking for scheduled events at the amphitheater and special functions at Station Square. At the start of construction, the amphitheater will be closed permanently and special events will not be scheduled at Station Square during this period. Also, commuter parking will be eliminated at Station Square to increase the availability of parking for Station Square patrons. The parking program includes a horizontal expansion of the existing parking garage to achieve approximately 200 new parking spaces in that location. These spaces are expected to be completed and available during construction of the casino.

Comment 16 (Evaluation of the Recommended Improvements): The proposed mitigation includes widening the existing east access driveway at Arlington Avenue and Carson Street to provide dual left turn lanes and an exclusive right turn lane; however the intersection is still projected to operate with a deficient level of service "E" for two of the movements. Additionally the existing elevated rail lines and associated structures will increase the complexity of any potential improvements.

Response: Sufficient mitigation is proposed in accordance with PennDOT traffic impact study requirements. The specific requirement is that for intersections where existing levels of service are at LOS D, E, or F, they can remain at LOS D, E, or F respectively if the delay (in seconds) is decreased or improve from LOS F to E or LOS E to D. The proposed mitigation for the Carson Street at Arlington Avenue Intersection keeps the level of service the same while decreasing the delay or improves level of service.

Comment 17 (*Evaluation of the Recommended Improvements*): *This proposed* improvements to the intersection of Commerce Street and Carson Street include modifying the traffic signal to operate with inefficient split-phasing. Improvement alternatives which permit concurrent signal phasing (i.e. without the shared through/left-turn lane) should be explored.

Response: The intersection operates at an acceptable LOS C or better for all approaches with split-phasing and a left/left-through lane conditions. Without this lane configuration, the level of service for Commerce Street will operate at LOS D. Further, the approach opposite Commerce Street is a private parking lot with no through traffic.

Comments 18 (Evaluation of the Recommended Improvements): The analysis recommends a traffic signal at the new Carson Street egress; however, supporting signal warrant analyses are not provided in the technical appendix. *The applicant has indicated that the pending revised study will include signal warrant analyses.*

Response: This new intersection has been eliminated from the proposed casino site plan. A new traffic signal is proposed at the existing intersection west of the existing parking garage. This existing intersection will become Casino Drive and will serve as the primary access to the existing garage and to/from the casino porte cochere pick-up/drop-off and to/from valet parking. A traffic signal warrant analysis has been provided for the Casino Drive intersection in the expanded and updated transportation analysis.

Comment 19 (*Evaluation of the Recommended Improvements*): The report notes that , at the intersection of Carson Street and Smithfield Street, a pedestrian overpass across Carson Street will be constructed. In addition to improvements at this intersection, pedestrian accommodations should be adequately addressed at each of the signalized intersections. This includes proper delineation, ADA accommodations, adequate crossing times and pedestrian indications. The investigation of pedestrian count down timers may also be appropriate.

Response: The primary pedestrian movements in the vicinity of Station Square are related to walking trips across the Smithfield Bridge to/from Downtown and to/from the bus stops, light rail station and incline rail station. The pedestrian overpass across Carson Street will redirect most of the pedestrian traffic away from the Smithfield Street intersection with Carson Street. Accommodations to pedestrian traffic, including pedestrian count down timers will be investigated for each of the intersections evaluated in the study except for the intersections located through the West End Circle. No pedestrian facilities are available at the Circle nor were there any pedestrians observed during the counted periods. Also, the whole West End Circle is going to be reconstructed starting next spring (2007) with construction finishing up in 2009.

Comment 20 (Evaluation of the Recommended Improvements): The mitigation plan assumes the interconnection of the six traffic signals along Carson Street within the study area and programmed to operate as a system providing coordinated progressive traffic movements.

Response: Yes, that is correct.

Comment 21 (Evaluation of the Recommended Improvements): The report discusses the *implementation of an internal traffic management plan, the utilization of ITS technologies* and the establishment of a transportation management center. The use of these mitigation measures will require long-term participation and financial support of local and state agencies.

Response: The use of ITS technologies and establishment of a traffic management center at Station Square is part of the overall transportation improvement program to upgrade both traffic and parking conditions. The observation of real-time traffic and parking conditions with strategically located CCTV cameras will permit quick response by the Transportation Manager at Station Square to adjust traffic flow patterns and parking operations within the site through use of dynamic message signs. PennDOT has already confirmed that they currently have a fiber link to Station Square from their traffic management center that will allow them to receive the video feed from the proposed CCTV cameras and to assist with incident management activities. Until the City of Pittsburgh progresses with their ITS program, coordination from the Station *Square traffic management center will take place using standard telephone communications.* The Station Square ITS program will be designed and coordinated with the City of Pittsburgh for future connection.

Comment 22 *(Evaluation of the Recommended Improvements)*: Except as noted above, it appears that the proposed improvements adequately mitigate the project impacts based on the results presented in the analysis. It should be noted that the omissions in the capacity analysis (as noted above) may be influencing the reported results and the analyzed operation of the intersection. Additionally the inclusion of the evaluation of the 2018 design year may identify additional deficiencies requiring mitigation.

Response: The expanded and updated study report includes all of the manual turning movement counts. Addendum 1 dated addresses 2018 design year conditions.

<u>Highway Occupancy Permit Issues</u>

- **This study does not include an evaluation of future conditions 10 years after the project build-out date, which is typically required by PennDOT for a highway occupancy permit (HOP) submission.**

Response: The 2018 design year analysis has been completed and is included as Addendum 1 of the expanded and updated study report.

- **The need to address the 10 year analysis as well as the various inconsistencies in the analysis (i.e. Peak Hour Factors) may result in additional mitigation requirements that will impact the HOP process.**

Response: The 2018 design year analysis has been completed and is included as Addendum 1 of the expanded and updated study report. The peak hour factors shown in the Synchro output can be seen in Volume 2 of 2 (Appendices) of the expanded and updated study report.

- **Potential widening improvements to Carson Street may be constrained by Mount Washington to the south and/or existing development to the north. Where widening is proposed, the acquisition of new right-of-way and need for retaining walls on the Mount Washington side of Carson Street should be considered.**

Response: The intent is to accomplish the additional widening of Carson Street within available ROW or utilizing land available within Station Square. During the design phase consideration will be given to the acquisition of new ROW or use of retaining walls, if that becomes necessary.

- ***Insufficient information was available to adequately assess the potential impacts*** **of proposed improvements to existing utilities. However, transportation improvements within urban locations such as the proposed site typically require extensive utility coordination and relocation.**

Response: Station Square is in a very urban setting with existing utilities located within and adjacent to the existing roadways. It is expected that utility coordination and relocations will be included in the extensive transportation program that has been proposed.

If you have any questions or require additional information, please call me at 412.476.2000, extension 1722.

Sincerely,

GAI Consultants, Inc.

Thomas E. O'Brien

for David F. Kundrat, P.E.
Project Traffic Engineer

Enclosures

DFK:MSG/ptm

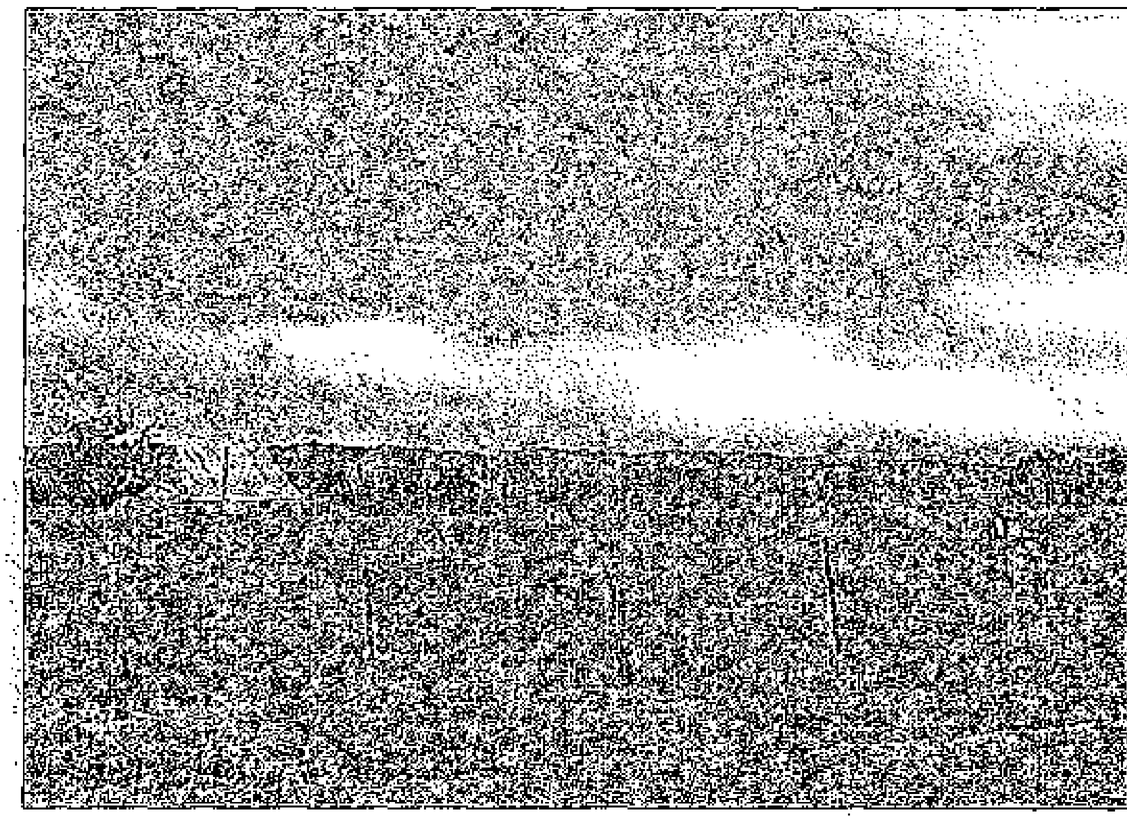
Cc: Mr. Albert Federico, McCormick Taylor
Ms. Susan Hensel, PGCB
Mr. Victor Stabile, Dilworth Paxon

APPENDIX O

SUPPLEMENTAL TRAFFIC IMPACT STUDY
(PARSONS, 2006E)

COWLITZ INDIAN TRIBE
CASINO PROJECT

Traffic Impact Study
-Supplemental Report-



Prepared for
The Cowlitz Tribe

December 2006
Revised April 2007

Existing Transit Service

Currently, C-TRAN does not provide direct, regularly scheduled transit service to either of the specific site alternatives. In March 2005, C-TRAN adopted a new service and taxing boundary, which formerly was all of Clark County. The newly implemented boundary includes the City of Vancouver and its Urban Growth Boundary (UGB), plus the city limits only of the cities of Battle Ground, Ridgefield, LaCenter, and the town of Yacolt. Transit service is provided by the North County Connector, which provides the cities of La Center, Ridgefield, Battle Ground, and Town of Yacolt with fully accessible dial-a-ride and regular stop service within city limits only. These cities will be connected to the Vancouver UGB via "non-service" transportation corridors, meaning that transit service along these corridors will operate in a closed-door, express mode and passengers will not be able to board or de-board buses while traveling in these areas.[7] For purposes of this study, the sites are not expected to have regular transit service anytime in the foreseeable future.

