Affidavit of the Testimony of Perry D. Elliott regarding Zoning Change to I 88 and RT. 47 corridor

1-23-19

Perry D. Elliott

Perry D. Elliott

Public Hearing
Exhibit N

Acknowledgments

The taking of an acknowledgment consists of positively identifying the signer of a document. The signer need not sign in the notary's presence but must personally appear before the notary and state that the signature on the document is his or hers. Acknowledgments may be taken in an individual capacity or in a representative capacity (as an authorized representative of another – for example, as officer of a corporation for and on behalf of the corporation or as an attorney in fact for another person). These short form certificates are sufficient to meet the requirements of the law.

Acknowledgment (in an individual capacity):

State of Illinois
County of Kane.

This instrument was acknowledged before me on 01-23-19
(date) by Paul J. Freske (name of person).

(seal)

signature of notary public

"OFFICIAL SEAL"
PAUL J FRESKE
Notary Public, State of Illinois
My Commission Expires 9/10/2020

TAX INCREMENT FINANCING From S.G. Website

The Tax Increment Allocation Redevelopment Act, 65 ILCS 5/11 - 74.4 - 1, et seq., as amended (the "Act"), stipulates specific procedures, which must be adhered to in designating a Project Area and amendments thereto. A **Redevelopment Project Area** is defined as:

"..an area designated by the municipality, which is not less in the aggregate than 1 ½ acres and in respect to which the municipality has made a finding that there exist conditions which cause the area to be classified as an industrial park conservation area, or a blighted area or a conservation area, or a combination of both blighted areas and conservation areas" (65 ILCS 5/11-74.4-3(p)).

Section 5/11-74.4-3(a) defines a **"conservation area"** as:

"...any improved area within the boundaries of a redevelopment project area located within the territorial limits of the municipality in which 50% or more of the structures in the area have an age of 35 years or more. Such an area is not yet a blighted area, but because of a combination of 3 or more of the following factors: dilapidation; obsolescence; deterioration; presence of structures below minimum code standards; illegal use of individual structures; excessive vacancies; lack of ventilation, light, or sanitary facilities; inadequate utilities; excessive land coverage and overcrowding of structures and community facilities; deleterious land use or layout; lack of community planning; environmental remediation costs impede development; decline or minimal marginal increase in equalized assessed valuation; is detrimental to the public safety, health, morals, or welfare and such an area may become a blighted area."

Read

Per the Act, an **"industrial park"** means:

"an area in a blighted or conservation area suitable for use by any manufacturing, industrial, research or transportation enterprise, of facilities to include but not be limited to factories, mills, processing plants, assembly plants, packing plants, fabricating plants, industrial distribution centers, warehouses, repair overhaul or service facilities, freight terminals, research facilities, test facilities or railroad facilities."

Also per the Act, an **"industrial park conservation area"** means:

"an area within the boundaries of a redevelopment project area located within the territorial limits of a municipality that is a labor surplus municipality or within 1 1/2 miles of the territorial limits of a municipality that is a labor surplus municipality if the area is annexed to the municipality; which area is zoned as industrial no later than at the time the municipality by ordinance designates the redevelopment project area, and which area includes both vacant land suitable for use as an industrial park and a blighted area or conservation area contiguous to such vacant land."

And finally, per the Act a **"labor surplus municipality"** means:

Not the case

"A municipality in which, at any time during the 6 months before the municipality by ordinance designates an industrial park conservation area, the unemployment rate was over 6% and was also 100% or more of the national average unemployment rate for that same time as published in the United States Department of Labor Bureau of Labor Statistics publication entitled "The Employment Situation" or its successor publication. For the purpose of this subsection, if

~~Aurora~~ Aurora Airport

II – Legal Description

The legal description of the Project Area can be found in Appendix B.

III – Eligibility of the Proposed TIF District

During May 2011 and September 2011 a study was undertaken, consistent with the Act and related procedural guidelines, to determine the eligibility of the proposed TIF district. The results of the study indicate that the Project Area meets the Act's requirements for an "industrial park conservation area," and is eligible to be designated by the Village Board of the Village of Sugar Grove as a "Tax Increment Financing Redevelopment Project Area." The detailed findings of this study are described in Appendix A of this report.

