

FISHTOWN NEIGHBORS ASSOCIATION



Herbert L. Shallcross – President

June 2, 2006

Office of the Clerk
PA Gaming Control Board
PO Box 69060
Harrisburg, PA 17106

Written Comment to be Included in the Evidentiary Record of the Public Input Hearings

I request that the following comments be made part of the public input hearing record and considered by the Pennsylvania Gaming Control Board prior to awarding licenses for slot operators.

I am writing as the official representative of the Fishtown Neighbors Association. The Fishtown Neighbors Association has as its first purpose, "To represent the neighborhood to the City of Philadelphia and to all of its departments and agencies and other government agencies." Two of the Casinos proposed, the Pinnacle and SugarHouse sites are within the borders of Fishtown and one other, the Riverwalk site is within a few blocks and quite close enough to have a significant impact on our community. In view of that, we have established a committee to study these proposals, and casinos generally to be better able to comment on these matters.

We found upon studying the potential operators impact studies, that it was quite easy for amateurs to find major mistakes and misconceptions in the reports. Traffic plans, as an example were prepared with obvious haste and were inaccurate and impractical. We understand that some of the operators are in the process of doing new traffic studies, and these studies may be complete in time to be of some use in the licensing process. This would be of little consequence, I suppose, if failure of these plans didn't threaten to paralyze not only our neighborhood and most of the City of Philadelphia, but the biggest traffic artery on the east coast, I-95, with the incalculable economic cost associated with that. We are familiar with local conditions of course, but the professionals responsible for preparing the reports obviously didn't do their homework. We worry that other critical factors that are harder for us to discover may have been overlooked in the haste to meet the schedule established by the gaming regulations.

But we must take the situation as we find it. There is no unified opinion, either for or against in our community about casinos. The Fishtown Neighbors Association has taken the position that we are unlikely to be given a voice in whether casinos will be built here. If the State wanted our opinion they would have held a referendum. Our aim is to try to work to maximize the benefits of a casino, should a license be issued here, and to try to mitigate the negative impacts.

The reports attached to this letter are the results of our research, and they are offered freely in the hope of informing the Gaming Control Boards deliberations. The conclusions we have drawn from our study can be summarized thus-

The operators haven't submitted their final proposals and traffic plans. We feel the Gaming Control Board should –

- release the complete proposals, with the exception of confidential business information to the public as soon as they are received by the board.

- With that information, the public will be better able to comment, so we request that the Gaming Control Board open a new public comment period of at least 90 days in duration, This period should include a new round of public hearings in Philadelphia scheduled for weekday evenings at locations in the affected neighborhoods so it is easier for citizens to attend.

- Require that each applicant provide to the Board a finalized Community Benefits Agreement, signed by the applicant and by the impacted community organizations before issuing a license.

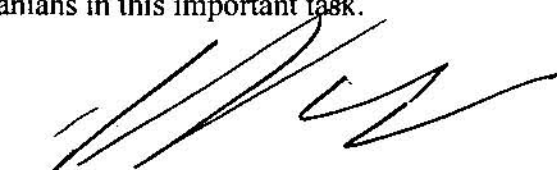
- Of the three proposed casino sites in the Central Delaware riverfront area, no more than one should be licensed. It will take a great deal of cooperation between City and State agencies and the communities here to make any one of these projects viable and to mitigate the impact on the community. We do not believe there is any plan or resource that would allow for the successful operation of any two of these three sites even if we were willing to accept the degradation of the condition of the neighborhood such a plan would cause.

- The one single factor that would do the most to rescue the impractical traffic plans for either of the two northernmost sites, Pinnacle or SugarHouse is the construction of the planned I-95 on and off ramps. These are not scheduled to be started until 2009, with a completion date of 2011 or 2012. Quite frankly, neither of these casinos could operate successfully without these highway upgrades, and the impact on our community of a casino attempting to operate without them would be devastating. It is obvious that the State considers the completion and operation of these casinos to have a very high priority. The Gaming Control Board should exert itself to the utmost to affect the priorities of another State agency, PennDOT to immediately fund, schedule and start this construction. No casino should be issued a license to operate on either of these sites until these ramps are complete.

The Gaming Control Board has reserved the decision of which operators are licensed to themselves, so I will not attempt to rule in the board's stead. We feel that while one site or proposal may have advantages over another, the Board is able to discover any such advantage. We feel that the relationship between the community and the developer/operator, the willingness to work in partnership with the neighbors is an important factor in mitigating the burdens associated with a casino. We have not communicated With the Riverwalk group, since they aren't in our borders, but we have

had several conversations with the Sugarhouse team. They have given a letter outlining the framework of a community benefits agreement, and have recently contacted us to set up meetings to negotiate the details of an agreement. Pinnacle has been less forthcoming, never bringing anyone to our meetings with authority to make even the first steps toward any sort of commitment. They feel they have a better plan, and a better site, but whether that is true or not, it gives us nothing in the way of resources to deal with the inevitable unforeseen problems the siting of a casino here will create. We hope they show more willingness to involve themselves in a partnership with the community so we can have confidence in the successful integration of their project into the neighborhood.

Thank you for your kind attention and I wish that you be granted the gift of wisdom to better serve your fellow Pennsylvanians in this important task.



Herbert L. Shallcross
President
Fishtown Neighbors Association

**REVIEW OF IMPACT REPORTS SUBMITTED TO
THE PENNSYLVANIA GAMING CONTROL BOARD
REGARDING THE PROPOSED
PINNACLE, SUGARHOUSE AND RIVERWALK SITES**

**By Fishtown Neighbors Association
Submitted to the Pennsylvania Gaming Control Board
June 2, 2006**

**REVIEW OF IMPACT REPORTS SUBMITTED TO
THE PENNSYLVANIA GAMING CONTROL BOARD
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I. Introduction

Residents of the Fishtown section of Philadelphia have concerns about the plans proposed by Pinnacle Entertainment ("Pinnacle"), HSP Gaming ("Sugarhouse") and Riverwalk to open gaming facilities in, or immediately adjacent to, our neighborhood.

While it is possible that the siting of a gaming facility in our neighborhood may bring some benefits, nothing in Act 71 provides any assurances that these benefits will materialize, or if they do, that they will flow to the residents of the Fishtown neighborhood in particular. The citizens closest to the licensed facility will bear the burden of the siting of such a facility. Thus, it is imperative that they should receive specific benefits from the operation of these facilities. There must be a mechanism to lock in any available benefits, such as living-wage jobs and full-time permanent jobs, for local Fishtown residents.

At the same time, if the Pennsylvania Gaming Control Board (the "Board") is to issue a license to a gaming facility, it must include in that license mechanisms to lessen the burdens on the residents of the area in which this facility will be located. By far the most serious issue is that of traffic. Under the plans as currently proposed by each of these three facilities,¹ these facilities'

¹ These three facilities and their impact and traffic reports are:
(1) PNK - Pinnacle Entertainment, "Local Impact Report for Philadelphia Gaming Proposal;" (2) HSP Gaming, "Local Impact Report, Sugarhouse Casino" and "Traffic Impact Analysis Report, Sugarhouse (Delaware Avenue) Site;" and (3) Riverwalk Casino, "Economic Impact of the Proposed Riverwalk Casino,

operations will have a devastating effect on our neighborhood because they will pour tens of thousands of vehicles down our small local streets each and every week. This is not immediately apparent from the applications provided to the Pennsylvania Gaming Control Board (the "Board") for a couple of reasons. First, the operator's reports contain sweeping conclusions stating that their operations will have little or no adverse effects on our neighborhood. Second, the operators' reports are exceedingly superficial and thus fail to consider essential information. Third, some of the most fundamental and important items presented as "facts" in the operators' reports are simply wrong.

The fact is that, under the casinos' plans as currently proposed, each of these three facilities will send thousands of vehicles down our local streets each week. -- In the case of Sugarhouse, for example, its traffic consultant, Gannet Flemming, estimates that 25,000 vehicles per week will come to the site via southbound I-95. That means that over 25,00 vehicles per week will pour down our one-lane residential streets. Due to a seriously flawed traffic plan the local impact report mistakenly concludes that it will have "no adverse impact" on the local community at all.

These casino-bound vehicles will block access to local businesses, create safety issues for people waiting for public transportation (trolley stops are located in the middle of traffic-bearing lanes to which this traffic will be added) and will cut off residents from the City's only Delaware Riverfront Park. Other issues, including crime, the availability of local emergency responders and the proliferation of casino-related nuisance businesses also exist.

The enormity of these issues cannot be overstated. This Board cannot license, and thus compel operation of, facilities which will have such significant adverse impacts on the residents closest to any of the proposed sites without taking measures to ameliorate these effects.

Fishtown is a historic, riverfront community. It is a dense mix of row home residences, retail and services and a handful of remnant warehouses (some now converted to residential uses) and industrial uses. The neighborhood is intimately scaled with few large streets and few buildings over three or four stories in height. It is known as a tightly-knit, family-oriented community. It contains the only Delaware Riverfront park within, or immediately adjacent to, central Philadelphia. The Fishtown Neighbors Association is the recognized civic association for this area.

Act 71 specifically identifies as important factors for the Board's consideration "the location and quality of the proposed facility" including road access and "the degree to which potential adverse effects which might result from the project . . . will be mitigated." Therefore, the residents of Fishtown request that this Board use its licensing power to eliminate or ameliorate these negative impacts to the community by, *at a minimum*, taking the following actions:

- (1) Delaying licensing (or otherwise prohibiting operation) of Pinnacle, Sugarhouse and Riverwalk so that none of these facilities begins operation before the completion of construction of the Girard Avenue off-ramps for northbound and southbound I-95 such that these ramps deliver exiting vehicles directly onto Delaware Avenue.
- (2) Including as a condition of any license granted to Pinnacle, Sugarhouse or Riverwalk, adherence to the terms of a Community Benefits Agreement between the operator and the local community or communities.
- (3) Refrain from casino "clustering," i.e., licensing any two of the above three

referenced facilities. The impact of licensing any two of these three facilities would be absolutely devastating for our neighborhood.

II. Sugarhouse Has Informed the Board that It Will Have No Adverse Impacts On Local Traffic, Residents, etc. and Provides the Board with Totally Inaccurate Information to Support Its Conclusion

The Sugarhouse and Pinnacle proposals may have the most adverse effect for the area adjacent to or in Fishtown because they both to some degree send many thousands of cars a week down small, one-lane neighborhood streets. Sugarhouse's Local Impact Report, however, informs the Board that, with the exception of some increased traffic on a small stretch of North Delaware Avenue it will have "*no adverse impacts*" on the local community at all.²

Review of Sugarhouse's Traffic Report reveals the basis for this incorrect conclusion. In that document, they inaccurately inform the Pennsylvania Gaming Control Board ("the Board") that all traffic approaching the facility from southbound I-95 will move via major thoroughfares directly onto the Sugarhouse site. But, this is incorrect. Rather, Sugarhouse's visitors (and Pinnacle's to a different degree) who use the Girard Avenue exit from southbound I-95 each week will have no choice but to travel for several blocks down Fishtown's only local retail roadway, Girard Avenue, and then turn onto one of Fishtown's small, one-way, one-lane residential streets to reach Delaware Avenue, and thus the proposed site. Implementation of

² "The findings of this Local Impact Report are that, with the exception of increased traffic on North Delaware Avenue, there are no adverse impacts to surrounding properties, residents, schools, community services, transportation, parking, utilities, City services, air quality, cultural and historic resources, tourism, parklands/open space, ecosystems and soil and water quality associated with the development of the site as the Sugarhouse Casino." Sugarhouse Local Impact Report at 2.

Sugarhouse's proposal will not only disrupt Fishtown's sole retail corridor, but overwhelm its residential streets with traffic.

Sugarhouse and Pinnacle's reports both rely on northbound I-95 casino vehicles exiting at the Girard Avenue exit, performing a dangerous maneuver to cross over two lanes of speeding traffic in just one tenth (.1) of a mile. Surprisingly, however, there is no traffic study and no analysis to see if this is even possible, much less safe. Moreover, the pathway proposed by Sugarhouse will move 21,000-31,000 vehicles in front of Penn Treaty Park to get to southbound Delaware Avenue creating a barrier of cars cutting off residents of the City from the only Delaware Riverfront park within, or immediately adjacent to, central Philadelphia.

A. Sugarhouse's Traffic Report Incorrectly Informs The Board that Its Traffic Will Not Impact Local Streets Because that Traffic Will Move Via Major Thoroughfares Directly From Southbound I-95 to the Site

Sugarhouse's Traffic Report incorrectly identifies the main traffic path for gamblers entering their site. It is located 1/2 mile south and 1/2 mile down Delaware Avenue. In order to reach the site, Delaware Avenue without any direct access to the site. Traffic coming southbound on I-95 makes it appear that these vehicles will be able to access the Sugarhouse site using major thoroughfares (so that local impacts will be minimized). The true facts are that traffic coming southbound on I-95 will stream through small residential streets and into the neighborhood of Fishtown, which is the proposed Sugarhouse facility. Exhibit 4.0 of the Traffic Report shows the proposed route of traffic from I-95 to the site, disrupting this quiet Fishtown neighborhood.

In section 4.0 of Sugarhouse's Traffic Report, the Report then claims that vehicles traveling south on I-95 will exit at the Girard Avenue exit, "make a left onto Aramingo Avenue, travel under I-95 and continue straight to Delaware Avenue." Sugarhouse Traffic Report at 2.

B. The Magnitude of the Failure to Include the Correct Traffic Facts Is Revealed by the Numbers – Twenty Five Thousand (25,000) Vehicles Per Week Will Stream Through Local Neighborhood Streets

The incorrect representation regarding the path to be followed by southbound I-95 traffic only becomes truly important if a substantial number of vehicles is expected to arrive from southbound I-95. In this case, the volume is huge: 25,000 per week.

Sugarhouse estimates that during the first phase of operations approximately 18,000 vehicle trips per day or 126,000 vehicle trips per week will be generated. Traffic Report at 8, Table 6. It appears these figures represent the total number of trips, i.e., in and out. Thus, Sugarhouse predicts that approximately 9,000 vehicles will arrive at its site daily, 63,000 weekly. This number is likely to be low given that it is based on the operation of 3,000 slot machines, but does not account for any trips generated by any of the other events or destinations on site. Sugarhouse has said that it intends to have restaurants and other amenities. It has even said that it will have a "Turf Club," a night club and concerts. Sugarhouse Impact Report at 5, 8. Yet, no vehicle trips are assigned for any of these activities. Nor are vehicle trips by employees considered. Pinnacle plans to include other attractions also.

Both Sugarhouse and Pinnacle expect 40 percent of its patrons to be coming from the north on I-95.³ This means that 3,600 cars per day, 25,200 cars per week will invade the quiet streets of

³ Sugarhouse's public presentations, e.g., Gannett Flemming representative speaking at the Adaire School to the Fishtown community on March 30, 2007 and Ian Cope of Cope - Lindner, Sugarhouse's design firm, speaking at the Daily News public casino design forum at the Pennsylvania Convention Center May 24, 2006. In those presentations Sugarhouse has said that 40% of their patrons will come from southbound I-95, 30% will come from I-676, then onto northbound I-95 where they will combine with the 20% of casino-bound traffic already heading north on I-95 and the final 10% will come across the Ben Franklin Bridge.

Fishtown. Twenty five thousand (25,000) cars every week will take the Girard Avenue exit, funnel down Girard Avenue and need to move out to Delaware Avenue either using Frankford Avenue or one of Fishtown's small residential side streets.

C. Sugarhouse Admits that siting of its Facility Will Cause the Intersection of Frankford and Delaware Avenues to Fail. But, It Doesn't then Consider the Result of this Failure: More of the Will Be Vehicles Required to Use the Smaller, Primarily Residential Streets.

Sugarhouse has already identified what will happen when vehicles attempt to access the casino by traveling eastbound on Frankford Avenue. They will cause a traffic failure at the Frankford Avenue / Delaware Avenue intersection.

Sugarhouse proposes to locate one of the entrances to its facility at the intersection of Frankford Avenue and Delaware Avenue and to locate another entrance a short distance further north on Delaware Avenue. Exhibit 3. As a result, traffic coming from Girard Avenue and then east on Frankford would either proceed straight through the Frankford Ave/Delaware Ave intersection into the first facility entrance, or would go left through that intersection and proceed a short distance north on Delaware Avenue to the other facility entrance. But, as Sugarhouse's traffic engineer, Gannett Flemming, points out, once the casino traffic is added to eastbound Frankford Avenue, the intersection at Frankford and Delaware Avenues will fail. Sugarhouse Traffic Report at 10-11 (Frankford Avenue eastbound approach is . . . expected to operated at LOS F during the PM peak hour."); *id.* Table 11 (showing grade "F" for Frankford Avenue eastbound).

One consequence of the failure of the eastbound Frankford Avenue traffic delivery route is

that patrons will seek to take any open route (other than Frankford Avenue) from Girard Avenue to Delaware Avenue. This means traffic will turn onto Berks, Montgomery, Columbia or Shackamaxon Streets. Exhibit 2. These are quiet one-way, one lane, primarily residential streets. Exhibit 4. These are the streets on which Fishtown residents have built their lives. These are the streets in which they have invested their life savings. These are the streets on which their children play. These streets are totally inappropriate for through traffic, bus or truck traffic and for high volumes of traffic.

The only eastbound roadway which is even potentially appropriate to serve as a conduit for casino traffic is Frankford Avenue, which is a two-lane, mixed-use roadway. But, Sugarhouse points out that if this avenue is used it will cause traffic failure, and further concludes that even modifications to this roadway cannot prevent the failure. Sugarhouse Traffic Report at 10-11. Thus, the only path available to casino-bound cars will be through these small neighborhood refuges. Exhibits 2 and 4.

It is important to note that Sugarhouse acknowledges it will cause traffic failure even without taking any of the cars from southbound I-95 into consideration. This is because its traffic study and prediction were made under the non-existent scenario it posits, i.e., that southbound I-95 traffic moves directly to Delaware Avenue and thus is excluded from local streets, including eastbound Frankford Avenue. (Recall that the predicate for Sugarhouse's entire Traffic Report is that southbound I-95 traffic will be entirely excluded from local streets and will instead proceed directly from I-95 onto Delaware Avenue⁴ so that virtually no I-95 traffic will follow a path that includes

⁴ Traffic Report at 2 ("Traveling south on I-95, vehicles exiting at the Girard Avenue Exit, make a left onto Aramingo Avenue, travel under I-95 and continue straight to Delaware Avenue); *id.* at 3 ("[P]atrons coming in from I-95 . . .

taking Frankford Avenue east to Delaware Avenue.) Thus, Sugarhouse acknowledges that it will cause failure of Frankford Avenue *even without accounting for the cars that will come from I-95 southbound.*

D. The True Facts Are that Licensing the Sugarhouse Facility Will Totally Disrupt Local Residential Streets.

The streets which vehicles will have to traverse to access Delaware Avenue, and thus the Sugarhouse Site, are not state highways. They are not major thoroughfares. They are not bustling commercial routes. As shown by the photos attached as Exhibit 4, these are one-way, one-lane, primarily residential streets.

This is an old, urban neighborhood. As a result, the residences sit only a sidewalk-width away from the street. This also means that few residences have off-street parking; people park in front of their house. Yards are small, where they exist at all, so both adults and children use the stoops, sidewalks and streets for socializing and recreation.

Directing 25,000 vehicles down these residential streets will place adults and children who are using their limited outdoor space in harm's way. It will put people's parked vehicles at risk. It will bring noise and tailpipe pollution to within feet of people's front doors and bedroom windows. On Montgomery Avenue, for example, the traffic will flow just 14.5 feet from neighbors' front

utilizing the Girard Avenue interchange . . . are expected to drive down south on Delaware Avenue and are expected to make a left turn into the proposed parking lot on the site.").

to Delaware Avenue, how can traffic get down this failed stretch of roadway? No answer exists because no one has asked the question.

Fourth, what complications are introduced by the fact that Girard Avenue has a pathway dedicated to electric trolleys that run dozens of trips throughout the day in both directions? The co-existence of cars and the trolley is already a difficult one since the trolley often occupies the same lanes as vehicular traffic. But, its path of operation weaves back and forth across Girard Avenue, disrupting vehicle travel paths and often causing confusion for motorists. Numerous accidents involving the trolleys and vehicles have occurred since the reinstatement of the trolley's operation in 2005.

Fifth, Girard Avenue is unique in the amount and nature of pedestrian traffic it receives. Not only do neighborhood children cross this roadway, which passes through the quiet residential streets on each side, to visit friends and relatives who live on the other side of the Avenue, Exhibit 5, but trolley riders are required to cross lanes of traffic and to stand in the middle of the street to wait for and board the trolley, Exhibit 6.

The trolley "islands" along Girard Avenue are located in the center of the street. They consist of a small curb and sidewalk island with a railing which sit in between lanes of moving traffic. Not only must trolley riders cross perpendicular to lines of traffic to access these drop off and pick up points, but they must also wait for the trolley by standing in these islands with traffic moving all around them. Adding the casino traffic around these trolley riders will cause a significant safety risk not only as a sheer function of vehicle numbers available to do a body harm, but also by greatly reducing visibility for and of pedestrians crossing the Avenue and awaiting the trolley.

responsible for the highest rate of accidents in the district. Personal communication, Lou Campione, Captain, City of Philadelphia Police Department, 26th District. (The 26th is the City of Philadelphia Police Precinct that serves the Fishtown area). The configuration of the roadways here makes it particularly susceptible to accidents. Three sources of traffic are funneled into one roadway at or just before an intersection. Exhibit 1. This means that in just less than 2 tenths of a mile, vehicles moving from the I-95 ramp to eastbound Berks must move across two lanes of traffic on Girard Avenue. And, in that same distance, any vehicles moving from Aramingo Avenue to eastbound Berks must cross over *two* other streams of traffic in order to enter the turn only lane. All of this must be done with particular care because of the trolley station which is insinuated between these lanes of traffic. The addition of 25,000 cars per week to this already confused and dangerous block will require very careful consideration and special arrangements. Yet, no one has studied existing conditions, much less considered whether it can be made to bear the additional burden a casino places on it. See Sugarhouse Traffic Report (includes no consideration of traffic on any block of Girard Avenue).

Second, the approximately .7 mile section of Girard Avenue from the location at which southbound I-95 traffic enters that Avenue to the intersection of Girard and Frankford Avenues contains at least 12 cross streets and 9 signalized intersections. No study of whether 25,000 per week can even be moved down this stretch of road has been done.

Third, all of Sugarhouse's 25,000 vehicles must turn left in order to travel to Delaware Avenue. No one has considered whether this enormous number of cars can all be moved through such a left hand turn. Moreover, it has already been stated that eastbound Frankford Avenue will fail. Since Frankford is the only roadway that is even potentially appropriate for moving such traffic

doors. Exhibit 4.⁵ This steady stream of cars will force people back into their homes and destroy the social interaction central to the character of the neighborhood.

It is important to note that elements of the Sugarhouse design have the maximum negative traffic impact upon the local community. – There are two proposed entrances to the Sugarhouse facility, one across from the termination of Frankford Avenue at Delaware Avenue and one across from the termination of Shackamaxon Street at Delaware Avenue. Sugarhouse configured its site so that the Frankford Avenue entrance is smaller, more circuitous and relatively difficult to gain access to the parking garage. Exhibit 3. The entrance located across from the end of Shackamaxon Street, on the other hand, is extremely large, welcoming and provides direct access to the parking garage. In this way Sugarhouse directs visitors away from the commercial corridor, Frankford Avenue, and onto one-lane, primarily residential, Shackamaxon Street.

E. Routing Twenty Five Thousand (25,000) Vehicles Every Week Down Girard Avenue to Frankford Avenue Poses Myriad Unresolvable Traffic Issues

No traffic study has been made to see whether that roadway can accommodate such traffic without totally clogging this vital thoroughfare or causing serious safety issues. First, the very block onto which Sugarhouse proposes to dump 25,000 cars per week from southbound I-95 is already

⁵ While time does not permit a recitation of the negative health effects that will result from the extreme numbers of vehicles that will be using any of these three sites, it is important to note that simply the thousands and thousands of engine starts that will occur at the facilities' parking garages will have an air quality impact that is significant. All the tailpipe pollution associated with the vehicles during their travels to and from the casinos further counsels denial of a license to any operator who cannot keep its vehicles out of our residential streets. The tailpipe emissions aggravate asthma and cause and exacerbate other negative health effects and thus cannot be brought, literally, to our very doorsteps.

F. The Additional Traffic Down Girard Avenue to Frankford Avenue Threatens the Social Fabric of the Neighborhood, Takes Girard Out of Service for Local Residents and Threatens the Viability of Both Girard Avenue as a Commercial Corridor and Frankford Avenue as an Arts Corridor

As noted above, Girard Avenue is the commercial corridor which runs through the middle of Fishtown. It is a transmissible feature between neighbors, relatives and friends on the west side, and those on the east side. In its current condition, the roadway is only moderately busy, it contains many signalized intersections, numerous pedestrian crosswalks and has a police precinct headquarters located along it. These factors make for ease of pedestrian crossing so that Fishtown remains a united neighborhood. The addition of 25,000 cars per week will make navigation from one side of Girard Avenue to the other a difficult and dangerous proposition. It will turn Girard Avenue into an impassible divide cleaving the neighborhood.

Girard Avenue also serves as a conduit for local residents. Fishtown is primarily a residential neighborhood and does not have its own grocery stores, clothing stores, building supply stores and other types of major shopping facilities. As a result, residents must travel either north or south to access these fundamental supply facilities. To the north these amenities lie along Aramingo Avenue, and a primary means Fishtowners use to access Aramingo is via Girard Avenue. A variety of "box-type" stores also exists down Delaware Avenue to the south. Exhibit 1. Girard provides a conduit to Frankford Avenue and thus to Delaware and shopping. Injection of 25,000 along Girard Avenue has the potential to clog this artery important to locals. This will not only make life less convenient for residents, but will cause locals to divert through a series of smaller residential streets to get to necessary shopping thus negatively impacting the quality of life for residents living on those streets.

The use of Girard Avenue as a conduit for casino traffic will also negatively impact local businesses. Girard Avenue is a shopkeeper's environment. It nurtures several locally owned and operated businesses who depend upon customer access to their shops. But, the addition of a steady stream of 25,000 cars per week has the potential to so clog the roadway, that potential patrons of any businesses on that Avenue will be repelled.⁶ Girard Avenue has recently been experiencing a revival of small and local businesses. But this can be expected to wither since local Philadelphia entrepreneurs such as Canvas Coffee, DiPinto's Guitars, Johnny Brenda's restaurant and bar, Copa Soaps, the Spirit newspaper, Sulimay's restaurant and many others, Exhibit 7, will be cut off from their customers – their profits thwarted to favor casino dollars.

In addition, significant amounts of federal and other dollars have been spent recently to improve the very section of Girard Avenue Sugarhouse seeks to clog. Approximately one million more dollars are being spent this year to continue the improvements. A PA Home Town Streets grant that was just awarded. The funding is from Federal TEA-21 money that was awarded by PENNDOT and DVRPC.

Finally, Frankford Avenue has recently been the subject of enormous amounts of time and talent, as well as significant dollars, in an effort to spur its development as an arts corridor. The premise of this concept is to bring art patrons from various parts of the City of Philadelphia, as well as the suburbs, into the neighborhood and specifically onto Frankford Avenue. But, Sugarhouse's

⁶ As discussed above, the extent to which this Avenue will be jammed has not been quantified since Sugarhouse has not studied how, or even if, 25,000 cars can be forced down this 13 block stretch of road. The sheer number suggests that the roadway will delay and back up with motorists sitting in their vehicles spewing exhaust for lengthy periods of time. But, what exactly will result is unknown since not a single study has been done.

traffic report shows that *even if one does not consider the thousands of vehicles from southbound I-95*, the terminous of Frankford Avenue, the gateway to the Frankford Avenue, will suffer traffic failure. Sugarhouse Traffic Report at 10-11. Thus, the Frankford Avenue arts corridor will be cut off from its potential patrons and left to wither. This is even clearer if one considers that the next possible access location for patrons is the intersection of Frankford and Girard Avenues, Exhibit 2, and that this location will be impossibly clogged with the cars from southbound I-95 trying to move through it.

G. Plans to Move Traffic From Northbound I-95 to the Proposed Site Creates an Unsafe Condition and Cuts Off Access to the Only City Park Located On the Delaware River

Sugarhouse's Traffic Report identifies the route northbound I-95 vehicles will have to follow upon exiting at the Girard Avenue exit but fails to identify the problems associated with trying to move thousands of vehicles each week from this exit ramp to the proposed site.

Contrary to its name, the Girard Avenue exit from I-95 northbound does not place traffic onto Girard Avenue. Instead, dumps traffic into an unsignalized location at which several roadways come together. This location is north of the proposed Sugarhouse site. Exhibit 8. Thus, all these vehicles must be turned around and headed south on Delaware Avenue. As even Sugarhouse admits in its Traffic Report, this is not easily accomplished.