[7] http://www.c-tran.com/

EXAMINATION OF SITE ALTERNATIVES

TRIP GENERATION

Understanding the trip generation characteristics of this facility is fundamental to determining the associated traffic impacts and roadway mitigation measures. Because this is a regional generator that is distinctive with respect to planned land-uses in Clark County, the trip generation rates to be used for the overall Traffic Impact Study are intended to reflect its regional nature. Traffic impact studies of similar types of casinos elsewhere will be referenced in the following methodology.

This supplemental report updates the previous trip generation methodology with additional site data collection and very conservative assumptions regarding retail, the RV park, event trips, and casino trips. Additionally, investigation was made to determine the site's weekday peak hour as compared to the previous work which focused on the roadway system's weekday peak hour, to determine if analyzing the site peak results in any changes to impacts or mitigation.

Methodology

Casino trip generation case-studies were used to estimate vehicle trips; these studies are generally analogous to the context of the Cowlitz Casino project site: rural or suburban fringe, lack of a well-established traffic circulation system, little or no fixed-route transit service, and no competing casino-resorts within 50 miles of the site. However, these case studies are limited, as the trip generation characteristics of casinos found in large clusters, like those in Las Vegas, Nevada are not directly transferable to the Cowlitz Casino site.

Certain characteristics, such as size, location and type of casino complex contribute to the trip generation of the development. Other pertinent characteristics include the number of on-site hotel rooms, the total square footage (SF) of the casino gaming-floor area (GFA), and/or the total number of employees. Other characteristics include whether the casino has convention space, a conference or entertainment venue, retail uses such as restaurants, or lounges and convenience stores. For this analysis, the square footage of the casino GFA will be used as the primary trip generation variable, plus the proposed 5,000 seat multi-purpose room and on-site hotel.

Trip Rate Comparison

The following sources were utilized to establish trip generation rates for the Cowlitz Casino. While many casino trip generation studies base the trip rate on the number of gaming positions, for the Cowlitz Casino alternatives the trip rate per square foot of gaming floor was the preferred method because of the perceived limitation that using a gaming position rate would place on the development proposals. In other words, the initial phase of the Cowlitz Casino may be limited to a certain number of gaming positions, but could add gaming positions in future expansions even though the square footage may remain the same. The Draft EIS assumed approximately 3,930 gaming positions for the gaming square footage contained in Alternatives A and B.

In all cases where data were available, there are indications that the peak time for casino site trips is 6-7 p.m. weekdays, while the road system peak is 5-6 p.m. weekdays. Thus, separate PM peak trip generation will be calculated: one for the *system* peak (5-6 p.m.), and the other for the *site* peak (6-7 p.m.). This affects all casino-related trips, including those attending a concert event.

In the following citations, the weekday PM peak-hour trip rate on both a 1,000 GFA average as well as the corresponding rate per gaming position is listed for comparative purposes:

1. Tulalip Tribal Casino – Marysville, Washington (empirical trip data collected) – this site was counted on a summer peak Friday evening as well as on summer peak Saturday evenings both without and with event traffic. This casino is located within one hour of much of the Seattle/Everett metropolitan area. It has a 2,300-seat amphitheatre and *restaurants/retail shops within the casino area. This site was selected due to similarities* with the Cowlitz site. The resultant trip rates were 18.0 and 15.5 trips per 1,000 gross square feet for PM peak weekday and Saturday peak hour, respectively, or 0.62 weekday PM peak trips and 0.54 Saturday peak trips per gaming position.

2. Muckleshoot Indian Tribe Casino – Auburn, Washington (empirical trip data collected) – this site was counted on a peak Friday summer evening. While it does not have a concert/event venue nor does it have on-site lodging, it was selected for counting due to its being located within 20 miles of the Seattle and Tacoma metropolitan areas, similar to the location of the proposed Cowlitz Casino within 20 miles of the Portland/Vancouver metropolitan area. The resultant weekday PM peak rates were 10.40 trips per 1,000 gross square feet of gaming area and 0.31 trips per gaming position.

3. Spirit Mountain Casino – *Grand Ronde, Oregon (empirical trip data collected).* During the weekday PM peak-hour the two entrances were observed from 4:00-5:00 PM on a peak Friday – the resulting trip rate for these observations was 6.4/1,000 sq ft. casino gaming floor area for the weekday PM peak hour or 0.30 trips per gaming position.

4. Emerald Queen Casino – Tacoma, Washington (empirical trip data collected). During the weekday PM peak-hour the two entrances were observed from 4:00-5:00 PM – the resulting trip rate for these observations was 3.7/1,000 sq-ft. casino gaming floor area.

5. Mohegan Sun Casino – *Connecticut.* Traffic counts from an independent traffic audit were compiled and reviewed for comparisons to trip rates from the west coast casinos, the relationship between peak hour and daily traffic volumes, and traffic arrival characteristics on days of events at the events center. This study indicates that the weekday and Saturday peak hour trip generation rates are less than those observed for *the west coast sites, but the daily trip generation rate is higher. The trip generation rates* are 4.4 daily and 0.35 PM peak hour trips per gaming position weekdays and 5.6 daily and 0.45 peak hour trips per gaming position for Saturdays.

6. Shingle Springs Rancheria Hotel-Casino Traffic Study – Trip rate information from *"Shingle Springs Rancheria Interchange Transportation/Circulation,"* completed by David Evans and Associates, Inc. in August 2002, was used. Trip generation within the Shingle Springs traffic study was based on surveys of inbound/outbound traffic at five northern California Indian gaming casinos ranging in size from 17,300 sq ft. to 70,000 sq ft. during PM peak hours – 4:00-6:00 - on weekdays in October, 1988 and May, 1999. Sites included: Alturas Casino; Elk Valley; Lucky 7; Rolling Hills and Twin Pines casinos. The *trip rate for the weekday PM peak hour in this study is 4.95/1,000 square feet casino* gaming floor.

7. Gaming Casino Traffic, Paul Box and William Bunte, ITE Journal, March 1998. Examined casino trips at two casinos located near St. Louis, MO: Casino St. Charles (2,500 gaming positions) and Casino Queen. The Casino St. Charles observed weekday PM trip rates were 0.54 trips per gaming position during the site peak (6-7 p.m.) and 0.43 trips per gaming position for the surrounding roadway system peak (4:30 to 5:30 p.m.); the Saturday peak rate was 0.64 trips per gaming position. Thus, the trip generation rate for the *system* peak is 80 percent of the trip rate for the *site* peak during the p.m. peak period. The report also concluded that between 7 and 8 percent of the daily total trip generation occurred during the PM peak weekday hour. The Casino Queen (East St. Louis, IL) has 1,200 gaming positions and exhibited rates of 0.57 trips per gaming position for the weekday p.m. peak hour.

8. San Diego County Casino Study – The San Diego County Department of Public Works prepared a study of casino trip generation titled *"Report on the Potential Impacts of Tribal Gaming on Northern and Eastern San Diego County."* Based on surveys of numerous southern California Indian gaming casinos, the San Diego reports established that traffic for gaming casinos should assume a trip generation rate of 100 trips per 1,000 square feet of gaming floor on an average weekday (all day). The trip rate for the weekday PM peak hour is 3.93/1,000 sq ft. casino gaming floor area.

9. Jamul Indian Village FEIS – The *"Jamul Indian Village FEIS"* was referenced as it is an EIS that examined 4 casino alternatives for placing 101 acres into federal trust for the Tribal Government. The preferred alternative included the development of a hotel and casino complex, events center, tribal offices and other ancillary uses on-site. For comparison to the Cowlitz proposal, Alternative D was chosen as the most suitable, with 74,376 square feet of gaming floor and a 300 room hotel, among other similarities. The trip rate for the weekday PM peak hour is 4.94/1,000 sq ft. of casino gaming floor area.

10. Gun Lake Casino Traffic Study – this study was used because of its similarities to the Cowlitz proposal; it is located on a state highway; the character of the surrounding area is predominately tourism in a rural setting; and the casino has two restaurants (though not a hotel). The casino itself is comprised of 98,879 square feet of gaming space and includes 2,500 slot machines and 92 gaming tables. The restaurants include casual dining, buffet style, fast food and bars/lounges, plus an on-site retail component. The trip rate cited in this study is 6.81/1,000 square feet casino gaming floor area.

11. Enterprise Rancheria Casino-Hotel Traffic Impact Study – this study was used because of its similarities and extensive research. The Enterprise trip generation rates were established by plotting rates for 7 casinos ranging in size from 17,000 sq ft. to 447,600 sq ft. with a best-fit curve. The resulting weekday PM peak hour trip rate cited is 3.93/1,000 sq ft. casino gaming floor area.

12. Chinook Winds Casino – Lincoln City, Oregon (Empirical trip data collected). Casino is similar in size to what is proposed under site alternatives A, B, and E and includes restaurants, an adjacent hotel/motel, and an entertainment center. During the weekday PM peak-hour the two entrances were observed from 4:00-5:00 PM – the resulting trip rate for these observations was 4.8/1,000 sq ft. casino gaming floor area.

Empirical data collected at Chinook Winds Casino, Spirit Mountain Casino and Emerald Queen Casino, coupled with the other studies of similar casino/resorts provided additional comparisons and a reasonableness check to the final trip generation calculations.

Analysis of the empirical data leads to the conclusion that the presence of an adjoining hotel and restaurants reduces the overall PM peak hour trip rate compared to adding the trip generation for each separate use. In other words, guests at the hotel would patronize the casino and simply walk between them, and guests of the casino also tend to use the on-site restaurant and other site amenities, thus generating far fewer vehicle trips.

A review of the independently-collected traffic counts indicates that the Mohegan Sun's Friday peak hour trip generation rate may be lower than the empirical data collected for the West Coast casinos, but also has significantly higher daily trip generation rates than what was observed for the West Coast sites. To be conservative, the higher casino-only peak hour trip generation rates calculated from the West Coast casinos will be used for peak hour traffic impact analysis, while the higher daily trip rate from the Mohegan Sun casino complex will be used to estimate daily traffic and air quality impacts.

The following casino trip generation rates will be used for this study:

- Weekday AM peak hour: 2.95 trips per 1,000 gross square feet of gaming floor area (GFA)
- Weekday *system* PM peak hour: 9.18 trips per 1,000 gross square feet or 0.31 trips per gaming position
- Weekday *site* PM peak hour: 10.94 trips per 1000 GFA.
- Weekday daily trips: 74.63 trips per 1,000 gross square feet or 2.54 daily trips per gaming position
- Saturday peak hour: 15.50 trips per 1,000 gross square feet or 0.53 trips per gaming position
- Saturday daily trips: 93.24 trips per 1,000 gross square feet or 3.24 daily trips per gaming position.

Note: there are questions as to the reasonableness of the weekday PM peak casino trip rate. It should be noted that the trips above are purely those that would be generated by the casino gaming area only; if the other trips not associated with an event are factored in, the resultant overall trip generation rate is 17.41 trips per 1,000 gross floor area or 0.59 trips per gaming position, which is on the high side of the observed casino counts (which include all trips to the sites studied) mentioned above.