The Village of Sugar Grove's qualifies as a Labor Surplus Municipality, a municipality in which the unemployment rate is over 6% and 100% or more of the national average unemployment rate for the previous 6 months. The national unemployment rate was 9.1% in August 2011, while the Kane County unemployment rate was 9.9%. (Source: U.S. Bureau of Labor Statistics)

An area adjacent to vacant industrial properties within the Project Area also qualifies as a conservation area under the Act based on the predominance and extent of parcels exhibiting the following characteristics:

1. Age of structures greater than 35 years old;
2. Excessive vacancies;
3. Deterioration of buildings and surface improvements;
4. Inadequate utilities;
5. Deleterious land use or layout; and
6. Decline in EAV.

Each of these factors contributes to the eligibility of the Project Area as a conservation area.

STRATEGIES

Based on an analysis of the existing conditions of the Project Area and the overall goals stated above, the strategies for redevelopment should be to:

- Install needed infrastructure, including water and sanitary sewer service and local fiber optic services to attract new investment;
- Assemble and prepare property necessary to attract new investment;
- Undertake appropriate environmental remediation measures on rehabilitation or redevelopment sites, according to customary procedures;
- Repair and replace the infrastructure where needed, including, but not limited to: roads, sidewalks, public utilities, and other public infrastructure.

V – FUTURE LAND USE AND REDEVELOPMENT ACTIVITIES

FUTURE LAND USE

A variety of industrial uses are anticipated within the Project Area, as allowable in the M1 Limited Manufacturing zoning districts. A majority of existing industrial uses are expected to remain, and additional industrial development is expected for currently vacant buildings and/or properties. In addition, retail, restaurants or other commercial uses needed to support the industrial development area are also appropriate. Office uses are also be appropriate anywhere within the Project Area.

REDEVELOPMENT ACTIVITIES

The redevelopment of the Project Area will be driven by private reinvestment induced through public assistance and support. **In the absence of assistance from the Village as provided by the Redevelopment Plan, the private sector is not expected to pursue these opportunities.**

Key activities within the Project Area will be focused on retention and attraction of new industrial/business park private development and the accompanying infrastructure improvements needed to support such development.

New development within the Project Area will be consistent with the Village's Comprehensive Plan. This plan notes: *"New business parks around the airport should be guided by an overall site development plan to ensure the coordination of building sites, traffic access and circulation, and open space amenities. The business parks should be screened and buffered from nearby neighborhoods, and should be attractive when viewed from adjacent streets. The environmental corridors, wooded areas, and other natural features shown on the Land-Use Plan should be preserved and protected as the business park areas area developed in the future."*

Some of the parcels within the Project Area are appropriate for rehabilitation during the life of the TIF District. Rehabilitation typically involves facade improvements and repairs, as well as improvements to the interior of buildings that are structurally sound but require work to address appearance or safety

issues. Other sites within the Project Area were designed and built to suit specific uses, and are not suitable for contemporary industrial development. However, the Project Area location as a whole is suitable for redevelopment. Redevelopment of the Project Area can also spur other redevelopment and rehabilitation projects outside of the Project Area.

The Redevelopment Sites Map, (Figure D), classifies properties within the Project Area into one of the following categories:

1. Vacant property zoned for industrial/ commercial development
2. Property owned by the Aurora Municipal Airport, annexed into the Village of Sugar Grove, zoned for industrial use, and available for lease to private businesses for airport-related activities (hangers, etc.). Such private leased properties are subject to property taxes on buildings (but not property).
3. Property controlled by the Aurora Municipal Airport and used or planned for use for airport activities (runways, etc.) and not available for private development.
4. Existing developed property that is currently occupied (May, 2011).
5. Existing developed property that is partially or completely vacant.

VI – REDEVELOPMENT PROGRAM

This section describes the public and private improvements and activities anticipated to be made and undertaken to implement the Redevelopment Plan.