The northbound I-95 exit ramp comes down along the left hand side of northbound Delaware Avenue, which at this location is two lanes wide. Immediately north of the merge between the exit ramp and Delaware Avenue, Delaware Avenue forks, with the right hand fork becoming Richmond

Street. Sugarhouse traffic will use the exit ramp to come along the left hand side of Delaware Avenue, move right across two lanes of fast-moving Delaware Avenue traffic and into the right hand fork which becomes Richmond Street. The distance vehicles have to do this is only one tenth (.1) of a mile. Exhibit 8. Residents of the area know that this traffic route from the I-95 exit, across Delaware Avenue and onto Richmond Street is extremely treacherous under current traffic conditions. Many residents and guests of residents use alternate I-95 exits because they are unable to safely negotiate this obstacle course. Sugarhouse, however, expects 21,000 to 31,500 casino-bound vehicles to do this each week.⁷ To believe that thousands of drivers unfamiliar with the area can perform this stunt-driver-like maneuver in only one tenth (.1) of mile is simply incredible.⁸

Absent from the studies any evaluation to determine whether cars can be moved from the northbound I-95 exit ramp across two lanes of traffic onto Richmond Avenue; or any analysis of whether this traffic can be moved from Beach Street, through Columbia and out onto Delaware Avenue

⁷ According to Sugarhouse, 20% of its patrons will come up I-95 from points below its intersection with I-676. Thirty percent will come east on I-676, then onto I-95 north. Thus a total of 50% of all vehicles seeking to access the site will do so from I-95 northbound. Sugarhouse has stated that it expects 126,000 vehicle trips per week, Traffic Report at 8; Table 6, which translates to 63,000 inbound vehicles. Fifty percent of these, or 31,500 vehicles per week will arrive at the site from northbound I-95.

⁸ Even Sugarhouse calls this circuitous route a "non-standard configuration" and recognizes that casino-goers will try to find alternate routes. It should be noted, however, that I-676 terminates at I-95 immediately south of the Girard Avenue exit. Thus, there is no opportunity for those vehicles to take any exit further south. According to Sugarhouse these vehicles will account for 30% of their inbound traffic, or 21,000 vehicles per week. Thus, Sugarhouse's own information shows there will be between 21,000 and 31,500 vehicles attempting to negotiate this dangerous route. But, Sugarhouse has done no analysis to determine whether this is even possible.

Assuming the Sugarhouse vehicles could travel from the northbound I-95 off ramp to Richmond Street, to access the facility they would then have to turn right onto Beach Street, follow this small backstreet until it passes in front of a portion of Penn Treaty Park, turn right onto a short piece of Columbia Street, turn left onto Delaware Avenue and then proceed south to the proposed site. Not only is this a very circuitous route involving small roads, but it will stream 21,000 to 31,500 casino-bound vehicles per week past Penn Treaty Park will severely impact this park and the neighborhood's use of it.

Penn Treaty Park lies along the Delaware River on the east side of Delaware Avenue. It is a local jewel which members of Fishtown Neighbors Association spend significant time and effort tending. It is the only sizeable park located in Fishtown. It contains greenspace, a walking/bicycling path, swingsets and picnic tables. It is perched right along the river's edge and has beautiful views in which the green of the trees and grass contrast with the blue of the river. It is featured on guided tours of Philadelphia. Importantly, it is the only Delaware Riverfront park within, or immediately adjacent to, central Philadelphia.

Sugarhouse's Traffic Report does not discuss Penn Treaty Park at all. In fact, in describing the pathway vehicles will follow from the northbound I-95 off ramp to the site, it describes the various streets, but omits any mention of the park. Traffic Report at 2. The traffic will disrupt residents' quiet enjoyment of the largest greenspace in the area. Moreover, the remainder of the vehicles' travel path in this area interposes them between the park and the neighborhood. Exhibit 8. This will create a barrier for residents, often with young children in tow, and many children unaccompanied by adults who currently walk to the park. This truly important park will be cut off from the neighborhood and the City.

H. Casino Traffic Will Also have a Negative Impacts On Delaware Avenue That the Local Impact Reports Failed to Identify

The only locations at which Sugarhouse performed any traffic study were along Delaware Avenue, i.e., at the intersections of Delaware Avenue with Penn Street, Frankford Avenue and Shackamaxon Street, and it considered only a narrow range of scenarios. This narrow approach failed to recognize numerous problems intrinsic to siting a casino on North Delaware Avenue. Even as early as its first building phase, a casino will add several hundred cars per hour (during peak hours) to the already voluminous traffic on North Delaware Avenue. Sugarhouse Traffic Report, Appendix A, AM/PM Peak Hour Volumes, Build Phase I - 2009. This will impact both local drivers' ability to use Delaware Avenue and pedestrians' ability to traverse Delaware Avenue. This last is particularly important because Penn Treaty Park lies along this stretch of Delaware Avenue and, as discussed above, is significant importance both to the neighborhood and to the City. The addition of hundreds of new vehicles to the current roadway impediment will make it very difficult for residents to have full access to their park.

One very significant flaw in the Impact Reports was its unrealistic growth factor. North Delaware Avenue is likely the fastest developing section in all of Philadelphia. In the past year the City of Philadelphia has approved for development approximately 4,000 new residential units within one mile of the proposed Sugarhouse facility. Exhibit 9. (See attached map) Even if one were to assume that each of these units will result in only one additional car, this amounts to 4,000 additional cars on North Delaware Avenue. Sugarhouse's Traffic Impact Report accounted only for 780 units. Traffic Report at 8. Even if one were to assume that not all of the above identified units will

eventually be constructed, *at a minimum*, at least those units for which construction activity is already occurring should be considered (Marina View Towers consisting of 200 units, Waterfront Square consisting of 966 units and the Trump Tower consisting of more than 250 units) as well as some percentage of the City approved units. This has not been done.

Also misleading is the implication that a casino facility is needed to spur local development. – Quite the opposite is true. Currently, development is occurring so quickly along this stretch of the Delaware that Fishtown Neighbors Association and others have called for a moratorium on large projects to allow for development to occur in concert with better planning. June 2, 2006 letter from FNA Executive Board (signed by H. Shallcross, President) to Councilman F. DiCicco and Councilman D. Clarke.

Conclusion

Sugarhouse's failure to accurately identify the tens of thousands of vehicles it will contribute each week to both roadways that currently serve as Fishtown's commercial center and to Fishtown's quiet residential streets results in an extremely misleading picture⁹ of the impact their operation will have on the residents of Fishtown.

III. Road Access for the Proposed Pinnacle Site Is Also Extremely Problematic

The Pinnacle Local Impact Report for Philadelphia Gaming Proposal ("Pinnacle Report") is notable more for what it omits than what it addresses. No meaningful community comment or critique of it is possible due to its superficial treatment of community impact. Nevertheless, two

⁹ Sugarhouse touts its location as providing "superior accessibility" and states that "Existing access routes and capacity from I-95 to the site is more than adequate to serve the contemplated development." *Local Impact Report* at 6.

areas of this proposed casino stand out as particularly problematic. These are 1) the traffic,¹⁰ which the report addresses and 2) the impact of increased crime on the community—which is not addressed at all.

The City of Philadelphia Gaming Advisory Taskforce (“PGATF”) anticipates that casinos will attract up to 6.5 million visitors per year, per casino to Philadelphia. Of those 6.5 million, most are expected to come to and leave the Pinnacle site by car. PGATF Executive Summary at 11. I-95 will be the primary route taken by these visitors. The I-95 off ramps at Girard, however, are not currently designed to convey all of this traffic to the Pinnacle site effectively. Consequently, cars getting from I-95 to the Pinnacle site would add unmanageable volume to an area that is not even functional at pre-casino volume. In addition, Pinnacle makes no mention of, nor takes into account that traffic will also be greatly increased by the more than 4,500 residential units that are in the development pipeline for N. Delaware Avenue.

A. Current Conditions—North Delaware Avenue, north of Berks

The PGATF describes the intersection at N. Delaware Avenue just north of Berks Street as failing. The city’s determination is based on how well the intersection serves the traffic flow or the “Level of Service” (“LOS”). Based on existing traffic volume, 2,170 cars per hour (1,841 northbound) the city’s LOS grade for Delaware Avenue north of Berks is an “E” to “F” for weekday 4:00 PM-6:00 PM peak commuter traffic. See PGATF at 166, 168. A grade of E represents an “unstable flow at or near capacity levels with poor levels of comfort and convenience.” A grade of F represents “a condition of capacity breakdown represented by heavy

¹⁰ Unless otherwise noted, this analysis uses traffic data provided by Pinnacle. See Pinnacle Report at 14.

delay and congestion.” *Id.* at 140. Thus, this key roadway has failed to serve the current weekday evening peak commuter traffic. It is through this already failing passage that Pinnacle is proposing sending over 80% of its gaming traffic.

The City’s LOS grade for Saturday peak hours is a “C.” *Id.* at 168. A grade of C represents “stable traffic flow that is becoming susceptible of congestion with general levels of convenience declining noticeably.” *Id.* 140 This passageway does not optimally serve the weekend peak traffic.

While the development of a new I-95 Girard Avenue interchange will likely improve the LOS on North Delaware Ave, the introduction of casino traffic prior to the completion of that project will clearly exacerbate traffic conditions that are currently failing during the most heavily used period — the weekday peak commuter rush. To avoid the daily and huge backups on I-95 North from the Ben Franklin Bridge to north of Girard Ave, many commuters currently use Delaware Ave to a point just past Berks where there is an on ramp to North I-95. Any additional traffic will severely impact the residential neighborhoods of Port Richmond and Fishtown which are adjacent to the Pinnacle site. Cars will be forced to find alternate routes to I-95 N and the Pinnacle facility. One likely route will be east on Girard Ave, Fishtown’s only commercial corridor. The increased volume projected by Pinnacle will likely cause gridlock during peak commuter hours if current conditions are not changed. Saturday evening peak hours will likely not be much better especially given that Saturday evenings represent the casino’s busiest traffic hours.

B. Additional Casino Traffic

1. *I-95 Southbound Casino Traffic*

Pinnacle projects the volume of casino bound traffic exiting South I-95 at Girard Avenue to be 372 cars per hour during the weekday evening casino rush which lasts from 4 PM – 6 PM, the same hours as our peak commuter traffic. *Id.* at 168 These casino-bound cars would exit I-95 onto Girard Avenue where and make a left onto Berks Street at the signalized intersection of Berks and Girard where there is a 20 second green left turn arrow. *This traffic exiting off South I-95 will have the same negative impacts on two blocks of Girard Ave that Sugarhouse traffic would have on its entire length to Frankford Ave. See p. 11-13 of this report.* In addition, Pinnacle estimates another 20 cars per hour will turn right off of eastbound Girard Avenue onto Berks Street. They would all proceed to Berks and Delaware Avenue where Pinnacle is proposing to remove the median strip separating north bound and south bound Delaware Avenue traffic. This would allow eastbound Berks traffic to make a left onto northbound Delaware Avenue to access Pinnacle via the one lane feeder to Richmond Street.¹¹ This occurs where Delaware branches into Richmond St. and Aramingo Ave.

2. *Berks Street Traffic*

It is also here that the Berks Street casino traffic from I-95 S would have to merge with the casino traffic exiting off I-95 N which spills onto Delaware Ave. a couple of hundred feet before the one lane feeder to Richmond Street. In addition, the casino traffic, 65 cars per hour, coming up Delaware Avenue would also be forced to merge with casino traffic from both

¹¹ This portion of Richmond Street is currently one traffic lane plus a bike lane and a parking lane).

directions of I-95, and it is here where all of these cars plus an unspecified number of the 1,841 commuter cars per hour would all have to fit through one lane. In addition, all of the cars exiting North I-95 at Girard would have to traverse two lanes of peak Delaware Avenue traffic to get to the Richmond Street cattle chute.

The Berks and Delaware intersection is currently served by a stop sign and eastbound Berks Street traffic can only make a right turn onto southbound Delaware Avenue. Presumably, Pinnacle is proposing a traffic light at Berks and Delaware to allow eastbound Berks to traverse both north and southbound Delaware Avenue traffic as well as traffic exiting northbound I-95 at Girard Avenue. This light will quite literally make the two streams of I-95 casino traffic be at cross purposes to one another. At any given time one of these streams will be stopped by a light. How far will the back ups go? Neither Pinnacle nor the city have said. With the extant E and F LOS's just north of this intersection, another light could wreak havoc, and, in addition to other problems, cause considerable backups on I-95 in both directions especially during peak commuter hours.

3. *I-95 Northbound Casino Traffic—Delaware Avenue Northbound*

North bound casino traffic will exit I-95 onto Delaware Avenue. Similar to the south bound I-95 traffic, Pinnacle projects the northbound traffic flow to be 372 additional cars per hour exiting I-95 North during a weekday peak evening. The cars exiting North I-95 would be regulated by the same traffic light that controls traffic turning left onto Delaware at Berks. The traffic on the stretch of North I-95 from East I-676 to the Girard Ave. exit is already among the worst in the region; additional casino traffic and the proposed light at Berks Street and Delaware could make delays and traffic jams monumental. The city's traffic numbers and Pinnacle's

numbers do not agree in most cases. The PGATF states that casino traffic volume on North I-95 would be more than three times the volume on I-95 South, PGATF Report at 169. If this is the case, clearly the conditions would be significantly worse on I-95 North and significantly better on I-95 South than Pinnacle's numbers would suggest.

4. *Berks Street*

A significant percent of the casino traffic described above will converge where Berks Street meets Delaware Ave.. Berks Street is a historically significant one lane residential street. Several families with children live on this street and a significant number more families with children live just blocks of this street. The city does not permit trucks or buses to use Berks Street. The reason for this restriction is sound; it is a residential street that was not designed to nor should it bear the commercial traffic which Pinnacle will bring. According to Pinnacle, sound city planning will most likely give way to allow for 24 hour delivery of goods and people. Pinnacle has not, however, put forth any plan for getting delivery trucks and buses to its facility.

It should be noted that Pinnacle is now proposing to perform a comprehensive traffic study that will also include proposals for mitigation of impacts to local streets. This is a positive development (particularly since neither of the other two facilities have proposed any such study). However, this report is not expected to be complete for approximately four months.

C. *Conclusion*

While the traffic issues associated with operation of the proposed Pinnacle facility would not be nearly as severe as those associated with Sugarhouse (Pinnacle will not clog Girard Avenue or cause failure of Frankford Avenue or utilize as many one-way, one-lane residential streets), they are very significant. This assumes that Berks Street and the intersections of Berks

and Girard and Berks and Delaware can actually handle the proposed volume of traffic. In the likely event that they fail the traffic will spread out to the other local streets, possibly as far as Frankford Ave. Pinnacle will still bring tens of thousands of vehicles to our neighborhood each week and, in its current form, its proposal will cause traffic to converge on Delaware Avenue in the area of the northbound I-95 off ramp in such a way as to make a complete snarl inevitable.

IV. The Proposed Riverwalk Facility Will Cause Significant Traffic Problems as Well

The proposed Riverwalk facility is not located within the boundaries of Fishtown proper, but the traffic it will generate will adversely effect our neighborhood both because it will crowd the arteries that Fishtowners currently use to get from their neighborhood to the other sections of the City and because, while Riverwalk's Report does not quantify it, some amount of traffic seeking to access the Riverwalk facility will drive through our neighborhood.

Riverwalk's Report describes the pathway it expects southbound I-95 casino-goers to follow to access its site. I provides for traffic to use the Callowhill exit. But, a patron who does not wish to participate in the bovine-like procession of vehicles accessing the site during busy hours will take an equally easy, and in fact more direct, route. This is to use the Girard Avenue exit from southbound I-95 and then take any eastbound street out to Delaware Avenue (upon which Riverwalk is sited).The detailed discussion relating to southbound I-95 traffic and the Sugarhouse site applies equally here and will not be repeated in detail. Suffice it to say that licensing of Riverwalk also has the potential to cause some number of vehicles to traverse our , one-lane, one-way residential streets disrupting the quite Fishtown way of life.

Also significant for residents of Fishtown are the paths which vehicles exiting Riverwalk will have to take to access I-95 southbound. The most accessible entrance is from Delaware Avenue. But this is 2.6 miles south of the site and involves stops at 13 signalized intersections. There is a southbound I-95 entrance ramp located on Front Street, but access to that on-ramp requires traffic to travel over smaller, local roadways. If vehicles were to use the Aramingo on ramp, they would have to travel north on Delaware Avenue and eventually to the on ramp. All of these routes add voluminous amounts of traffic to local roadways that are used by Fishtown residents either within their community or as their access to other parts of the City.

V. Siting of a Casino Within Our Community Will Increase Crime and the Burden of this Increase Should Not Be Born by the Residents of Fishtown

There can be no doubt but that flooding Fishtown with 6.5 million casino-goers per site will cause the incidence of crime to increase dramatically. Neither the Pinnacle nor the Sugarhouse reports even discuss the issue of crime. Riverwalk's report, while admittedly not predicting a crime wave, notes that "petty crimes" such as purse snatchings at the casino will occur. It also, logically, predicts there to be an increase in crime that is at least proportional to the increase in population that Fishtown and the surrounding area will experience as a result of casino patrons. Riverwalk Report at 29-30 (referencing analysis of impact of casinos in Massachusetts.")

Neither Act 71 nor the City of Philadelphia has adequately anticipated the impact of casino-related crime on our neighborhood should a casino be licensed in Fishtown. Act 71 contemplates some casino-related crime impact, however, the criminal provisions included in the

Act are designed primarily to maximize state revenue by focusing on various mechanisms of tracking and calculating gaming activity. For example, Section 1518 of the Act makes it unlawful to fail to truthfully report, account for and pay over, or evade or defeat any license fee, tax or assessment. See § 1518 (A)(1)(2). While the Act provides for local law enforcement grants, these are earmarked to “enforce and prevent the unlawful operation of slot machines in the Commonwealth.” See § 1408(c).

Simply put, Act 71 does not address the impact of the increase in crime rates on the communities in which the casinos will be located.

The final report of the City of Philadelphia’s Gaming Advisory Taskforce (“PGATF”) acknowledges that “crime at the neighborhood level where the casino is located could be affected” but concludes that major crimes are not expected to increase on a city-wide basis. PGATF at 310-12.

The PGATF, however, underestimates the impact of crime as a result of casinos. The City examined the crime rates of only four cities and did not adequately take into account numerous variables affecting quantification of crime rates. The most significant variable underestimated by the PGATF is the fact that the overall national crime rate is declining for counties with or without casinos. The PGATF made only a superficial distinction between the overall national trend and the specific impact of casinos. Moreover, of the four cities reviewed by PGATF only two cities- New Orleans and Detroit- had gaming. One of these, New Orleans, located its casinos in a “suburban community” and in an area “remote from the core urban area.” Each of the three riverfront sites locations discussed in this document (which are either adjacent

or proximate to residential neighborhoods) is not comparable to the casinos described in the PGATF. Nor is the PGATF's methodology of comparison sound.

The PGATF concludes that there is "no evidence to suggest that violent crime rates are affected by the presence of casinos. PGATF at 310. This statement ignores compelling evidence to the contrary."¹²

A study published in *The Review of Economics and Statistics*, by the President and Fellows of Harvard College and the Massachusetts Institute of Technology, authored by Earl L. Grinols and David B. Mustard sets forth a more comprehensive and appropriate method of studying the impact of crime on casino communities. See *Casinos, Crime and Community Costs*, hereinafter the "CCC Study," attached hereto as Exhibit 10.

This study is the most comprehensive study undertaken on the subject and is more exhaustive than the one used by PGATF in that it analyzed *all* 3,165 counties in the United States from 1977 to 1996, controlling for over 50 variables. Accounting for the national trend of declining crime rates, Professors Grinols and Mustard measured the magnitude of the decrease between casino and non-casino counties and found that crime dropped twelve percentage points more in counties without casinos than in casino counties. The study's overall conclusion is instructive: crime increases over time in casino counties and that casinos do not just shift crime from neighboring regions, but create crime. CCC Study at 29 (emphasis added).

¹² The study the PGATF cites on page 311 in support of its conclusion, the National Opinion Research Center Gambling Impact & Behavior Study, ("NORC") reviewed only 100 communities and incorporated findings within a 50 mile radius of a given community. These parameters serve to dilute the findings particularly when compared to the impact on a densely populated, geographically compact area such as Fishtown.

The CCC Study found that “by the fifth year after introduction [of casinos] robbery, aggravated assaults, auto thefts, burglary, larceny, rape and murder were 136%, 91%, 78%, 50%, 38%, 21%, and 12% higher respectively.” *Id.* at 30. Importantly, the FBI Conference on Casino Gambling includes testimony from law enforcement officials that prostitution increased dramatically after casinos opened. *Id.* at 33. In fact, Pinnacle itself is familiar with this issue—the Indiana Gaming Commission fined it \$2.26 million for supplying prostitutes and gambling money to attendees of a golf outing. *Id.*

These findings should not be ignored. Even the PGATF notes that incidents of crime will increase in proportion to the increased number of people in the area. See PGATF at 307. That increase is estimated to be up to 6.5 million additional people per casino annually. The residents of Fishtown will bear the greatest victimization of a Pinnacle license for the very simple reason that they are right there. This effect would be similar for any of the casino site proposals. The city itself acknowledges that the largest burden will fall on the area surrounding the casinos. See PAGTF at 283. The residential neighborhoods certainly cannot bear this burden.

The casinos should bear the entire increase in public safety costs occasioned by their presence. Any casino allowed to operate within the city must be compelled to contribute funds specifically earmarked to address the increased public safety costs attributable to the casinos. Act 71 does not provide for any assistance to local law enforcement beyond to ensure that no unlicensed slot machines operate. The city gives an inadequate estimate of the crime-related impact of \$20 MM *per casino* annually. See PGATF at 289 (emphasis added). This figure is inadequate especially given the premise adopted by the City, that major crimes are not expected to increase. That premise is demonstrably inaccurate.

More information must be collected on precisely what this increase in costs will be. The casinos or the state then must contribute that cost to our City.

VI. Traffic and School Children in Fishtown

The 2000 Census figures identify 15,100 children between the ages of 5 and 17 lived in the Fishtown zip code of 19125 as of that date. These school children will share this zip code with the Pinnacle and Sugarhouse casinos if those operators are granted a gaming license. In fact, the majority of these children go to school *within walking* distance of the Pinnacle and Sugarhouse proposed sites. There are four elementary and middle schools in the 19125 zip code that will be affected by the casino-generated traffic. These include 1) 500 children at the Alexander Adair School, an elementary school located at 1300 E. Palmer (Thompson & Palmer Streets) enrolled for the 2006 school year; 2) 434 children at the Horatio B. Hackett School, an elementary school at 2161 E. York Street; 3) 260 children at the St. Laurentius elementary school located at 1612 E. Berks Street from kindergarten through eighth grade enrolled for the 2006 school year and 4) 720 children at the Penn Treaty Middle School located at East Thompson and Montgomery Streets.

Two of these schools, Penn Treaty and St. Laurentius let children out of school *directly onto Berks Street, the street that Pinnacle intends to use as the gateway to its site.* While casino traffic is least heavy during the morning when school children are walking to school, they will cross paths with casino traffic as it gears up in the afternoon. For example, school for St. Laurentius lets out at 2:30 pm. Any children participating in school sports or other after school programs will be traversing our Fishtown neighborhood streets just as the afternoon casino rush

hour gears up. This means that hundreds of children will be walking on the same street that Pinnacle intends to route thousands of cars to get to its casino. School children just like casino-goers do not stick to the path prescribed by the traffic engineers in their ivory towers. They choose the path of least resistance. Berks Street will not be the only street therefore in which the casino-bound cars will find themselves confronted with hundreds of schoolchildren.

VII. The Three Proposals as Presented Do Not Make the Most of Philadelphia's Now Revitalizing Riverfront , Nor do They Fit Well Within the Family-Oriented Context of Fishtown

A. Fishtown Context

One of the more historic neighborhoods in Philadelphia, Fishtown is a dense mix of rowhome residences, neighborhood retail and services, and a handful of remnant warehouse and industrial uses that once provided the neighborhood with its job base. Although dense, the neighborhood is intimately scaled, with few large streets or buildings over 3-4 stories. Approximately 12,000 people call Fishtown home, and it is known as a tightly-knit family-oriented community.

Fishtown has always been tied to its waterfront, as evidenced by its name. It has historical significance not only for the city of Philadelphia, but Pennsylvania as a Commonwealth and the early history of the United States. Fishtown has evidence of Native American presence, then was the site of the earliest European settlement on the Delaware River in the 17th century. It is said to be the location where William Penn signed a treaty with the local natives in 1682. In the 18th

century, Fishtown was the center of fishing for the entire Delaware River, then became a major shipbuilding hub. Shipbuilding continued into the 19th century with the Cramp Shipyard, which produced the area's only clipper ships, then successfully made the transition to iron-clad shipbuilding. The industrial revolution brought several industries to Fishtown including foundries, machine works, glass-making, and carriage works.

Today, Fishtown contains one of the only parks along the Delaware River, Penn Treaty Park, which has celebrated William Penn's Treaty with the local natives since the 18th century. Furthermore, it is the only neighborhood in the city with urban fabric on both sides of Interstate 95: it is inaccurate to categorize the interstate as a "buffer." When I-95 was constructed in the 1970s, thousands of buildings were demolished due to eminent domain. This demolition fractured the physical fabric of the neighborhood; however, the highway is less of a psychological barrier here than anywhere else – almost every north-south street penetrates under the raised highway, and there is pedestrian access to Penn Treaty Park across Delaware Ave. at Columbia Ave. Exhibit 11.

The 2 casino sites closest to Fishtown will thus become a major focal point for the neighborhood's waterfront, whether positive or negative. The Design Advocacy Group (DAG) of Philadelphia has been involved in the process of locating casinos in Philadelphia since 2004. DAG released a set of siting and design guidelines for casinos in Philadelphia that were used to evaluate the three proposed sites in Fishtown, and the results are described below.

B. Location and Land Use Impact

Should one or two casinos be located in Fishtown, there will be major negative impacts to the type and quality of land uses along the waterfront and the streets used to get to the casino sites.

Pinnacle Site – Of the three north-riverfront sites, this site would have the least negative impact to local land uses. The site itself is a large and empty industrial tract, and it is surrounded by similar industrial uses – a municipal power plant and tank farm lies to the south, warehouses and unused industrial land to the north, and a few auto repair facilities lie along Delaware Ave nearby. A knot of access ramps to and from I-95 and Aramingo Ave. buffer the site from the residential areas, but they are still within a block or two inland. There is currently a proposal to reuse a vacant factory building for loft condominiums across Delaware Ave from the casino site, but this same building is scheduled for demolition should the I-95 interchange be rebuilt as planned. Exhibit 12.

If the I-95 ramp interchange is rebuilt, the Pinnacle site would be accessed almost directly from the highway and the chance for traffic to detrimentally affect land use would be minimized. Until then however, much of the traffic to the site will be forced to use local roads – Berks St. in particular, and as that street isn't large enough to accommodate that level of traffic, other local streets will be adversely affected. This will be detrimental to the residents of Berks Street and put pressure on the neighborhood commercial uses near Berks and Girard to become more thru-traffic-oriented and less neighborhood- and pedestrian- oriented. Exhibit 13.

Sugarhouse Site – This site would have a more detrimental effect on the local land use pattern. The casino is sited across Delaware Avenue from a dense residential neighborhood of

historic rowhouses, small scale warehouses, and an historic church that have all seen new investment by property owners looking to capitalize on the proximity to the river. Until the I-95 interchange is built, much of the traffic to the casino will naturally route itself through this area. Given this and the known negative effects of casinos on nearby residential property values, it is feasible to say this historic and unique neighborhood will experience terrible disinvestment and decay significantly. Exhibit 14.

The formerly industrial land uses along the river to the north and south of the Sugarhouse site are also undergoing significant investment also – Waterfront Square, a five-tower condominium development is under construction to the south, and proposals for two 38-story condo towers and a 10-15-story condo building is proposed to the north of the site. 60-70 townhouses are also proposed to replace warehouses across Delaware Avenue from the site. These developments will add a tremendous traffic impact to the local road network, and none were taken into account in any casinos' impact statement. Should Sugarhouse be selected, it is not unreasonable to suggest that several of these proposals may not be built, opportunity missed, and the land might remain underutilized. There does seem to be a lot of enthusiasm among developers to bring forth proposals for projects on all the surrounding parcels despite the potential for Sugarhouse's selection however.

The Sugarhouse site will also affect land use deeper within the neighborhood. Because it is far from the highway exit, traffic coming from the north along I-95 (40% of customers says the casino's impact report) will have to travel for 9 blocks along Girard Avenue, before turning left and traveling along heavily residential streets – most easily Shackamaxon Street and Frankford Avenue. This will not only lead to residential disinvestment along these streets (where much

new investment is occurring now) but also encourage auto-oriented uses along Girard Avenue. It would be a terrible impact to this neighborhood-oriented, walkable commercial street that has been undergoing revitalization for several years now. Exhibit 15. This effect also pertains to the Pinnacle site if the new 1-95 ramps are delayed to any great extent. Their traffic proposals suffer from almost all of the defects of the SugarHouse proposal without those ramps.

Of the five sites in Philadelphia, the Sugarhouse site would appear to have the most negative effect on local land uses, both directly and through traffic impacts.