Hotel Trips

The Shingle Springs DEIR found that when a hotel is part of a casino-hotel establishment, the hotel portion of the project would generate 2.06 trips per room on an average weekday. The ITE Trip Generation Manual shows that a standard hotel (land-use #310) will generate 8.23 trips per room on an average weekday. Thus, the Shingle Springs casino study found that a hotel at a casino (in a semi-rural environment) will generate 25% of the trips a stand-alone hotel would generate on an average weekday. The reduced number accounts for those who stay at the hotel and walk, rather than drive, to the associated casino and other amenities. Observations at the other sites for which empirical data were collected corroborate this.

With the Cowlitz Casino and its retail and restaurant amenities on-site, guests are more likely to access these types of services while they're all on-site and via walking modes, which will not effect vehicle trip generation nor roadway levels-of-service. Therefore, a 75% reduction in trip generation for the hotel portion of the Cowlitz casino project was originally assumed. However, further investigation indicated that there is potential for the hotel to attract pass-by (transient lodging) trips off of I-5 that are not casino-destination trips, due to lack of other hotels in the area and associated with growth in the La Center area. Thus, a 50% trip reduction for trip internalization will be assumed instead of the 75% reduction in the original report.

Multi-Purpose Event Center

In all of the gaming alternatives (excluding Alternative D) the Cowlitz Casino site plan includes a Multi-purpose room with seating for 5,000 people; it is projected that approximately 20 to 30 events will occur on an annual basis (approximately one large event every three weeks) that will have the potential of filling most of the seats. There may be smaller events.

In accordance with the study methodology approved by Clark County, Ridgefield and WSDOT, the PM peak weekday, and Saturday peak hour trip generation rates include an "85th percentile event" at the Multi-purpose room, which is consistent with the assumptions for The Amphitheatre at Clark County. An 85th percentile event means an event that has a higher attendance than 85% of the events and a lower attendance than 15% of events. Using The Amphitheatre at Clark County as an example, their 85th percentile event in 2005 drew 8,400 people, or approximately half of the seating capacity. In 2006, of the 11 concerts, the 85th *percentile concert attendance was 12,000, or approximately 67 percent of the capacity.*

Thus, to be conservative, it was decided to analyze an event that fills 85 percent of the seats, or in this case, an event which attracts 4,250 people, as the 85th percentile event for this study. It is assumed that for each of the 20 to 30 concerts or events per year, 15% will have a higher attendance and 85% will have a lower attendance.

Based on the report "Mode Split at Large Special Events" (Charles Green for the Transportation Research Board, presented January 1991), a weekday PM Peak event would experience average auto occupancy of 2.62. Based on traffic observations for the Mohegan Sun events center, auto occupancies range from 1.8 to 2.2 persons per vehicle. To be conservative for the Cowlitz analysis, a low-end average auto occupancy of 1.8 persons per vehicle will be used. Thus, 4,250 event attendees will arrive in approximately 2,400 vehicles.

The Mohegan Sun Casino in Connecticut is required by its state permit to have an independent auditor monitor traffic flows around the casino site. This casino has a large events complex (10,000 seats, twice the size of the proposed events center at the Cowlitz site) which hosts concerts and a resident WNBA basketball team. Traffic counts were collected on event and non-event days for weekdays, Fridays, and weekend days. The result of this analysis indicates that the presence of the casino/hotel, restaurant, and entertainment facilities affects arrivals and departures on event days, and is also measurably different than arrival/departure characteristics for a stand-alone facility such as an amphitheatre or an arena. Thus, instead of almost 50 percent of vehicles arriving to an events site in the one hour period prior to a concert (during the transportation system's peak hour) or other large entertainment event, such as what has been observed at the Clark County Amphitheatre or other similar events, the Mohegan Sun site experiences significantly less event-related traffic impacts during the weekday PM peak hour.

According to Cowlitz and Mohegan Sun representatives, weekday and Saturday evening events will likely have 8:00 starting times, compared with 7:00/7:30 p.m. starting times for events at *other entertainment venues in the Portland/Vancouver area. The later starting time* is due to the desire to encourage attendees to take advantage of other offerings at the casino/resort, including the casino, restaurant, and hotel. The later starting time has a secondary implication:

the number of vehicles arriving to an event during the 4:45-5:45 p.m. weekday transportation system peak hour is less than what would occur for an earlier-starting event. Based on an 8:00 p.m. event start time (consistent with the Mohegan Sun events center), approximately 8% of those traveling to an event at the Cowlitz facility would arrive during the transportation system's peak hour (roughly 4:45 to 5:45 pm) and has a peak of approximately 19% of its arrivals occurring during the 6 to 7 p.m. hour, which is after the system's weekday peak. Since this casino is located approximately 90 to 120 minutes from the New York and Boston metropolitan areas, many concert-goers may arrive earlier to avoid traffic peaks on the area's roadway system; thus, the 19 percent peak arrival rate is probably lower than what the Cowlitz site would experience.

More detail regarding the Mohegan Sun counts and the calculations that derived the traffic numbers shown in this report are found in supporting data sheets that are available upon request.

Data collected at the Tulalip Casino site indicates that approximately 42 percent of the event-goers arrive in the one-hour period prior to the start of the event. This would put arrivals in the 6:30 to 7:30 time frame. For the purposes of this analysis, they are assumed to arrive at the site between 6 and 7 p.m. although many will arrive much later for an event that starts at 8:00 p.m.

Based on traffic counts in the site vicinity, the transportation system PM peak hour is 5 to 6 p.m. Using event-day counts taken by the Mohegan Sun Casino as well as the Mode Split at Large Special Events paper, approximately one-third (33%) of the attendees will arrive in the 5 to 6 p.m. time period.

Other

Another conservative assumption was that no trip reduction will be taken for "pass-by" trips, which are those people already traveling on the roadway system who decide to deviate from their travel path into the site.

Checking 24-hour traffic counts by hour in the area of the I-5/La Center interchange (ramp counts as well as La Center Road counts and also in Ridgefield), the 6-7 p.m. time period on weekdays carries approximately 75 percent of the 5-6 p.m. peak hour traffic volumes. For a sensitivity analysis, two Year 2010 PM peak scenarios were analyzed for the I-5/La Center interchange area to determine the "worst case" scenario to be analyzed in this report:

- *System PM Peak Hour*, which is the 5-6 p.m. period, using peak hour traffic projections for the system plus the 5-6 p.m. trip generation estimates for Alternative A/B
- *Site Peak Hour*, which is the 6-7 p.m. time period, using the site's peak trip generation estimates plus 75 percent of the road system peak hour volumes.

Tables 4-7 show the trips generated by the Cowlitz Casino proposal based on the trip generation rates summarized above.

The following table compares the trip generation estimates from the Draft EIS traffic analysis to the revised trip generation calculations for this supplemental report:

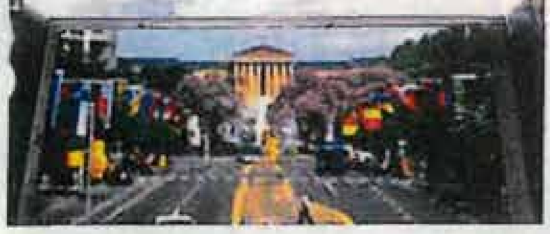
Table 4: Trip Generation Changes Cowlitz Casino Alternatives A and B[8]

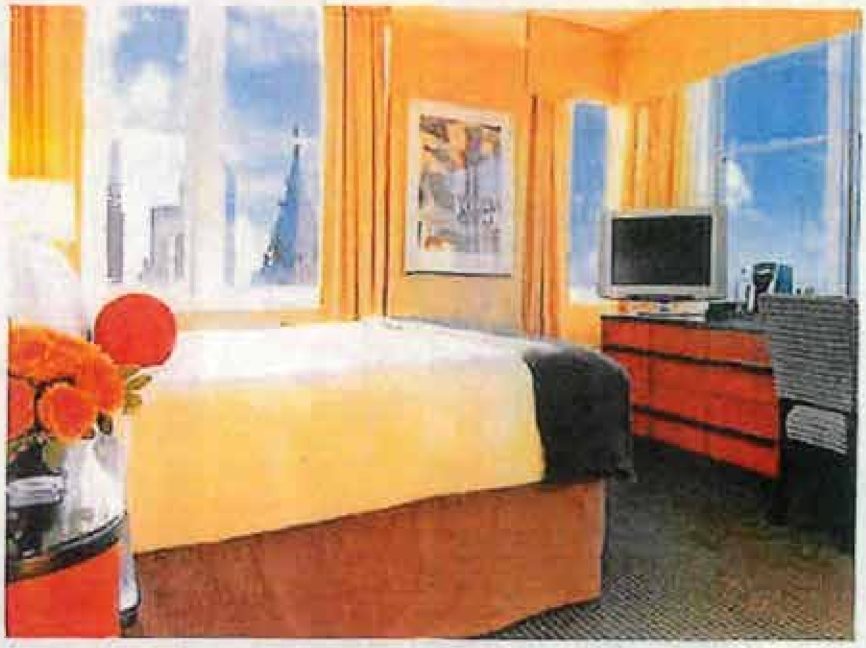
Land Use and Time Period	Previous	Revised	Difference
Casino Trips			
Weekday (Daily)	8,302	10,000	+1,698
Saturday (Daily)	12,508	12,750	+242
Weekday AM Peak Hr	396	396	NC
Weekday Road System PM Peak Hour	664	1231	+567
Weekday Site Peak Hr[9]	664	1468	+804
Saturday Peak Hr	926	944	+18
Hotel Trips			
Weekday (Daily)	514	1028	+514
Saturday (Daily)	512	1024	+512
Weekday AM Peak Hr	35	70	+35
Weekday Road System PM Peak Hour	38	61	+23
Weekday PM Site Peak Hr	38	76	+38
Saturday Peak Hr	45	90	+45
Retail Trips			
Weekday (Daily)	0	686	+686
Saturday (Daily)	0	800	+800
Weekday AM Peak Hr	0	16	+16
Weekday Road System PM Peak Hour			
Weekday Site PM Peak Hr	0	61	+61
Saturday Peak Hr	0	80	+80
Events Center Trips			
Weekday (Daily)	4,800	4,800	NC
Saturday (Daily)	4,800	4,800	NC
Weekday AM Peak Hr	n/a	n/a	NC
Weekday Road System PM Peak Hour	480	966	+486
Weekday Site PM Peak Hr	480	1259	+779
Saturday Peak Hr	480	1259	+779
RV Park Trips			
Weekday (Daily)	0	200	+200
Saturday (Daily)	0	200	+200
Weekday AM Peak Hr	0	40	+40
Weekday Road System PM Peak Hour	0	60	+60
Weekday Site PM Peak Hr	0	74	+74
Saturday Peak Hr	0	70	+70

[8] Note: similar changes will be made to Alternative C and E. Alternative D does not have casino, hotel and other uses, and as such there will be no changes to trip generation for that alternative.
[9] This formerly was assumed to occur during the road system peak hour.