PURPOSE OF THE REDEVELOPMENT PLAN

The Act defines the Redevelopment Plan as: "*...the comprehensive program of the municipality for development or redevelopment intended by the payment of redevelopment project costs to reduce or eliminate those conditions the existence of which qualified the redevelopment project area as a 'blighted area' or 'conservation area' or combination thereof or 'industrial park conservation area,' and thereby to enhance the tax bases of the taxing districts which extend into the redevelopment project area*" (65 ILCS 5/11-74.4-3(n), as amended).

Further, the Act states that for such areas, "*It is hereby found and declared that in order to promote and protect the health, safety, morals, and welfare of the public, that blighted conditions need to be eradicated and conservation measures instituted, and that redevelopment of such areas be undertaken; that to remove and alleviate adverse conditions it is necessary to encourage private investment and restore and enhance the tax base of the taxing districts in such areas by the development or redevelopment of project areas. The eradication of blighted areas and treatment and improvement of conservation areas and industrial park conservation areas by redevelopment projects is hereby declared to be essential to the public interest*" (65 ILCS 5/11-74.4-2(b), as amended).

The Future Land Use Plan (Figure E) illustrates proposed land uses. Ultimately, the Redevelopment Plan should help to better integrate the Project Area with adjacent uses, becoming an asset to the community and reversing decay.

SOURCES OF FUNDS

The Act provides methods by which municipalities can finance eligible redevelopment project costs with incremental real estate tax revenues. Incremental tax revenue is derived from the increase in the current equalized assessed valuation (EAV) of real property within the Project Area over and above the certified initial EAV of the real property. Any increase in EAV is then multiplied by the current tax rate, resulting in the tax increment revenue. A decline in current EAV does not result in a negative real estate tax increment.

Funds necessary to pay for Redevelopment Project Costs and secure municipal obligations issued for such costs are to be derived primarily from Incremental Property Taxes. Other sources of funds which may be used to pay for Redevelopment Project Costs or secure municipal obligations are land disposition proceeds, federal, state, county, or local grants, investment income, private financing and other legally permissible funds the Village may deem appropriate. The Village may incur redevelopment project costs which are paid for from funds of the Village other than incremental taxes, and the Village may then be reimbursed from such costs from incremental taxes. Also, the Village may permit the utilization of guarantees, deposits and other forms of security made available by private sector developers.

The Village may utilize net incremental property taxes received from the Project Area to pay eligible Redevelopment Project Costs, or obligations issued to pay such costs, in other contiguous redevelopment project areas or other project areas separated only by a public right-of-way, and vice versa. The amount of revenue from the Project Area, made available to support such contiguous redevelopment project areas, or those separated only by a public right-of-way, when added to all amounts used to pay eligible redevelopment project costs within the Project Area, shall not at any time exceed the total Redevelopment Project Costs described in this Redevelopment Plan. The amount of revenue from the Project Area so made available, when added to all amounts used to pay eligible redevelopment project costs within the Project Area or other areas as described in the preceding paragraph, shall not at any time exceed the total Redevelopment Project Costs described in Table 3 of this Redevelopment Plan.

In the event that adequate funds are not available as anticipated from aforementioned sources, the Village may utilize its taxing power to sustain the Redevelopment Project or repay obligations issued in connection therewith, to be reimbursed over time, if possible, from tax increment revenues.

NATURE AND TERM OF OBLIGATIONS TO BE ISSUED

The Village may issue obligations secured by Incremental Property Taxes pursuant to Section 11-74.4-7 of the Act. To enhance the security of a municipal obligation, the Village may pledge its full faith and credit through the issuance of general obligation bonds. Additionally, the Village may provide other legally permissible credit enhancements to any obligations issued pursuant to the Act.

The redevelopment project shall be completed, and all obligations issued to finance redevelopment costs shall be retired, no later than December 31 of the year in which the payment to the Village Treasurer as provided in the Act is to be made with respect to ad valorem taxes levied in the twenty-third calendar year following the year in which the ordinance approving the Project Area was originally adopted, assuming the ordinance is adopted in 2012, December 31, 2035. Also, the final maturity date of any such obligations which are issued may not be later than 20 years from their respective dates of

increasing int. rates could cannibalize expected benefits

issue. One or more series of obligations may be sold at one or more times in order to implement this Plan. Obligations may be issued on a parity or subordinated basis.