Riverwalk Site – This site would also have a negative affect on local land use patterns. The site sits amongst several condominium projects either under construction (Waterfront Square's 5 towers to the north) or proposed (Trump Tower, Bridgeman's View, 101 Sky and others to the north and west). Additionally, the much-anticipated World Trade Center is proposed to bring several condo and office towers across Delaware Avenue. Exhibit 16. These projects will bring a large increase in traffic and a large-scale casino in their midst will likely create chaos. It is possible that some of these projects will not happen if the Riverwalk or Sugarhouse sites are selected, although they seem to have considerable momentum. Instead, land owners might feel pressure to cater to the auto-oriented casino users and uses such as gas stations, convenience stores, and strip retail centers could dominate the valuable waterfront.

C. Program

The three potential casinos near Fishtown have widely varying programs of activity – this will impact the neighborhood by determining the numbers and kinds of visitors that come to Fishtown, as well as what amenities will be available for local residents.

Pinnacle Program – Pinnacle plans an appropriate mix of activities for an urban entertainment center – it is too bad it is not proposed in a more accessible and central location like Penn's Landing. The centerpiece of the development would be a shallow pool used for outdoor entertainment in the summer and ice-skating in the winter. A multi-screen cinema would be a welcome addition to the neighborhood, and create a more family-friendly destination. The mix of retail, dining, and entertainment uses, as well as a marina and a spa envisioned by the project are nicely kept separate from the casino, so that non-gamblers would be drawn to the site. If everything is actually built as envisioned, the project could successfully bring a diverse mix of users to Fishtown – not just gamblers – which could add to the local economy off-site. Moreover, this mix will help diversify the project's economic base, should slot gambling not prove as popular as anticipated. Future phases suggest a hotel or condo towers, further diversifying the types of people who might use the site, and encouraging the redevelopment of nearby riverfront parcels if successful. Of course these additional features contribute to the level of vehicle traffic that must be accommodated.

However, to operate most successfully and tie-in with the local neighborhood, Pinnacle should try to incorporate local businesses in its retail and dining mix, and should partner with the neighborhood to help create a special services district that will improve the nearby quality of life and perception of Fishtown as a whole. Exhibit 17.

Sugarhouse Program – Sugarhouse envisions its casino to be a traditional casino complex, making no attempt to do anything unique or urban. It is a casino box, with supporting activities such as buffets, a food court, and a ballroom accessible only from the casino floor. The public space is minimal and only accessible thru the casino floor or from behind the massive

parking structure needed to fit all the traffic onto such a small site. Using this access next to the parking garage, river views and riverfront dining is possible without entering the casino. The program mix is identical to anything found in most of the casinos in Atlantic City. Knowing that national trends see slots decreasing in popularity, this program mix may be economically questionable. Sugarhouse will thus not contribute a great deal of vitality or uniqueness to Philadelphia or Fishtown and its design contributes very little of a positive nature. Exhibit 18.

Riverwalk Program – the Riverwalk proposal is also a banal casino complex that could be built anywhere, with nothing to draw anyone besides the slots enthusiast. A food court, minimal retail, and a Planet Hollywood restaurant are the only amenities, and ensure a minimal amount of local business opportunities. The riverfront open space is not public since it can only be accessed through the casino. The most unique element is a Planet Hollywood TV studio (whose function is not fully understood) deep within the complex. Like Sugarhouse, it contributes nothing unique to the city. Exhibit 19.

D. Site Design and Thematic Impact

The three casinos proposed for the riverfront near Fishtown vary widely in their site design and thematic flavors. The site design will impact the casino's immediate neighborhood by determining how traffic moves to and within the site, and how well the proposed buildings "fit" into the surrounding urban area. The design themes employed by the casinos will either contribute to or denigrate the historic local character of these neighborhoods.

Pinnacle Design – the Pinnacle casino envisions a large mixed-use and mixed-user entertainment complex that centers on an as-drawn attractive public space that if built as

designed would be a positive addition to the waterfront. The site is large enough to handle the program of activities and nearby uses such as the former power plant's tank farm and also allow for back end uses such as parking garages to be tucked against non-residential parcels. The layout of the project separates the casino floor from the other amenities, which creates a more urban setting and allows a more diverse set of users to enjoy the place. The design drawings show attractive modern buildings, but the reliance on gimmicky items like an "icon tower" or "water feature" is worrisome should development costs run high – these things will be cut first. While the riverside of the street was detailed in attractive watercolors, no drawings exist for the neighborhood side of the project so it is impossible to discern the visual impact to Delaware Avenue or the vista from Fishtown. However, the site plan shows parking lots spread on the block between Beach Street and Delaware Avenue – this is unfortunate in that it will add to the highway-feel of Delaware Avenue in this location and make the Pinnacle project more isolated from its locality. Exhibit 20.

Sugarhouse Design – the Sugarhouse site is small and to fit the size casino required by Harrisburg and its requisite parking means stacking. The first-phase parking garage becomes enormous (eight stories) and is poorly sited – it simultaneously faces the river, Delaware Avenue, and its neighboring parcel to the north which is currently proposed for a condominium development. The historic view from Penn Treaty Park towards downtown will be destroyed by the side of this over-sized garage, but the proposed neighboring condominium tower, if built would have the same impact. Additionally, the main entrance to the garage is at the intersection of Delaware Avenue and Shackamaxon Street, a small one-way residential street. The garage

would be better sited with its entrance on Frankford Ave., a larger, two-way, less residential street on the southern end of the property.

The second phase garage is not as large but its rear unfortunately looms over Delaware Avenue while the main development is set far back. As mentioned earlier, the non-gambling amenities are few and only accessed through the casino. The “public space” the project talks about mostly includes traffic islands amongst the spaghetti loops of entrances and exists to the site. A 20 ft boardwalk fronts the river but can be accessed by the public only from behind the parking garages, an unwelcoming and dangerous proposition.

The design theme is a gaudy neo-50s modernism that speaks more to Florida or the Jersey Shore than the urban setting of Philadelphia and the tight-knit waterfront neighborhoods nearby. The project has a suburban feel stylistically, and the generous setbacks of the main buildings from Delaware Avenue and complicated driveways that front the city side contribute to this effect. The impact of the design is doubly unfortunate given the historic and densely urban rowhouse neighborhood that faces it directly across Delaware Avenue.

Riverwalk Design – the first thing that must be said about the Riverwalk design is that the tiny number of renderings that are available are amateurish in quality and give almost no idea of what the project might look like. There is only one rendering that has been “finished” in any sense of the word, and that is the view from Delaware Ave. It shows a structure identical to any corporate “big box” architecture – think Home Depot or WalMart – covered with large advertising panels along the façade. Stylistically this is a real detriment to a city with such rich architectural traditions as Philadelphia. In terms of site design, the tiny site is overburdened with everything it must accomplish, and the few drawings available never adequately explain how the

anticipated number of cars and buses might actually be accommodated. Over a third of the site is a parking garage, which wastes valuable river frontage on two sides and looms over Delaware Avenue on a third. The few non-gambling amenities are tucked deep inside the casino, and the tiny open space fronting the river is accessible only from the casino or from behind the garage, an unattractive and intimidating experience at best.

On the whole, this design, or what can be discerned from the less-than-modest effort the developers have undertaken, will contribute little to the city. Instead, this box-that-could-be-anywhere is a disappointment in this critical area along the central waterfront. Exhibit 21.

E. Historic Impacts

Fishtown is an extremely historic neighborhood in Philadelphia; however, it has been largely overlooked by the city's overworked Historical Commission. There are no national or local historic districts in the neighborhood, and only approximately 35 buildings or sites listed individually on the local register. Most of these listings were designated in the 1960s, and the area has not been re-evaluated for historic significance since then. There are many buildings in Fishtown that are likely eligible for the local Philadelphia Historic Register, and possibly the National Register. These important undesignated historic assets are in danger of being lost to demolition or unsympathetic redevelopment, and/or their historic significance could be damaged by large developments on the Delaware River such as casinos because the historic commission has not had the resources to evaluate buildings in Fishtown.

In the last five years two extremely prominent and character-defining sites on the Delaware River, Penn Treaty Park and the former "Richmond Power Station" (now owned by Exelon), were evaluated for listing on the Philadelphia Historic Register. A National Register Nomination was completed for the Richmond Power Station, which was designed in the neo-Classical style by J.T. Windrim, the prominent Philadelphia architect who also designed Girard College.

These two sites are located on the Delaware River in between the Sugarhouse and Pinnacle sites. Penn Treaty Park is visible from the Sugarhouse site and the power station is visible from the Pinnacle site, although slightly obscured by the transformers and tanks located just to the north of the building. Both of these historic sites would be affected by locating a casino at the Sugarhouse site because traffic would travel south on Delaware Avenue past the power plant and the park. The close proximity of the Sugarhouse site to Penn Treaty Park is of particular concern.

Another area of historical significance that could be affected by casino siting on the riverfront is the 1100 block of Berks Street, which has ten rowhouses listed on the local historic register. These 2 ½-story houses date to the 1820s and are all that remain of an early 19th century 42-house subdivision between Hewson and Berks Streets. The traffic plans in the Pinnacle proposal route southbound I-95 traffic onto Girard Ave, then left onto Berks St. past this row of historic houses. Here, Berks St. is one-lane and one-way, and the proposed traffic would certainly have a negative impact on the historic houses and streetscape.

Lastly, there is evidence that the Sugarhouse site was used as a British encampment during the Revolutionary War. Early 19th century maps show the encampment at the end of

Frankford Avenue, which quite possibly overlaps with the Sugarhouse property. Archaeological study is needed to determine the exact location of the encampment, and should be accomplished before any construction is allowed on the site.

Neither the Pinnacle proposal nor the Sugarhouse proposal addresses the impacts on these known historic resources. Additionally, knowing the rich history of Fishtown, there are probably several more sites of historic significance in between Girard Avenue and Delaware Avenue that have not been evaluated for historic importance; this should be accomplished before more development takes place on Delaware Ave.

VIII. The Siting and Operation of Any of These Facilities Will Cause Significant Problems Which are Inherently Within the Responsibility of the Government to Solve, Yet Neither the Commonwealth Nor the City of Philadelphia Has Committed to Addressing Any of Them

Each of these facilities proposes to operate 24 hours a day, 7 days a week. Each also proposes to serve liquor 24 hours a day, 7 days a week. Each will also draw approximately 80% of its patrons to the site by vehicle. See, e.g., Sugarhouse Traffic Report at 8, Table 6. That means that if a facility is sited in Fishtown, approximately 9,000 people will be leaving that facility each day, most or all of whom have consumed one or more alcoholic beverages. See, e.g., Sugarhouse Traffic Report at 8, Table 6 (of the 22,680 casino visits on a peak weekday, one half will be arriving at and one half will be exiting the facility and 80% of those will arrive by vehicle). This poses a serious risk of drunk driving. In fact, Pinnacle points out that during the most likely drunk driving time, i.e., Saturday evening, it will have 500 vehicles exiting its facility. And Sugarhouse, who proposes to sell alcohol 24/7, says that it will be turning out

approximately 270 cars per hour during weekday mornings when hard working Fishtowners are trying to get to work and Fishtown children are traveling to school.

Although this issue is both obvious and of deadly importance, none of the casinos has indicated that it has any program designed to minimize drunk driving or even identify drivers that may be intoxicated before they hit the road. More importantly, neither of the governmental entities that are responsible for providing police services to protect citizens from criminals such as drunk drivers, i.e., the Commonwealth or the City of Philadelphia, has committed to addressing this very dangerous situation.

Similarly, *nobody* has committed to Fishtown that its emergency services will be uncompromised by the siting of a casino in our neighborhood. There currently exist two stations from which emergency services are provided: (1) the firehouse at 4th Street and Girard Avenue (5 blocks from the intersection of Frankford and Girard Avenues), and 2601 Belgrade Street. As it currently stands, these stations will have to bear the increased burden of servicing any casino that may be sited in our neighborhood. This will be a significant burden since, without even counting employees or patrons attending special events such as cabaret shows and concerts or even visitors to any restaurants or Off Track Betting facilities that may exist at these casinos, there will be in excess of 63,000 additional people in Fishtown each week, Sugarhouse Traffic Report at 8, Table 6, and our emergency responders will have responsibility for caring for all of them. This leaves the residents of Fishtown at a significant disadvantage - one that threatens life and limb.

Other potential adverse effects also exist. For example, the National Organization for Research has estimated that for each problem gambler, the costs due to job loss, unemployment

and welfare benefits, health costs and gambling treatment is approximately \$715 per year. For pathological gamblers, this is approximately \$1,200. None of the applicants' impact reports identify any mitigation of these costs which will be borne by the public. Moreover, neither the Commonwealth nor the City has made any commitment to address these issues either. Act 71 notes the importance of considering "the degree to which potential adverse effects which might result from the project, including the costs of meeting the increased demand for public health care . . . and social services, will be mitigated." Nobody, not the applicants, not the Commonwealth, not the City, has committed to any mitigation of these serious public impacts.

IX. No Facility Should Be Licensed Without Until Certain Requirements Have Been Met

The above is not a complete listing of all the adverse impacts which the casinos, *under their current plans*, threaten to visit upon our community. While not all adverse impacts can be eliminated, in some instances they can be significantly lessened. In addition, while in theory there may be benefits to the community from siting a casino in our midst, none of these is provided for by law or by commitment from any of the applicants or any governmental unit. As a result, protective measures must be implemented for our community.

First, since it is not possible to route traffic to the facilities without totally disrupting its residential streets (as well as impacting Fishtown's sole commercial corridor), none of the three facilities should be granted a license to operate until the Girard Avenue exit from I-95 is reconfigured to deliver traffic directly to Delaware Avenue.

Second, the Fishtown Neighbors' Association and other community groups have initiated a dialogue with both Pinnacle and Sugarhouse (no discussion has yet occurred between FNA and Riverwalk) which the community hopes will eventually result in the creation of a community benefits agreement. It is expected that such an agreement would address issues including, but not limited to, job creation and job benefits for local residents, use of local vendors for food service and other functions at the facility, waterfront access for residents, and annual contributions to a newly created community-based non-profit organization which would use the contributed funds for projects of benefits to the local neighborhood. If a license is issued to either Pinnacle, Sugarhouse or Riverwalk, a condition of that license should be the applicant's adherence to that community benefits agreement.

Third, the impact of licensing any two of these three facilities would be absolutely devastating for our neighborhood. Therefore, we respectfully, but emphatically, request that the Board refrain from casino "clustering," i.e., issuing licenses to any two of the above three referenced facilities.

In addition, several other measures must be implemented before any casino can be permitted to operate. These include requiring all facilities to perform detailed traffic studies and to develop effective traffic mitigation plans. Review of the work done by the facilities to date shows it to be either woefully inadequate or blatantly wrong. No facility of this magnitude can be sited until it is clear that its operation will not cause the destruction of the surrounding community simply because of traffic issues. Essential to any mitigation plan is identification of methods for excluding all casino traffic from using Fishtown's local residential streets as thoroughfares to access any casino. In addition, police officers and support resources must also

hired, trained and put in place prior to the operation of any casino. A sufficient contingent of such officers and resources must be dedicated to casino crime issues both at the facilities and in the surrounding community so that no additional burdens will be placed on the 26th precinct. In addition, further staff and resources should be provided to the 26th precinct to address the indirect effects of the siting of these facilities within our neighborhood.¹³ Local health and emergency services issues must also be addressed. A comprehensive plan for addressing the additional health and safety needs posed by each of the facilities must be developed to assure local residents are not put in harm's way. A thorough construction plan must be provided that describes how construction will be accomplished without undue impact (i.e., traffic, noise, dust, vibration, etc.) on the facility's immediate neighbors.

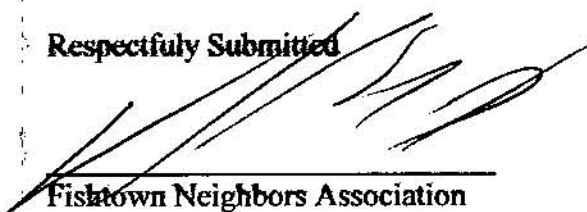
Finally, the Commonwealth's citizens cannot be said to have had opportunity for public input where they have not been provided the full and complete applications of each entity seeking a Category 2 license. We respectfully request that full and complete applications be made available to the public (most effectively via posting on the Board's website), including any and

¹³ In fact, we believe that the PGCB should require that as a condition of licensure, that any Category 2 facility be required to provide substantial financial support to the City of Philadelphia that would be earmarked to address the increased burden the City will bear to control increased crime resulting from gaming activity. The dollar amount should be adjusted annually to reflect increases in the social costs.

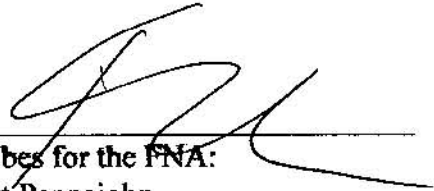
all supplementations, amendments and the like which entities may present to the Board, and we request adequate time to review and provide comment to the Board on all such information.

Dated: June 2, 2006

Respectfully Submitted



Fishtown Neighbors Association
By: Herbert L. Shallcross, President



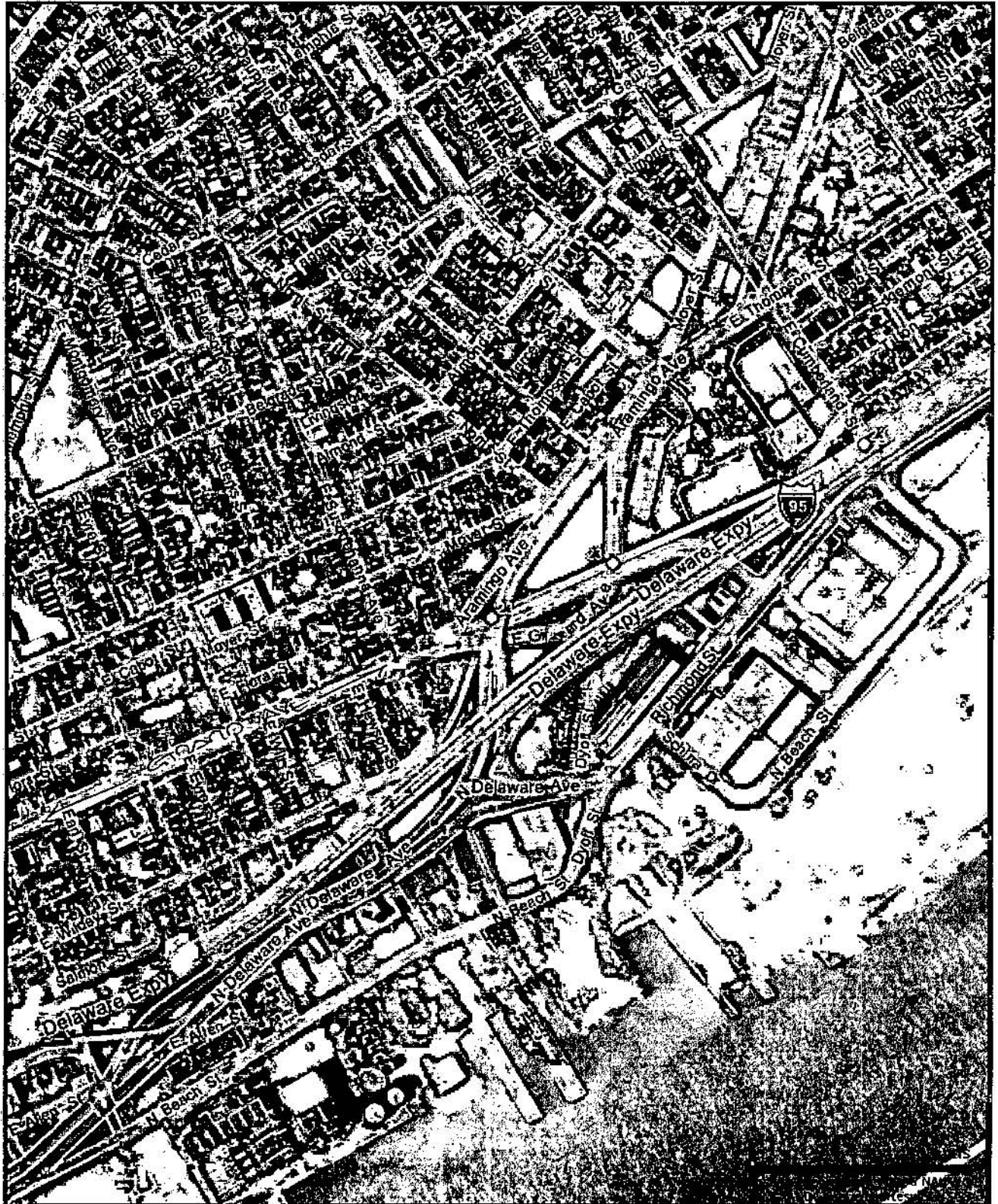
Scribes for the FNA:
Matt Pappajohn
Sarah M. Thorp
Catherine M. Recker, Esq.
Kerry Nelson, Esq.

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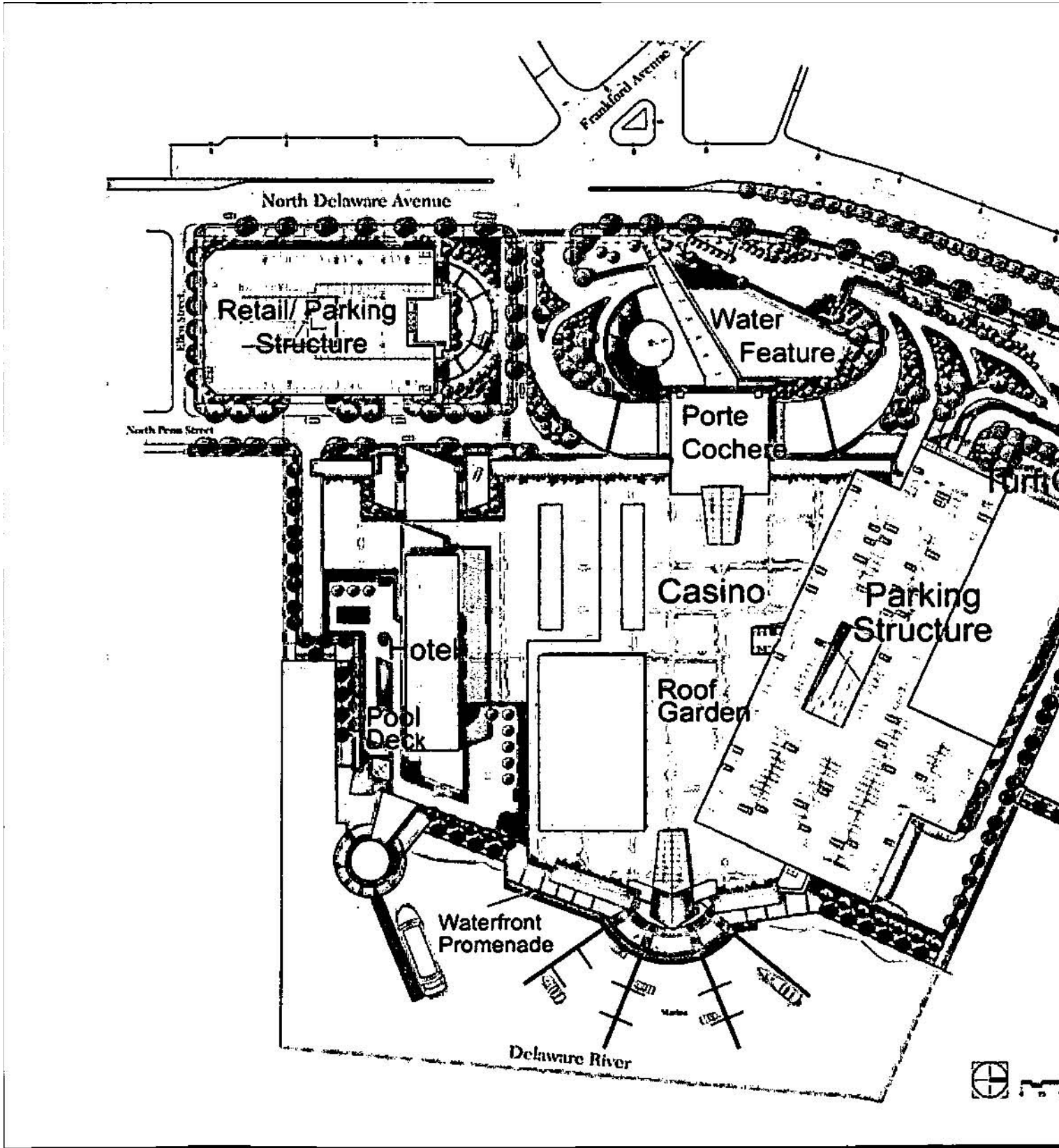


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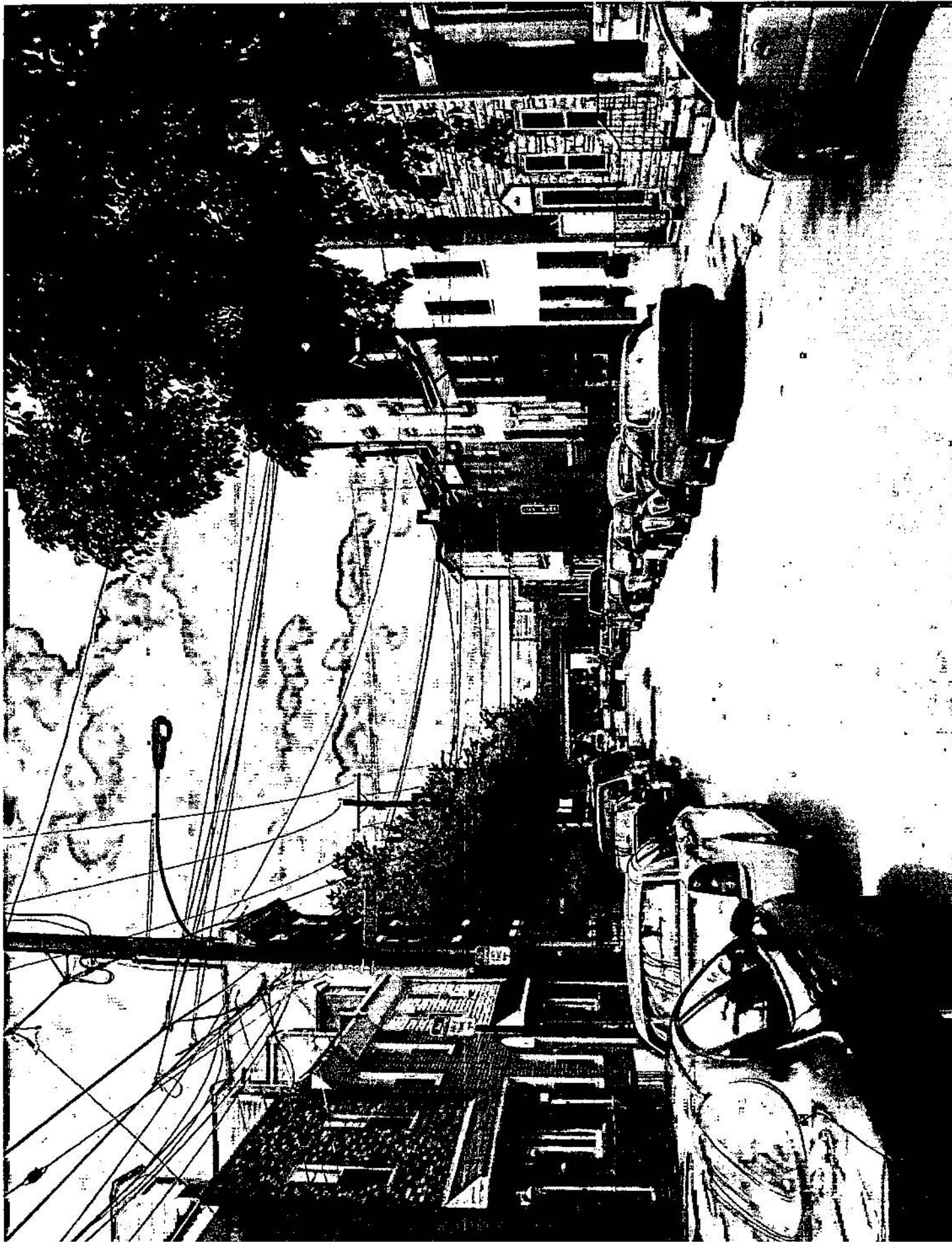
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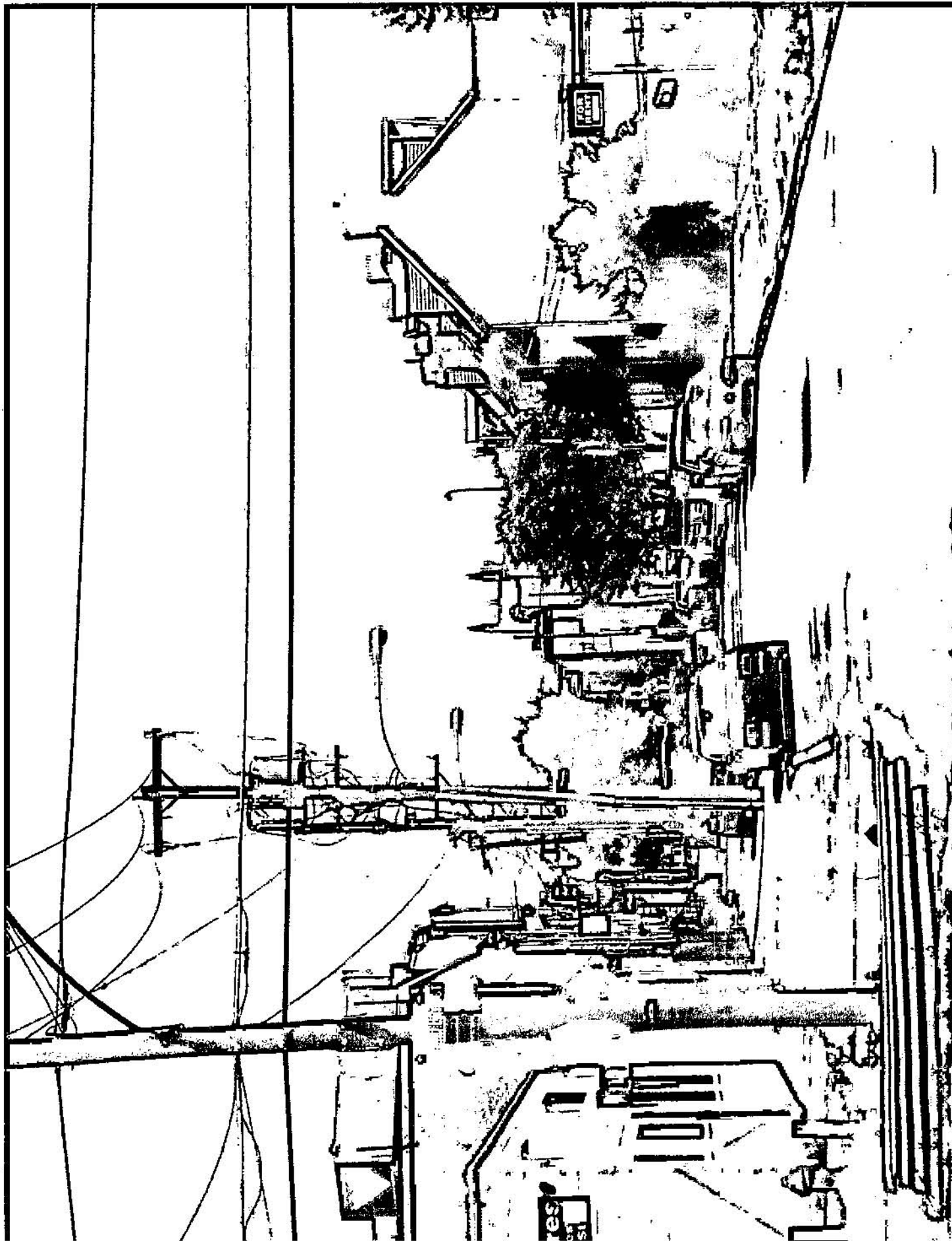




