Kane County

Road Improvement Impact Fee Ordinance

Alternative Approaches to Meeting the Transportation Needs of Kane County Citizens

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Prepared by:

Intersect

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I. Introduction

Following a lengthy process, Kane County adopted its Road Improvement Impact Fee Ordinance in January of 2004 with an effective date of April 1, 2004. Development of the ordinance followed the general procedure prescribed by the Illinois Road Improvement Impact Fee Law (605 ILCS 5/5-900 *et. seq.*, referred to herein as the enabling statute) and borrowed heavily from DuPage County's ordinance. The adopted fee schedule raised a number of concerns on the part of some municipal and county officials due to the large variation in fees from one service area to another. In particular, fees for retail developments in the Tri-Cities service area range from 1.6 to 6.4 times those in the surrounding service areas. While these differences are technically valid, they have undesirable consequences in terms of competition between municipalities for retail and other commercial developments and are in some ways inconsistent with the County's comprehensive plan.

To address these concerns, the County Board directed the Division of Transportation to investigate potential ways to address the perceived inequities in the fee schedule. In the months following adoption of the Ordinance, Kane County's transportation planning consultant investigated several alternative sets of fee calculations, and concluded that, while the fees could be made more uniform by altering some of the variables, inherent differences in the county highway system from one area to another would always result in a significant variation in fees between adjacent service areas.

Several Kane County municipalities retained their own consultant to review the various elements of the fee calculations. After a detailed analysis, this consultant concluded that further refinement of the calculations could result in a reduction of the fees in the Tri-Cities service area by approximately 30%. This consultant did not analyze any of the other service areas, however.

Since none of these studies appeared to have much promise in developing a more level fee structure, Intersect was asked to conduct a brief investigation of alternative approaches to calculation of the fees. While a broad range of alternatives was considered, this investigation primarily focused on utilizing a completely different approach to calculation of the impact fees, known as the "facilities-driven" approach. This report summarizes the results of that investigation.

II. Impact Fee Calculations

There are two basic approaches to the calculation of any true impact fee – the "needs-driven" approach, also known as the "inductive" approach, and the "facilities-driven" approach, also known as the "deductive" approach. The two approaches can be used for any type of impact fee, regardless of the type of facility addressed (roads, sewers, parks, schools, etc.) Other names are also in use, but regardless of the terminology, the theories are the same. Both approaches are technically valid and in common use around the country. Both have advantages and disadvantages with respect to their data requirements and flexibility. Because the two approaches have differing data inputs, they will generally result in different fees, even for the same jurisdiction.

One concept that is common to both approaches is the "unit of impact." This is the actual measure of the impact of a development on the type of facility to be funded through the impact

fee. For streets and highways, the unit of impact is peak hour travel generation. For schools, it is school-age children. For parks, the unit of impact is population generation. The fee for a development must be proportional to a rational "unit of impact" or the fee will probably not pass judicial scrutiny. In particular, fees based on the value of property will nearly always be considered "taxes", and not fees, by the courts.

A. The "Needs-Driven" Approach

The "needs-driven" approach is most often used when the agency assessing the fee does not have a firmly established plan for its growth and the resulting facility needs. This approach basically calculates the amount of a facility "consumed" by a development, and charges the development for the cost of that amount of facility. The resulting fees will in theory be adequate to pay for whatever facilities are then needed, as the jurisdiction develops. The following simplified example illustrates the general concept of the "needs-driven" approach:

> A 600-unit single-family development will generate approximately 600 trips during the critical afternoon peak hour of traffic, with an average trip length of 5 miles. Under these conditions, the development generates 3,000 vehicle-miles of travel during the critical peak hour (600 vehicle trips x 5 miles). One lane of suburban arterial has a capacity of approximately 600 vehicles per hour (at level of service "D", generally considered to be the lowest acceptable level of service for design). By dividing the 3,000 vehicle-miles of travel by 600 vehicles per hour per lane, we find that the development "consumes" five lane-miles of roadway. If the cost of an average lane-mile of roadway is $1.2M, the traffic impact of the development is $6M (5 lane-miles x $1.2M/lane-mile). The impact fee for each single-family unit would then be $10,000 ($6M/600 units).

Advantages of the "needs-driven" approach generally include greatly simplified data and planning requirements and fewer points of argument with respect to the calculation methodology. Absent legislative limitations, a true "needs-driven" ordinance can be developed at very low cost. Disadvantages are primarily related to the calculation of the cost per unit of impact. Many facility costs are not linear in nature. For example, a jurisdiction may need only two or three fire stations, but if the fees generated only pay for 2.3 stations, the jurisdiction has to make up the difference from other funds. Costs of different types of facilities can vary widely, as well. While the average arterial road may cost $1.2M/lane-mile, freeways will cost much more, and have a very different lane-mile capacity. Major intersections, interchanges, right of way acquisition, environmental mitigation, and bridges have costs with a high degree of uncertainty; therefore, these project elements are difficult to factor into an "average" lane-mile cost. Jurisdictions usually compromise on a cost per unit of impact that is significantly less than the true ultimate cost of the facilities needed. As a result, a needs-driven ordinance will almost always generate lower fees than a facilities-driven ordinance.

B. The "Facilities-Driven" Approach

The "facilities-driven" approach is generally used when an agency has a well-developed comprehensive plan and expects few revisions to that plan within the time horizon of the ordinance. The fees are calculated by totaling the cost of the planned facilities and allocating their cost to new development based on the number of units of impact of each development. While this approach seems simpler, it is actually more complex due to its data and planning requirements. The following simplified example illustrates the "facilities-driven" approach:

A municipality's ultimate boundaries are established by boundary agreements with all surrounding communities. It anticipates that remaining vacant land will be built out within ten years. The community's comprehensive plan includes hundreds of acres of new residential and commercial developments that are expected to generate an aggregate 60,000 vehicle miles of travel during the afternoon peak hour. Detailed traffic modeling indicates that road improvements totaling $120M will be necessary to accommodate that anticipated traffic at an acceptable level of service. Fees will therefore be assessed at $2,000 per vehicle-mile of travel. ($120M / 60,000) A single family home would then be assessed a fee of $10,000, assuming one peak hour trip and an average trip length of five miles ($2,000 x 1.0 x 5.0). Office space would be assessed at a rate of $21,000 per 1,000 square feet, assuming 1.5 peak hour trips per 1,000 square feet and an average trip length of seven miles ($2,000 x 1.5 x 7.0).

The principal advantage of the 'facilities-driven" approach is that it virtually guarantees that sufficient funding will be generated to meet the agency's needs, provided the comprehensive plan is followed. Another significant advantage is that fees and facility costs will always be in balance in each service area. The principal disadvantages of this approach are its extensive data collection, planning and modeling requirements. Another disadvantage occurs if the agency does not have control over land use decisions. In this case, there is a risk that a major change in land use could cause an imbalance in the fee calculation. For large jurisdictions, such as a county, this is less of a concern as even relatively large land use changes may cancel each other out. Frequent updates to the planning assumptions (as is required by the enabling legislation) will also mitigate changes made by other jurisdictions.