In addition to paying Redevelopment Project Costs, Incremental Property Taxes may be used for the scheduled retirement of obligations, mandatory or optional redemptions, establishment of debt service reserves and bond sinking funds. To the extent that Incremental Property Taxes are not needed for these purposes, and are not otherwise required, pledged, earmarked or otherwise designated for the payment of Redevelopment Project Costs, any excess Incremental Property Taxes shall then become available for distribution annually to taxing districts having jurisdiction over the Project Area in the manner provided by the Act.

One or more issues of obligations may be sold at one or more times in order to implement the Redevelopment Plan, as amended, and as it may be amended in the future. Obligations may be issued on a parity or subordinate basis.

The Village may, by ordinance, in addition to obligations secured by the tax allocation fund, pledge for a period not greater than the term of the obligations any part or any combination of the following:

- Net revenues of all or part of any redevelopment project;
- Taxes levied and collected on any or all property in the Village;
- The full faith and credit of the Village;
- A mortgage on part or all of a redevelopment project; and
- Any other taxes or anticipated receipts that the Village may lawfully pledge.

EQUALIZED ASSESSED VALUATION

The purpose of identifying the most recent equalized assessed valuation ("EAV") of the Project Area is to provide an estimate of the initial EAV, which the Kane County Clerk will certify for the purpose of annually calculating the incremental EAV and incremental property taxes of the Project Area. The most recent (2010) equalized assessed valuation (EAV) of all the taxable parcels in the Project Area is approximately **$9,606,327**. This total EAV amount, by PIN, is summarized in Appendix D. This EAV is based on 2010 EAV figures collected by TESKA and is subject to verification by the Kane County Clerk. After verification, the final figure shall be certified by the County Clerk of Kane County, Illinois. This certified amount shall become the Certified Initial EAV from which all incremental property taxes in the Project Area will be calculated by the County.

lowest in years

Upon completion of anticipated private development of the Project Area, it is anticipated that the equalized assessed valuation will be approximately **$30,961,999**. The calculation assumes that assessments appreciate at a rate of 1% every year. Other new projects, rehabilitation of existing buildings, and appreciation of real estate values may result in substantial additional increases in equalized assessed valuation.

Conclusion

The Redevelopment Project Area as a whole qualifies as a conservation area according to the criteria established by the Act, based on the predominance and extent of parcels exhibiting the following characteristics:

1. Age;
2. Deterioration of buildings and surface improvements;
3. Excessive vacancies;
4. Inadequate utilities;
5. Deleterious land use or layout; and
6. Decline in EAV.

Each of these factors contributes to the eligibility of the adjacent area as a conservation area.

THE IMPACT OF COMMERCIAL DEVELOPMENT ON SURROUNDING RESIDENTIAL PROPERTY VALUES

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Georgia State University
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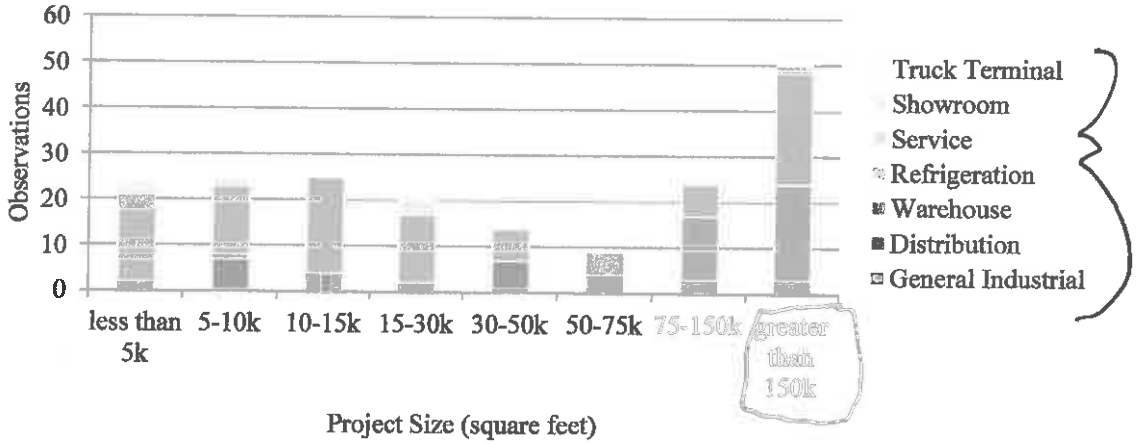
Funding for this research was provided by REALTOR® University through the Richard J. Rosenthal Center for Real Estate Studies.