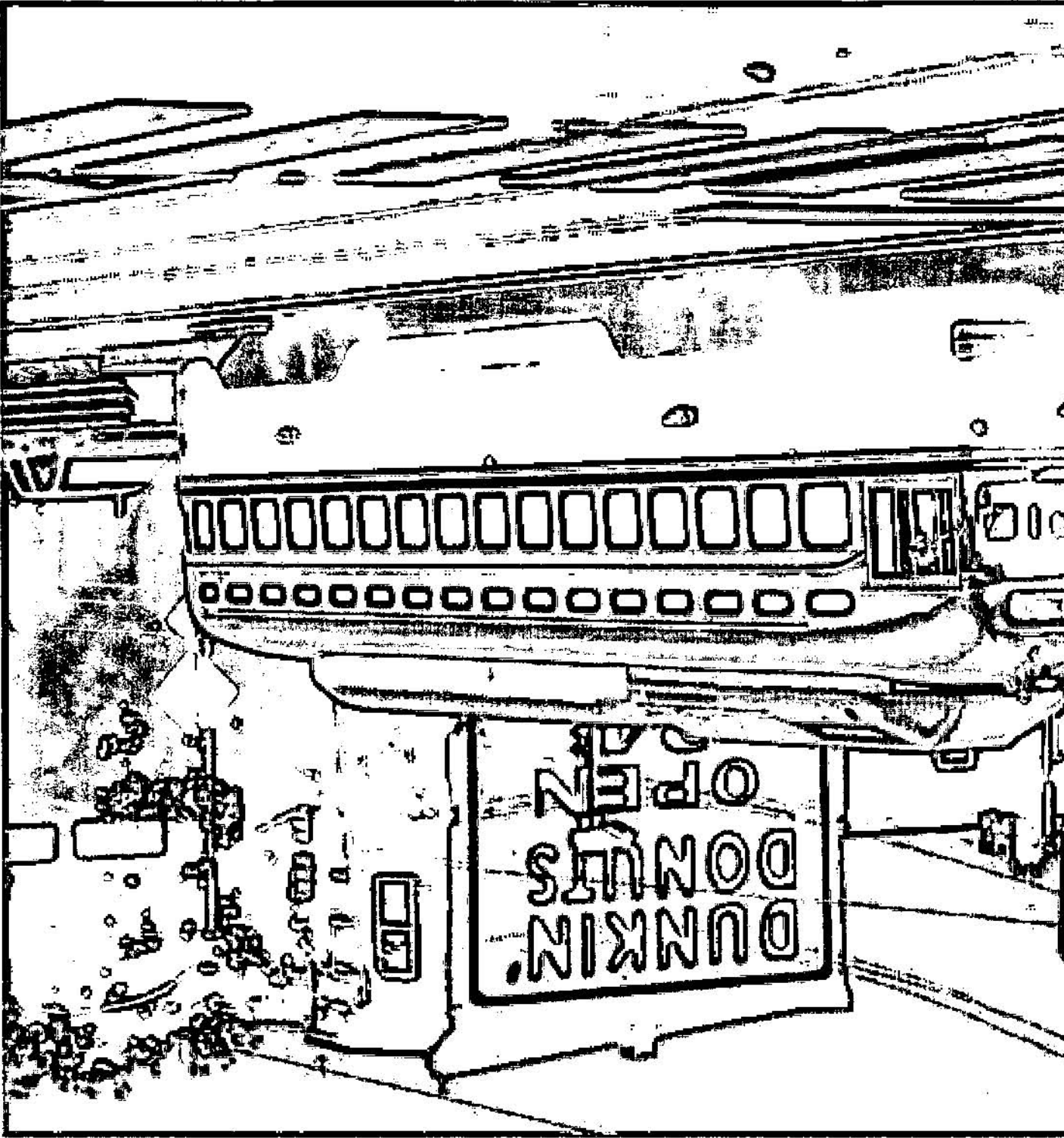
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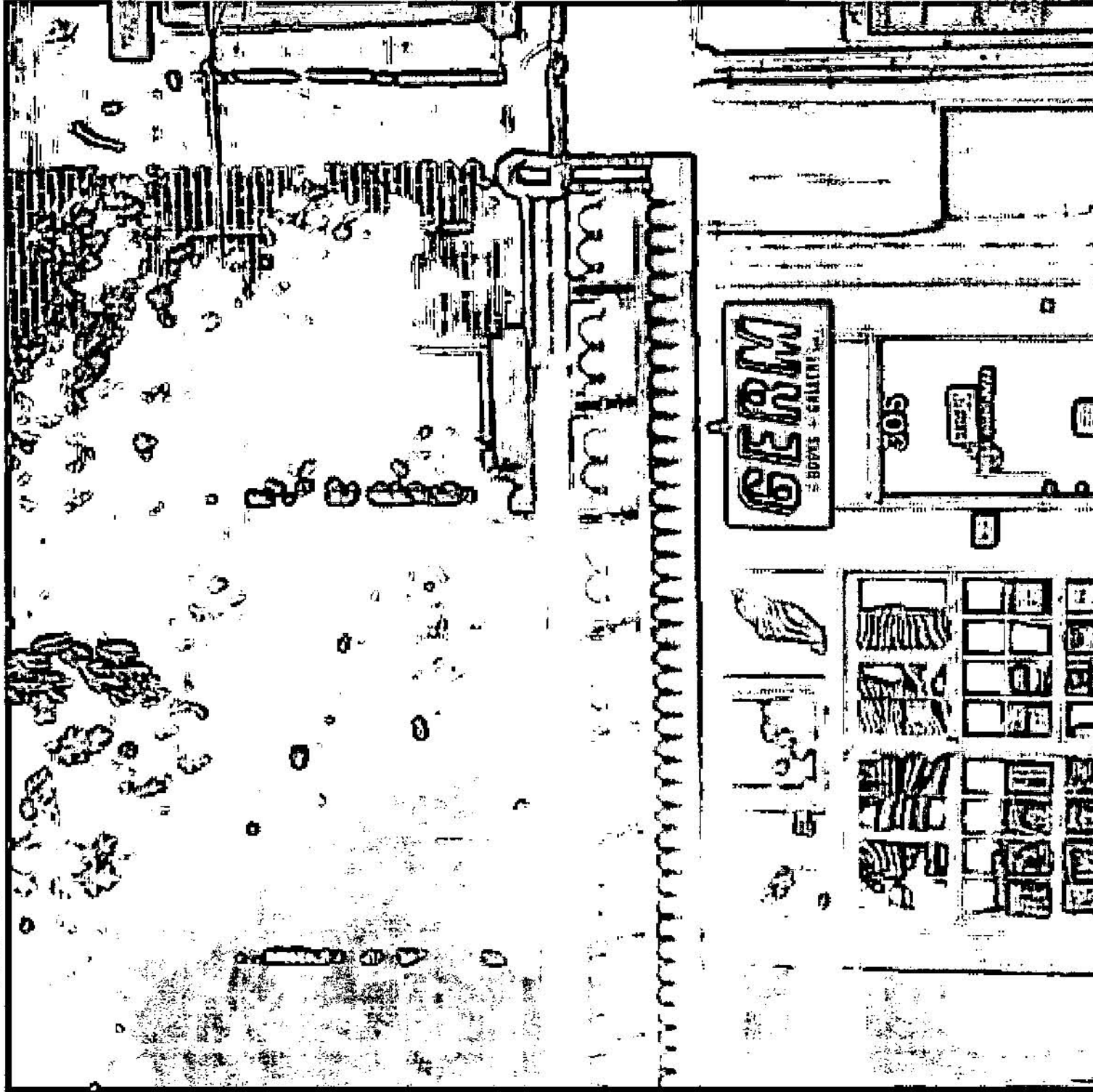


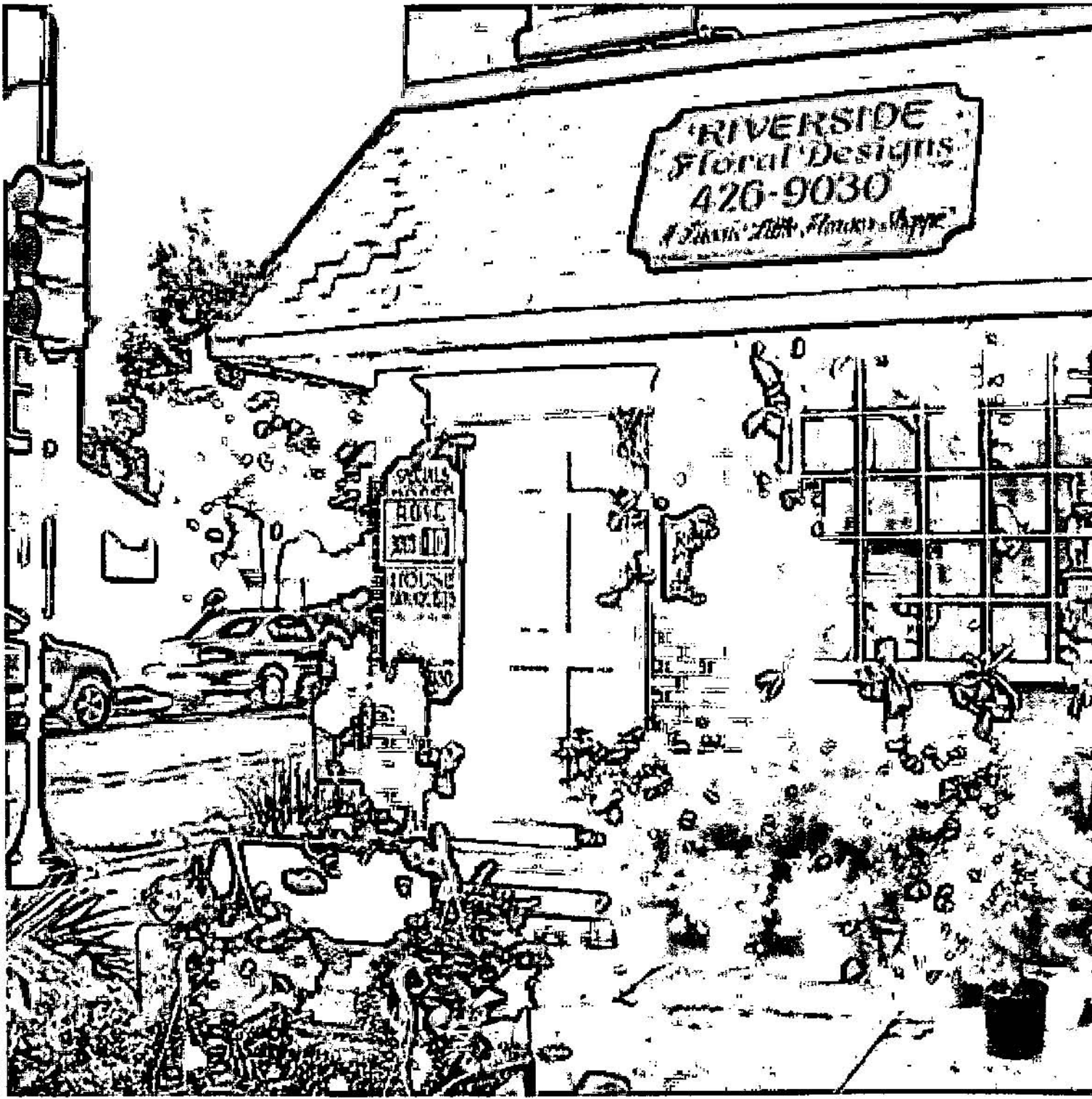






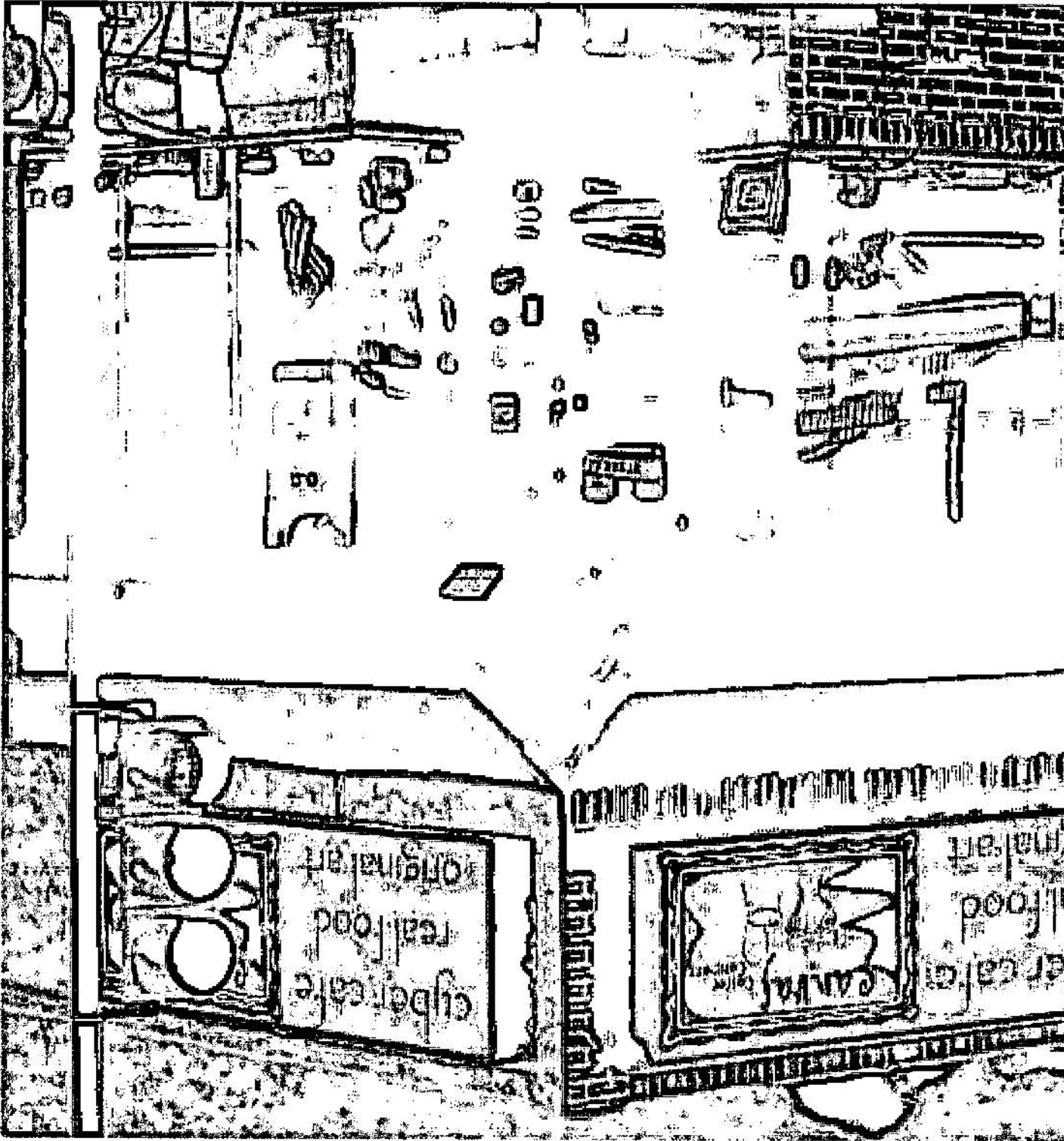




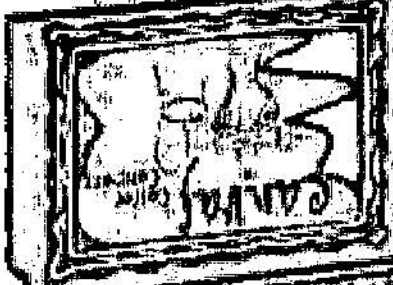


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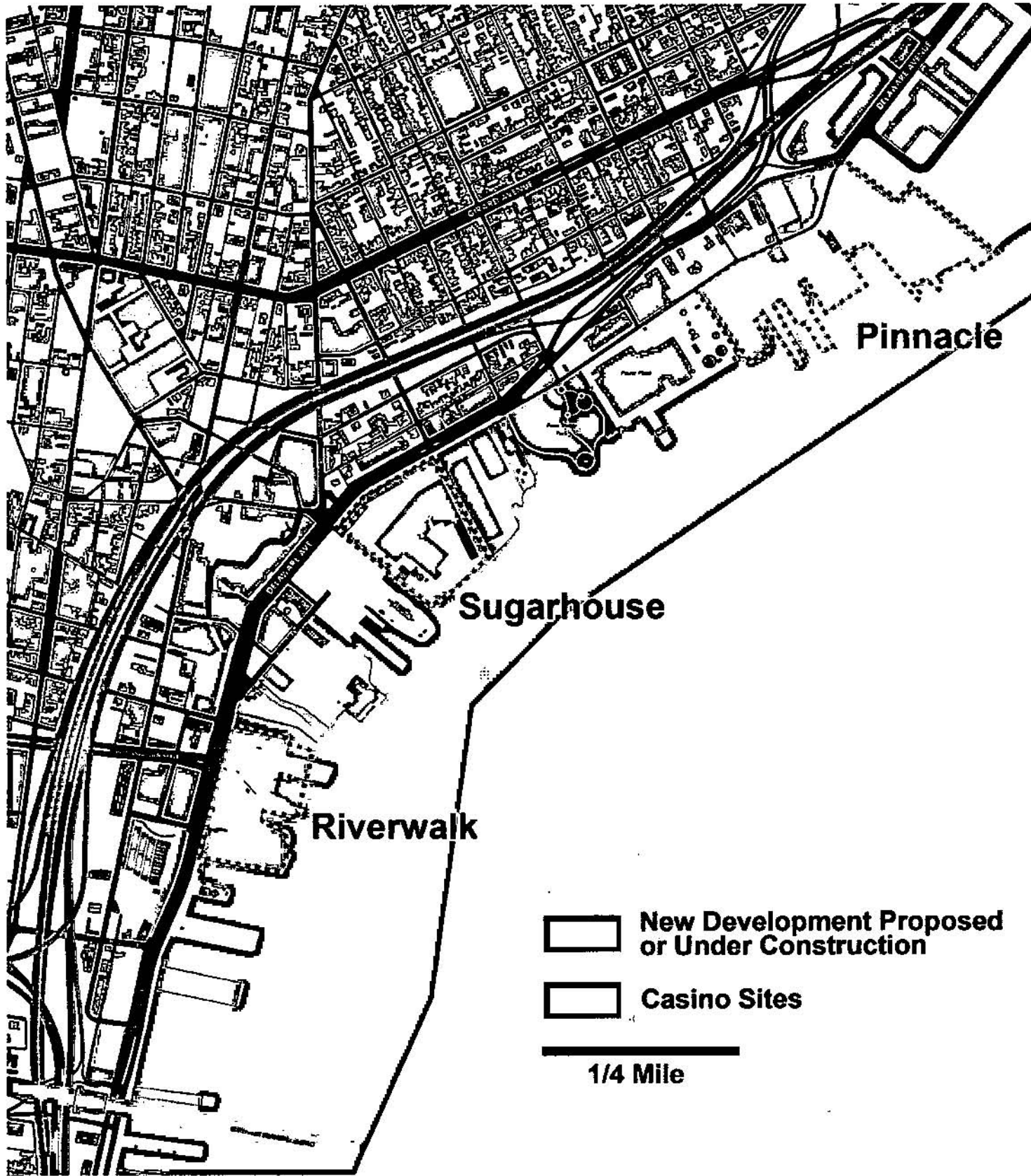


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CASINOS, CRIME, AND COMMUNITY COSTS

Earl L. Grinols and David B. Mustard*

Abstract—We examine the relationship between casinos and crime using county-level data for the United States between 1977 and 1996. Casinos were nonexistent outside Nevada before 1978, and expanded to many other states during our sample period. Most factors that reduce crime occur before or shortly after a casino opens, whereas those that increase crime, including problem and pathological gambling, occur over time. The results suggest that the effect on crime is low shortly after a casino opens, and grows over time. Roughly 8% of crime in casino counties in 1996 was attributable to casinos, costing the average adult \$75 per year.

I. Introduction

PRIOR to 1978, there were no casinos in the United States outside Nevada. Since 1990, casinos have expanded to the point where the vast majority of Americans now have relatively easy access to one. This paper utilizes the natural experiment created by casino openings to examine how casinos affect crime. There are many reasons why understanding this link is particularly valuable. First, the casino industry has grown rapidly in the last decade and has become one of the most controversial and influential industries. Commercial casino revenues increased 203% from \$8.7 billion to \$26.3 billion between 1990 and 2000. Including Class III American Indian casinos, revenues were \$38.8 billion, or \$200 per adult, in 2001. Casino industry revenues are comparable to those of the cigarette market, and all forms of gambling total more than seven times the amount spent on theater tickets.¹ From 1982 to 2000, GDP increased 201% while casino revenues increased more than 660%. This rapid expansion generated extensive debate about the impact of casinos on many social, economic, and political issues.²

Second, the casino industry has become a major lobbying presence. Between 1992 and 1997, \$100 million was paid in lobbying fees and donations to state legislators (Harvard Medical School, 1997). Concerns were sufficiently pronounced that the U.S. Congress established the National Gambling Impact Study Commission (NGISC) in 1996 to study casinos exhaustively. Its final report called for additional research about the effects of casinos and a moratorium on further expansion.

Third, research suggests that on a national basis casino gambling generates externality costs in the range of \$40

billion annually,³ and crime is one of the biggest components of these social costs.

Last and most important, in spite of the substantial attention devoted to the casino-crime link, there is a paucity of convincing research about it. Economists have been virtually silent, and studies from other disciplines typically exhibit many fundamental weaknesses. First, no study examined the intertemporal effect of casinos, which is essential to understanding the relationship. Second, nearly every study used small samples, most frequently Las Vegas, Atlantic City, Reno, and Deadwood (Albanese, 1985; Lee & Chelius, 1989; Friedman, Hakim, & Weinblum, 1989; Buck, Hakim, & Spiegel, 1991; Chiricos, 1991; Margolis, 1997) or Wisconsin (Thompson, Gazel, & Rickman, 1996a; Gazel, Rickman, & Thompson, 2001), or a selection of a handful of casino markets (Albanese, 1999). Four of these studies conclude that casinos increase crime, two argue that there is no effect, and one maintains that Florida regions with casinos have lower crime rates than selected Florida tourist cities if visitors are included in the population base denominator.

Another problem with the existing research is that so many studies (Albanese, 1999; Hsing, 1996) reached conclusions about crime rates without actually examining crime rates. Instead of analyzing offenses, they used arrests, but did not discuss the problems inherent in using arrest rates to infer anything definitive about crime rates.

A fourth criticism is that most studies are subject to substantial omitted variable bias because they rarely controlled for variables that affect crime. Margolis (1997), Florida Department of Law Enforcement (1994), and Florida Sheriffs Association (1994) included no control variables. Nearly all of the other studies control for very few factors.

Fifth, the literature has generally neglected discussing the theoretical links between casinos and crime, as Miller and Schwartz (1998) document in detail.

Last, many studies were agenda-driven, conducted and funded by either progambling or law enforcement organizations. Nelson, Erickson, and Langan (1996), Margolis (1997) and Albanese (1999) were funded by explicit progambling groups. As expected, they concluded that gambling had no impact on crime. The Florida Department of Law Enforcement (1994) and Florida Sheriffs Association (1994), which both opposed casinos, concluded that crime and drunk driving increased in Atlantic City and Gulfport, MS, as a result of casinos.

The General Accounting Office (GAO) and NGISC concluded that definitive conclusions cannot yet be reached.

Received for publication April 5, 2001. Revision accepted for publication April 19, 2005.

* Baylor University, and Terry College of Business, University of Georgia and the Institute for the Study of Labor, respectively.

We thank workshop participants at the American Law and Economics Association, American Economics Association Annual Meetings, Baylor University, and the Universities of Buffalo, Georgia, Illinois, and Rochester for their helpful comments.

¹ 1997 cigarette sales were \$45 billion. 2002 theater ticket and gambling revenues were \$9.3 and \$68.7 billion.

² Kindt (1994), Grinols (1996), Henriksson (1996), and Grinols and Omorov (1996) discussed a number of these.

³ See, for example, Grinols and Mustard (2001, p. 155) and Grinols (2004, p. 170).

CASINOS, CRIME, AND COMMUNITY COSTS

about the casino-crime link. According to the GAO (2000, p. 35), "In general, existing data were not sufficient to quantify or define the relationship between gambling and crime. . . . Although numerous studies have explored the relationship between gambling and crime, the reliability of many of these studies is questionable." This paper contributes to the literature on this important issue by addressing each of the above limitations.

The paper is organized as follows. Section II explains the data we use. Section III analyzes the theoretical links between casinos and crime, and section IV outlines our estimation strategy. Section V discusses our basic empirical results, and section VI extends the results to border counties. Section VII concludes. We find that crime increases over time in casino counties, and that casinos do not just shift crime from neighboring regions, but create crime. We estimate the crime-related social costs in casino counties at approximately \$75 dollars per adult per year.

II. Data

Our sample covers all 3,165 U.S. counties from 1977 to 1996. The Federal Bureau of Investigation's (FBI) Uniform Crime Report⁴ provided the number of arrests and offenses for the seven FBI Index I offenses: aggravated assault, rape, robbery, murder, larceny, burglary, and auto theft.⁵ With the exception of Alaska, the county jurisdictions remained unchanged over our sample period.

We used U.S. Census Bureau data for demographic control variables, including population density per square mile, total county population, and population distributions by race, age, and sex.⁶ The Regional Economic Information System, of the Bureau of Commerce, provided data on income, unemployment, income maintenance transfers, and retirement.⁷

⁴ U.S. Department of Justice, FBI, *Uniform Crime Reports: County-Level Detailed Arrest and Offenses Data, 1977-1996*, Washington, DC: U.S. Department of Justice, FBI; Ann Arbor, MI: Inter-university Consortium for Political and Social Research (ICPSR, distributor).

⁵ The definitions are listed in *Crime in the United States: 1993* (U.S. Department of Justice, Federal Bureau of Investigation), Appendix H, pp. 380-381.

⁶ ICPSR (8384): "Intercensal Estimates of the Population of Counties by Age, Sex and Race (U.S.): 1970-80," U.S. Department of Commerce, Bureau of the Census, Winter 1985, ICPSR, Ann Arbor, MI 48106. "Intercensal Estimates of the Population of Counties by Age, Sex and Race: 1970-1980 Tape Technical Documentation," U.S. Bureau of the Census, Current Pop. Reports, Series P-23, 103, "Methodology for Experimental Estimates of the Population of Counties by Age and Sex: July 1, 1975," U.S. Bureau of the Census, Census of Population, 1980; "County Population by Age, Sex, Race and Spanish Origin" (preliminary OMB-consistent modified race).