C. Issues Specific to Road Improvement Impact Fees in Illinois

The simplified examples presented above ignore a number of factors required to be considered under Illinois law. Several are spelled out in the enabling statute. These include consideration of donations of land and road improvements, expected tax revenues that are dedicated to road improvements, and other sources of revenue for road improvements. Also, the enabling statute requires that the fees be "specifically and uniquely attributable to the traffic demands generated by the new development paying the fee." Among other things, this clause requires that the calculations adjust for the proportion of the trip length that occurs on roads under the jurisdiction of the agency imposing the impact fee (unless the fees are to be expended without regard to jurisdiction).

The enabling statute also requires the establishment of "service areas" within which the fees are uniquely calculated, collected and spent. It also requires that each fee payer receive a "direct and material benefit" from the fees paid. This has generally been held to mean that the service areas need to be small enough to ensure that impact fee funded road improvements anywhere in the service area provide at least a minimal benefit to every development in the service area. For small jurisdictions, a single service area may be sufficient to meet this test. For larger jurisdictions, such as a county, multiple service areas will almost certainly be necessary.

Finally, for Illinois jurisdictions, the choice between "needs-driven" and "facilities-driven" need not be driven by cost. The statute requires all jurisdictions to complete a very comprehensive planning process prior to adopting an ordinance, so the cost advantages of the "needs-driven" approach are not present. In fact, a careful reading of the statute shows that its original authors had the "facilities-driven" approach in mind.

III. Existing Kane County Ordinance

Early in the development of Kane County's current Road Improvement Impact Fee Ordinance, the decision was made to follow DuPage County's lead and utilize the "needs-driven" approach. This decision was made due to the fact that DuPage is the only county in Illinois to have adopted a road improvement impact fee and also due to DuPage's successful defense of its ordinance shortly after its adoption in 1989. In addition, Kane County decided to utilize the Planning Partnership Areas as its Impact Fee Service Areas. Although it could not have been accurately predicted at the time, these two decisions ultimately led to the large disparity in fees between service areas and the current concerns on the part of several Kane County municipalities.

Under the "needs-driven" formula for a road improvement impact fee, two factors will vary from one service area to another. These are the trip length and the proportion of overall travel on the roadway system to be covered by the fee. In the current Kane and DuPage County ordinances, the trip length is based on a household travel survey performed by the Chicago Area Transportation Study (CATS) in 1990. CATS is currently evaluating vendor proposals for a new Household Travel Inventory to be completed in 2007; while it would be desirable to use this information in an update to the ordinance, its availability is not critical.

The second factor represents the percentage of overall travel on the Kane County highway system within the service area. Variations in this factor depend on how many county highways are located in the district and how heavily traveled they are. This factor can be influenced significantly by the location of the service area boundaries, but with the current distribution of roads under county jurisdiction, there will be significant differences between service areas no matter where the boundaries are drawn. This variance could be virtually eliminated, however, by making all arterial roadway improvements eligible for impact fee funding.

An analysis of the data inputs to the current impact fee formula in Kane County reveals that approximately two thirds of the variation in fees between districts is due to the variance in %VMT.

Service Area	Trip Length (Retail – 50K to 300K sq. ft.)	%VMT
Aurora Area	3.1	9.41
Campton Hills	2.2	34.08
Greater Elgin	3.5	15.06
Northwest	1.5	10.44
Southwest	5.2	20.02
Tri-Cities	3.6	45.79
Upper Fox	3.5	14.38
West Central	4.7	6.67
Standard Deviation / Mean	.352	.699

IV. Other Illinois Ordinances

Only three other Illinois jurisdictions, DuPage County, the City of Naperville, and the Village of Schaumburg, have adopted road improvement impact fees under the enabling statute. As noted above, DuPage County's ordinance was the model for the current Kane County ordinance. DuPage County utilizes the "needs-driven" approach. Originally, DuPage County's service area boundaries were drawn with consideration for municipal boundaries and transportation corridors. This configuration led to large disparities in fees, and also created imbalances in revenues and expenditures, since several of the service areas had few county highways. The service area boundaries were ultimately amended to coincide with township boundaries. DuPage County was the first entity to enact an impact fee under the enabling statute, and was the first to be tested in court. The Northern Illinois Homebuilders challenged DuPage's ordinance and the enabling statute and the county prevailed all the way to the Illinois Supreme Court.

The City of Naperville was next to adopt an impact fee. This ordinance was a replacement for the City's previous "60-40" plan, which required developers to pay for 60% of the cost of improving arterial and collector roads across their frontage. The City elected to follow the "facilities-driven" approach and enacted their ordinance in 1990. Naperville has only a single service area; however, its ordinance includes a provision that developments within the Will County portion of the community have to pay an additional fee for improvements to Will County Highways. No additional collection is made in DuPage County since that county has its own ordinance. Naperville's ordinance has been challenged several times, generally on procedural grounds, but has remained virtually unchanged since the time of adoption (other than the regular updates required by statute).

The Village of Schaumburg's impact fee is limited in scope to two commercial districts in the Village. It also follows the "facilities-driven" approach. Schaumburg's ordinance illustrates the flexibility of the "facilities-driven" approach in its ability to meet the planning objectives of a unit of government.

Will County is considering a road improvement impact fee and has begun some of the planning necessary for adoption of an ordinance. We are unaware of any other unit of government in Illinois that has adopted a road improvement impact fee under the enabling statute. Many units of government, however, negotiate for developer donations of right of way and road improvements as a condition of annexation or access to an access-controlled highway.

V. Implications of the Facilities-Driven approach for Kane County

As part of this assignment, Intersect has performed a preliminary analysis of the feasibility of Kane County's use of the "facilities-driven" approach for its road improvement impact fees. A simplified model was developed which calculates the impact fee per peak-hour trip for various scenarios. Like the model used to develop the current fee schedule, we have divided the county into 780 Traffic Analysis Zones (Figure 1). Each of these zones has corresponding traffic growth from households (Figure 2) and employment (Figure 3). All projects in the 2030 Plan have also been allocated to T-Zones (Figure 4). Within the model, T-Zones can be aggregated in any combination to form Service Areas. The model uses this data to estimate an impact fee per

peak-hour trip within each service area. Variables between scenarios include which projects are eligible for impact fee funding, the percentage of funding for each project, and the service area boundaries. The model utilizes the population and employment forecasts developed for the current Kane County ordinance. Several factors that would be included in a final impact fee ordinance, such as trip length and tax credits, are not included in this preliminary analysis.