Hotels

PHILADELPHIA:
Smart City. Smart Choice for Hotel Investment.
2011





PHILADELPHIA
CONVENTION & VISITORS BUREAU
www.PhiladelphiaUSA.travel

PIDC

PHILADELPHIA HOTEL DEVELOPMENT
2011

TABLE OF CONTENTS

PIDC Contact:

Anne Bovaird Nevins • 215-496-8151 • anevins@pidc-pa.org

Cover photos by: Hotel Palomar, Loews Center City and PCVB

PHILADELPHIA: Smart City, Smart Choice for Hotel Investment

I. MARKET REVIEW

Background:

As one of the premier destinations in the United States for convention, leisure (domestic and international), group, and business travelers from around the globe, Philadelphia is a smart choice for hotel development and investment.

Meeting and group planners find first-rate facilities to host business meetings, conventions and social events. Tourists delight in the city's world-class cultural amenities and exciting dining and shopping opportunities. An East Coast gateway city, Philadelphia is one of the fastest growing international destinations in the United States.

Philadelphia's densely populated and vibrant downtown is ideal for sightseeing. Fantastic restaurants and outdoor cafes, acclaimed museums and performing arts venues, unique retail, as well as some of America's most important historic destinations, lie within the center of the city and just steps from the newly expanded Pennsylvania Convention Center, other meeting facilities, and high-quality hotels.

Located at the crossroads of the Northeast and the Mid-Atlantic states, there are convenient options for visitors traveling to Philadelphia by car, train, or plane. Philadelphia is within a five hour drive of one-quarter of the U.S. population and within a day's drive for 40 percent of the U.S. population. Philadelphia's 30th Street Station, the third busiest rail station in the country, is located at the center of Amtrak's Northeast Corridor rail lines. Thirty-one million passengers per year travel through Philadelphia International Airport (PHL), which is served by 30 airlines with 600 daily flights to 120 domestic and international cities. PHL serves as the international gateway for US Airways, which has recently added nonstop flights to Tel Aviv, Oslo, and Halifax.

Once visitors arrive in Philadelphia, convenient subway and rail lines take them directly from the airport and Amtrak's 30th Street Station to the Pennsylvania Convention Center, world-famous historic and cultural attractions, exciting retail and restaurants, and more than 10,500 hotel rooms in the downtown. From there, the city's safe, clean and walkable streets, organized in a grid pattern, make Philadelphia easy to navigate.

The Pennsylvania Convention Center (PCC), located within walking distance of all of Center City Philadelphia's attractions, restaurants and retail is an important economic engine for hospitality in the city. The PCC is host to more than one million visitors a year, many of whom are being exposed to Philadelphia for the first time through their experience at the PCC. Over the years, many convention groups outgrew the PCC and business often had to be turned away as the space in the Center was already committed to another group. A $786 million expansion increased the size of the PCC by 62% and opened in March 2011. The PCC now offers the largest contiguous exhibit space in the Northeast – 528,000 square feet – and a total of 1,000,000 square feet of saleable space. With an expanded facility, Philadelphia is now able to bring back those events that outgrew the building, as well as to host mega trade shows or two large events simultaneously.

Over the past two decades, Philadelphia has become a premier domestic and international leisure destination, as demonstrated by the fact that Saturday night has been the busiest night of the week for Center City hotels for the past seven years running. Visitors are drawn by a mix of iconic historic and cultural attractions, complemented by the energy of a thriving dining and arts scene. During that time, the City has invested in improvements to Independence Mall, new cultural institutions such as the Kimmel Center for the Performing Arts and the National Constitution Center, and new sports stadiums for the Philadelphia Phillies and the Philadelphia Eagles. In addition to the Pennsylvania Convention Center expansion, there are many exciting cultural, tourism and corporate developments taking place which will continue to draw leisure, convention and business travelers to Philadelphia.

- The Barnes Foundation, one of the world's legendary art collections featuring more than 2,500 works, will relocate to the cultural corridor along the Parkway in Philadelphia in 2012. The Barnes will welcome about a quarter-of-a-million visitors and students every year and will feature spectacular gathering spaces and views of the Rodin Museum and Fairmount Park.

- The Comcast Center, home to the global headquarters of Comcast Corporation, opened in 2008 and upon certification was the tallest LEED-certified building in the nation standing 975 feet and totaling 1.25 million square feet. Comcast recently completed a merger with NBC Universal making Comcast the nation's largest media corporation.

- The striking new National Museum of American Jewish History opened in November 2010 featuring permanent and changing exhibits marking the trials and triumphs of American Jews throughout our history. Just a block away, the much-anticipated President's House Commemorative Site on Independence Mall now offers visitors an opportunity to see the exposed underground remains of the home where Presidents Washington and Adams lived during their terms, as well as the quarters of the nine enslaved Africans who served the first president.

- The Pennsylvania Academy of the Fine Arts will open Lenfest Plaza directly across from the Pennsylvania Convention Center expansion which will feature a major work of sculpture art by Claes Oldenburg, rotating artist exhibitions and an upscale restaurant.

- The SugarHouse Casino opened on the Delaware River waterfront in 2010 with a mix of gaming, including slots and table games and dining options. A second phase of the project is scheduled for completion in 2013.

Photo by B Krist for PCVB

Past Hotel Development

Between 1998 and 2001, approximately twenty-four hotel projects were completed in Philadelphia at an estimated total investment of $815 million. This development, driven largely by the completion of the Pennsylvania Convention Center in 1993, increased tourism, growth in Philadelphia airport travel and the hosting of the Republican National Convention in 2000, added more than 5,800 rooms to the market. These projects averaged 240 rooms per hotel at a development cost of approximately $130,000 per room.

Through the Philadelphia Industrial Development Corporation (PIDC), the public sector provided a combination of grant and low-interest debt funding to six of the twenty-four projects (25%) that focused on seeding the larger, historic renovation projects first developed around the PCC. These six projects were completed at a total cost of $405 million for more than 2,250 rooms, averaging 375 rooms per hotel and costs of $175,000 per room. Total public investment of $93 million provided an average subsidy of $25,000 per room and was made available in the form of HUD108 or UDAG loans, Tax Increment Financing, and Philadelphia Economic Stimulus grants.

Hotel projects receiving public investment created an estimated 2,026 construction jobs and 1,492 permanent jobs and enabled successful competition for the 2000 National Republican Convention and ongoing efficient booking of the PCC. In addition, renovation of vacant historic office structures facilitated tightening of Philadelphia's office market and removed significant blighting influences from Center City.

Projected Hotel Development

Continued vitality in Philadelphia's convention, tourism, business and airport markets allowed Center City Philadelphia hotels to achieve occupancy rates above 70% every year from 2004 through 2010, except in 2009 at the height of the recession. The average daily rate (ADR) reached a peak of $173.69 in 2008, representing an increase of 23% since 2000. Rates have declined due to the recession, but a strong increase in occupancy from 2009 to 2010 bodes well for ADR growth in 2011. Development of a total of 2,000 to 2,500 new hotel rooms has been identified to meet increased demand relating to the expanded PCC and strong and growing appeal as a domestic and international tourism destination. In the last three years, three new Center City hotels totaling 525 rooms have been completed (Hotel Palomar by Kimpton, Four Points by Sheraton, and Le Meridien by Starwood) and one 270-room hotel (Hotel Monaco by Kimpton) is under construction. **Approximately 1,500 additional hotel rooms will be needed from this point forward to meet the increased market demand.**

Philadelphia Lodging Market:

The following is statistical data compiled by PKF Consulting which describes the historical performance of the lodging market in Philadelphia.

Center City Philadelphia Industry Data

The following tables were prepared by PKF Consulting - Philadelphia, in conjunction with the Greater Philadelphia Hotel Association, the Greater Philadelphia Tourism Marketing Corporation and the Philadelphia Convention & Visitors Bureau and based on data from Smith Travel Research and/or contributed by the hotels themselves. The tables constitute dynamic tools for understanding the health and make-up of the Center-City hospitality industry from 1993 through 2010.

CENTER-CITY PHILADELPHIA LODGING MARKET
HISTORICAL PERFORMANCE
1993 THROUGH 2010

	Hotel Supply			Hotel Demand			Average Rate		RevPAR	
Year	Daily	Annual	Percent Change	Annual	Percent Change	Occupancy	Amount	Percent Change	Amount	Percent Change
1993	5,613	2,048,745	3.1%	1,331,684	4.7%	65.0%	$91.00	1.1%	$59.15	2.7%
1994	5,548	2,025,020	-1.2	1,357,842	2.0	67.1	96.00	5.5	64.37	8.8
1995	6,565	2,396,225	18.3	1,641,710	20.9	68.5	104.00	8.3	71.25	10.7
1996	6,677	2,443,782	2.0	1,782,829	8.6	73.0	117.00	12.5	85.38	19.8
1997	6,513	2,445,566	0.1	1,794,180	0.6	73.4	123.96	5.9	90.94	6.5
1998	6,728	2,455,868	0.4	1,756,151	-2.1	71.5	134.85	8.8	96.43	6.0
1999	7,869	2,872,191	17.0	1,957,715	11.5	68.2	136.63	1.3	93.13	-3.4
2000	9,805	3,588,718	24.9	2,282,052	16.6	63.6	141.42	3.5	89.93	-3.4
2001	10,654	3,888,544	8.4	2,340,381	2.6	60.2	134.06	-5.2	80.69	-10.3
2002	10,690	3,901,953	0.3	2,575,154	10.0	66.0	138.58	3.4	91.46	13.4
2003	10,605	3,870,680	-0.8	2,569,626	-0.2	66.4	130.14	-6.1	86.41	-5.5
2004	10,428	3,816,848	-1.4	2,702,880	5.2	70.8	133.44	2.5	94.48	9.3
2005	10,244	3,739,043	-2.0	2,712,509	0.4	72.5	145.42	9.0	105.43	11.6
2006	9,840	3,591,491	-3.9	2,641,637	-2.6	73.6	156.08	7.3	114.87	9.0
2007	9,901	3,613,864	0.6	2,678,604	1.4	74.1	169.73	8.8	125.80	9.5
2008	10,045	3,678,521	1.7	2,595,109	-3.1	70.6	173.69	2.3	122.63	-2.5
2009	10,257	3,743,624	1.8	2,557,263	-1.5	68.3	152.44	-12.2	104.12	-15.1
2010	10,580	3,861,576	3.1	2,752,737	7.6	71.3	146.50	-4.0	104.43	0.2
CAG:										
93-'10			3.8%		4.4%			2.8%		3.4%
02-'07			-1.0%		0.8%			3.8%		5.0%

Source: PKF Consulting

PHILADELPHIA: Smart City. Smart Choice for Hotel Investment.

Geographic Sub-Market Performance:

The following comments relate to the three geographic sub-markets:

- The Old City/Society Hill area: those hotels most popular with the tourist segment, which produces visits (domestic and international) all year round with especially high volume from April through October;
- The Broad Street and East area: those hotels closest to the Convention Center;
- The West of Broad Street area: these hotels, including those in University City, benefit from the concentration of Class A office space along West Market Street and the academic and health-care institutions in University City. Due to its proximity to Rittenhouse Square and the Parkway, this area also draws a healthy mix of leisure (domestic and international) and group travelers. The West of Broad Street sub-market reported the highest average room rate in 2010, as it has historically.