⁷ Income maintenance includes Supplemental Security Insurance (SSI), Aid to Families with Dependent Children (AFDC), food stamps, and other income maintenance (which includes general assistance, emergency assistance, refugee assistance, foster home care payments, earned income tax credits, and energy assistance). Unemployment insurance benefits include state unemployment insurance compensation, Unemployment Compensation for Federal Civilian Employees (UCFE), Unemployment for Railroad Employees, Unemployment for Veterans (UCX), and other unemployment compensation (which consists of trade readjustment al-

The natural operating measure for casinos is gross revenue or profits. Unfortunately, such panel data do not exist. American Indian casinos are not required to report revenue. We therefore used the year a county first had an operating Class III⁸ gambling establishment, including riverboat casinos, American Indian casinos, land-based casinos, and, in the case of Florida and Georgia, "boats to nowhere" cruises that travel outside U.S. boundary waters so passengers can gamble. Not all forms of gambling qualify as casinos. For example, Montana has hundreds of small gambling outlets that offer keno or video poker, many in gas stations along the highway. Also, California has many casinos, some of which were illegal. These establishments are distinct from casinos in size and type of play.

To obtain casino opening dates we first contacted state gaming authorities. In cases like Washington, this was an expeditious way to ascertain the first year a casino opened. However, even the central gaming authorities and Indian affairs committees often lacked information on Indian casinos. Therefore, in most states we called each casino to obtain its opening date or first date of Class III gambling if it had previously operated other forms of gambling.⁹ We also used lists from the Casino City Web site, www.casinocity.com, which lists casinos in every state, and verified it against the annually produced *Casinos: The International Casino Guide* (B.D.I.T., 1997).

Table 1 presents summary statistics for casino and noncasino counties. Noncasino counties had no casino in any year of the sample. Casino counties had a casino in operation during one or more years of the period. Casino counties had higher population, land area, income, and crime rates. The regressions later in the paper show no statistically significant differences between casino and noncasino populations opening crime rates when control variables are included.

lowance payments, Redwood Park benefit payments, public service employee benefit payments, and transitional benefit payments). Retirement payments included old age survivor and disability payments, railroad retirement and disability payments, federal civilian employee retirement payments, military retirement payments, state and local government employee retirement payments, federal and state workers' compensation payments, and other forms of government disability insurance and retirement pay.

⁸ According to the Indian Gaming Regulatory Act of 1988, Class III gambling consists of "social games solely for prizes of minimal value." Included in Class I gambling are traditional Indian games identified with tribal ceremonies and celebrations. Class II gambling includes bingo, "games similar to bingo." Class III gambling includes "all forms of gaming that are not Class I gaming or Class II gaming," such as blackjack, slot machines, roulette, and other casino-style games.

⁹ We distinguish the operation date of Class III casinos from other dates such as the legislation date to authorize casinos and the operation date of Class I or II establishments. Within a state, different counties acquire casinos at different times. Also, bingo halls operated by American Indians converted to Class III gambling during our sample. Nevada legalized commercial casino gambling (in 1931) prior to the start of our sample. Excluding Nevada from our sample slightly increased the magnitude of the estimated casino-crime effect. For example, when Nevada was included from the table 4 regressions, 39 of the 42 post-opening coefficient estimates became more positive or less negative. Excluding New Jersey whose Atlantic City casinos opened in 1978, produced similar results.

TABLE 1.—DEMOGRAPHIC AND CRIME DATA: CASINO VERSUS NONCASINO COUNTIES

Variable	Casino Counties			Noncasino Counties		
	Mean	Std. Dev.	Sample Size	Mean	Std. Dev.	Sample Size
Population	145,330	288,149	3,533	73,209	252,381	59,053
Population density (pop./sq. mi.)	204	491	3,533	217	1,462	59,045
Area (square miles)	2,021	3,056	3,533	1,008	2,883	59,060
Per capita personal income	\$11,306	\$2,689	3,533	\$10,808	\$2,618	59,040
Per capita unemployment ins.	\$78	\$54	3,533	\$65	\$51	59,024
Per capita retirement comp	\$10,771	\$6,544	3,538	\$9,831	\$6,243	59,028
Aggravated assault rate	259	276	3,245	188	245	54,551
Rape rate	29	28	3,182	20	32	53,882
Robbery rate	82	136	3,254	44	143	54,623
Murder rate	5.9	9.3	3,254	5.5	10.5	54,628
Larceny rate	2,548	1,423	3,254	1,738	1,940	54,622
Burglary rate	1,056	666	3,254	770	1,110	54,619
Auto theft rate	267	264	3,254	167	276	54,627

Notes: Crime rates are annual incidents per 100,000 population. Monetary amounts are in 1982-1984 dollars.

The differences in the crime rates are due to the postopening differences between casino and noncasino counties.

Between 1977 and 1996 the number of states with some form of casino gambling rose from 1 to 29. Counties with casinos grew from 14 (all in Nevada) to nearly 180. The Indian Gaming Regulatory Act of 1988 increased the number of Indian casinos by mandating that states allow American Indian gambling on trust lands if the state sanctioned the same gambling elsewhere. The semisovereign status of Indian tribes and their management by the Federal Bureau of Indian Affairs gave them greater leverage with the states. By 1996, 21 states permitted casinos on Indian reservations.

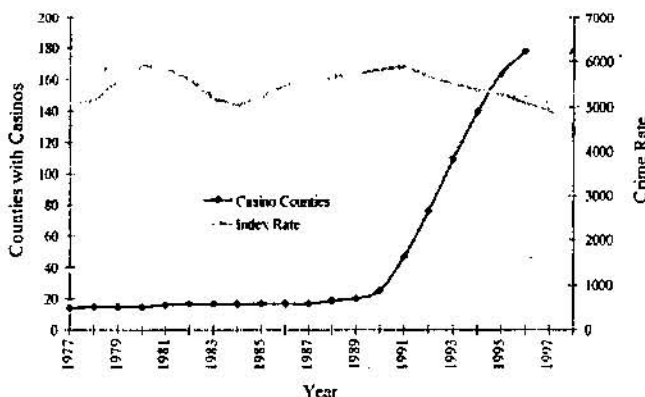
Figure 1 shows the relationship between the number of counties with casinos (left scale) and the crime rate (right scale). The crime rate fluctuated between 1977 and 1990 when the number of casinos was relatively constant. However, between 1990 and 1996, when the number of counties with casinos increased rapidly, the crime rate dropped substantially. This contemporaneous casino growth and crime reduction is important. Some have used these data to suggest that casinos reduced crime. For example, Margolis (1997) stated, "Crime rates in Baton Rouge, LA have decreased every year since casino gaming was introduced." However, most regions experienced falling crime rates after

1991. Therefore, it is more appropriate to compare the magnitude of the decreases between casino and noncasino counties. We provide two comparisons of this type. Figure 2 suggests that crime rates in counties that opened casinos during our sample increased relative to crime rates in noncasino counties.

The first example, shown in figure 2, contrasts the crime rate for casino and noncasino counties between 1991 and 1996. FBI Index I offenses were summed by year for casino counties. Average crime rates for 1991-1996 were calculated by dividing these totals by the populations of casino counties in the corresponding years. The series was then scaled to take the value 100 in the year 1991. The same procedure was applied to noncasino counties.¹⁰ (Though the crime rate dropped in both sets of counties, crime dropped 11 percentage points more in counties without casinos than in casino counties.) The absolute reduction in crime in noncasino counties (90.3 offenses per 100,000) was approximately 3 times as large as the reduction (30.6 offenses per 100,000) in counties that opened a casino.

The second example, shown in figure 3, presents casino county crime data centered on the year of opening, where the average crime rate for the two years prior to casino opening and the year of opening is set to 100. Crime rates were stable prior to opening, were slightly lower in the year of casino introduction, returned to approximately average levels for the next two or three years, and increased thereafter. By the fifth year after introduction, robbery, aggravated assaults, auto theft, burglary, larceny, rape, and murder were 136%, 191%, 78%, 150%, 38%, 21%, and 11% higher, respectively. These effects by year after introduction

FIGURE 1.—INDEX CRIME RATE AND NUMBER OF COUNTIES WITH CASINOS: UNITED STATES, 1977-1998



¹⁰ Data on Florida are excluded from figure 2 because it changed crime reporting from summary-based to incident-based on January 1, 1988, and switched back to summary-based in 1995. Crime data are missing in the transition years. However, a Florida-only analysis is consistent with figure 2. Between 1977 and 1995 Florida counties that opened casinos experienced greater growth than noncasino counties. Murder, rape, robbery, aggravated assault, burglary, larceny, and auto theft (19.9, 29.3, 27.3, 33.6, 7.7, 16.9, and 81 percentage points higher, respectively).

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suggest the need to estimate lead and lag structures to identify the relevant time dependencies.

III. Theory

Previous studies focused on the empirical relationship between casinos and crime, but neglected theoretical explanations of how casinos affect crime. We present two reasons why crime could decrease and five reasons why crime could increase. We then discuss their different effects over time, an essential, but previously ignored issue. These factors are not mutually exclusive, and our empirical results estimate the total effect of these factors.

A. Theoretical Connections between Casinos and Crime

Casinos might reduce crime directly by improving legal earning opportunities, or indirectly through development effects.

Wage Effects: Grogger (1997) argued that increases in wages reduce crime, and Gould, Weinberg, and Mustard (2002) showed that increased employment and wages of low-skilled individuals reduce crime. Therefore, if casinos provide greater labor market opportunities to low-skilled workers, they should lower crime. Evans and Topoleski (2002) contend that when casinos are opened by American Indians, the fraction of adults who are poor, who are more likely to commit crime, declines by 14% and that employment increases significantly.

Development: Casinos may reduce crime indirectly through development effects. In the Midwest, for example, legislation decriminalizing casino gambling cited economic development as its rationale. Decaying waterfronts and derelict sections of town that once harbored crime may be less amenable to it when renovation occurs, streetlights appear, and resident presence increases. The streets near Las Vegas casinos, even at night, are often cited as some of the safest.

FIGURE 2.—CASINO-COUNTY VERSUS NONCASINO-COUNTY CRIME RATES

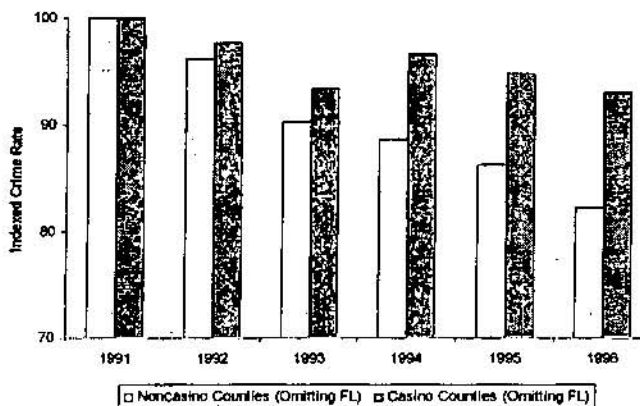
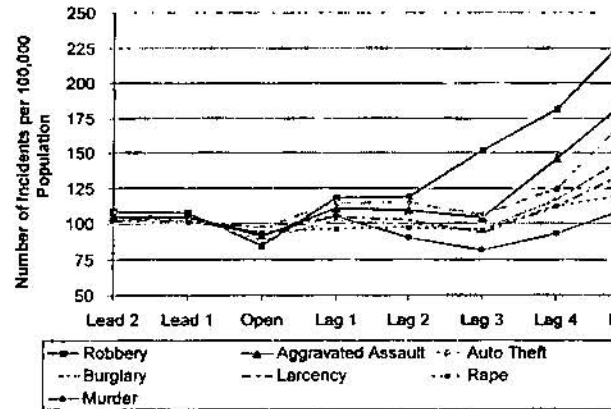


FIGURE 3.—CRIME BEFORE AND AFTER CASINO OPENING: CASINO COUNTIES, OMITTING FLORIDA IN 1988, 1996



Likewise, casinos may increase crime through direct and indirect channels.

Development: Casinos may raise crime by harming economic development, the opposite of the indirect effects discussed above. While some commend casinos for bringing growth, others criticize them for draining the local economy, for attracting unsavory clients, and for leading to prostitution and illegal gambling-related activities.

Increased Payoff to Crime: Casinos may increase crime by lowering the information costs and increasing the potential benefits of illegal activity. Travelers are often more vulnerable to crime victimization, and because casinos attract gamblers and money, there is an increased payoff to crime from a higher concentration of cash and potential victims. A 1996 Kansas City case is illustrative: a local restaurant owner was followed home, robbed, and murdered in his garage after winning \$3,000 at a casino (Reno, 1996). Similar stories exist in other locations with casinos.

Problem and Pathological Gambling: Crime may increase through problem and pathological gamblers. Pathological gambling is a recognized impulse control disorder in the Diagnostic and Statistical Manual (DSM-IV) of the American Psychiatric Association. Pathological gamblers are identified by repeatedly failing to resist the urge to gamble, relying on others to relieve the desperate financial situations caused by gambling, committing illegal acts to finance gambling, and losing control over their personal lives and employment. Problem gamblers have similar problems, but to a lesser degree. Compared to those arrested for crime, problem and pathological gamblers are more likely to be female, are older, and have higher incomes.

¹¹ See NGISC (1999, Tables 4-2, 4-5) and Bureau of Justice Statistics (2002, Tables 4.7-4.10, 6.13, 6.16, 6.17).

The geographical spread of casinos lowers the cost of buying the addictive good, which increases the quantity consumed by problem gamblers, as evidenced by the rapid increase in Gamblers Anonymous programs after casinos open. For example, the number of Wisconsin communities holding Gamblers Anonymous meetings grew from 6 to 29 in the seven years after Indian tribes initiated agreements with the state to open casinos in 1992. Eleven people who contacted the Wisconsin group in 1997 committed suicide because of gambling (*Chicago Tribune*, August 2, 1999). The NGISC also reported a large increase in Gamblers Anonymous from 650 chapters in 1990 to 1,328 in 1998, "a period of rapid legalized gambling expansion" (NGISC, 1999, p. 4-17).

Conversely, when gambling is restricted, the cost of consuming the addictive good increases. Beginning July 1, 2000, South Carolina banned slot machines by court order. Six months later, the number of Gamblers Anonymous groups had dropped from 32 to 11, and the attendance fell from a typical size of approximately 40 to as few as 1 or 2 (Bridwell & Quinn, 2002, p. 718). During the same time, the number of help-line calls in Horry County (Myrtle Beach) dropped from 200 per month to 0 (*ibid.*)

An often-cited Maryland study found that 62% of the Gamblers Anonymous group studied committed illegal acts because of their gambling (Maryland Department of Health and Mental Hygiene, 1990); 80% had committed civil offenses, and 23% were charged with criminal offenses. A similar survey of nearly 184 members of Gamblers Anonymous showed that 56% admitted stealing to finance their gambling. The average amount stolen was \$60,700 (median \$500), for a total of \$11.2 million (Lesieur, 1998).

Visitor Criminality: Crime may also rise because casinos attract visitors who are more prone to commit and be victims of crime. Chesney-Lind and Lind (1986) suggested that one reason tourist areas often have more crime is that tourists are crime targets. However, in the following section we show that visitors to national parks do not increase crime. Therefore, if casino visitors induce crime, it is because they are systematically different from national park visitors or visitors to other attractions. The three largest single tourist attractions in the United States in 1994 were the Mall of America (Bloomington, MN), Disney World (Orlando, FL), and Branson, MO (country and western music) receiving 38, 34, and 5.6 million visitors, respectively. For comparison, Hawaii received approximately 6 million and Las Vegas received 30.3 million visitors in 1994. Visitors per resident were 1,345 for Branson, 436 for Bloomington, 188 for Orlando, and 40 for Las Vegas. If visitors of any type are the predominant mechanism for crime, Branson and Bloomington should be among the most crime-ridden places in North America. Even adding visitors to residents in the denominator to calculate diluted crime rates, the crime rate per 100,000 visitors-plus-residents was

187.3 for Las Vegas, 64 for Orlando, 16.4 for Branson, and 11.9 for Bloomington. Bloomington received 7.7 million more visitors than Las Vegas, but had a diluted crime rate less than $\frac{1}{15}$ of Las Vegas's. One indication of the difference clientele casinos attract is the large increases in pawnshop sales that occur when casinos open. Other tourist areas do not experience similar increases.

A few of the numerous press examples that explicitly link casino gambling to crime are as follows:

Authorities linked a woman arrested in Bradenton, FL, to one of the largest and most profitable burglary rings in the country. Baton Rouge, La., police Detective Jonny Dunham said that Barbara Dolinska and her cohorts like to gamble, and they committed many crimes in areas that either had riverboat gambling operations or other kinds of gaming. (*Sarasota [FL] Herald-Tribune*, December 23, 1999)

A man arrested in the armed robbery of a [New Orleans] bar told deputies of his motive for the holdup: he wanted to recover the several hundred dollars he lost playing the lounge's video poker machines. (*Las Vegas Sun*, June 14, 1999)

Former San Jose police officer, Johnny Venzon Jr., was imprisoned for stealing from people on his own beat while in uniform. Venzon, who blamed his actions on a gambling addiction, often burglarized homes and then investigated the crimes. (*San Francisco Chronicle*, February 25, 1999)

Daniel Blank confessed to stealing over \$100,000 and killing six Louisiana residents from October 1996 to July 1997. Blank's motivation for his brutality was to obtain cash to support almost daily trips to video poker halls and casinos. Sometimes Blank headed for casinos right after committing the crimes. ([New Orleans] *Times-Picayune*, January 28, 1999)

Casino-Induced Changes in Population Composition: Gambling, along with gambling-related industries such as hotels and restaurants, is one of the few growth sectors with a high demand for unskilled labor. An increase in demand for unskilled and lower-income employees may alter the composition of the underlying labor force and reside toward those who are more apt to engage in criminal activity.

B. Effects across Types of Crime

Different crime mechanisms need not have the same effects across crimes. For example, improvements in the legal sector reduce property crime more than violent crime (Gould et al. 2002). Although murder has been tied to casino activities as described above, the statistical connection is harder to detect, because murder is rare in comparison with other crimes and because other causes predominate. For this reason we expect casinos to contribute less to the overall explanation of murder rates.

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Pathological gamblers generally commit crimes to generate money either to deal with their debts or to gamble. Peoria and Tazewell counties, surrounding one of Illinois's oldest riverboats, have documented a significant increase in casino-related embezzlement, theft, and burglary, much of it committed by professionals like teachers and lawyers (Copley News Service, June 28, 1999). Burglary, larceny, and auto theft, and the violent crime of robbery, have pecuniary payoffs. Casinos may affect aggravated assault because assault often occurs in the context of a crime with an economic payoff. Because the FBI classifies each incident involving multiple offenses under the most serious offense, property crimes and robberies that become assaults are categorized as assaults.

Identifying the link between casinos and rape is less obvious. Casinos may attract visitors more likely to commit rape or to be its victims, and have an indirect effect through the population composition effect and social climate. Changed population might be related to casino-generated growth in adult entertainment, escort services, and related industries, which show significant increases as measured by advertising or the number of listings in the yellow pages. Many law enforcement officials have testified that prostitution increased dramatically after casinos opened (FBI Conference on Casino Gaming, 1999).¹ Pinnacle Entertainment was fined \$2.26 million by the Indiana Gaming Commission for supplying prostitutes and gambling money to attendees at a golf outing sponsored by its Belterra Casino Resort (Piskora, 2002).

C. Intertemporal Effects on Crime

The theory importantly predicts that the effects of casinos will vary over time. Reduction of crime through improvements in labor market opportunities is observed prior to and shortly after the casino opening as low-skilled people may be hired by the casino or casino-related industries. The economic development theories (whether positive or negative) imply that a casino's effect after opening will grow until the casino market reaches equilibrium. Likewise, the visitor effect and the effect of changing composition of the population appear with the casino's opening and grow as people are attracted to the area.

Effects operating through problem and pathological (P&P) gamblers will not be felt until a gambling problem has developed. Breen and Zimmerman (2002) studied the time to pathology. "We found that the men and women who 'got hooked' on video gambling became compulsive gamblers in about one year. Those who got hooked on other kinds of gambling (such as horses, sports betting, blackjack, etc.) became compulsive gamblers after about three and a half years" (RI Gambling Treatment Program, 2002). According to gambling treatment specialists, "Many addicted gamblers follow essentially the same course. . . . [T]hey enter a desperation stage, [the treatment specialist] said, and when they've used up their own money and lines of credit

they often turn to stealing" (Schneider, 2003). In the same article, police and prosecutors "told the newspaper that in recent years, with the arrival of casino gambling in the area, they have seen an increase in exactly the kinds of crimes that [the convicted subject of the story] has acknowledged committing" (ibid.). The successful Evansville attorney A. J. Lossemore's case (Rohrig, 2002) is symptomatic of the nature of time lags. He began going to the Casino Aztar in July 1997 and for the first three or four months won enough money to subsidize his fledgling law practice. But by early 1998 he began to lose. "I started to draw from charge cards and from a line of credit in an attempt to get even," he reported. He tried to get back on track by barring himself from the casino and staying away from gambling, but later in 1999 he gambled again and lost. After a series of personal and professional financial circumstances, in mid-2000 he misappropriated clients' funds. "From there, I was just robbing Peter to pay Paul. I was gambling at that point pretty heavily—I was really trying to make up the difference." He was arrested in November 2000 and later jailed.

Research conducted for the NGISC reported that the population percentage of problem gamblers rose from 0.4% to 1.1% when the distance to the nearest casino fell from more than 250 miles to less than 50 miles, and rose from 0.4% to 1.3% for pathological gamblers (National Opinion Research Center, 1999, pp. 28–29). Distances less than 50 miles were not studied; thus a difference of 1.7% in P&P gambling probably understates the actual fraction. Research on the degree of P&P gambling in Las Vegas found the rate was 6.6% (Stow, 1999), suggesting that a difference of 5.9% is closer to an upper bound. If problem and pathological gamblers are an important explanation of crime, we expect to observe crime increase over time as more people start to gamble, develop gambling problems, and eventually commit crimes to fund their losses. Because different causes are at work, and may operate differently for different crimes, there is no presumption that intertemporal effects must be identical.

IV. Estimation Strategy

Our empirical strategy addresses many limitations of current research. First, by conducting the most exhaustive investigation and utilizing a comprehensive county-level data set that includes every U.S. county, we eliminate sample selection concerns. Second, by analyzing crime effects over time we exploit the time series nature of our data. Third, we are the first to articulate a comprehensive theory about how casinos could increase or decrease crime. Last, we use the most exhaustive set of control variables, most of which are commonly excluded from other studies.

A. Direct and Indirect Effects

As noted, casinos may affect crime rates directly through their effects on the resident local population and indirectly

by increasing the number of casino visitors. The total includes both direct and indirect effects, as expressed in the following equations, where crime (C_{it}) in county i in year t is a function of the presence of a casino, the number of casino visitors (V_{it}) to the county, and other variables that affect crime (summarized in the term *Other*), and where a , b , c , and d are unknown coefficients:

$$C_{it} = a \text{ Casino}_{it} + bV_{it} + \text{Other}_{it}, \quad (1)$$

$$V_{it} = c \text{ Attractions}_i + d \text{ Casino}_{it}. \quad (2)$$

Casino visitors in (2) depend on both the visitor attractiveness of the county (Attractions_i) and the presence of the casino. The coefficient a measures the direct effect of the casino on crime. The coefficients b and d measure the indirect effect via casino visitors. Substituting from (2) into (1) gives

$$C_{it} = \beta_i + \delta \text{ Casino}_{it} + \text{Other}_{it} \quad (3)$$

where $\delta = a + bd$, and $\beta_i = bc \text{ Attractions}_i$. The total effect of the casino on crime, δ , in (3) includes the effects on both the local population and casino visitors. Estimating a in (1) would give only a partial effect, because it would not take into account the visitor effect.¹² The key to our being able to estimate the full effect is having panel data. Because many studies of the casino-crime relationship used cross-sectional data, they were limited to estimating only a partial effect.

B. Visitors

Although distinguishing direct and indirect effects is important, it is also important to avoid the assumption that anything that attracts the same number of visitors will have the same crime effects. Different types of visitors may have systematically different effects on crime even if the effect for all types of visitors is positive. The presence of a casino in (3) proxies for direct effects on crime and for an increased number of casino visitors. It does not necessarily follow that the same number of visitors for another purpose would generate the same crime outcomes. Visitors for other purposes appear in the variable *Other*, which we now address.

Time series visitor data do not exist at the county level and certainly do not distinguish visitors for different purposes. Running the regression (3) without such information, therefore, risks omitted variable bias. In partial defense, no other crime studies have been run with these data either. However, more importantly, in the case of casinos the omitted variables are likely uncorrelated with a new casino. Fortunately, for at least one type of tourist, data are available that we can use to test the hypotheses of being uncor-

¹² Ideally we would like to know both a and b . Because of data constraints, we must estimate only the total effect δ . Casino visitor data do not exist at the county level. Both a and b might be estimated using other variables to proxy for the number of casino visitors, but no annual time-series data exist at the county level.

related with openings and having an effect on crime different from the effect of casinos. We obtained National Park Service time series data from 1978 to 1998 on all visitor national parks, monuments, historic sites, recreation areas, and so on. These parks and attractions, scattered across the country, receive millions of visitors annually—some as many as 14 million. Some, such as Yellowstone National Park, are in counties with sparse population; others are in highly populated areas. In most cases the correlation between park visitors and the casino variables used in this study was well below 1%, and in no case was a correlation above 1.7%. This is consistent with the view that this type of omitted variable bias is likely to be small or zero. Although it is always preferable to include such variables when possible, we are confident that in the case of casinos the procedure employed in (3) of treating data on other visitors as part of the constant term and the error term is not a problem for the coefficients of interest.¹³

A second analytical issue is whether to use *diluted* or *undiluted* crime rates. Should the number of crimes be divided by population—the conventional way to generate the crime rate (undiluted)—or by population *plus* visitors (diluted)? Four possibilities exist, depending on whether one considers total or partial effects, and studies diluted or undiluted crime rates. Some have argued for one combination or another without realizing that the choice is not methodologically, but depends on what questions the researcher wants to answer. A common but invalid claim is that the diluted crime rate should be used to determine the change in probability that a resident would be the victim of a crime. However, knowing what happens to the diluted crime rate does not give the needed information and could even move the answer in the wrong direction. To illustrate, let s_1 be the share of the resident population P victimized by residents, and let s_2 be the share of the resident population victimized by V visitors. Similarly, let σ_1 be the share of visitors victimized by residents and σ_2 the share of visitors victimized by visitors. Then the crime rate is $s_1 + s_2 + (\sigma_1 + \sigma_2)\frac{V}{P}$; the diluted crime rate is $(s_1 + s_2)w_P + (\sigma_1 + \sigma_2)w_V$ where w_P and w_V are the shares of visitors plus residents made up by residents and visitors respectively; and the probability of a resident's being a crime victim is $s_1 + s_2$. If residents do not victimize visitors ($\sigma_1 = 0$), then $P = V$ and $s_2 + \sigma_2$ is smaller than s_1 . If

¹³ When visitors to National Park Service sites were included, regressions (3) showed that an additional one million park visitors annually were associated with statistically significantly fewer crime incidents for rape, murder, robbery, and burglary, and had a statistically insignificant effect on auto thefts. The effects of park visitors on larceny and assault were statistically significant but socially insignificant compared to the crime effects found for casinos (coefficient δ) and reported in section 4. For example, we estimated the long-run effect of a casino on larcenies to be 615, which was roughly 60 times larger than the effect of one million national park visitors. This means that if the crime consequences of casino visitors and national park visitors were identical, a casino would have attracted over 59 million visitors annually to account for 615 additional larcenies. Las Vegas, the single largest casino gambling destination in the United States, attracted 30.3 million visitors in 1994.

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probability of a resident being victimized is s_1 without visitors, and it rises to $s_1 + s_2$ with visitors. The diluted crime rate is s_1 without visitors and falls to $(s_1 + s_2 + \sigma_2)/2$ with visitors. Thus in this case the diluted crime rate falls while the probability of a resident being victimized rises.

In this study we are interested in the costs to the host county associated with a change in crime from whatever source. We are therefore interested in the total effect of casinos on crime, and thus use the undiluted crime rate based on equation (3).

C. Timing: Separating Casino Effects from Other Effects

The version of equation (3) that we estimated is

$$C_{it} = \alpha + \beta_i X_i + \gamma_t T_t + \delta L_{it} + \theta A_{it} + \epsilon_{it} \quad (4)$$

where C_{it} is the crime rate (offenses per 100,000 people) of county i in year t , α is a constant, and β_i is the vector of estimated coefficients on the county-level fixed effects that control for unobserved characteristics across counties. The time fixed effect, T_t , controls for national crime rate trends. Our base specification of L_{it} is a vector of the casino-opening dummy variables that includes two leads and five lags of the opening variable and captures the important intertemporal effects outlined earlier. The opening dummy variable takes the value 1 in the year the casino began operation and 0 in other years. In the reported regressions we used two years of leads, because it is unlikely that a casino would affect the crime rate more than two years prior to its opening. We stopped at five years of lags because the numbers of counties with casinos open three to five years, not counting Nevada counties, were 91, 59, and 35, respectively. Twelve counties (26 including Nevada counties) had casinos open for 6 or more years, and seven (21 including Nevada counties) had casinos open 7 or more years. For each group, however, observations are scattered widely across the decades and geography of our sample.