Several scenarios have been considered, including limiting the funded road improvements to regionally significant projects, and using fewer service areas. The goal was to determine if a new combination of assumptions could result in a more uniform fee schedule. For this study, five scenarios have been analyzed in detail, as indicated in the table below:

Scenario	Service Areas	Projects
1.	Three E-W (Figure 5)	IL-47 and Fox River Bridge Corridors
2.	Three E-W (Figure 6)	All 2030 Plan Projects
3.	Three E-W (Figure 6)	All County Projects
4.	Three E-W (Figure 6)	All SRA and Bridge Corridor projects regardless of jurisdiction
5.	Seven (Figure 7)	All SRA and Bridge Corridor projects regardless of jurisdiction
6.	Three N-S (Figure 8)	All SRA, Principal Arterial and Bridge Corridor projects regardless of jurisdiction

The estimated gross impact fees per PM peak hour trip for each scenario as calculated by our model are provided in Tables 1 through 6. As can be seen, all of the scenarios analyzed result in less variation in fees than the current ordinance. By adjusting service area boundaries and the eligible projects, we believe the fee schedules could be brought within a 30% variance from one service area to another, if that was the County's goal.

VI. Other Refinements for Consideration

As Kane County considers an update to its Road Improvement Impact Fee Ordinance, the following features could also be considered:

- Exempt urban downtown areas as economic development zones
- Exempt developments meeting the State of Illinois' definition of "affordable housing"
- Establish a sliding fee schedule reflecting other goals of the 2030 Land Resource Management Plan, such as mixed-use development, walkable downtowns, and compact-building design
- Base impact fee funding eligibility on functional classification rather than jurisdiction

Incorporation of some or all of these features would better integrate the impact fee ordinance as a working element of the County's comprehensive plan, whether or not the county chooses to utilize the facilities-driven approach to calculating impact fees. Only the last feature, however, would result in any significant reduction in the variance in fees between service areas.

VII. Work Plan and Schedule for Implementation

Following is a suggested work plan that Kane County could use as a guide if it chose to perform a complete update of its impact fee ordinance using either the "facilities-driven" or the "needs-driven" approach.

Task	Tentative Schedule	Description
1	7-8/05	Staff and Leadership review of options
2	7/25/05	Presentation to Transportation Committee on Impact Fee Alternatives
3	8/22/05	Transportation Committee consideration of alternatives and any needed consultant contracts
4	9/13/05	County Board consideration of alternatives and any needed consultant contracts
5	9/28/05	Advisory committee meeting. Discussion of process and alternatives to be considered by the committee, including highway jurisdictions and functional classifications to be included in fees, exemptions, economic development and farmland preservation considerations, and service areas.
6	9-12/05	Update of land use assumptions. Under the facilities-driven approach, these assumptions become critical to the development of the impact fees; therefore the update needs to be realistic and developed in close cooperation with municipalities and the development community. While the data from the 2030 plan can be used as a starting point, the enabling statute requires the horizon year for the land use assumptions and comprehensive road improvement plan to be ten years from the date of adoption of the fees. For a comprehensive update, that means the horizon year of the study will be 2016. Data for both 2006 and 2016 need to be prepared in order to perform the fee calculations. Because the rate of development is not linear in each service area, a straight line interpolation of the 2030 data is not appropriate. Assumptions regarding rates of development will have to be coordinated with municipalities as part of the public process.
7	10/05	Advisory Committee meeting – status update and discussion of alternatives
8	10/24/05	Transportation Committee recommends date for public hearing on land use assumptions to County Board

Task	Tentative Schedule	Description
9	11/05	Advisory Committee meeting – Land use assumptions
10	11/8/05	County Board establishes date for public hearing on land use assumptions. Advertisements made in accordance with enabling legislation
11	12/05	Advisory Committee meeting – land use assumptions
12	12/20/05	Public Hearing on revised land use assumptions
13	12/05-1/06	Advisory Committee meetings – discuss public hearing comments and possibly make recommendation to County Board
14	1/17/06	Advisory Committee meeting – recommendation to County Board on land use assumptions – last available date.
15	1/23/06	Transportation Committee meeting – recommendation to County Board on land use assumptions.
16	2/13/06	County Board adopts land use assumptions
17	1-6/06	Update traffic modeling and develop revised Comprehensive Road Improvement Plan. Verify scope, limits, and cost estimates of potential CRIP projects. Develop revised trip lengths based on new CATS household travel inventory. Update tax credit factors. Develop revised ordinance text. Develop and verify fee calculation model. Identify potential CRIP and service area scenarios and perform corresponding fee calculations.
18	2/06	Advisory Committee meeting to review CRIP goals and methodology.
19	3-5/06	Advisory Committee meetings to review and recommend proposed CRIP projects and fee calculation methodology. Consider and make recommendations for exemptions for economic development and affordable housing, and review opportunities to further goals of the 2030 land resource management plan.
20	5/22/06	Transportation Committee recommends date for public hearing on CRIP and adoption of impact fees
21	6/13/06	County Board establishes date for public hearing on CRIP and adoption of impact fees
22	7/19/06	Public Hearing on CRIP and adoption of impact fees

Task	Tentative Schedule	Description
23	7-8/06	Advisory Committee meetings to make recommendations to County Board on CRIP and impact fees
24	8/17/06	Advisory Committee makes recommendation to County Board on CRIP and impact fees -- last available date.
25	9/25/06	Transportation Committee meeting to make recommendations to County Board on CRIP and impact fees
26	10/10/06	County Board adopts revised ordinance
27	12/1/06	Effective date of revised ordinance

VIII. Summary and Recommendations

With the recent adoption of the *2030 Land Resource Management Plan* and the *2030 Long Range Transportation Plan*, Kane County has an opportunity to develop a road improvement impact fee ordinance that is fully integrated with and supports the goals of the County's Comprehensive Plan, while fully addressing existing concerns regarding inequities between service areas. Intersect is of the opinion that the County should move forward with implementation of a complete update of its ordinance following the "facilities-driven" model.

Figures and Tables

Approximation of Total Impact Fee per Peak-Hour Trip Generated

Scenario 1: Three E-W Service Areas, Route 47 and Bridge Corridor Projects only. See Figure 5 for Service Area Map.

Service Area	Home-Based Trips	Work-Based Trips	Total New Trips	Project Cost ($1,000)	Cost per Trip ($)
1	9,653	36,930	46,582	177,036	3,801
2	10,333	26,928	37,261	237,374	6,371
3	11,389	11,994	23,383	133,590	5,713
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-
	31,374	75,852	107,226	548,000	

Note:

The cost per trip found in this table is roughly equivalent to the gross impact fee per peak hour trip before credits are applied for outside funding sources, gas tax credits, and any other incentives or discounts granted by the County Board.

One peak hour trip is generated by approximately one single family home, 500 square feet of retail space, 700 square feet of general office space, or 2,000 square feet of warehouse. Fees would be allocated to various uses on the basis of their peak hour trip generation rate.

Table 1

Approximation of Total Impact Fee per Peak-Hour Trip Generated

Scenario 2: Three E-W Service Areas, All 2030 Projects. See Figure 6 for Service Area Map.