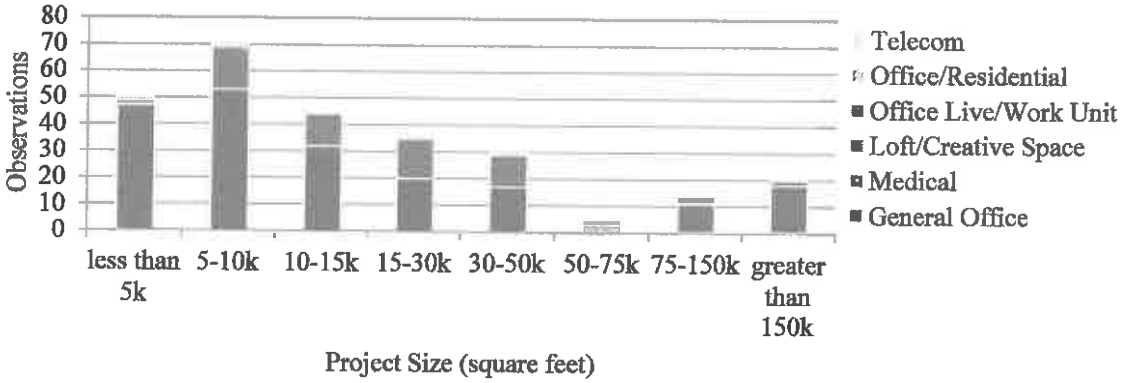
April 2015

Figure 3. Sample of Commercial Developments, by Property Size & Category

A. Sample of Industrial Developments



B. Sample of Office Developments



C. Sample of Retail Developments

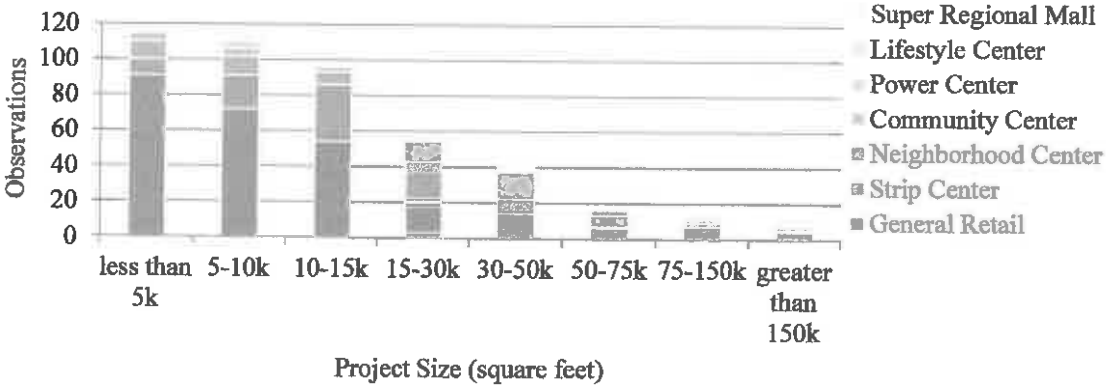
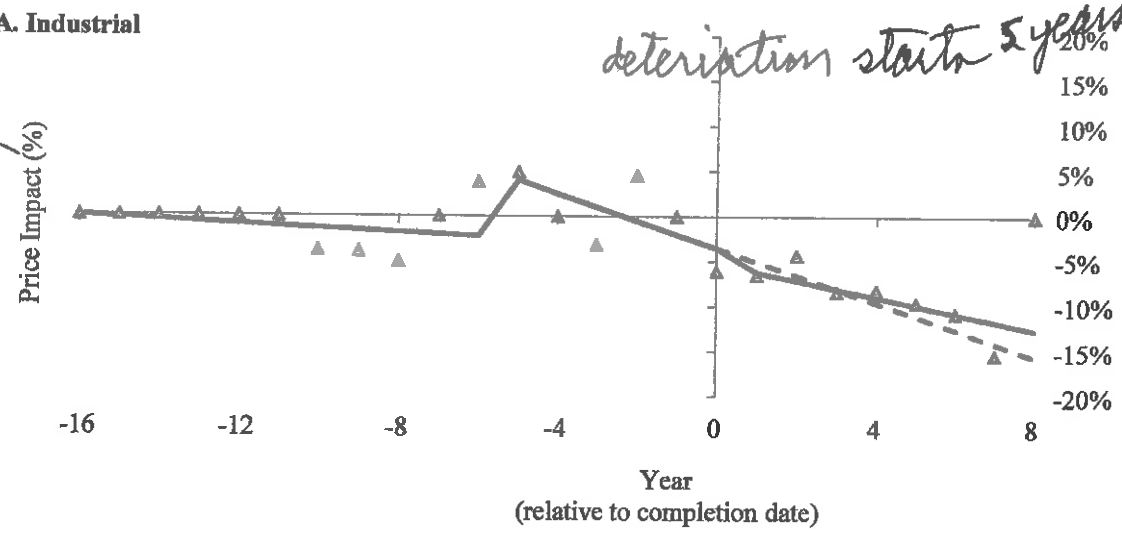