A_{it} is a vector of 22 control variables. It includes population density, the percentage of the population that was male, the percentage that was black, the percentage that was white, and the percentages in the age ranges 10-19, 20-29, 30-39, 40-49, 50-64, and over 65.¹⁴ Economic variables in A_{it} are real per capita personal income, real per capita unemployment insurance payments, real per capita retirement compensation per old person, and real per capita income maintenance payments. All income figures were adjusted to a 1982-1984-dollar basis. A_{it} also includes a dummy variable indicating whether the county honored a shall-issue right allowing citizens to carry a concealed firearm upon request, and two years of leads and five years of lags on the shall-issue dummy. ϵ_{it} is the regression error. Including leads and lags, the regression had 50 explanatory

variables plus one constant for each county (3,165) for a total of 3,215 explanatory variables. This set was expanded to 58 variables plus county constants when we analyzed the effects of casinos on adjacent counties. Excluding observations with missing data reduced the sample size in multiple regressions to approximately 58,000, leaving more than adequate degrees of freedom for estimation.

We independently estimated each lead and lag of casino opening year (describing the timing of crime effects) without cross restrictions. We weighted regression observations by county population.

V. Results

Before reporting the more sophisticated lag structure discussed above, we begin with a simple dummy variable for whether a county has a casino. Table 2 reports two simple regressions for each crime. The left column for each crime reports the estimated coefficient for the casino dummy variable. The variable *Casino* takes the value of 1 if a casino is operating in the county for the year in question and 0 otherwise. No other explanatory variables are present in the leftmost regression. The regressions all show large, statistically significant elevated crime rates for counties with operating casinos. For example, according to table 2 some counties experience 157 more aggravated assaults annually per 100,000 population. This compares to average aggravated assault crime rates of 188 per 100,000 population in counties without casinos in any year of the sample reported in table 1. The right column for each crime reports the estimate of the casino dummy when year and county fixed effects are the only other explanatory variables included in the regression. In each case the effect attributed to operating casino declines. Aggravated assault, for example, falls from 157 to less than 18. The coefficient estimates are positive and statistically significant for five crimes. The estimated effect is positive for murder and negative for burglary; neither is statistically significant. To summarize the two regressions, when a simple dummy variable specification is used for a casino being open, the estimated casino effect is positive and statistically significant in twelve of the fourteen regressions. The other two results are not statistically different from 0. These before-after results obscure the intertemporal effects, so we now turn our attention to the model that includes leads and lags.

Tables 3 and 4 report coefficient estimates and t -statistics for specifications of (4) that allow for the timing of the effects of casino opening. Table 3 includes year fixed effects and county fixed effects but excludes the control variables A_{it} , whereas table 4 includes these regressors.¹⁵ For example, the estimated coefficient of lag 4 in the table 3 column labeled "Aggravated Assault" indicates that the aggravated

¹⁴ The remaining groups were Hispanics and those between 0 and 9 years.

¹⁵ We report casino variables. Results for the 588 other coefficient estimates for the seven crime regressions are omitted for lack of space because they are used as controls, and because we are primarily interested in the casino variables.

TABLE 2.—CASINO CRIME RATE REGRESSIONS EMPLOYING CASINO DUMMY VARIABLE ONLY

	Aggravated Assault		Rape		Robbery		Murder	
Casino	157.254 (23.04)	17.825 (4.29)	11.521 (17.91)	0.973 (2.04)	86.905 (12.09)	34.175 (10.07)	1.522 (6.88)	0.117 (0.75)
Year fixed effects	No	Yes	No	Yes	No	Yes	No	Yes
County fixed effects	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	57,796	57,796	57,064	57,064	57,877	57,877	57,882	57,882
<i>F</i>	530.68	754.52	320.88	126.60	146.06	212.39	47.30	81.94
Prob. > <i>F</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<i>R</i> -squared	0.0091	0.8147	0.0056	0.7234	0.0025	0.8861	0.0008	0.7500

	Larceny		Burglary		Auto Theft	
Casino	1128.547 (31.88)	218.850 (9.44)	144.373 (7.58)	-23.927 (-1.58)	266.582 (21.72)	217.416 (30.87)
Constant	Yes	No	Yes	No	Yes	No
Year fixed effects	No	Yes	No	Yes	No	Yes
County fixed effects	No	Yes	No	Yes	No	Yes
<i>N</i>	57,876	57,876	57,873	57,873	57,881	57,881
<i>F</i>	1016.63	138.15	57.45	635.32	471.71	472.89
Prob. > <i>F</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<i>R</i> -squared	0.0173	0.7839	0.0010	0.6699	0.0081	0.8328

Notes: Coefficient estimates are additional annual crime incidents per 100,000 population. *t*-statistics are in parentheses.

assault rate was higher by 62.153 offenses per 100,000 population four years after a casino opened in the county. The number of observations for each regression varied from 57,023 to 57,841. The R^2 was between 0.67 and 0.89.

The patterns in both tables show that casino effects tend to increase over time after a lag of 2–3 years. In table 3, which does not include control variables, the estimates on the casino leads are often positive and statistically signifi-

cant, consistent with the common belief that casinos are more likely to be placed in high-crime areas. However, when control variables are included, all of the leads are statistically indistinguishable from 0 except for those on auto theft.

Another key difference is that table 3 shows much larger increases in crime in the lagged years. When the control variables are included in table 4, these larger positive

TABLE 3.—CASINO CRIME RATE REGRESSIONS EXCLUDING CONTROL VARIABLES.

	Aggravated Assault	Rape	Robbery	Murder	Larceny	Burglary	Auto Theft
Lead 2	4.325 (0.61)	1.189 (1.42)	13.178 (2.26)	.725 (2.73)	113.498 (1.64)	33.865 (0.79)	114.440 (9.46)
Lead 1	4.455 (0.64)	0.708 (0.86)	19.067 (3.32)	1.270 (4.85)	160.828 (1.82)	28.071 (0.57)	142.864 (11.98)
Open	8.799 (1.19)	.250 (0.29)	19.142 (3.15)	1.251 (4.53)	229.687 (2.61)	-19.609 (-0.55)	182.095 (14.47)
Lag 1	16.656 (2.24)	1.765 (2.06)	47.031 (7.72)	1.360 (4.91)	315.990 (2.99)	54.171 (0.76)	236.103 (18.69)
Lag 2	3.647 (0.46)	0.684 (0.76)	56.089 (8.63)	1.305 (4.41)	193.729 (0.89)	3.025 (0.03)	225.876 (16.75)
Lag 3	29.953 (3.22)	3.436 (3.23)	81.467 (10.67)	0.801 (2.30)	201.816 (1.51)	13.797 (0.25)	253.046 (15.98)
Lag 4	62.153 (4.76)	7.021 (4.72)	75.755 (7.08)	0.429 (0.88)	460.681 (2.74)	153.209 (2.74)	246.417 (11.11)
Lag 5	124.683 (7.80)	7.076 (3.87)	76.725 (5.84)	-1.496 (-2.50)	715.031 (2.65)	236.992 (2.97)	376.278 (13.80)
Control variables A_i	No	No	No	No	No	No	No
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	57,755	57,023	57,836	57,841	57,835	57,832	57,840
<i>F</i>	562.01	95.50	163.79	63.83	19.25	79.81	358.19
Prob. > <i>F</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<i>R</i> -squared	0.8149	0.7236	0.8865	0.7511	0.7843	0.6730	0.8334

Notes: Coefficient estimates are additional annual crime incidents per 100,000 population. *t*-statistics are in parentheses. We used robust standard errors for larceny and burglary, which the Breusch-Pagan indicated had heteroskedasticity.

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TABLE 4.—CASINO CRIME RATE REGRESSIONS INCLUDING CONTROL VARIABLES

	Aggravated Assault	Rape	Robbery	Murder	Larceny	Burglary	Auto Theft
Lead 2	-3.843 (-0.55)	0.157 (0.19)	6.924 (1.21)	0.438 (1.00)	37.710 (0.63)	16.481 (0.43)	97.006 (8.43)
Lead 1	-8.498 (-1.24)	-0.815 (-1.01)	8.164 (1.44)	0.969 (1.34)	47.645 (0.61)	-6.164 (-0.14)	113.656 (10.00)
Open	0.376 (0.05)	-0.644 (-0.77)	11.218 (1.88)	1.103 (1.37)	148.279 (1.74)	-23.625 (-0.72)	152.659 (12.72)
Lag 1	2.613 (0.36)	0.955 (1.14)	32.588 (5.43)	1.188 (1.68)	173.836 (1.83)	30.661 (0.55)	183.735 (15.24)
Lag 2	-9.739 (-1.25)	-0.267 (-0.30)	39.137 (6.08)	1.181 (1.46)	-0.447 (-0.00)	-51.987 (-0.68)	161.791 (12.53)
Lag 3	20.306 (2.22)	3.339 (3.20)	70.427 (9.30)	1.099 (1.32)	4.132 (0.03)	-48.495 (-0.89)	206.769 (13.60)
Lag 4	42.844 (3.34)	6.503 (4.47)	52.188 (4.93)	0.572 (0.54)	184.855 (1.41)	64.367 (0.92)	161.641 (7.60)
Lag 5	99.982 (6.38)	9.979 (5.59)	65.240 (5.02)	-0.458 (-0.55)	614.695 (1.98)	325.147 (2.30)	271.848 (10.43)
Control variables A_i	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	57,724	56,992	57,805	57,810	57,804	57,801	57,809
<i>F</i>	393.15	129.78	143.37	13.34	42.97	121.18	346.19
Prob. > <i>F</i>	0.0000	0.00000	0.0000	0.0000	0.00000	0.00000	0.0000
<i>R</i> -squared	0.8252	0.7410	0.8913	0.7623	0.7992	0.6997	0.8504

Notes: Coefficient estimates are additional annual crime incidents per 100,000 population. *t*-statistics are in parentheses. We used robust standard errors for larceny and burglary, which the Breusch-Pagan indicated had heteroskedasticity.

estimates are reduced. Because the table 4 estimates have better fit in the lead variables and the added control variables reduce omitted variable bias, we emphasize these results, that show smaller casino effects on crime.

A. Violent Crime

Figure 4 displays the information on violent crime from table 4. The horizontal axis plots the casino opening leads and lags, and the vertical axis plots the coefficient estimates. The vertical lines show the 95% confidence intervals, the range within which the regression indicates the true coefficient should lie with 95% probability.

For aggravated assault, only estimates for the third and subsequent year after opening are significantly above 0, and the trend rises. The estimated high occurs in the fifth year after opening, when the aggravated assault rate is 100 assaults higher per year. This pattern of crime increase is unlike the typical pattern of visitor increases after casino opening. Grinols and Omorov (1996) showed that the number of visitors to Illinois casinos typically rose immediately after opening and reached equilibrium after 6 months or less.¹⁶

Figure 4 for rape shows coefficient estimates that are not significantly different from 0 prior to the opening. However,

¹⁶ In addition to the regressions reported, we ran regressions that included as many as 4 leads and 7 years of lags of the casino opening variable. With few exceptions, leads continued the pattern of being statistically indistinguishable from 0, and later lags showed comparable or greater estimated effects to the fifth year lag. In the case of murder, the sixth and seventh lags continued the pattern of being statistically indistinguishable from 0.

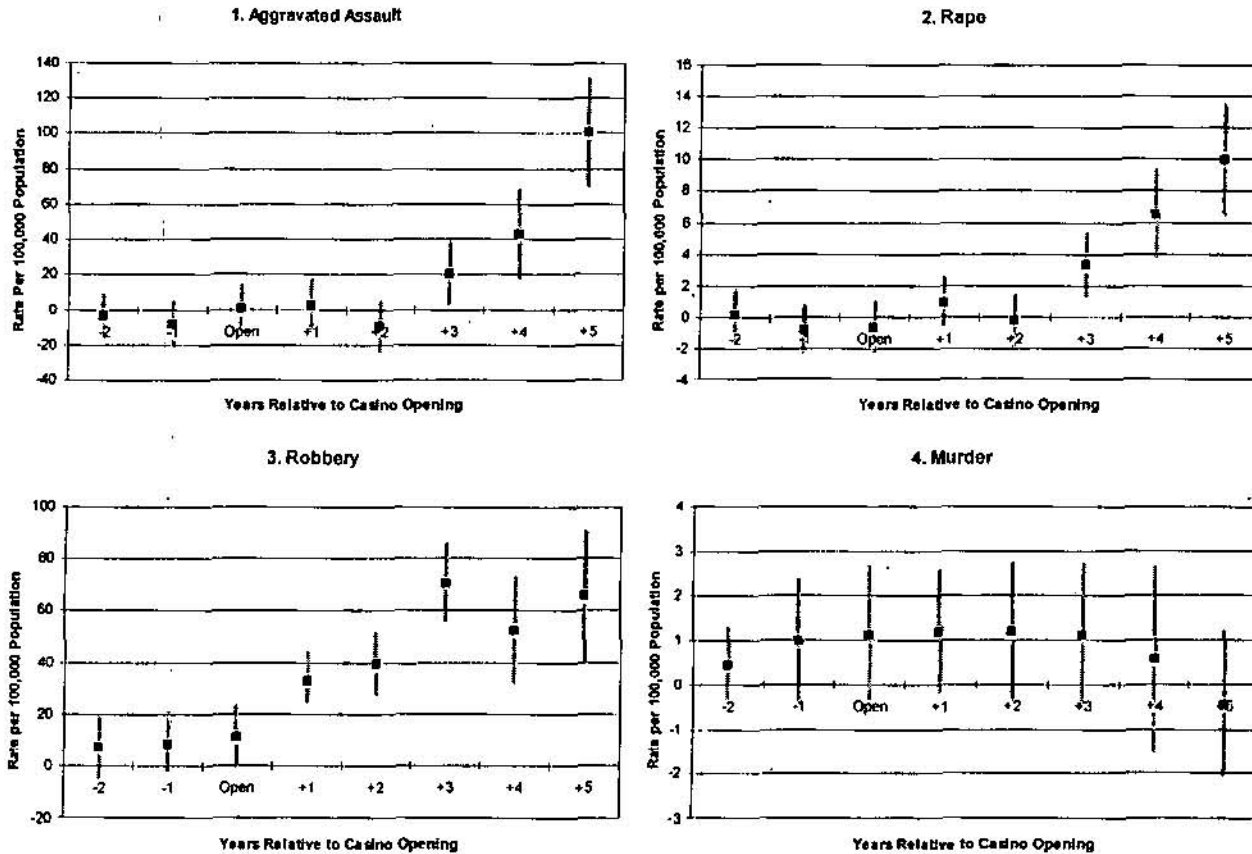
they are positive and significant in the third and subsequent years after the casino opened, rising from the third year. A county that introduces a casino might expect a negligible effect in the first two years after opening, but a higher rate by 6.5 to 10 incidents per 100,000 population in fourth and fifth years after opening.

The pattern for robbery in figure 4 is similar to patterns for aggravated assault and rape, with one important exception—the increase in robbery begins immediately the first year there were approximately 35 more robberies per 100,000 people, which increases to over 60 three years after opening.

As expected, the impact of casinos on murder is smallest among all offenses. Figure 4 shows that casino counties have slightly higher murder rates than noncasino counties both before and after opening. However, murder shows no statistically significant coefficient estimates for any of the casino leads or lags, and the change from before to after is not statistically significant. Gambling-related murders include incidents such as the disgruntled gambler who killed a casino teller when he tried to retrieve his gambling losses, a spouse who fought over the other's gambling losses and was murdered, a parent's gambling leading to the death of her child, murder for insurance, and similar tales.¹⁷ However, because murder is the least

¹⁷ See Jeffrey Bloomberg, Prepared Statement, Hearing Before the Committee on Small Business, House of Representatives, 103rd Congress, Second Session, 21 September 1994, Serial No. 103-104, Washington, DC: USGPO, p. 47. Accounts of the more spectacular gambling-related murders and deaths (most often suicides) frequently appear in the press. *USA Weekend*, February 10-12, 1995, p. 20, for example, describes a

FIGURE 4.—CASINO EFFECTS—VIOLENT CRIME



quently committed crime and most counties have zero murders, murder rates typically have high variance, which makes it difficult to identify effects.

B. Property Crime

Figure 5 displays the coefficient estimates in table 4 for property crimes. The larceny estimates increase from 0 in the second year after opening, to 4.1 in the third, 185 in the fourth, and over 615 in the fifth year after opening. Burglary increases from negative estimates in the second and third years after opening, to 64 in the fourth, to 325 in the fifth. Only the fifth-year estimates are individually statistically significant, so we investigated further the significance of the rising third-, fourth-, and fifth-year coefficient estimates. We checked whether the rising patterns of coefficient estimates in the last three years with the lag 5 estimated coefficients positive and significant persisted or disappeared after the fifth year. Estimates of the sixth- and seventh-year lags were

killing his wife and beating up his daughter in a fight over his gambling away thousands of dollars. The Associated Press, September 3, 1997, reported on a 10-day-old infant in South Carolina who died of dehydration after being left in a warm car for approximately 7 hours while her mother played video poker. A mother in Illinois was convicted of killing her infant children for insurance money because of her gambling.

745 and 1,069 for larceny and 201 and 229 for burglary respectively. Moreover, lags 5 through 7 pass a 5% *F*-test for significance for both offenses.

Figure 5 for auto theft presents a different picture. It is the only crime that showed statistically significant leads, which were positive. After opening, the rates increase slightly a few years and increase substantially after five years. The data indicate that casino counties did not experience the same decreases in auto thefts that noncasino counties did after 1991, when the number of casinos increased rapidly.

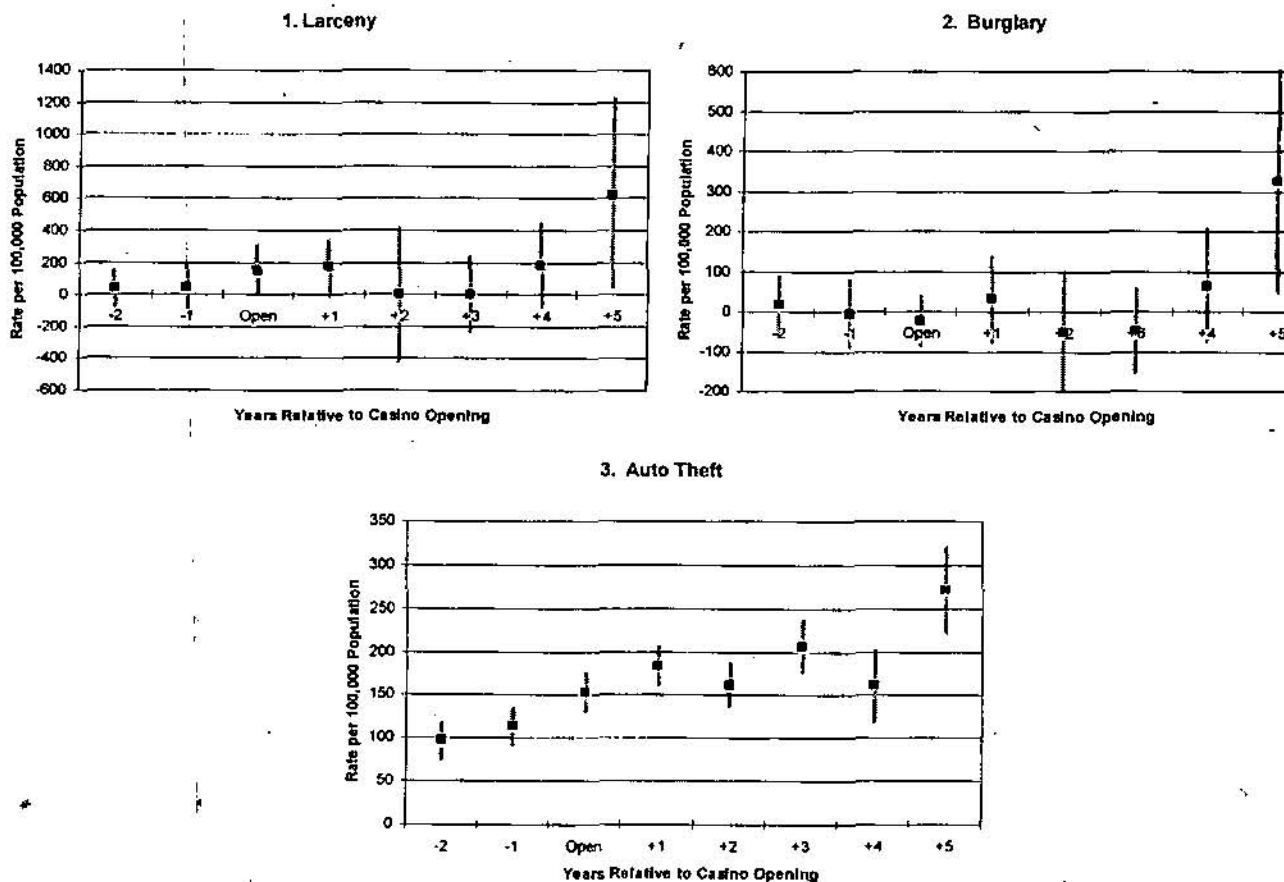
A second factor may be that we were unable to control for Lojack, an electronic tracking system that allows police to quickly locate and recover stolen autos. Ayres and Levitt (1998) found that Lojack accounted for a significant reduction in auto thefts in the 1990s. Because cities that implemented Lojack generally do not have casinos, we may overstate the effect of casinos on auto theft.¹⁹ It is also

¹⁸ A similar divergence in Florida started in 1984 and grew after that, consistent with Florida casino openings. The first Florida casinos opened in two counties in 1982, two more opened in 1988, and the rest opened between 1990 and 1995.

¹⁹ Ayres and Levitt (1998) showed that Lojack had little effect on other offenses, so our results for the other crimes will not be affected.

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FIGURE 5.—CASINO EFFECTS—PROPERTY CRIME



possible that Lojack's use is not yet sufficiently widespread to greatly affect our estimates.

C. Additional Robustness Checks

The precisely correct model of crime is not known. Thus, in addition to the comparison of tables 3 and 4, we considered several additional formulations to test the robustness of the results.

Law Enforcement Variables: All the regressions reported to this point omit law enforcement variables. Although including them reduces omitted variable bias, it also introduces sample bias by significantly limiting the number of counties with available data.²⁰ To examine this tradeoff we included two additional sets of law enforcement control variables. When we included the arrest rate as an explanatory variable, the estimated casino effects for almost every

²⁰ For example, the arrest rate is undefined when there are 0 offenses for a given crime type. Many small counties record no offenses even for property crimes for a given year, and even large counties frequently record no offenses for murder and rape, which consequently produce a large number of missing observations for the arrest rate. For some offenses including the arrest rate eliminated over 30,000 observations. See Lott and Mustard (1997) and Levitt (1998) for more detailed discussions.

year after opening and for almost all crimes were higher than those reported in table 4. Therefore, the table 4 results that we emphasize are biased against the finding that casinos increase crime.

Although arrest rates are often undefined, the problem is even bigger for other law enforcement variables. County level conviction rates and sentence lengths are available for only four states (Mustard, 2003), and annual police employment is unavailable at the county level.

We also included explanatory variables that estimated the probability of capital punishment, which we estimated in four different ways.²¹ When these variables are included, the results are qualitatively the same as for the base regressions. There are slight differences of the estimated effects

²¹ The first was a prorated number of executions in the previous current year divided by the number of people sentenced to death six years ago. The second was the number of executions in the first three quarters of the current year and last quarter of the previous year divided by number of people sentenced to death six years ago. The third is a prorated count of executions in the previous and current year divided by number of persons on death row at that time. The last was the number of executions in the first three quarters of the current year and the last quarter of the previous year, divided by the number of persons on death row at that time. Gittings and Mocan (2003) provided the first two variables, Gittings and Mocan (2001) explain the last two in more detail.

different crimes in different postopening years, but the general qualitative trends are similar.

That the inclusion of law enforcement variables generally increases the estimated casino effects is consistent with reports from law enforcement officials that enforcement expenditures increased substantially when casinos opened. Stephen Silvern (FBI in Atlantic City) documented that expenditures for the Atlantic City Police Department and Prosecutor's Office grew much more rapidly in the late 1970s and early 1980s than similar expenditures in the rest of the state and nation (Federal Bureau of Investigation Conference on Casino Gaming, 1999). The director of the Indiana Gambling Commission reported that Indiana hired an additional 120 state troopers when the casinos opened in 1995.²² Allocations for police services also rose substantially in New Orleans upon introduction of casinos.²³ Law enforcement officials emphasize that to maintain public safety, spending on enforcement resources must increase when casinos open. Because we cannot measure all these additional resources that reduce crime, our estimates without enforcement variables tend to understate the effect of casinos on crime.

Casino–Population–Density Interactions: A natural question is whether the effect of casinos on crime varies with the type of county, such as a rural-urban difference related to population density. To test for a population-density interaction, we multiplied each of the eight casino-opening lead and lag variables by the county population density and reran the original regressions including these eight new variables. The density interaction coefficient estimates were statistically significant as a group at the 1% or better level for all regressions except aggravated assault and larceny, which were significant at the 11% and 46% levels, respectively. With the exception of murder and auto theft, the same rising pattern of crime after casino introduction was observed as found in the original regressions. Crime is not statistically different from zero in the years before casino introduction and immediately thereafter, but begins to rise three or four years after introduction. By the fifth year after casino introduction, a statistically significantly elevated crime rate for both low- and high-density counties appears. Introducing a density effect does not change the prediction of the model. These results give us confidence that the effect of casinos on crime is similar in large and small counties. For auto theft the casino effect is largest for less densely populated counties.

²² John Thar, director of the Indiana Gambling Commission, report at Federal Bureau of Investigation Conference on Casino Gaming (1999).

²³ Lt. Joseph P. Lopinto, Jr., commander of the Gambling Section of the New Orleans Police Department, reported that his department has been significantly resource-constrained since the opening of New Orleans's casinos and the resulting increase in demand for police services (Federal Bureau of Investigation Conference on Casino Gaming, 1999).

D. Summary

We summarize the results in table 4 and figures 4 and 5. First, the casino-opening lead variables suggest that after controlling for other variables casinos were not more likely to be placed in areas that had systematically different crime environments than other regions.

Second, after casinos opened, casino-county crime rates increased relative to the noncasino-county rates. Of the 34 estimated casino effects (one opening and five lags for each of seven offenses), 34 are positive, of which 19 are statistically significant at the 0.05 level, and others are significant at the 0.10 level. In contrast, none of the 8 negative estimates are statistically significant. As expected, murder exhibits no relation to casino gambling.

Third, the time pattern of estimated coefficients implies that the casino effects may change over time. With the exception of murder, all crimes show higher estimates in the last two coefficients (lags 4 and 5) than for the first two (leads 2 and 1). For most offenses, the statistically significant differences tend to appear two or three years after casino opening. Only one estimated coefficient for the year of opening is statistically significant. Estimates of the sixth and seventh lags (run but not reported) are typically positive and statistically significant.

Fourth, the increase over time in casino effect is consistent with the effects outlined in the theory. For example, crime-mitigating influences through increased wages and employment should occur before and shortly after opening. In contrast, the crime-increasing factors are more long-term. Casino-induced changes in population and the effects of negative development grow over time. Also, clinical research shows that problem and pathological gamblers typically take approximately 2 to 4 years to start gambling, become addicted, exhaust alternative resources, and eventually commit crimes. Studies that did not have large datasets or a sufficient number of years of observations after casino opening, and that did not allow for the effects of casinos to change over time, missed these effects. An additional potential explanation of the time pattern is that casinos have an immediate impact on crime, but that impact is ameliorated by a large increase in police resources, which are typically significantly increased when casinos open, but do not maintain the same rate of growth over time. The slightly more immediate impact of casinos on violent crime may be explained in terms of *imported* criminals. It may take less time to habituate to a new casino's location than for people to exhaust their resources.

E. Evaluation

The regressions in table 4, of course, cannot decompose the net number of offenses to assign them to each alternative explanation. Nevertheless, it is instructive to ask how many crimes table 4 would imply per additional P&P gambler. All estimated additional crime incidents were arbitrary.

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assigned to this one source. The coefficient estimates report additional crime incidents per 100,000 population. If x is the coefficient, and y is the change in P&P share of the population, then

$$\frac{x \text{ Offenses}}{10^5 \text{ Capita}} \times \frac{10^{-5}}{10^{-5}} \times \frac{1}{y} \frac{\text{Capita}}{\text{Problem and Pathological}} = \frac{x}{y} \times 10^{-5} \frac{\text{Offenses}}{\text{Problem and Pathological}} \quad (5)$$

The total number of crime incidents estimated in table 4 in the fifth year after casino opening is $x = 1.386.4$. If $y = 0.059$ (as in the numbers reported for Las Vegas, for example), then the average additional P&P gambler would have to commit 0.23 crime incidents per year to account for all additional crime, so that roughly one in four P&P gamblers would have to commit a crime annually. This figure rises to 0.82 if $y = 0.017$ at the other extreme. Thus 20%–80% are reasonable proportions relative to the information reported above that 80% of problem gamblers studied committed civil offenses, 56% had stolen, and 23% were charged with criminal offenses. In contrast, if the calculation suggested that each P&P gambler would be required to commit a dozen crime incidents per year, the numbers would be of a different magnitude.