Service Area	Home-Based Trips	Work-Based Trips	Total New Trips	Project Cost ($1,000)	Cost per Trip ($)
1	14,534	43,086	57,620	1,067,832	18,532
2	5,451	20,771	26,222	624,332	23,809
3	11,389	11,994	23,383	864,336	36,964
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-
	31,374	75,852	107,226	2,556,500	

Note:

The cost per trip found in this table is roughly equivalent to the gross impact fee per peak hour trip before credits are applied for outside funding sources, gas tax credits, and any other incentives or discounts granted by the County Board.

One peak hour trip is generated by approximately one single family home, 500 square feet of retail space, 700 square feet of general office space, or 2,000 square feet of warehouse. Fees would be allocated to various uses on the basis of their peak hour trip generation rate.

Table 2

Approximation of Total Impact Fee per Peak-Hour Trip Generated

Scenario 3: Three E-W Service Areas, County Projects Only. See Figure 6 for Service Area Map.

Service Area	Home-Based Trips	Work-Based Trips	Total New Trips	Project Cost ($1,000)	Cost per Trip ($)
1	14,534	43,086	57,620	489,796	8,500
2	5,451	20,771	26,222	368,358	14,047
3	11,389	11,994	23,383	490,746	20,987
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-
	31,374	75,852	107,226	1,348,900	

Note:

The cost per trip found in this table is roughly equivalent to the gross impact fee per peak hour trip before credits are applied for outside funding sources, gas tax credits, and any other incentives or discounts granted by the County Board.

One peak hour trip is generated by approximately one single family home, 500 square feet of retail space, 700 square feet of general office space, or 2,000 square feet of warehouse. Fees would be allocated to various uses on the basis of their peak hour trip generation rate.

Table 3

Approximation of Total Impact Fee per Peak-Hour Trip Generated

Scenario 4: Three E-W Service Areas, SRA and Bridge Corridor Projects Only. See Figure 6 for Service Area Map.

Service Area		Home-Based Trips	Work-Based Trips	Total New Trips	Project Cost ($1,000)	Cost per Trip ($)
	1	14,534	43,086	57,620	576,384	10,003
	2	5,451	20,771	26,222	457,380	17,442
	3	11,389	11,994	23,383	510,836	21,847
	4	-	-	-	-	-
	5	-	-	-	-	-
	6	-	-	-	-	-
	7	-	-	-	-	-
	8	-	-	-	-	-
	9	-	-	-	-	-
	10	-	-	-	-	-
		31,374	75,852	107,226	1,544,600	

Note:

The cost per trip found in this table is roughly equivalent to the gross impact fee per peak hour trip before credits are applied for outside funding sources, gas tax credits, and any other incentives or discounts granted by the County Board.

One peak hour trip is generated by approximately one single family home, 500 square feet of retail space, 700 square feet of general office space, or 2,000 square feet of warehouse. Fees would be allocated to various uses on the basis of their peak hour trip generation rate.

Table 4

Approximation of Total Impact Fee per Peak-Hour Trip Generated

Scenario 5: Seven Service Areas, SRA and Bridge Corrodor Projects Only. See Figure 7 for Service Area Map.

Service Area	Home-Based Trips	Work-Based Trips	Total New Trips	Project Cost ($1,000)	Cost per Trip ($)
1	3,085	9,060	12,145	140,619	11,578
2	11,449	34,026	45,475	435,765	9,583
3	659	5,183	5,842	143,373	24,542
4	4,947	16,698	21,645	338,846	15,655
5	426	1,341	1,767	68,990	39,051
6	2,904	4,180	7,084	202,167	28,537
7	7,904	5,364	13,268	214,840	16,193
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-
	31,374	75,852	107,226	1,544,600	

Note:

The cost per trip found in this table is roughly equivalent to the gross impact fee per peak hour trip before credits are applied for outside funding sources, gas tax credits, and any other incentives or discounts granted by the County Board.

One peak hour trip is generated by approximately one single family home, 500 square feet of retail space, 700 square feet of general office space, or 2,000 square feet of warehouse. Fees would be allocated to various uses on the basis of their peak hour trip generation rate.

Table 5

Approximation of Total Impact Fee per Peak-Hour Trip Generated

Scenario 6: Three N-S Service Areas, SRA and Bridge Corrodor Projects Only. See Figure 8 for Service Area Map.

Service Area	Home-Based Trips	Work-Based Trips	Total New Trips	Project Cost ($1,000)	Cost per Trip ($)
1	631	3,232	3,863	36,528	9,456
2	13,082	25,705	38,787	917,594	23,657
3	17,662	46,914	64,576	1,175,678	18,206
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-
	31,374	75,852	107,226	2,129,800	

Note:

The cost per trip found in this table is roughly equivalent to the gross impact fee per peak hour trip before credits are applied for outside funding sources, gas tax credits, and any other incentives or discounts granted by the County Board.