Figure 4. Estimated Price Impact following New Commercial Development

deteriation starts 5 years prior to completion

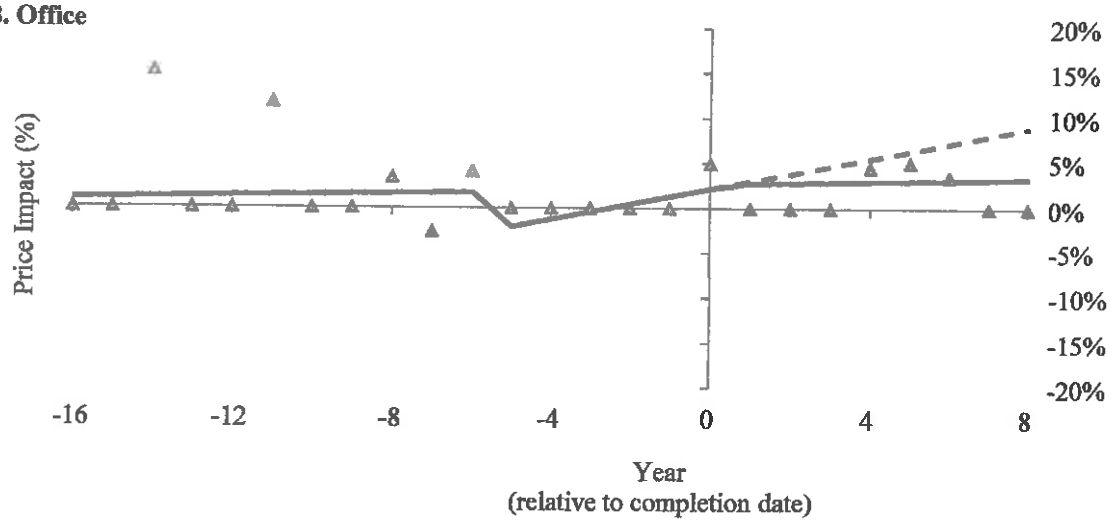
A. Industrial



Down 12 to 16% at year 8

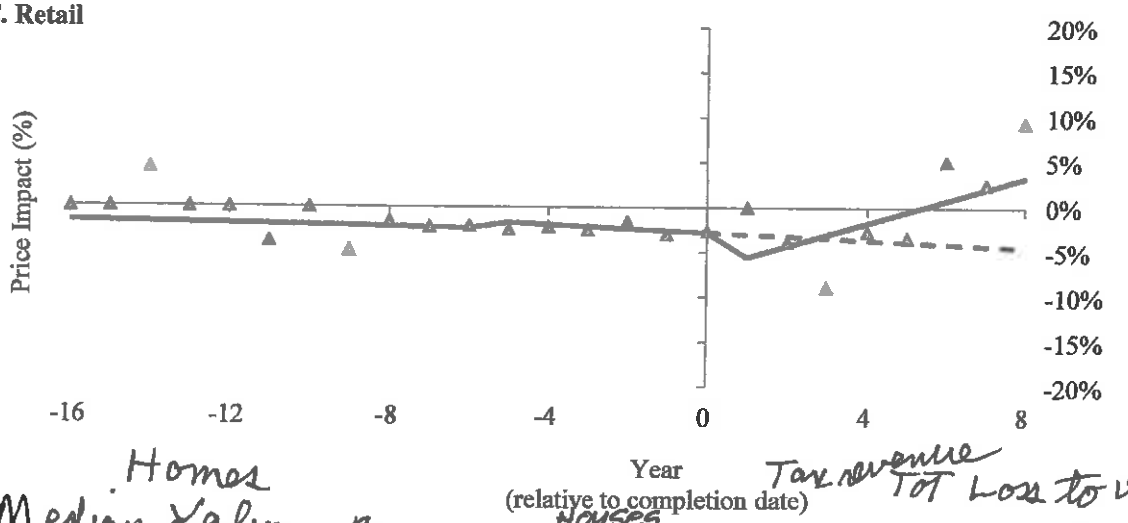
Home @ $300,000 = − $45,000 @ 15% decline

B. Office



Decrease of 15% of 500 m of Tax = 75 mil

C. Retail



Tax revenue Tot Loss to village $246337

S.G. Median ~~Value~~ Homes = $263,000 X 2700 Houses = 710,100,000 X (.15) = $106,515,000 To us

Median assessed value = 87579 X 2700 Homes = $236,463,300

X .15

Median Assessed Value Reduced by $35,469,495

Notes: This figure presents the estimated price impact for single-family residential properties located within a .75 mile radius of a new industrial development (Panel A), office development (Panel B), and retail development (Panel C). Price impact is measured relative to a matched sample of single-family residential properties that have the same number of bedrooms, the same number of bathrooms, are built within 5 years, located in the same zip code (but outside the radius) and sold in the same calendar quarter of at least one subject property inside the radius. The grey triangles represent the estimated coefficients for each relative year interaction term for properties located inside the radius. Grey triangles