The estimated coefficients in table 4 also allow us to gauge the fraction of observed crime due to casinos. Summing the estimated number of crimes attributable to casinos for each county, taking into account how many years the casino was in operation, and dividing by the casino counties' total population measures the contribution of casinos to observed crime. Estimates of the share of crime attributable to casinos in 1996 for individual crimes ranged between 5.5% and 30%. Auto theft was the highest, followed by robbery at 23%. The values for the rest of the offenses were between 5.5% and 10%.

We provide three estimates of the implied cost of additional crime. First, we use the cost per victimization figures adjusted to 2003 dollars using the CPI-U to calculate the total social cost of crimes committed in casino counties that are attributable to the casino presence according to the estimated coefficients in table 4 (Miller, Cohen, & Wiersema, 1996, column 4 of Table 9, p. 24). We also report the total social cost for casino counties on a per adult basis. Finally, although the social cost of property crime is not synonymous with the value of the lost property, the latter is nevertheless useful in describing the effect of casinos. The *Sourcebook of Criminal Justice Statistics* (Bureau of Justice Statistics, 2002, table 3.112, p. 298) contains data about the average property loss for four of the offenses in this paper—robbery, larceny, burglary, and auto theft. For those offenses we took the fifth-year lag coefficient estimates for each crime and multiplied them by the average loss per crime adjusted to 2003 dollars using the CPI-U. This produced

property loss numbers per 100,000 population, which can be aggregated to the entire adult population.

In 1996 the total costs for the 178 casino counties exceeded \$1.24 billion per year. If the estimated coefficients from table 4 are applied to a representative county with 100,000 population, 71.3% of which are adults (as is representative of the United States as a whole), then the social costs per adult are \$75 in 2003 dollars. These costs reflect the profile of the lagged effect on crimes experienced by this particular sample of casino counties making up our data. The value of lost property from the four property crimes is \$2.905 million for a population of 100,000 (\$29.05 per adult), which becomes \$5.91 billion when aggregated to the national level for 2003.

We can compare these costs with other estimates that rely on a different methodology. Social costs of casino gambling have commonly been estimated in terms of the average cost imposed on society by a P&P gambler²⁴ multiplied by the number. In the most recent comprehensive study of this type of which we are aware, Thompson, Gazel, and Rickman (1996b) found that total social costs were \$135 per adult in 1996 dollars, of which \$57 (40%) were due to police and judicial-related costs and to thefts.²⁵ Thompson et al. reported that they intentionally "projected numbers believed to be very conservative," and that the crime costs in their sample (Wisconsin) were probably lower than similar counties in other locations. Adjusting crime costs to 2003 dollars their estimate is \$67. Taking into account the differences in samples and methodologies, their estimate is remarkably close to the direct costs estimated here for 1996 (\$75).

Corrective taxes reflect the costs that an industry imposes on society. Assuming crime costs no lower than \$75 (that are crimes other than FBI Index I, such as embezzlement not considered here), crime costs equal to 40% of total social costs, and revenues for a representative casino of \$400 per adult²⁶ each year implies tax rates above 47% of revenues. In a few cases tax schedules for high-end casinos include portions where average tax rates reach these levels.²⁷ Having applied proper taxes, continued operation would be efficient in a Kaldor-Hicks sense.²⁸ If it is feasible to offer gambling in an altered manner that causes fewer P&

²⁴ Some studies group problem gamblers with pathological gamblers and some treat the two groups separately. Costs are computed by learning about the behavior of P&Ps through direct questionnaires and surveys.

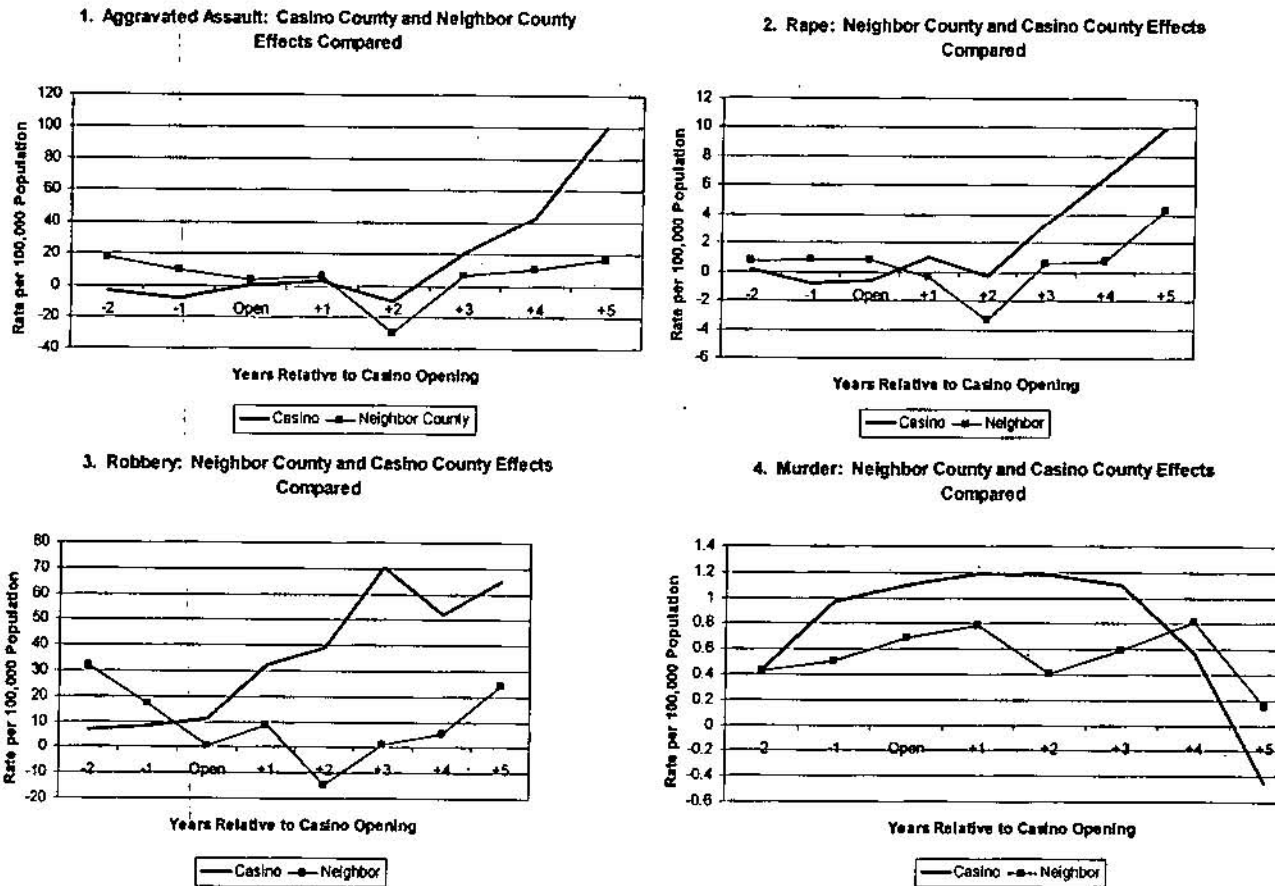
²⁵ The social-cost effect of casino-related serious problem gamblers is \$138,453,113. Dividing this by the number of adults over 20 in casino counties with casinos gives the per adult figure in the text. The proportion of costs due to police, theft, and judicial-related costs is determined from their tables A-2 and A-5.

²⁶ Research for the NGJSC estimated that average losses by adults living near a casino might be in the \$400–\$600 range per year. Other estimates including some by the gambling industry for losses by residents in Las Vegas and Atlantic City to casinos, are lower than \$400, even after adjusting upward for price level changes.

²⁷ In Illinois the average tax rate rises from 43% to 50% as casino annual gross revenues rise from \$250 to \$340 million. Revenues this large imply a very successful casino.

²⁸ This observation is due to the anonymous referee. Whether casinos expand, shrink, or disappear will be immaterial, because whatever c

FIGURE 6.—HOME AND NEIGHBOR CASINO-CRIME EFFECTS: VIOLENT CRIME RATES



gamblers and less crime, then this may be better for society than a response based on taxes.

VI. Do Casinos Simply Attract Crime from Elsewhere?

The estimates suggest that after five years, 8.6% of the observed property crime and 12.6% of the violent crime in casino counties are due to casinos.²⁹ However, do casinos create crime, or merely move it from elsewhere? If the casino-induced increases in crime come only from neighboring regions, casinos produce no new crime. This untested hypothesis is first tested here. To address this question we examine the crime rates of counties that border casino counties. When casinos open, neighboring county crime rates could either decrease, remain the same, or increase. The first possibility supports the idea that casinos move crime from adjacent counties but do not create crime. In the second and third cases, adjacent counties experience no change or an increase in crime, both of which indicate that total crime rises and that casinos create crime.

come occurs will be the result of socially optimal decisions by the firms themselves.

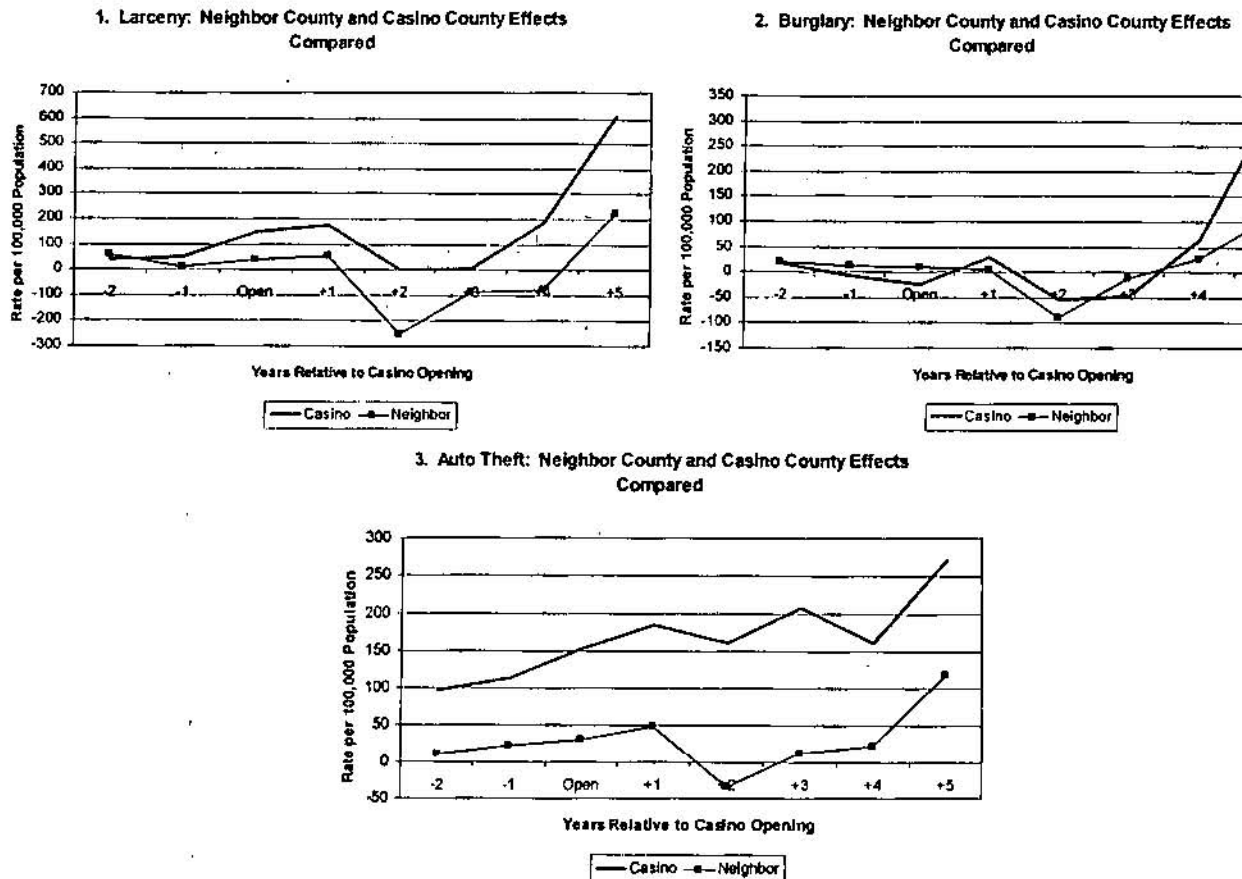
²⁹ Section V C explains the computation of these numbers.

To implement a test strategy we reestimate the table regressions with neighbor leads and lags as additional control variables. We define neighbor lead, opening, and variables, similar to those in tables 3 and 4 for the home county. The neighbor opening variable took a value of 1 if a casino opened in an adjacent county in the given year. Adjacent counties are the relevant unit of measurement because the vast majority of casino patrons come from the local region surrounding the casino. For example, in Illinois over 92% of casino customers come from within 75 miles (Gazel & Thompson, 1996). A few casinos, mainly in Nevada, draw their customers from outside their immediate area. However, our estimates do not rely on these casinos because we identify the effects, because these casinos opened prior to the beginning of our sample.

Figures 6 and 7 summarize the estimated casino effect on neighboring and home counties for violent and property crimes, respectively. When the neighbor variables were included, the host-county crime coefficient estimates were virtually unchanged, in terms of both point estimates and statistical significance. For the years before casinos opened there is virtually no effect of the casino on crime rates in neighboring counties. Of the 42 opening and postopening

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FIGURE 7.—HOME AND NEIGHBOR CASINO-CRIME EFFECTS: PROPERTY CRIME RATES



coefficient estimates on the neighbor variables, 32 are positive, of which 15 are statistically significant at the 0.05 level. Of 21 estimated coefficients for lags 3–5, 18 are positive, of which 8 are individually statistically significant. None of the three negative coefficients for lags 3–5 are statistically significant. All crimes but murder display elevated and rising lags 3, 4, and 5.

For all offense types the data reject the contention that the increase in crime in the casino counties can be attributed to decreases in neighboring counties, and thus support the contention that casinos create crime. *F*-tests reject at the 5% level for all crimes the hypothesis that host-county opening- and lag-coefficient estimates are matched with negative estimates of equal size in neighboring counties. On the contrary, a simple correlation of host- and neighbor-county coefficient estimates for opening and lags ranges from 0.61 to 0.82, with the exception of robbery (0.14). However, there is ambiguity about the extent to which casinos increase crime in neighbor counties. Murder clearly exhibits no spillover effects. For the other offense types the neighbor time pattern is similar to the home-county time pattern. Crime typically increases in later lags, but at half or less the magnitude of the home-county effect, and many of these

neighbor-county effects are not statistically significant until the very last lags. *F*-tests of the proposition that neighbor-county coefficient estimates equal their host-county counterparts are rejected at the 5% level for aggravated assault, rape, robbery, and auto theft, but not for the other crimes.

In our discussion of host-county auto theft rates we speculated as to why the host-county estimated coefficients displayed a different pattern of continually growing crime. This pattern of host-county coefficient estimates did appear closely related to the introduction of casinos. However, auto theft for neighbor counties displays the pattern of crime increases observed for other crimes. There is a statistically significant, discernibly different crime rate three or more years after the opening of the neighboring casino, but not in the years before. The neighbor-county effect suggests a possible spillover of auto theft crimes due to the casino.

VII. Conclusions

Our analysis of the relationship between casinos and crime is the most exhaustive ever undertaken in terms of number of regions examined, the years covered, and

control variables used. Using data from every U.S. county from 1977 to 1996 and controlling for over 50 variables to examine the impact of casinos on the seven FBI Index I crimes (murder, rape, robbery, aggravated assault, burglary, larceny, and auto theft), we concluded that casinos increased all crimes except murder, the crime with the least obvious connection to casinos. Most offenses showed that the impact of casinos on crime increased over time, a pattern very consistent with the theories of how casinos affect crime. The crime-ameliorating effects of casinos through increased employment opportunities and wages for low-skilled people will be concentrated shortly after opening. Also, law enforcement agencies can frequently use casino openings to leverage greater immediate staffing increases, but are unable to sustain this growth. This effect further reduces the immediate impact of casinos on crime. However, over time these effects are dominated by casino-related factors that increase crime. Specifically, problem and pathological gamblers commit crimes as they deplete their resources, non-residents who visit casinos may both commit and be victims of crime, and casino-induced changes in the population start small but grow. The data show that these crime-inducing and crime-mitigating effects offset each other shortly after opening, but over time the crime-raising effects dominate, and crime increases in subsequent years. Furthermore, we believe these estimates to be lower bounds on the true effect because they omit measures of law enforcement, which is typically increased substantially when casinos open. When we include law enforcement measures, the estimated effects are larger.

According to the estimates, between 5.5% and 30% of the different crimes in casino counties can be attributed to casinos. This translates into a social crime cost associated with casinos of \$75 per adult in 1996. This figure does not include other social costs related to casinos, such as crime in neighboring counties, direct regulatory costs, costs related to employment and lost productivity, and social service and welfare costs. Overall, 8.6% of property crime and 12.6% of violent crime in counties with casinos was due to the presence of the casino. Although robbery, the offense that exhibited the largest increase, is classified as a violent crime, it is similar to property crime in that its motivation is financial.

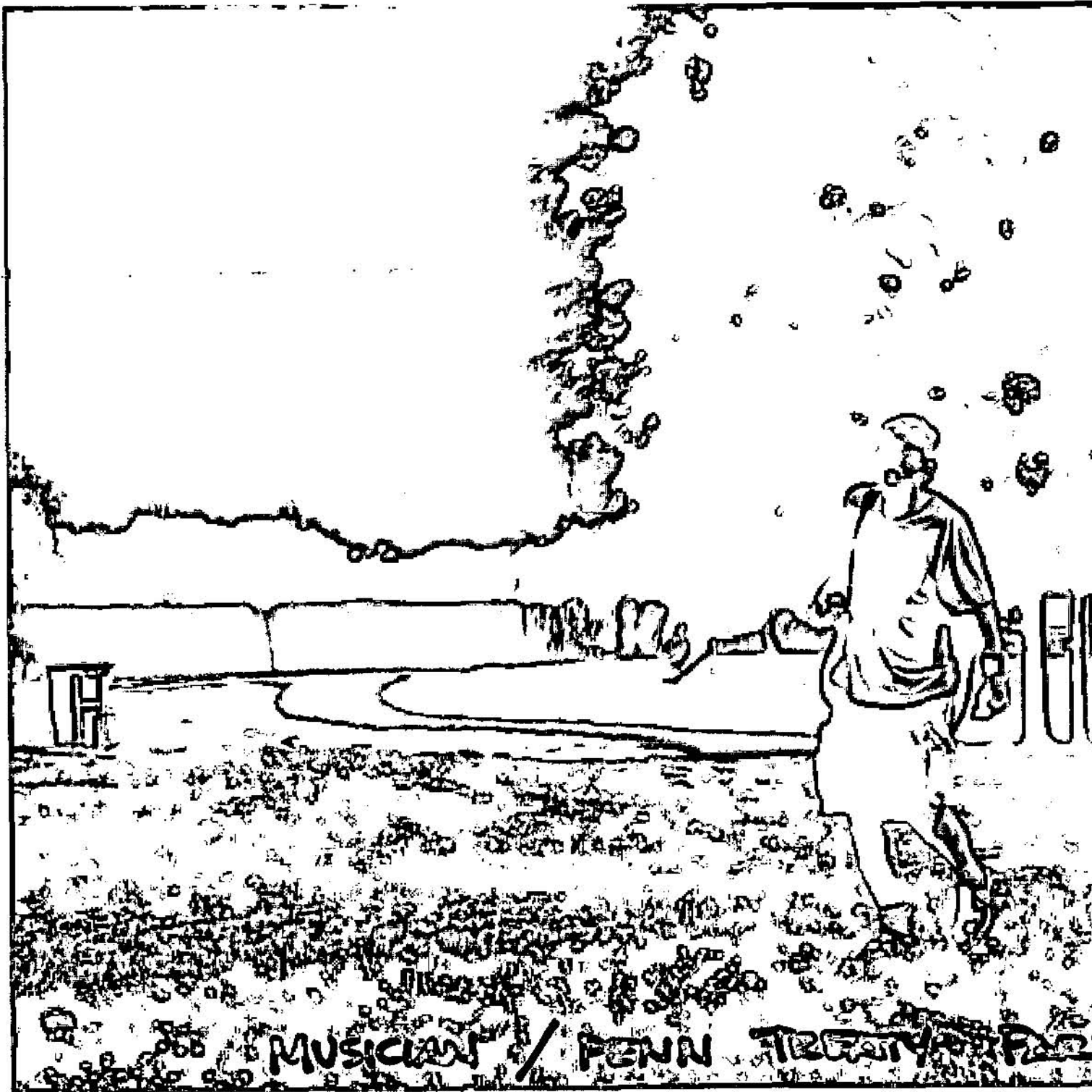
We also investigated whether the crime in casino counties is attracted (moved) from other regions or is created. Counties that neighbor casino counties did not experience compensating crime reductions, indicating that crime was created in casino counties, rather than simply being shifted from one area to another. There is mixed evidence about whether casino openings increase neighbor-county crime rates. Murder rates in neighbor counties are unaffected. The other offenses exhibit increasing neighbor rates, but are generally not statistically significant until the fourth and fifth year after opening.

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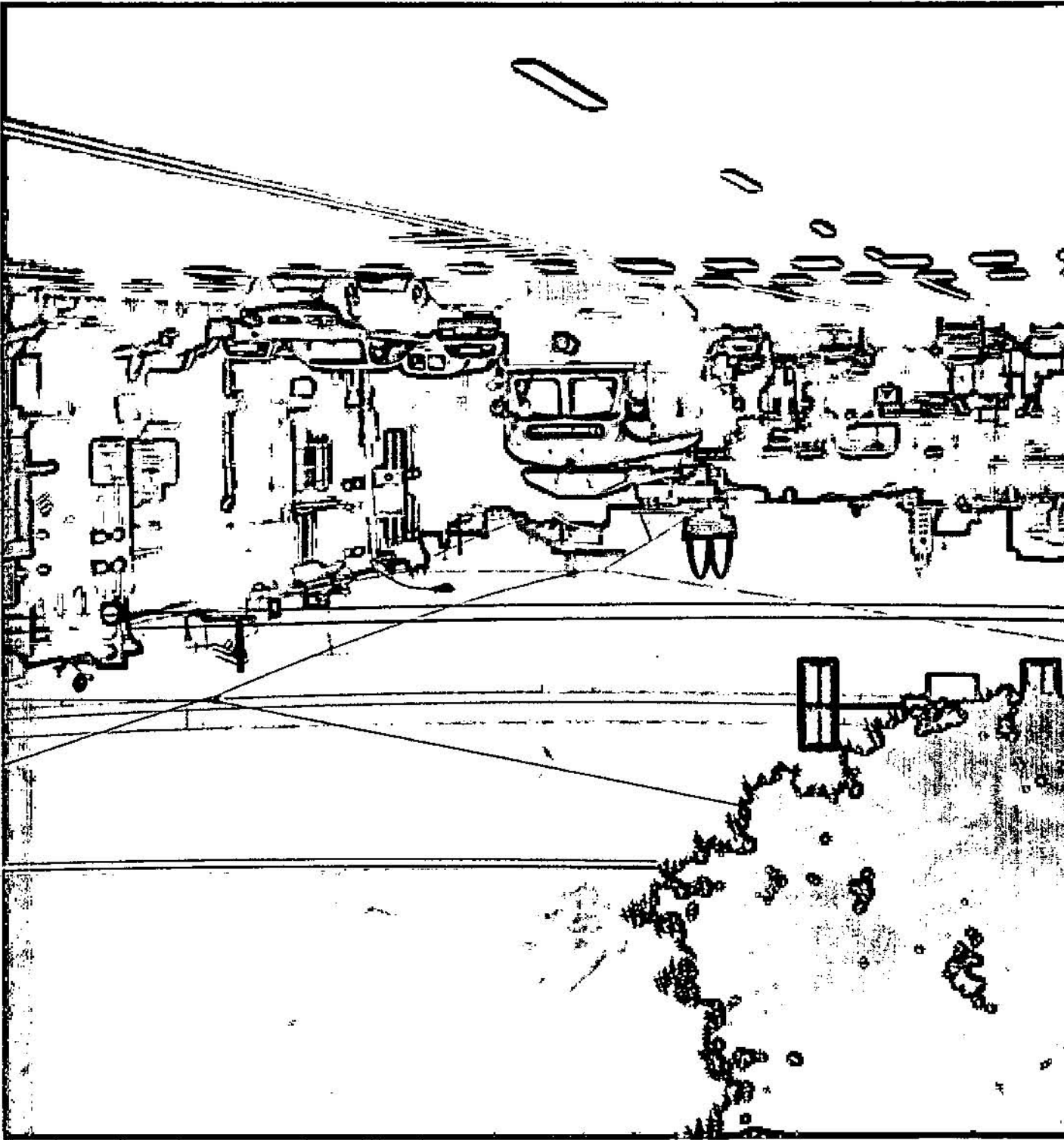
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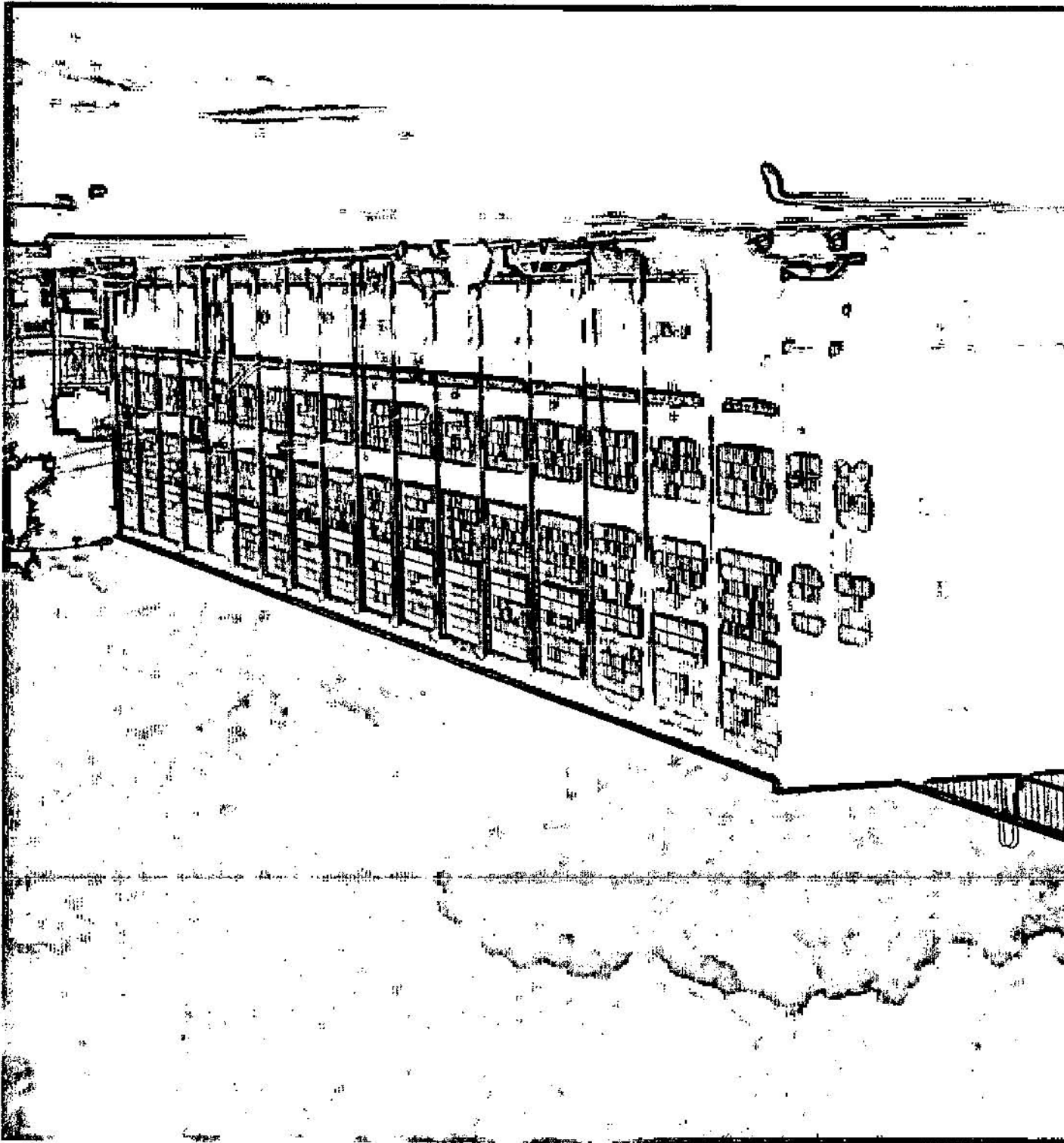
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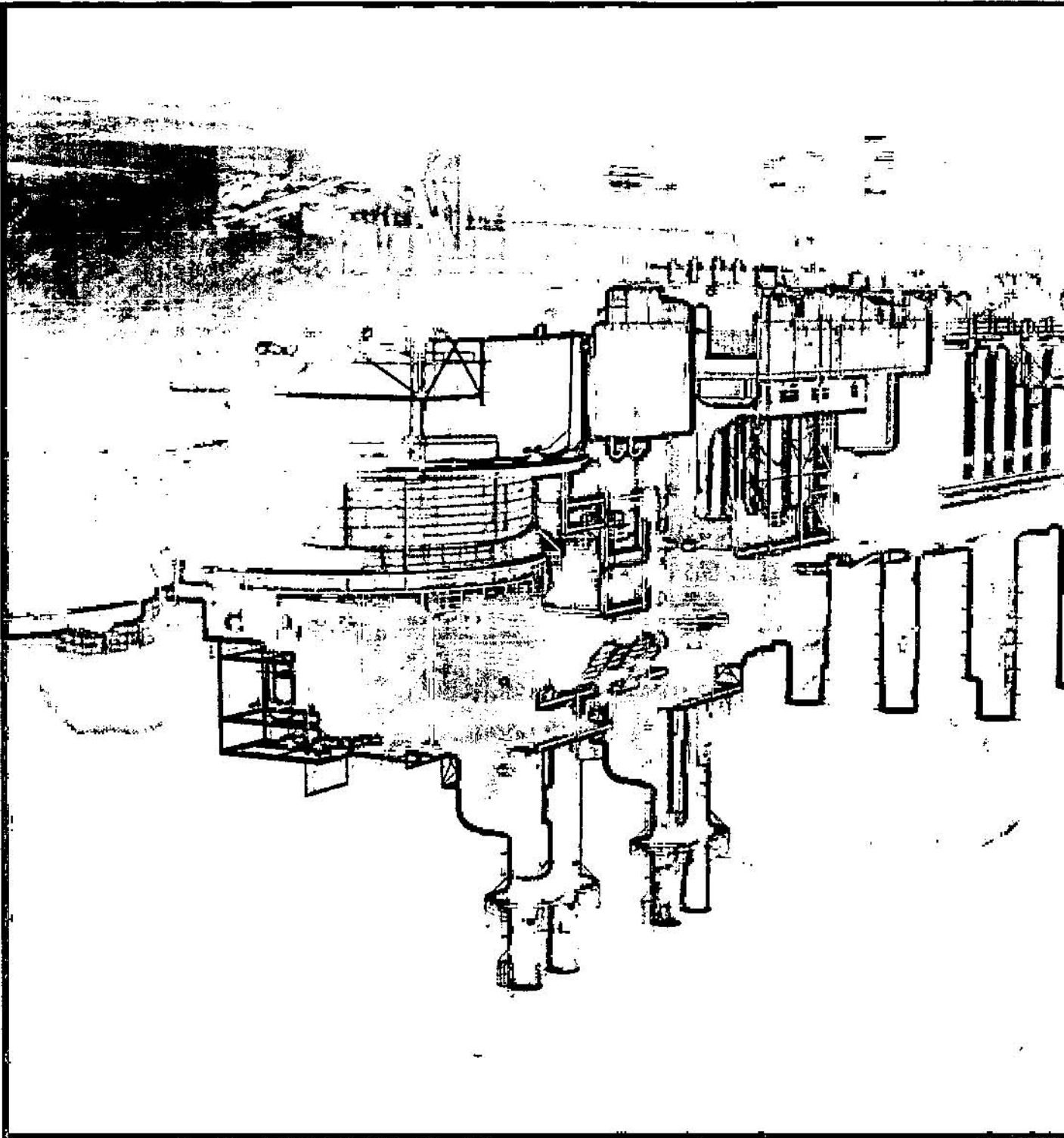