One peak hour trip is generated by approximately one single family home, 500 square feet of retail space, 700 square feet of general office space, or 2,000 square feet of warehouse. Fees would be allocated to various uses on the basis of their peak hour trip generation rate.
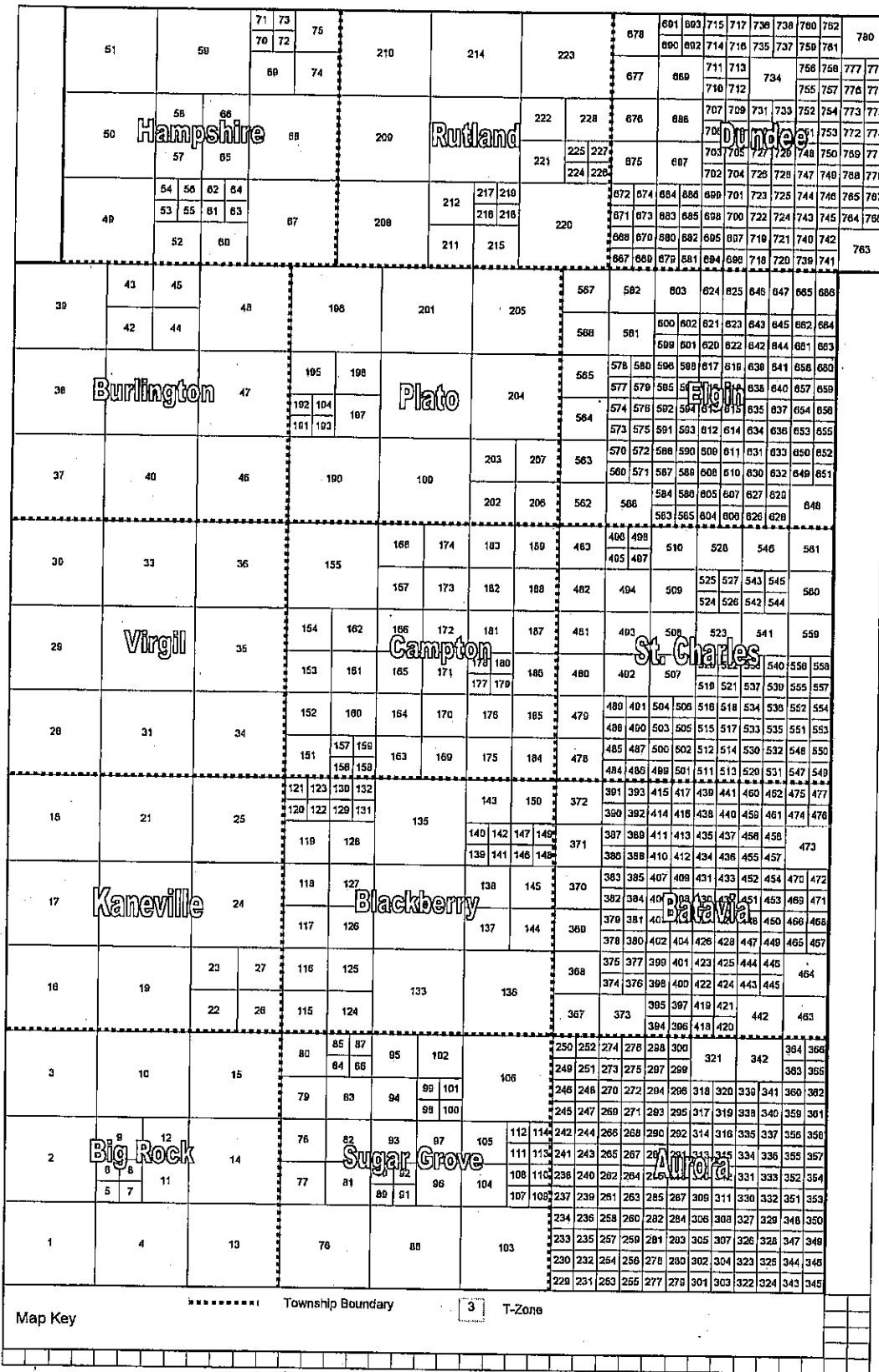
Table 6

Figure 1
Traffic Analysis Zones
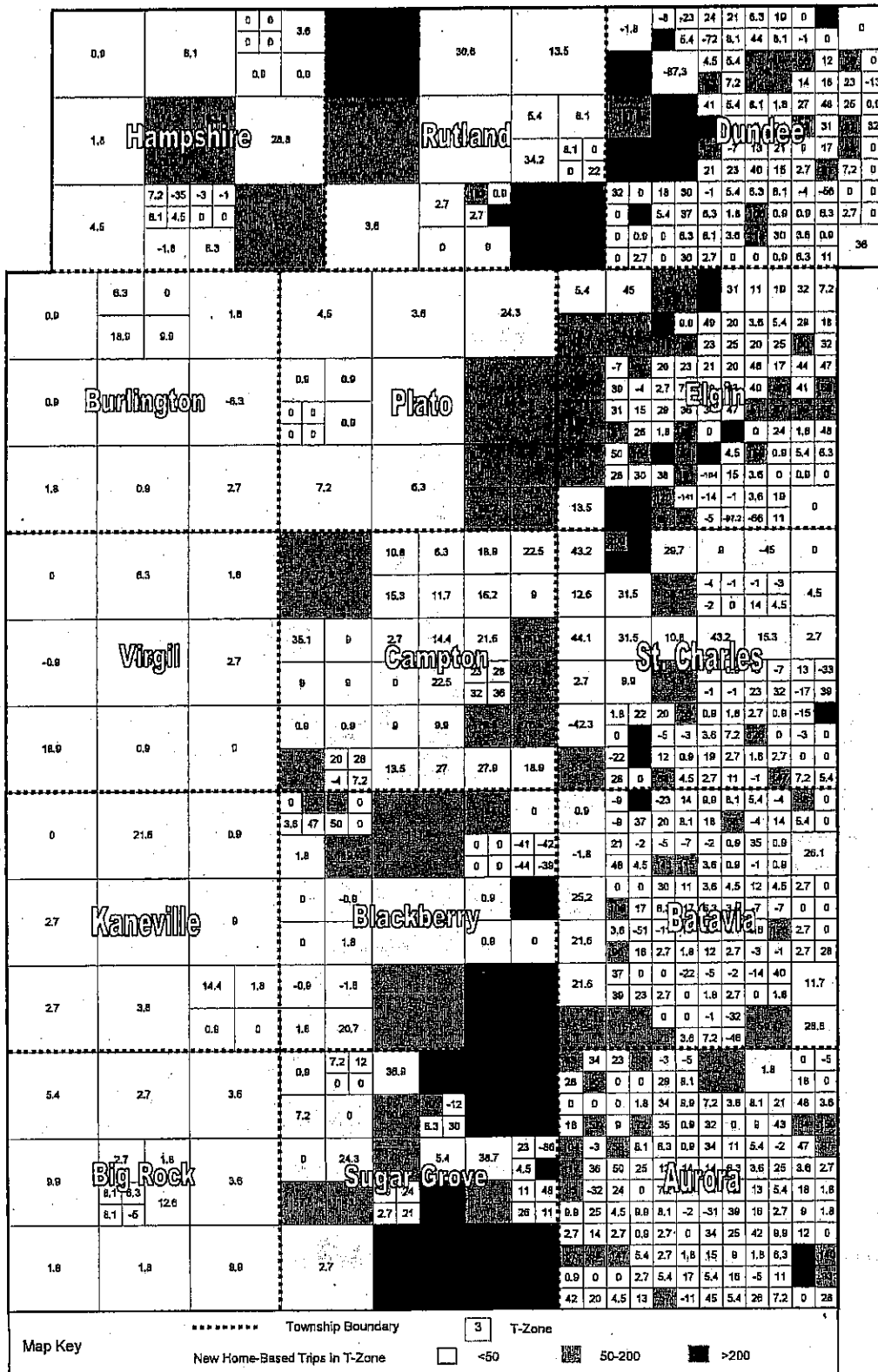
Figure 2
New Home-Based Trips
2003-2013