take on a value of zero for coefficients that are statistically insignificant from zero at the 10% level. The solid black line depicts the trend from the spline regression with breakpoints at the -5 and +1 years relative to project completion. The dashed black line represents the counterfactual trend that would have been expected to occur for the .75 mile radius had the development not occurred.

Kane County Web Site
Appendix to my evaluation of home prices

Township EAV Within District Value Report
Kane County

Unit 001 KANE COUNTY

Township	Rural	Residential	Commercial	Industrial	Mineral	Railroad	Total
SUGAR GROVE	12,154,184	542,205,161	51,803,160	10,622,676	0	0	616,785,181
New Construction	75,724	8,036,391	1,598,036	207,514	0		9,917,665
Annexations	0	0	0	0	0		0
Total EAV	12,229,908	550,241,552	53,401,196	10,830,190	0	0	626,702,846
VIRGIL	29,061,967	29,729,637	3,938,665	676,199	0	0	63,406,468
New Construction	130,248	115,288	0	0	0		245,536
Annexations	0	0	0	0	0		0
Total EAV	29,192,215	29,844,925	3,938,665	676,199	0	0	63,652,004
Unit Totals	262,699,957	10,410,904,031	1,820,965,001	1,136,341,232	0	0	13,630,910,221
New Construction	1,230,062	103,834,040	32,299,375	34,869,331	0		172,232,808
Annexations	0	0	0	0	0		0
Total EAV	263,930,019	10,514,738,071	1,853,264,376	1,171,210,563	0	0	13,803,143,029