Le Meridien

Hotel Palomar

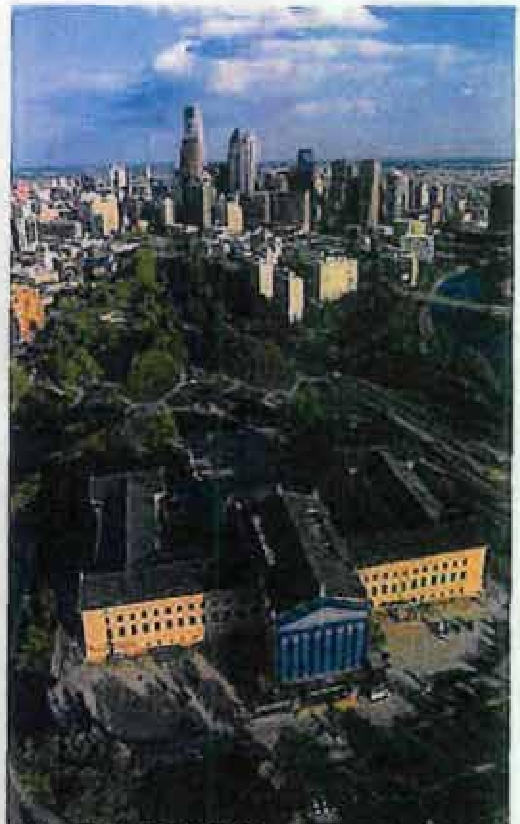


Photo by B.Krist for PCVB

The table below lists the "major" hotels in Center-City, classified by general geographic location, with estimated sector occupancy and average room rate levels for 2010. The differences between the areas closely follow recent historical trends.

CENTER-CITY PHILADELPHIA LODGING SUPPLY
GEOGRAPHIC SECTOR ESTIMATES FOR 2010

Area/Hotel	Average Rooms Available in 2010	Occupancy	Average Room Rate
West of Broad Street(incl. University City):	3,778	67.9%	$152
Sheraton Center City Philadelphia	757		
Crowne Plaza	445		
Four Seasons	364		
Sheraton University City	332		
Sofitel	306		
Radisson Plaza Warwick	301		
Westin	294		
Embassy Suites	288		
Hilton Inn at Penn	238		
Best Western Center City	183		
Latham	139		
Le Meridien (partial year)	132		
Windsor Suites	126		
Rittenhouse	111		
AKA Rittenhouse	79		
Penn Tower	50		
Broad Street & East:	4,673	72.4%	$146
Marriott	1,408		
Loews	581		
Courtyard by Marriott	498		
Doubletree	432		
Ritz-Carlton	299		
Hilton Garden Inn	279		
Residence Inn	269		
Hampton Inn	250		
Park Hyatt	172		
Holiday Inn Express	168		
Four Points by Sheraton	92		
Inn at the Union League	84		
Travelodge	50		
Alexander Inn	48		
Rodeway Inn	32		
The Independent	24		
Old City/Society Hill:	1,493	76.0%	$129
Sheraton Society Hill	355		
Holiday Inn Historic District	358		
Hyatt Penns Landing	345		
Comfort Inn Historic Area	185		
Omni at Independence Park	148		
Penn's View Inn	50		
Best Western Independence Park	36		

Sources: Hotels concerned; PKF Consulting

PHILADELPHIA: Smart City. Smart Choice for Hotel Investment.

Overall demand in Center City may be categorized into four segments:

- *Commercial Individual*: Individual travelers for business purposes, typically paying comparatively higher room rates and utilizing hotels Monday through Thursday. Individual government travelers are included in this much larger segment in the chart below.
- *Convention & Group*: Convention business related to the Pennsylvania Convention Center and groups of 10 or more including business meeting attendees; social groups (weddings, reunions, bar and bat mitzvahs, etc.) Room rates tend to be discounted somewhat for group business.
- *Leisure Individual*: Individual travelers for leisure purposes, which has been the fastest-growing market segment for Center City hotels and experienced a tripling of room nights since 1997.
- *International Traveler*: Philadelphia jumped from the 21st most visited city (421,000 visits) in the United States in 2002 to the 13th most visited city (636,000 visits) in 2010. Between 2009 and 2010, international travel to Philadelphia increased 7%.

The following table indicates the estimated market mixes for the Center City market from 1993 through 2010. Every major segment of the lodging market – commercial, convention, group and leisure – has experienced significant growth during this period.

CENTER-CITY PHILADELPHIA LODGING MARKET
HISTORICAL SEGMENT DEMAND LEVELS (ROUNDED)
1993 THROUGH 2010

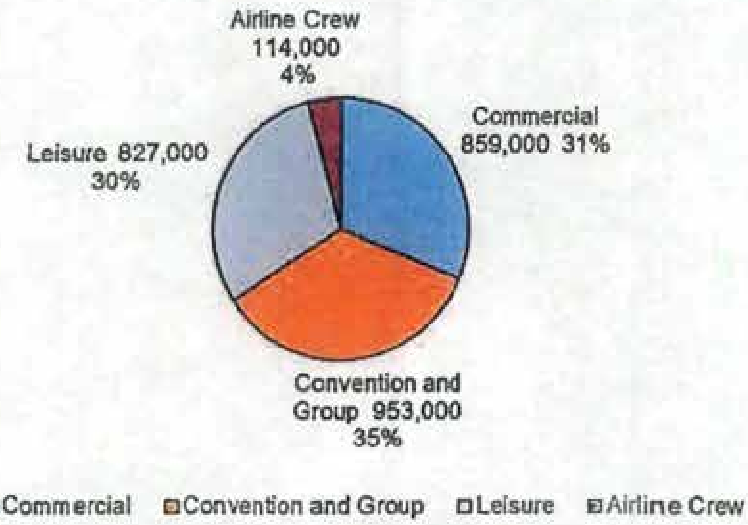
	Commercial Demand (Includes Government)		Convention & Group Demand		Leisure Demand		Airline Crew Demand		Total Demand
Year	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change	Amount	Percent Change	Amount
1993	514,000	1.0%	535,000	10.1%	283,000	2.5%	N.A	N.A	1,332,000
1994	521,000	1.4	552,000	3.2	285,000	0.7	N.A	N.A	1,358,000
1995	567,000	8.8	754,000	36.6	321,000	12.6	N.A	N.A	1,642,000
1996	613,000	8.1	771,000	2.3	294,000	N.A	105,000	N.A	1,783,000
1997	667,000	8.8	769,000	-0.3	254,000	-13.6	104,000	1.0%	1,794,000
1998	654,000	-1.9	721,000	-6.2	293,000	15.4	88,000	15.4	1,756,000
1999	703,000	7.5	788,000	9.3	386,000	31.7	81,000	-8.0	1,958,000
2000	798,000	13.5	983,000	24.7	418,000	8.3	83,000	2.5	2,282,000
2001	788,000	-1.3	971,000	-1.2	476,000	10.7	105,000	26.5	2,340,000
2002	800,000	1.5	1,116,000	14.9	573,000	20.4	86,000	-18.1	2,575,000
2003	834,000	4.3	985,000	-11.7	675,000	17.8	76,000	-11.6	2,570,000
2004	887,000	6.4	1,035,000	5.1	687,000	1.8	94,000	23.7	2,703,000
2005	885,000	-0.2	1,063,000	2.8	657,000	-4.4	108,000	14.6	2,713,000
2006	824,000	-6.9	1,049,000	-1.3	671,000	2.1	98,000	-9.3	2,642,000
2007	836,000	1.5	1,064,000	1.4	685,000	2.1	94,000	-4.1	2,679,000
2008	786,000	-6.0	998,000	-6.2	714,000	4.2	97,000	3.8	2,595,000
2009	780,000	-0.8	936,000	-6.2	735,000	2.9	107,000	10.3	2,557,000
2010	859,000	10.1	953,000	1.9	827,000	12.4	114,000	6.4	2,753,000
CAG%'s:									
1993-2010		3.1%		3.5%		6.5%		N.A	4.4%
2002-2007		0.9%		-0.9%		3.6%		1.8%	0.6%

Sources: Hotels concerned; Smith Travel Research; PKF Consulting.

PHILADELPHIA: Smart City. Smart Choice for Hotel Investment.

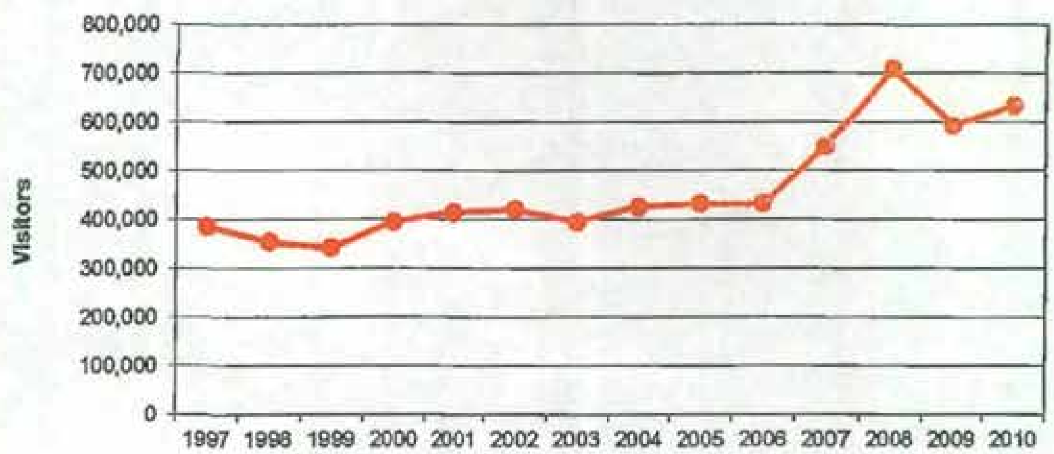
The following chart provides an overview of Center City hotel demand by segment for 2010:

2010 CENTER CITY PHILADELPHIA HOTEL NIGHTS BY MARKET SEGMENT



The following table outlines the growth in overseas visitations to Philadelphia from 1997 through 2010. Philadelphia was the fastest growing international destination in the United States in 2008 prior to the full effect of the global recession.

OVERSEAS VISITORS TO PHILADELPHIA



*SOURCE: U.S. Department of Commerce, Office of Travel and Tourism Industries

The following table outlines the mix of convention and group demand, including the number of citywide conventions annually as well as the room nights sold or booked by the PCVB and Center City hotels.