Hampshire

Rutland

Dundee

Burlington

Plato

Elgin

Virgil

Campton

St. Charles

Kaneville

Blackberry

Batavia

Big Rock

Sugar Grove

Aurora

Map Key

Township Boundary

New Home-Based Trips in T-Zone

3   T-Zone

☐   <50   ▧   50-200   ■   >200

Figure 3
New Work-Based Trips
2003-2013

Map Key

.... Township Boundary

New Work-Based Trips In T-Zone

[3] T-Zone

[ ] <50   [▨] 50-200   [■] >200

Employment Growth
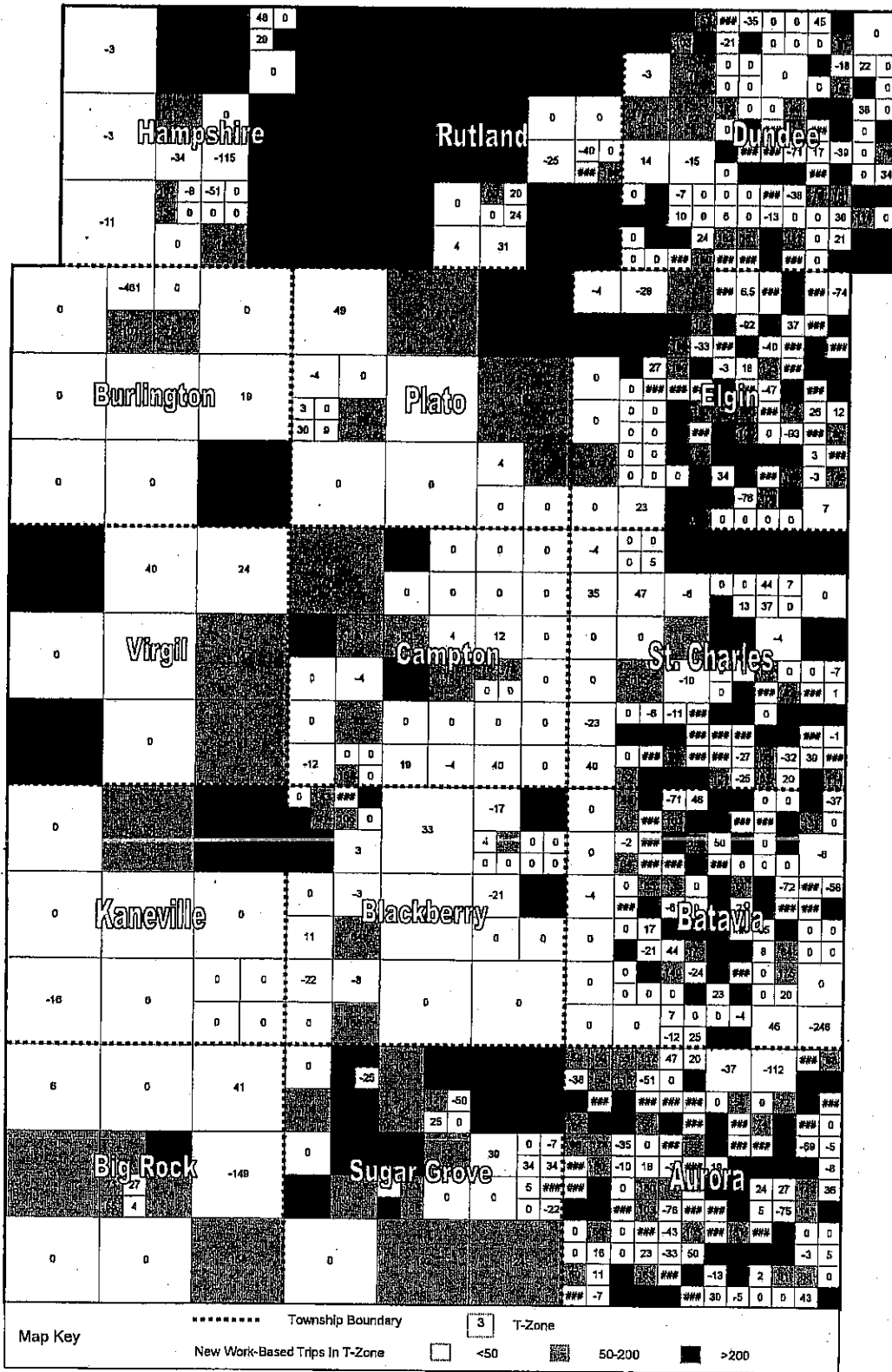
Figure 4
Project Costs by T-Zone
All 2030 Projects

Map Key

- - - - - - - - - Township Boundary | 3 | Project Costs in T-Zone ($Millions)

Total Project Costs in T-Zone ($Millions)   ☐ <10   ▨ 10-30   ■ >30

30
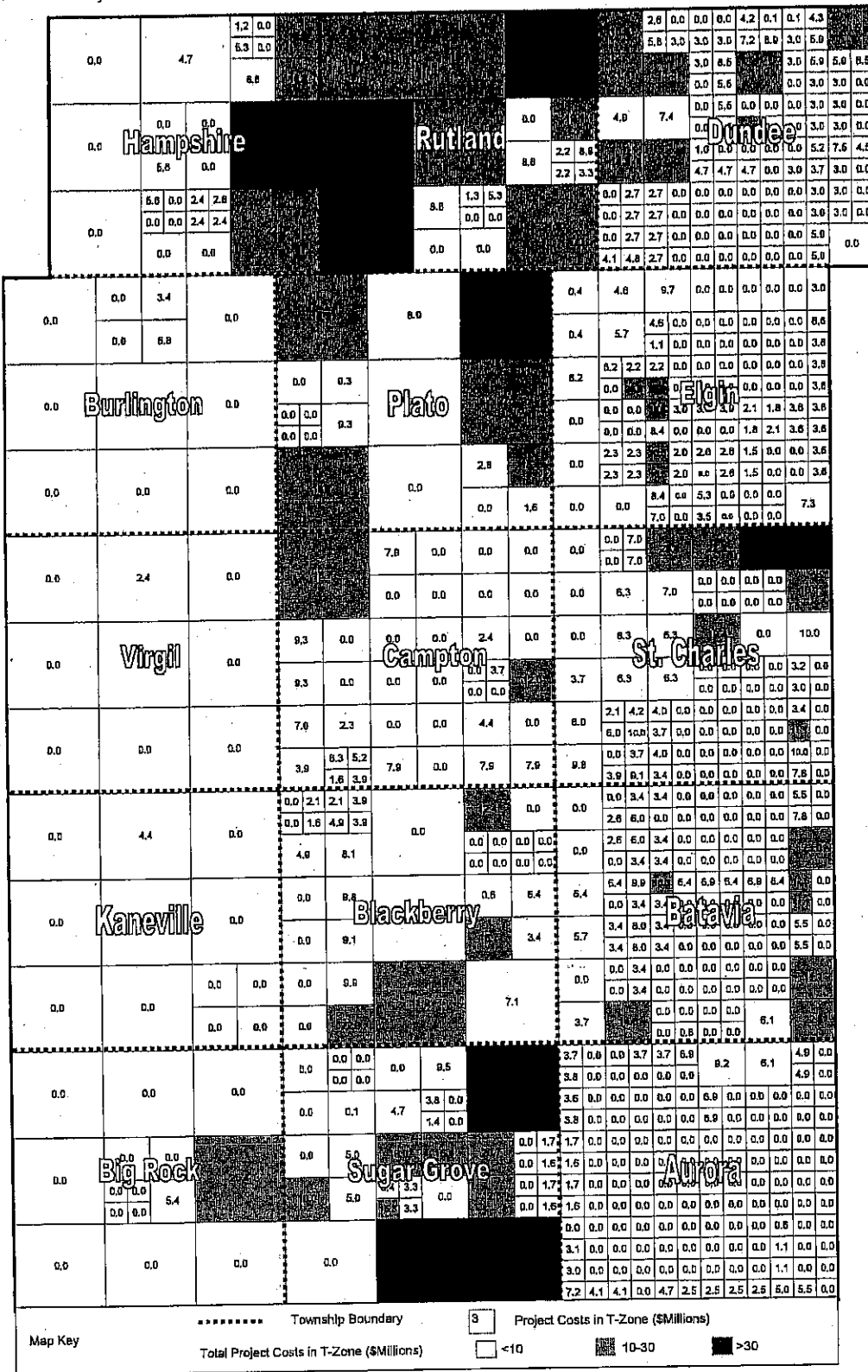
Figure 5
Service Area Boundaries
Scenario 1