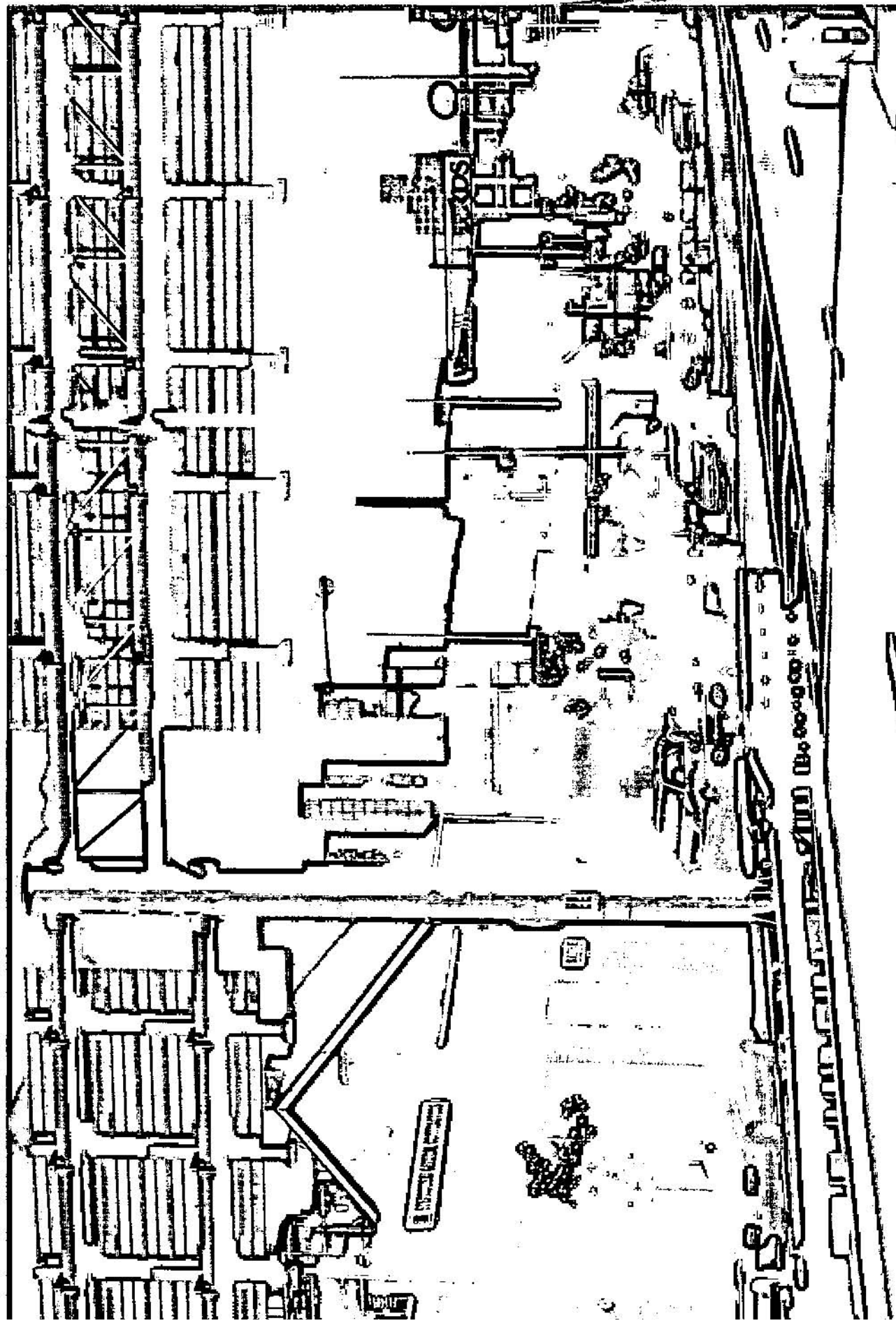
MUSICIAN / PENN. TREATY / PAZ

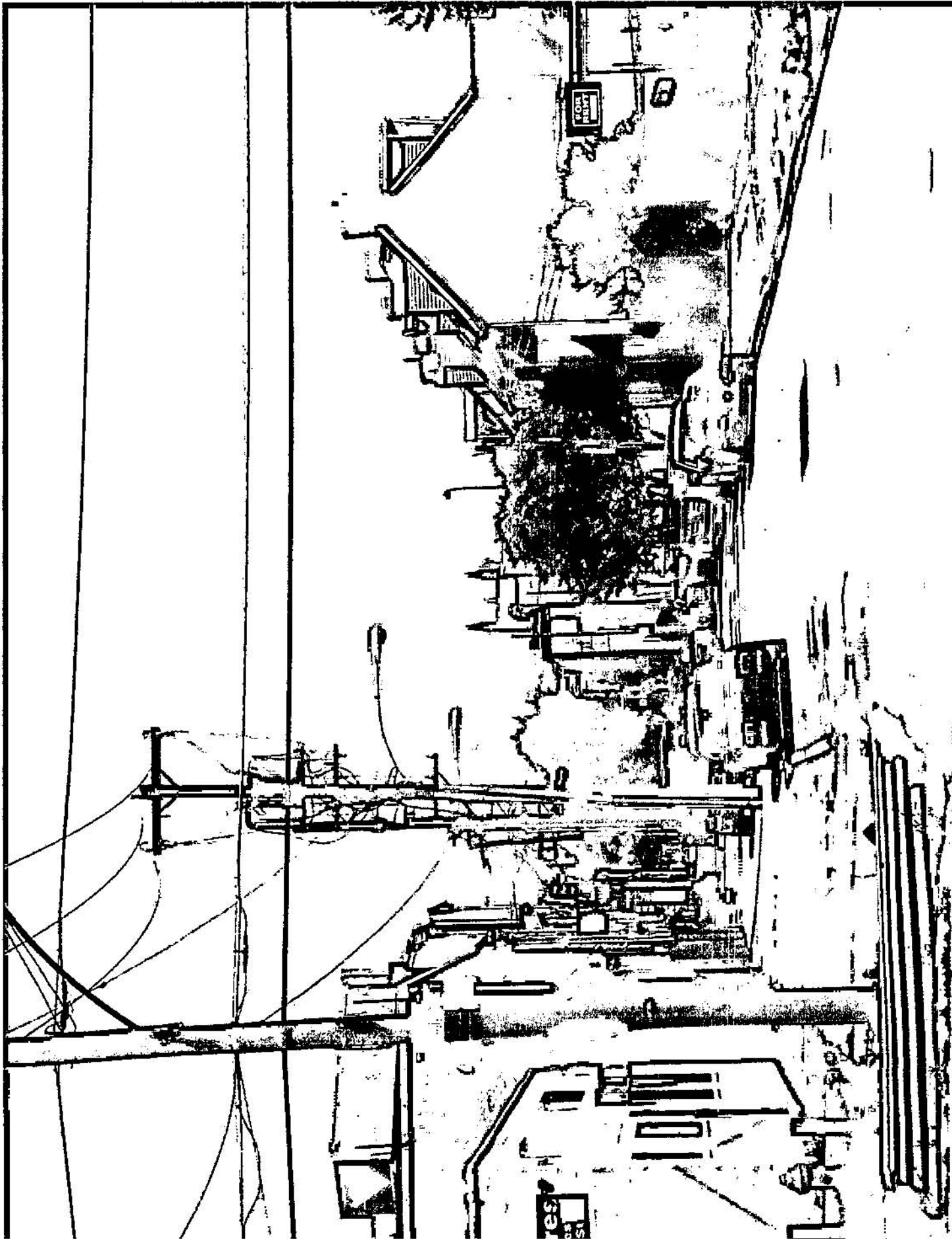


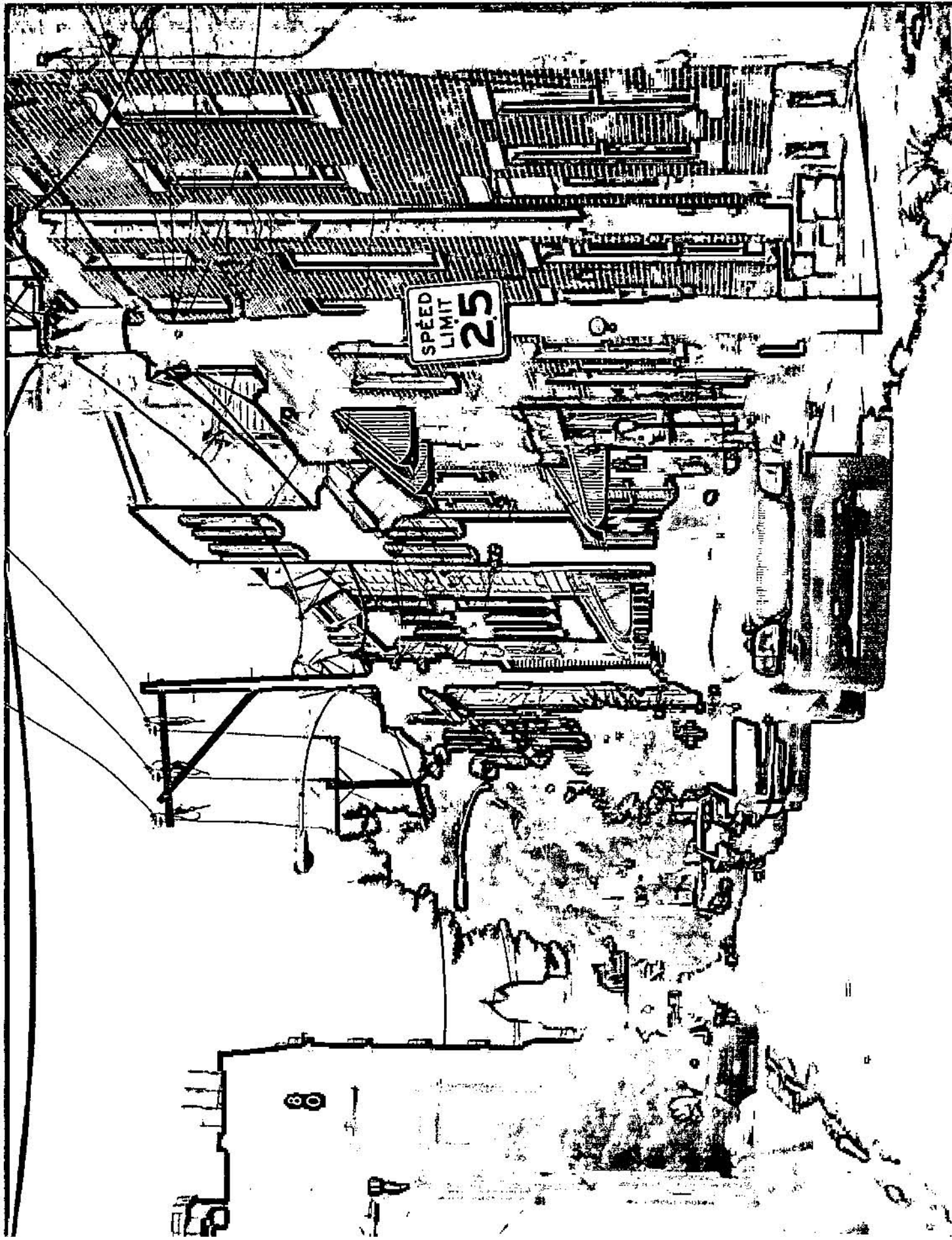




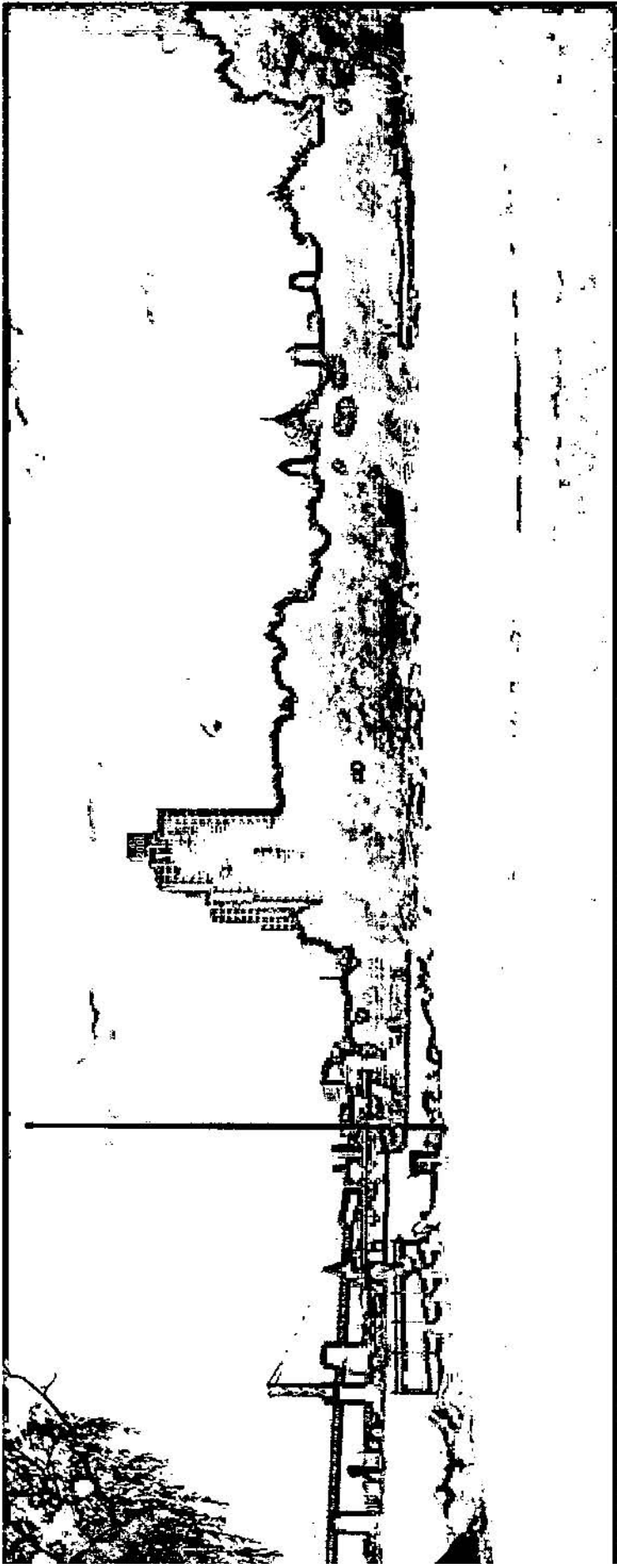




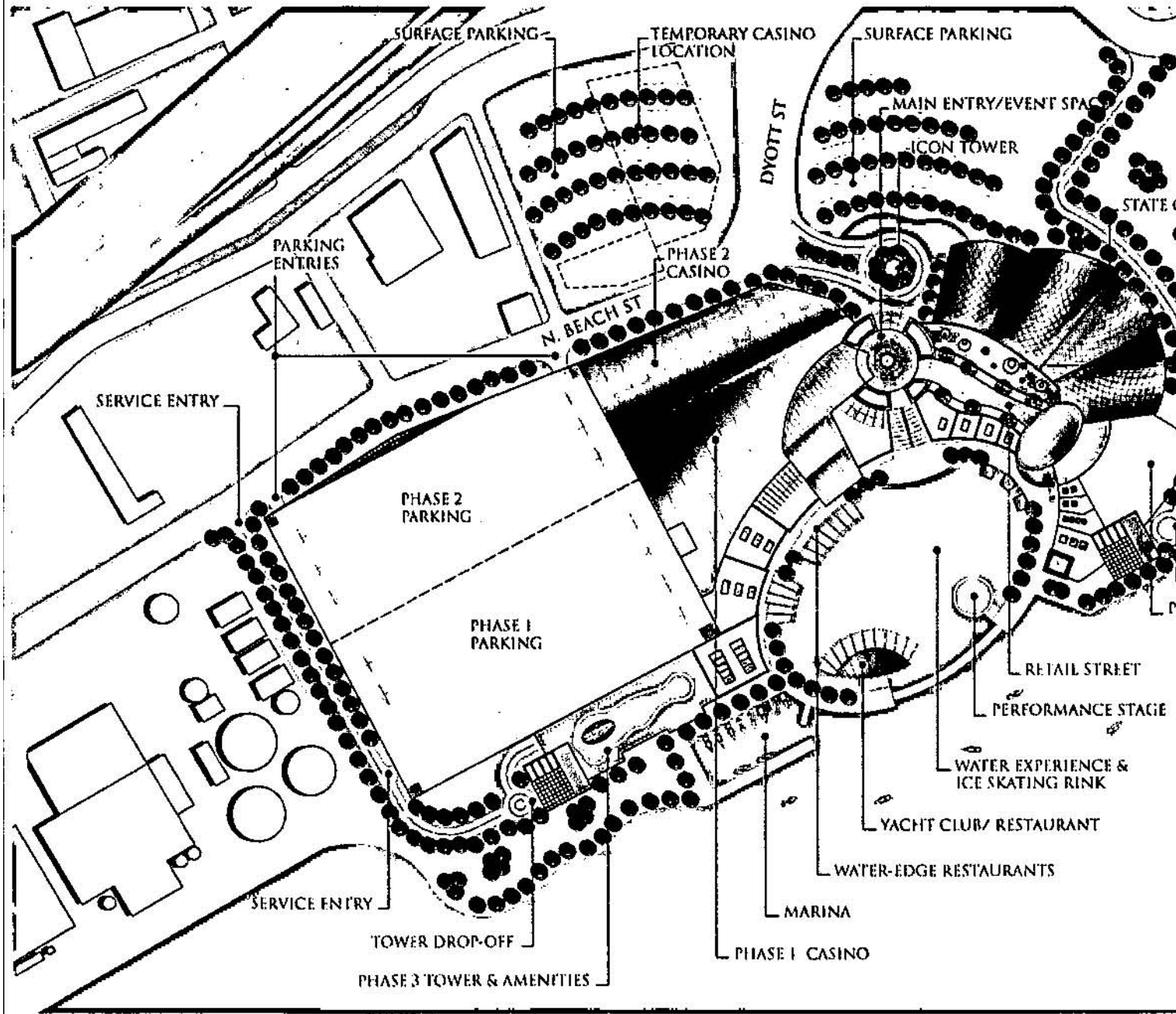


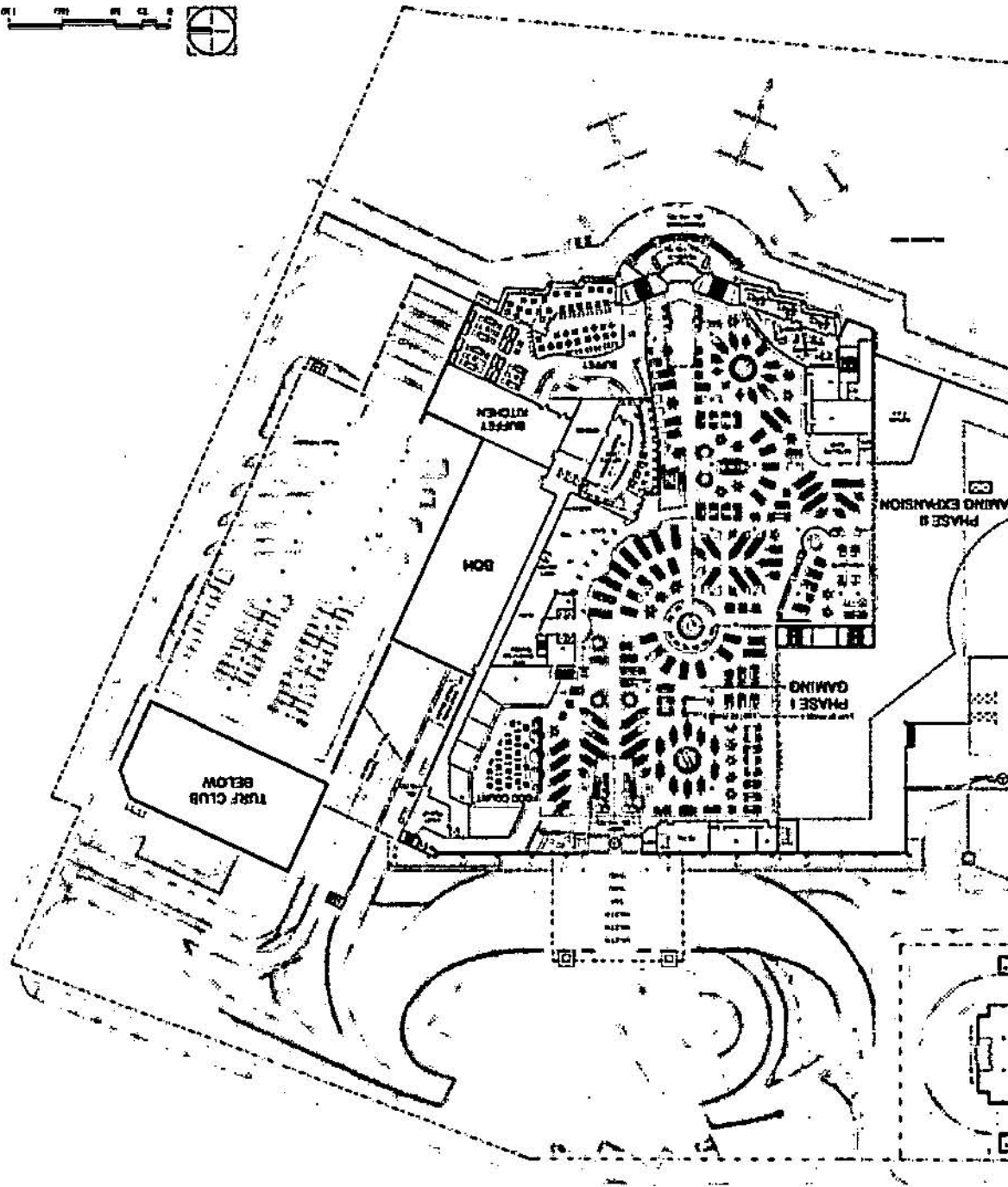




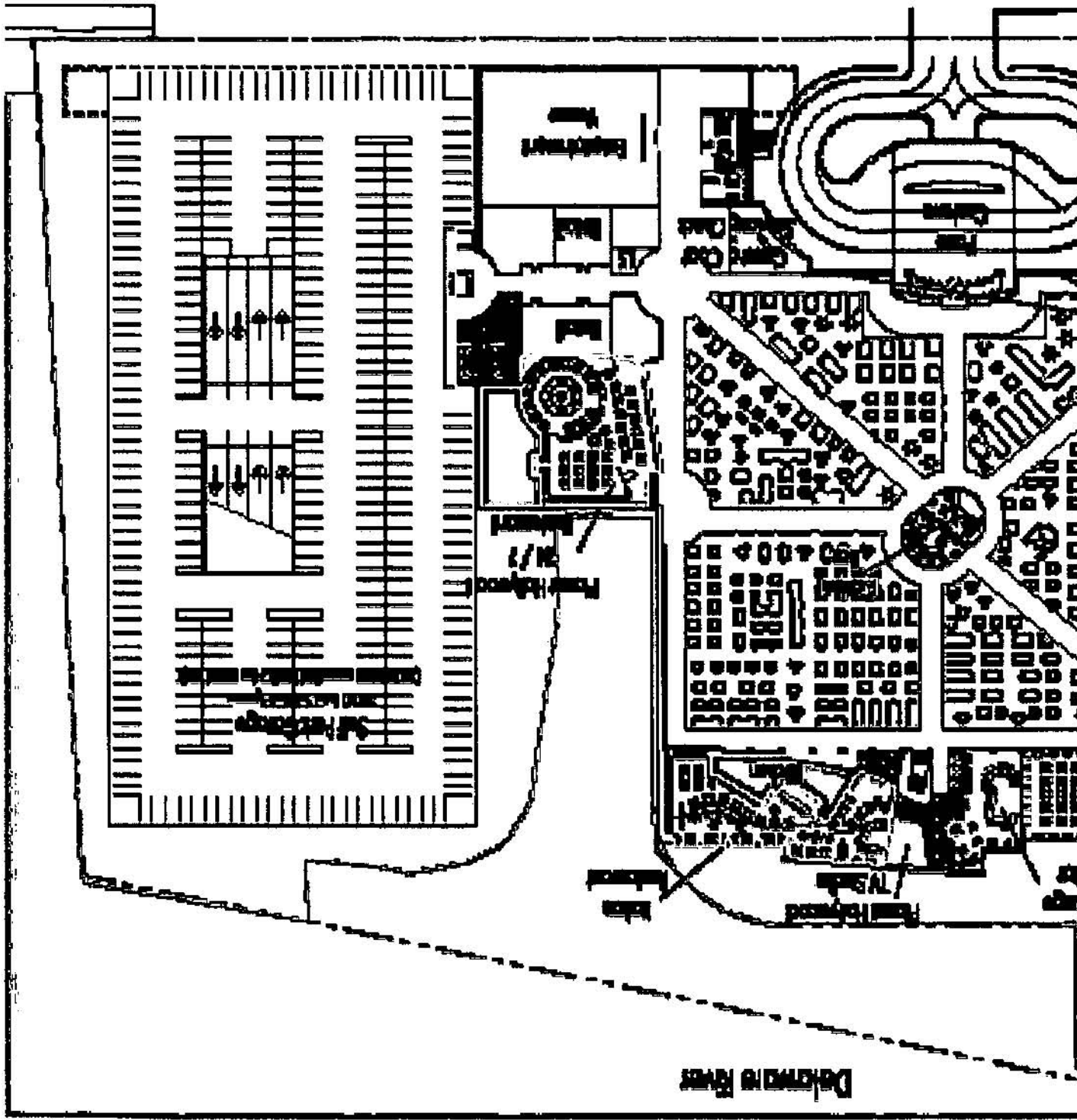


VIEW FROM PENN TREASTY PARK





Columbus Boulevard



Delaware River