CONVENTION AND GROUP DEMAND BY SEGMENT
1993 THROUGH 2010

		Sold/Booked by the PCVB				Sold/Booked by Center-City Hotels		Total Convention & Group Demand	
	Number of	Convention-Center Related		Non Convention-Center Related					
Year	Citywides	Demand	% Chg.	Demand	% Chg.	Demand	% Chg.	Demand	% Chg.
1993	1	49,000		NA	NA	NA	NA	535,000	
1994	5	165,000	236.7%	NA	NA	NA	NA	552,000	3.2%
1995	12	331,000	100.6	NA	NA	NA	NA	754,000	36.6
1996	23	536,000	61.9	126,000		109,000		771,000	2.3
1997	23	508,000	-5.2	163,000	29.4%	98,000	-10.1%	769,000	-0.3
1998	24	470,000	-7.5	187,000	14.7	64,000	-34.7	721,000	-6.2
1999	18	420,000	-10.4	257,000	37.4	111,000	73.4	788,000	9.3
2000	24	547,000	30.2	205,000	-20.2	231,000	108.1	983,000	24.7
2001	18	394,000	-28.0	246,000	20.0	331,000	43.3	971,000	-1.2
2002	27	574,000	45.7	259,000	5.3	283,000	-14.5	1,116,000	14.9
2003	19	406,000	-29.3	257,000	-0.8	322,000	13.8	985,000	-11.7
2004	14	277,000	-31.8	272,000	5.8	485,000	50.6	1,034,000	5.1
2005	15	315,000	13.7	290,000	6.6	463,000	-4.5	1,068,000	2.6
2006	16	310,000	-1.6	270,000	-6.9	470,000	1.5	1,049,000	-1.6
2007	14	336,000	8.4	235,000	-13.0	493,000	4.9	1,064,000	1.4
2008	14	316,000	-6.0	236,000	0.4	446,000	-9.5	998,000	-6.2
2009	13	303,000	-4.1	233,000	-1.3	400,000	-10.3	936,000	-6.2
2010	11	179,000	-36.9	222,000	8.7	552,000	23.3	953,000	1.9

Sources: PCVB; hotels concerned; PKF Consulting

The following table provides attendance information for the Independence Visitor Center and Center City's major attractions for 2010.

ATTENDANCE LEVELS
PHILADELPHIA VISITORS CENTER & PARTICIPATING ATTRACTIONS FULL YEAR 2010

Visitor Center/Attraction	Attendance	% Change
Independence Visitor Center	2,440,295	-10.2%
Attractions:		
Liberty Bell Center	2,271,938	-3.1%
Independence Hall	694,552	-3.7
National Constitution Center	804,551	-12.9
Franklin Institute	958,330	13.3
Academy of Natural Sciences	155,632	-5.3
Philadelphia Zoo	1,255,604	-4.4
Please Touch Museum	568,581	-13.1
Philadelphia Museum of Art	680,544	-8.8
University of Pennsylvania Museum of Archaeology and Anthropology	138,716	-4.0
Eastern State Penitentiary	250,458	7.6
Total Attractions	778,908	-3.9%

II. PUBLIC FINANCING PROGRAMS

PIDC has identified many programs that are available to support new hotel developments and hotel renovation projects in Philadelphia which will create or retain significant numbers of jobs. The following are offered on a first-come, first-served basis subject to need, availability of funds, and PIDC's underwriting criteria, except as noted:

Low-Cost Financing:

The Welcome Fund

PIDC's Welcome Fund loan program can provide financing in increments of $500,000 for every ten new direct and indirect jobs created by a project as determined by an economic impact statement. The Welcome Fund offers 3.25%, interest-only financing over a five-year term and requires senior-level secured collateral. The minimum loan amount for the Welcome Fund is $10,000,000 supported by the creation of at least 200 new direct and indirect jobs.

HUD 108 Loan Program

PIDC's HUD 108 loan program can provide financing in increments of $35,000 for each permanent full-time equivalent job created by a project, with a maximum loan amount of approximately $5,000,000. The HUD 108 loan program offers funds at a rate based on the 10 Year Treasury, fully amortizing over a 15 to 20 year term. The HUD 108 loan can be secured in a subordinate position to private senior debt, subject to a combined 80% loan-to-value ratio. The interest rate and loan term are fixed at settlement based on market conditions.

PIDC Growth Loan

The PIDC Growth Loan can provide low-cost financing for building acquisition and renovation, tenant improvements, and equipment purchases in increments of $35,000 for each permanent full-time equivalent job created by a project, with a maximum loan amount of $750,000. The PIDC Growth Loan program is currently priced at 2.75% and the loan term is generally matched with the useful life of the assets being financed. The Growth Loan can be subordinate but must be fully secured and cash flow to support debt service must be demonstrated.

First Industries Tourism Machinery and Equipment Loan Fund

The First Industries Tourism program can provide low-cost financing for machinery and equipment purchases for hotel development or renovation projects which retain or create jobs in Pennsylvania and which are located in close proximity to a destination tourism site. Eligible equipment purchases for hotel projects would include computer reservation systems, kitchen appliances, and laundry appliances. One job must be retained or created for each $25,000 in financing, and the Commonwealth of Pennsylvania is currently accepting applications for a maximum of $500,000.

Energy Efficiency Programs:

EnergyWorks Loan Fund

The City of Philadelphia, PIDC, and The Reinvestment Fund are offering the EnergyWorks Loan Fund to provide low-cost financing to support energy efficiency retrofits and new construction projects in Philadelphia. Financing is available up to 85% of project costs for retrofits or 33% of costs for new construction, and loan amounts range from \$100,000 to \$2,500,000. Interest rates on the loans range from 3.5% to 6.5% and the loans must be fully secured.

City of Philadelphia Green Roofs Tax Credit

The City of Philadelphia offers a credit against the Business Privilege Tax of twenty-five percent (25%) of all costs incurred to construct a Green Roof, with a maximum credit of \$100,000 per business.

*Please note that there are a number of additional programs relating to energy efficiency and alternative energy generation that are available through PECO, the Commonwealth of Pennsylvania and the federal government.

Tax Abatement and Credit Programs:

City of Philadelphia Real Estate Tax Abatement

The City and School District of Philadelphia offer an abatement of incremental real estate taxes over ten years for new construction and major renovations. The abatement requires filing of an application within sixty (60) days from the date on which the building permit to construct is issued by the Department of Licenses and Inspections.

City of Philadelphia Job Creation Tax Credit (JCTC)

The City of Philadelphia can provide Job Creation Tax Credits, to be deducted against the company's Business Privilege Tax liability. For jobs created through 2013, the JCTC can equal \$3,000 per new job created. For jobs created after 2013, the maximum JCTC is \$1,000 per job or 2% of annual wages, whichever is greater. To qualify, the jobs created must be full-time positions and pay at least 150% of minimum wage.

Non-Financial Assistance:

Developer Services

The City of Philadelphia will convene a meeting of all major Philadelphia operating departments and utilities involved in the permitting and approval process to review and provide guidance to a proposed hotel development. Meetings are held on alternate Fridays and are offered as a free service of the City.

Workforce Training

PIDC will collaborate with the Philadelphia Works, Inc. (PWI) to provide support for new hospitality industry employees who are Philadelphia residents. The PWI can offer training grants as well as non-financial assistance for recruitment, assessment and employee retention.


Omni Hotel at Independence Park


Le Meridien

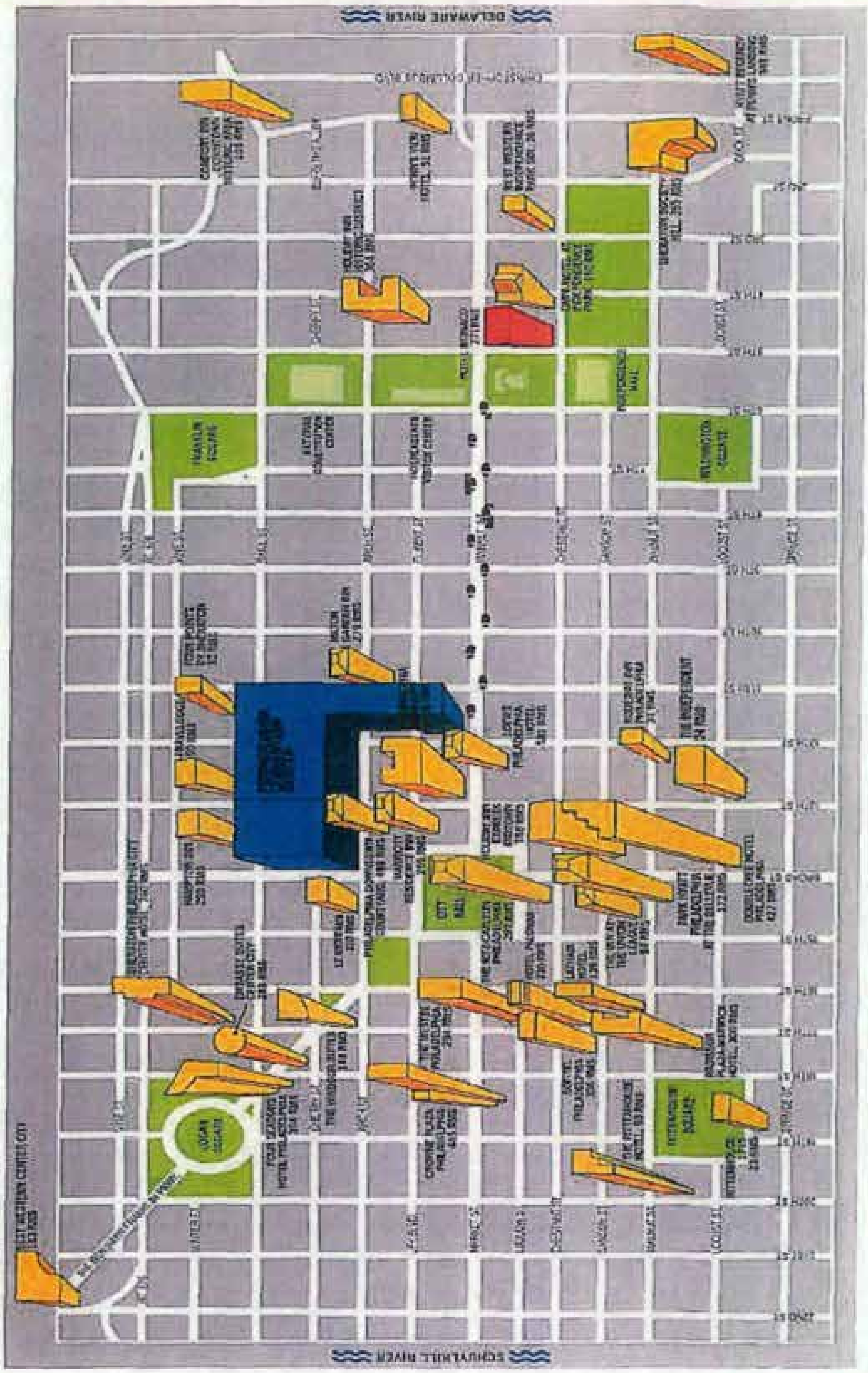
III. NEW AND EXISTING HOTELS MAP

A new generation of convention and tourist infrastructure and a vibrant hospitality market make investing in the development and renovation of hotels in Philadelphia a smart choice. The expansion of the Pennsylvania Convention Center, the relocation of the Barnes Foundation to the Benjamin Franklin Parkway and the expansion of the Philadelphia Museum of Art, continued retail and residential vitality concentrated around Rittenhouse Square, and recent investments in the historic Independence Mall and its surrounding assets will continue to support a strong hospitality market in Philadelphia.