| Map Key | ·········· | Township Boundary | 3 | T-Zone assigned to Service Area |
| | • • • • • | Service Area Boundary | | |
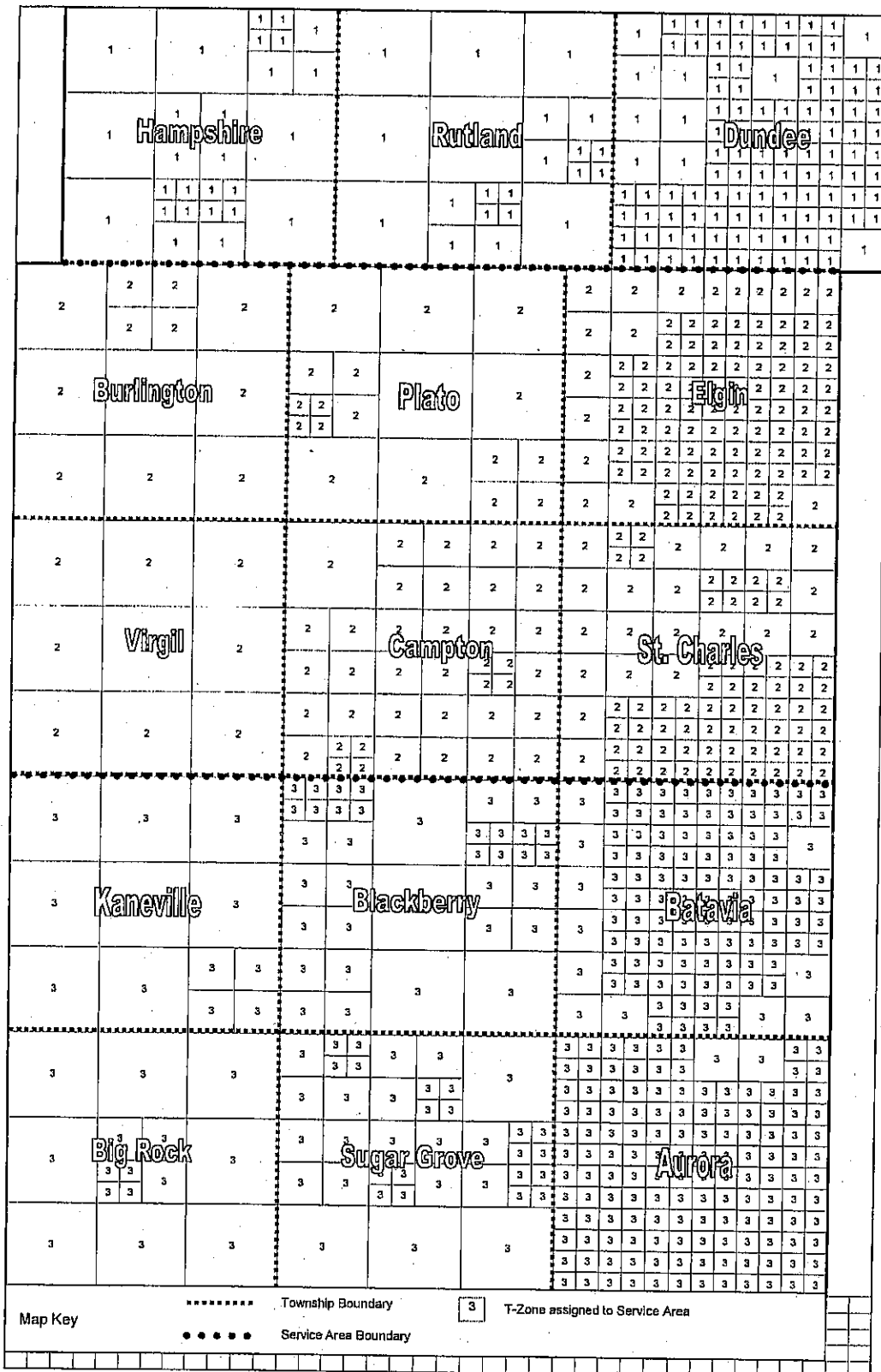
Service Areas

Figure 8
Service Area Boundaries
Scenarios 2, 3 and 4

Hampshire	Rutland	Dundee	
Burlington	Plato	Elgin	
Virgil	Campton	St. Charles	
Kaneville	Blackberry	Batavia	
Big Rock	Sugar Grove	Aurora	