Please see the following map of new and existing hotels in Center City Philadelphia.

For more information, please contact:
Anne Bovaird Nevins at:
215-496-8151 or anevins@pidc-pa.org.

PHILADELPHIA: Smart City. Smart Choice for Hotel Investment.

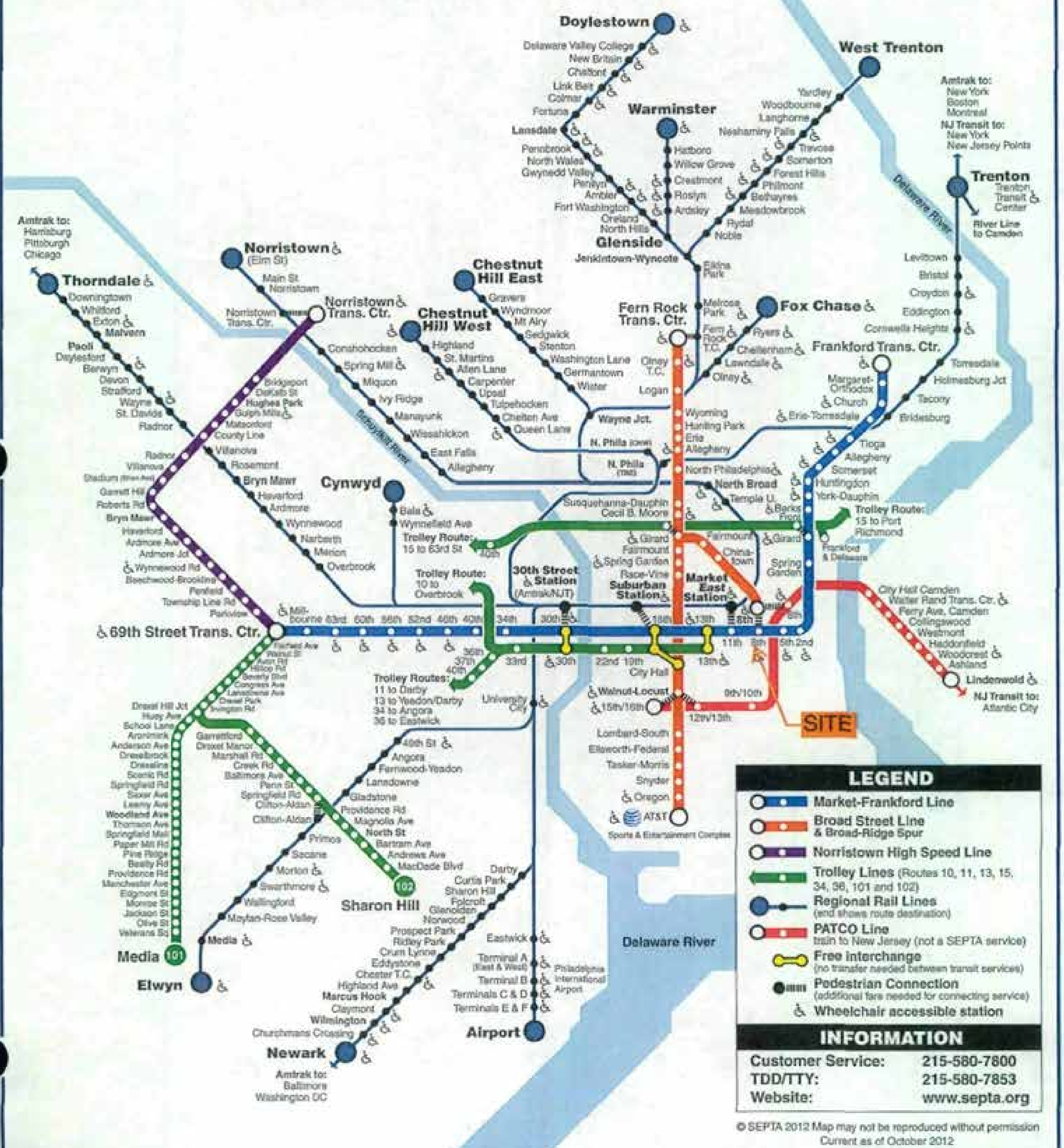


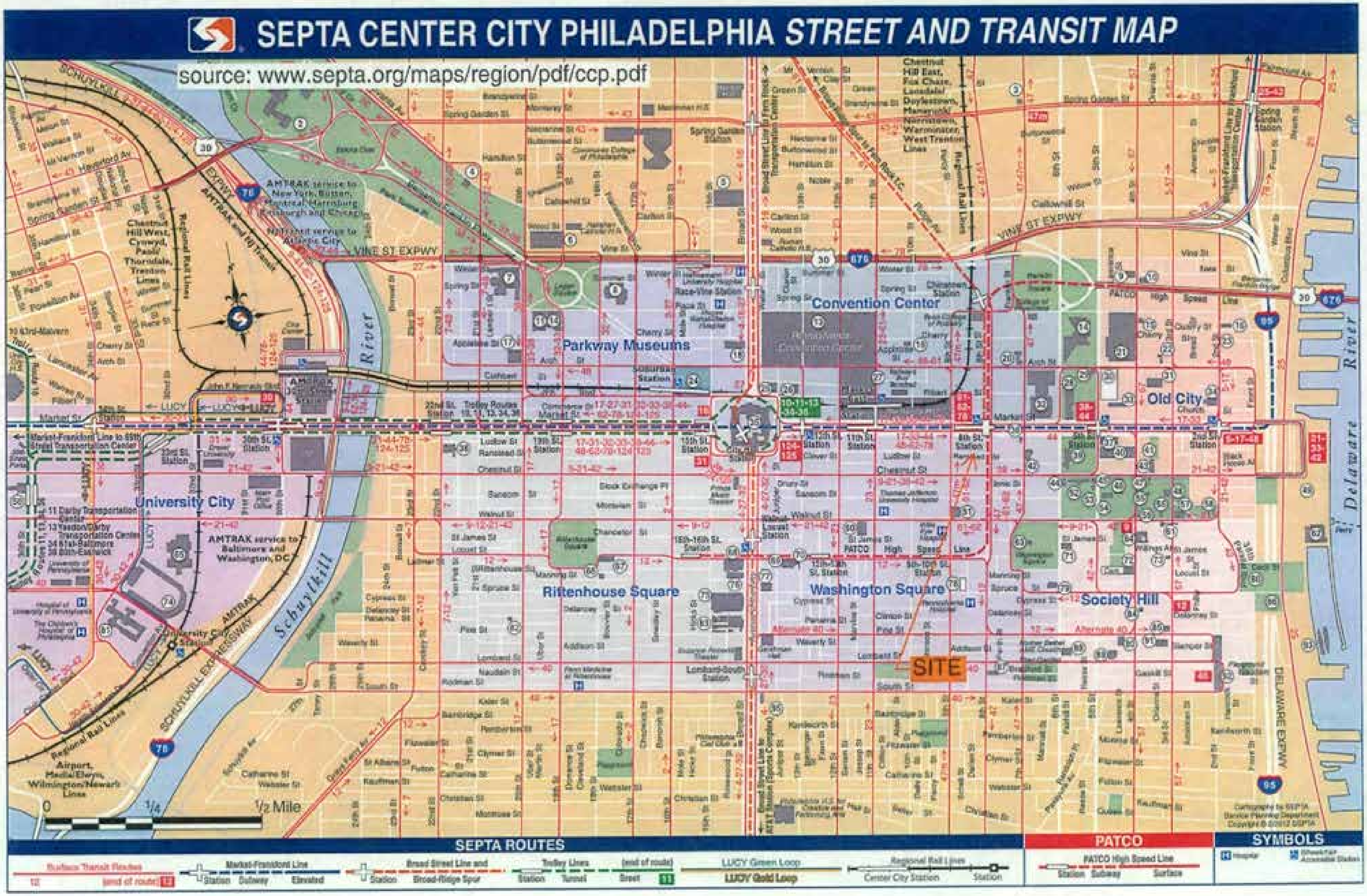
APPENDIX A

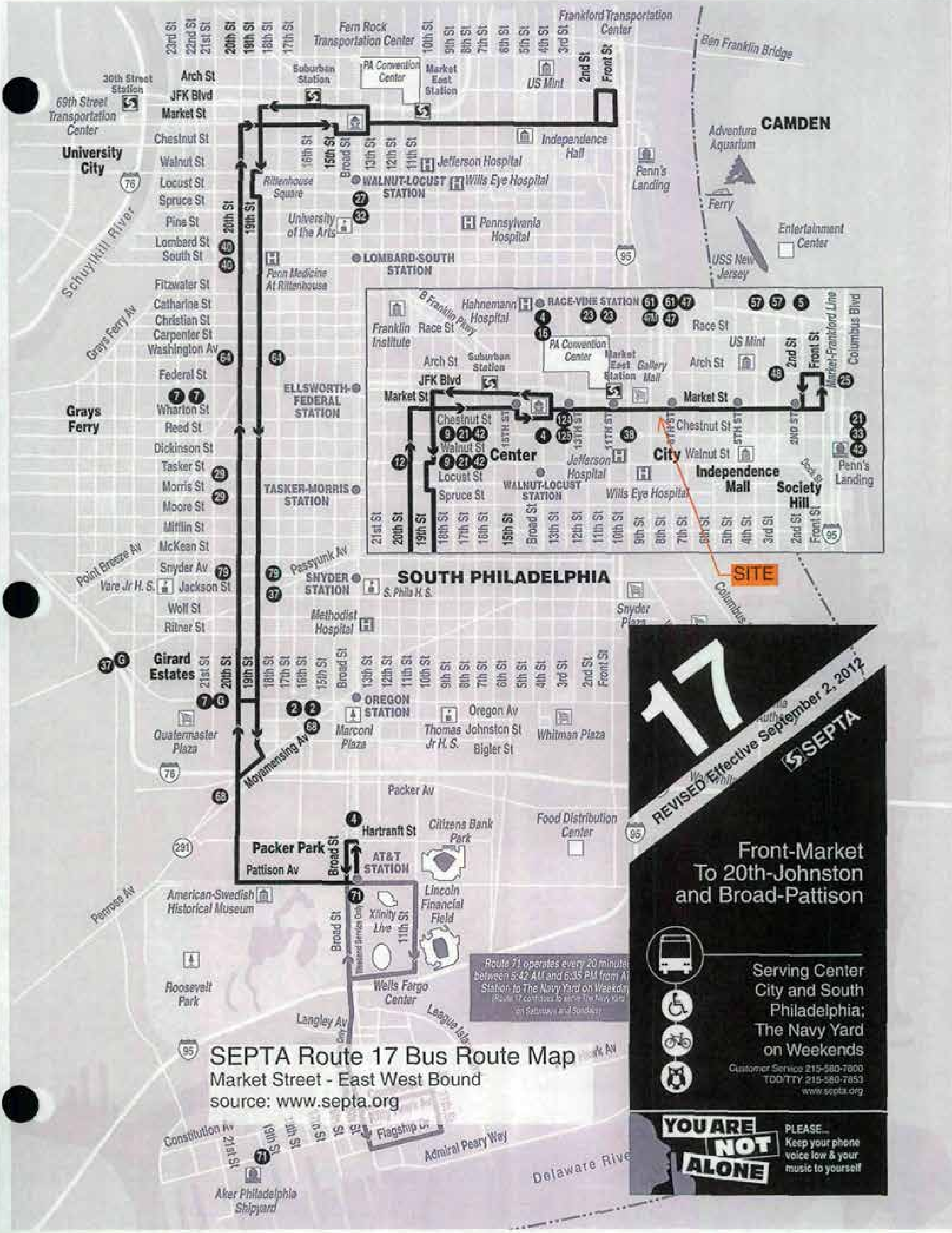
Public Transportation Information

SEPTA Regional Rail & Rail Transit

source: http://www.septa.org/maps/pdf/click-map.pdf




SEPTA CENTER CITY PHILADELPHIA STREET AND TRANSIT MAP
source: www.septa.org/maps/region/pdf/ccp.pdf
Convention Center
Parkway Museums
Old City
University City
Rittenhouse Square
Washington Square
Society Hill
SITE
Schuylkill River
Delaware River
VINE ST EXPWY
DELAWARE EXPWY
SCHUYLKILL EXPRESSWAY
AMTRAK service to New York, Boston, Montreal, Harrisburg, Pittsburgh and Chicago
NJ Transit service to Atlantic City
AMTRAK service to Baltimore and Washington, DC
Regional Rail Lines
Airport, Media/Elwyn, Wilmington/Newark Lines
1/4
1/2 Mile
SEPTA ROUTES
PATCO
SYMBOLS

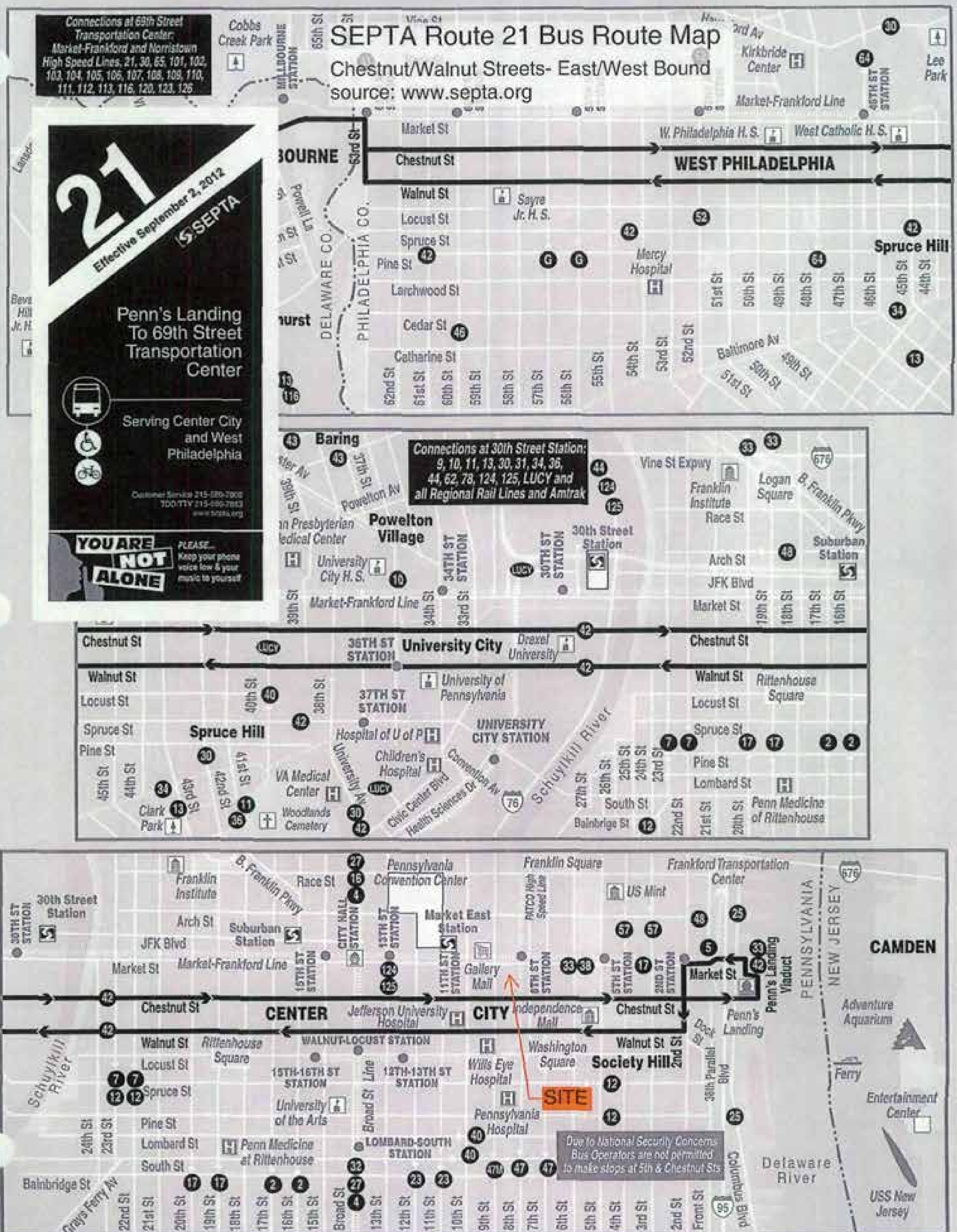


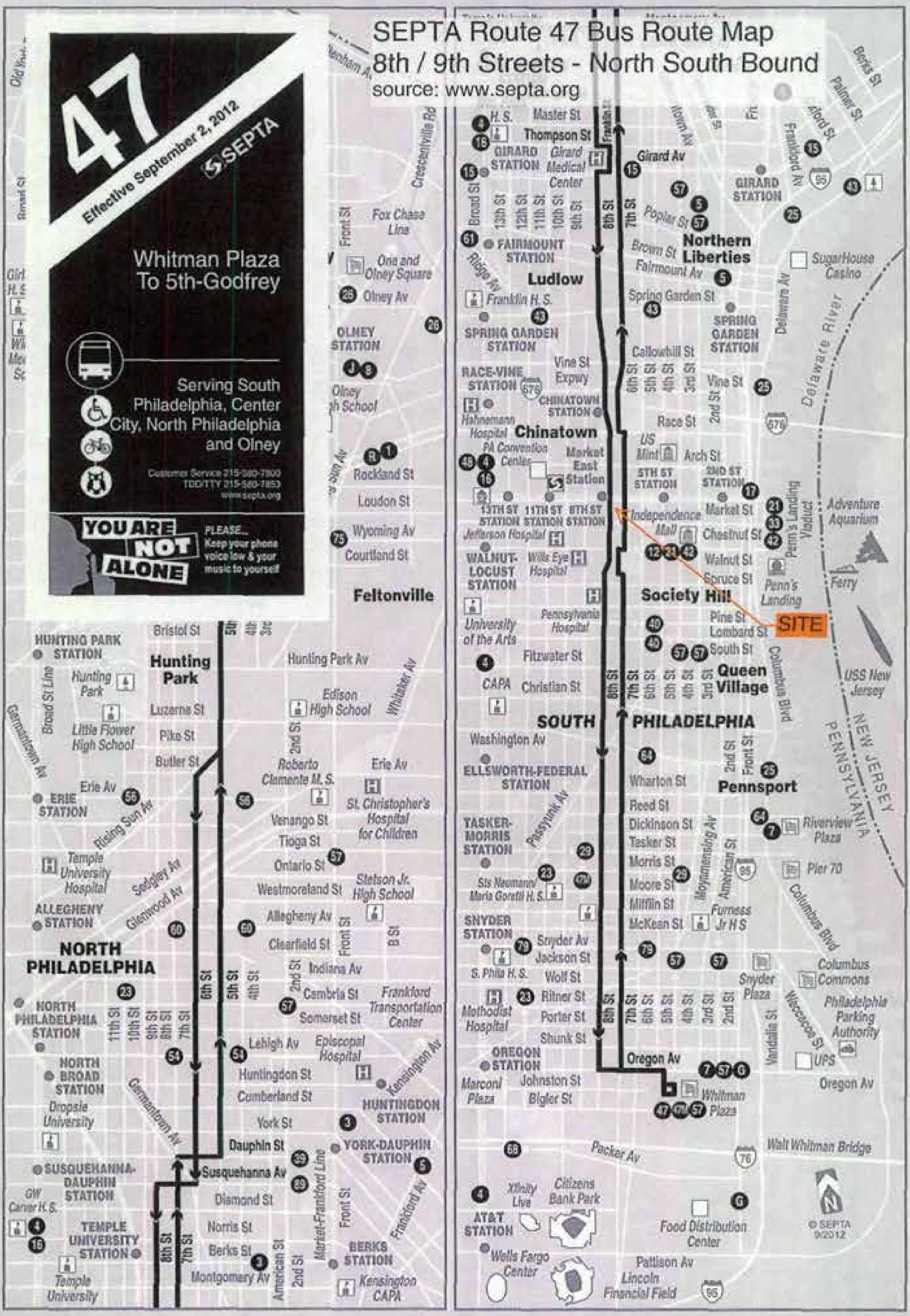
SEPTA Route 17 Bus Route Map
Market Street - East West Bound
source: www.septa.org

SEPTA Route 21 Bus Route Map

Chestnut/Walnut Streets- East/West Bound

source: www.septa.org




SEPTA Route 47 Bus Route Map
8th / 9th Streets - North South Bound
source: www.septa.org
47
Effective September 2, 2012
SEPTA
Whitman Plaza
To 5th-Godfrey
Serving South Philadelphia, Center City, North Philadelphia and Olney
YOU ARE NOT ALONE
PLEASE... Keep your phone voice low & your music to yourself
SITE
Northern Liberties
Ludlow
Chinatown
Society Hill
Queen Village
SOUTH PHILADELPHIA
Pennsport
Feltonville
Hunting Park
NORTH PHILADELPHIA
Girard Av
Spring Garden St
Callowhill St
Vine St
Race St
Arch St
Market St
Chestnut St
Walnut St
Spruce St
Pine St
Lombard St
South St
Fitzwater St
Christian St
Washington Av
Wharton St
Reed St
Dickinson St
Tasker St
Morris St
Moore St
Mifflin St
McKean St
Snyder Av
Jackson St
Wolf St
Ritner St
Porter St
Shunk St
Oregon Av
Johnston St
Bigler St
Packer Av
Pattison Av
Whitman Plaza
Delaware River
NEW JERSEY
PENNSYLVANIA
Walt Whitman Bridge
Olney Av
Rockland St
Loudon St
Wyoming Av
Courtland St
Bristol St
Hunting Park Av
Luzerne St
Pike St
Butler St
Erie Av
Venango St
Tioga St
Ontario St
Westmoreland St
Allegheny Av
Clearfield St
Indiana Av
Cambria St
Somerset St
Lehigh Av
Huntingdon St
Cumberland St
York St
Dauphin St
Susquehanna Av
Diamond St
Norris St
Berks St
Montgomery Av
8th St
7th St
© SEPTA 9/2012