Map Key

- - - - - - - - Township Boundary   3   T-Zone assigned to Service Area

• • • • • Service Area Boundary
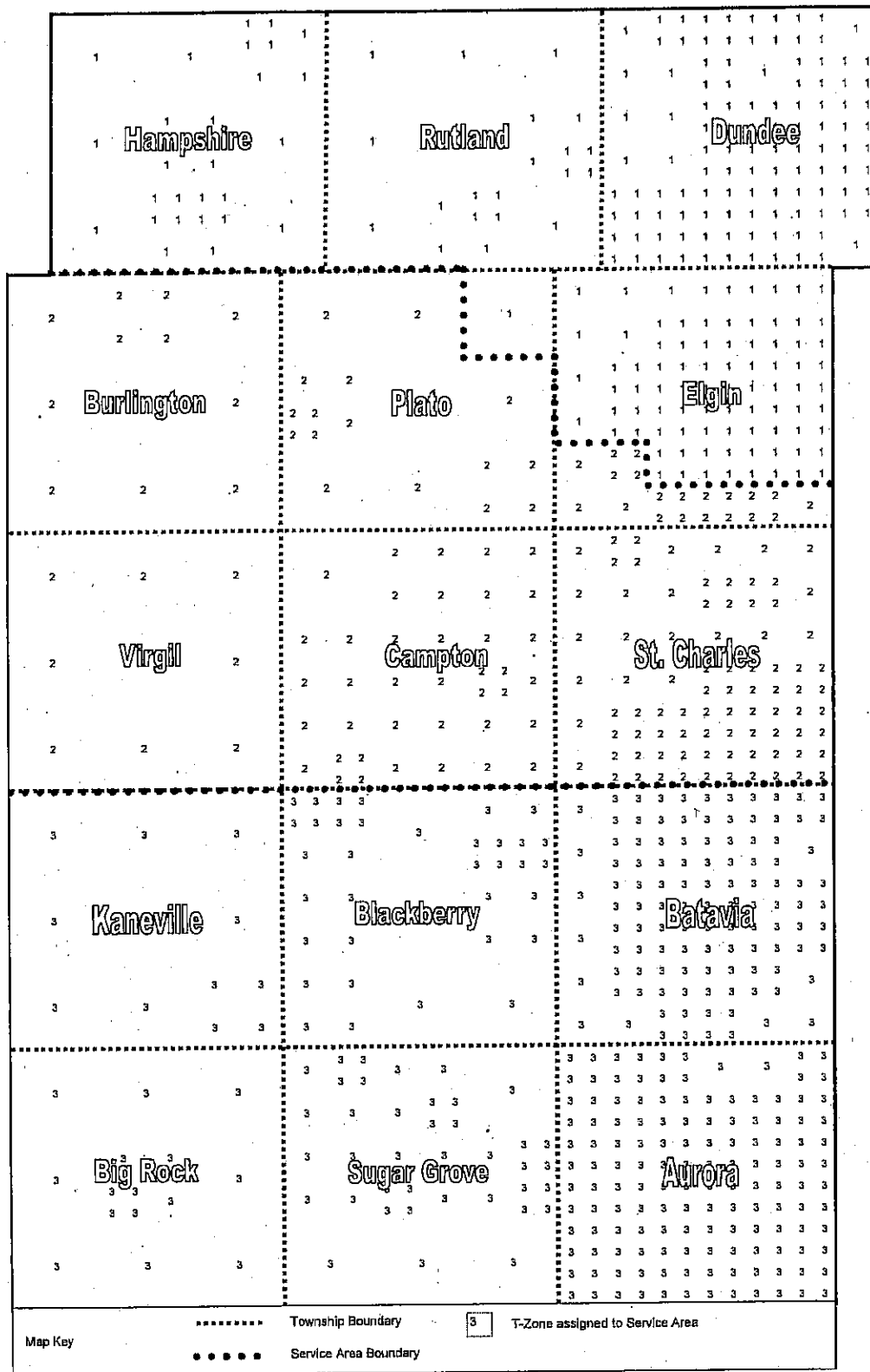
Service Areas

Figure 7
Service Area Boundaries
Scenario 5

Map Key

- - - - - - - - - Township Boundary

● ● ● ● ● Service Area Boundary
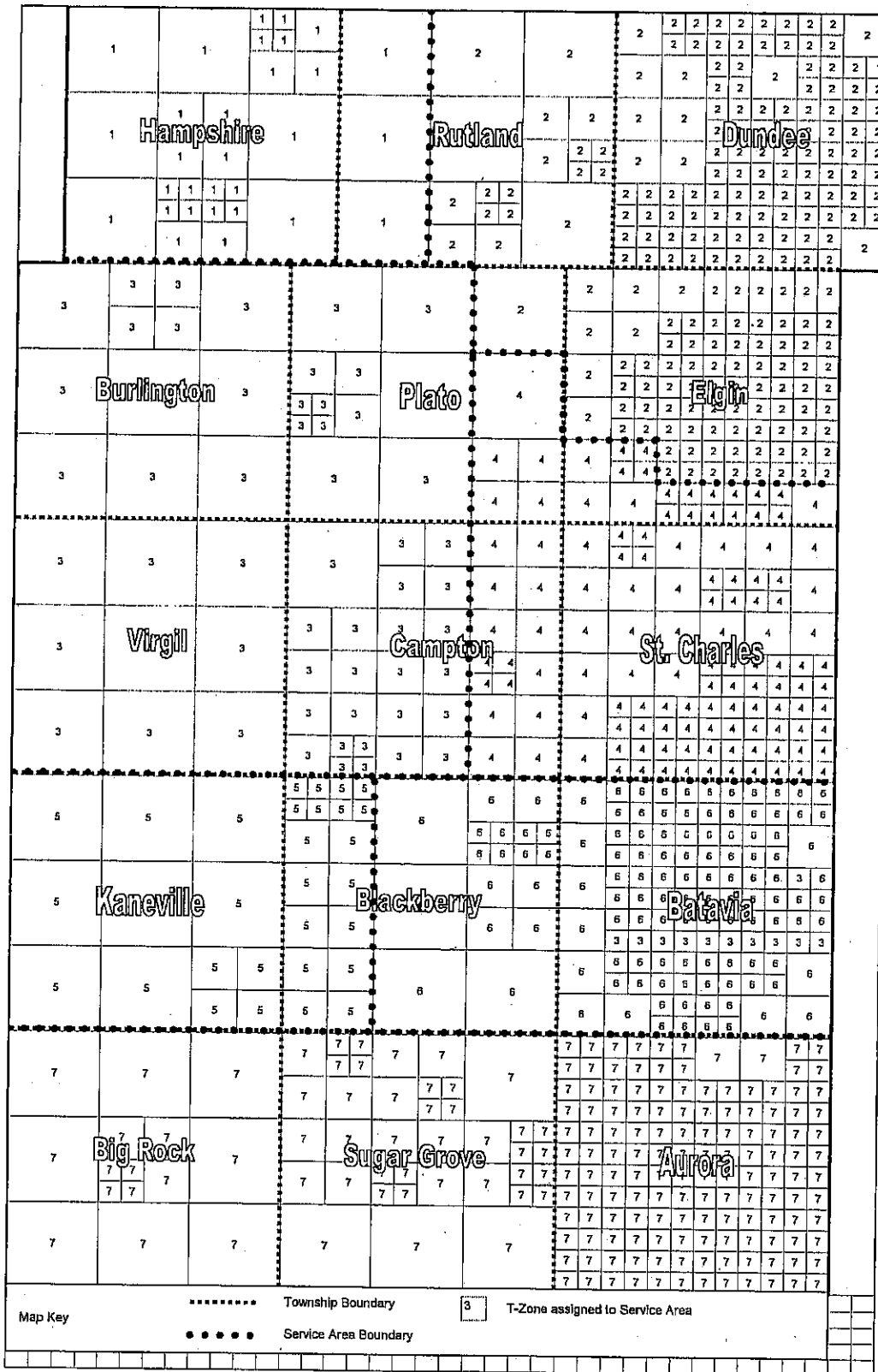
[3] T-Zone assigned to Service Area

Service Areas

Figure 8
Service Area Boundaries
Scenario 6

Map Key

········· Township Boundary

● ● ● ● ● Service Area Boundary

[3] T-Zone assigned to Service Area

Service Areas