Unit 002 KANE FOREST PRESERVE

Township	Rural	Residential	Commercial	Industrial	Mineral	Railroad	Total
AURORA	2,397,643	1,280,485,100	369,626,354	256,242,135	0	0	1,908,751,232
New Construction	0	3,771,864	2,489,693	14,659,733	0		20,921,290
Annexations	0	0	0	0	0		0
Total EAV	2,397,643	1,284,256,964	372,116,047	270,901,868	0	0	1,929,672,522
BATAVIA	5,812,601	941,789,123	100,866,312	90,299,626	0	0	1,138,767,662
New Construction	67,482	6,107,834	629,270	515	0		6,805,101
Annexations	0	0	0	0	0		0
Total EAV	5,880,083	947,896,957	101,495,582	90,300,141	0	0	1,145,572,763
BLACKBERRY	24,963,610	498,307,744	24,144,474	15,277,222	0	0	562,693,050
New Construction	145,942	6,661,495	1,641,502	0	0		8,448,939
Annexations	0	0	0	0	0		0
Total EAV	25,109,552	504,969,239	25,785,976	15,277,222	0	0	571,141,989

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Annual Average Unemployment Rates*(1)*

Calendar Year	The Village	The County	The State
2008	6.3%	6.0%	6.3%
2009	10.5%	10.5%	10.2%
2010	8.8%	11.0%	10.4%
2011	7.4%	9.8%	9.7%
2012	6.8%	8.9%	9.0%
2013	6.9%	8.7%	9.1%
2014	5.6%	6.8%	7.1%
2015	4.3%	5.7%	5.9%
2016	4.2%	5.5%	5.9%
2017	NA	4.8%	5.0%

Notes: (1) Source: Illinois Department of Employment Security.
(2) Preliminary rates for the month of June 2017.

Housing

Sugar Grove

The U.S. Census Bureau 5-year estimated values reported that the median value of the Village's owner-occupied homes was $262,300. This compares to $213,200 for the County and $173,800 for the State. The following table represents the five year average market value of specified owner-occupied units for the Village, the County and the State at the time of the 2011-2015 American Community Survey.

Home Values*(1)*

	The Village		The County		The State	
Value	Number	Percent	Number	Percent	Number	Percent
Under $50,000	0	0.0%	3,906	3.1%	240,110	7.6%
$50,000 to $99,999	129	4.7%	10,229	8.1%	518,898	16.3%
$100,000 to $149,999	143	5.2%	19,348	15.2%	533,593	16.8%
$150,000 to $199,999	514	18.6%	25,218	19.9%	527,923	16.6%
$200,000 to $299,999	1,052	38.0%	34,171	26.9%	648,006	20.4%
$300,000 to $499,999	803	29.0%	26,442	20.8%	473,931	14.9%
$500,000 to $999,999	86	3.1%	6,753	5.3%	188,536	5.9%
$1,000,000 or more	39	1.4%	836	0.7%	46,708	1.5%
Total	2,766	100.0%	126,903	100.0%	3,177,705	100.0%

Note: (1) Source: U.S. Bureau of the Census, American Community Survey 5-year estimates 2011 to 2015.

Mortgage Status*(1)*

	The Village		The County		The State	
	Number	Percent	Number	Percent	Number	Percent
Housing Units with a Mortgage	2,185	79.0%	94,394	74.4%	2,104,166	66.2%
Housing Units Without a Mortgage	581	21.0%	32,509	25.6%	1,073,539	33.8%
Total	2,766	100.0%	126,903	100.0%	3,177,705	100.0%

Note: (1) Source: U.S. Bureau of the Census, American Community Survey 5-year estimates 2011 to 2015.

Income

Per Capita Personal Income for the Highest Income Counties in the State*(1)*

Rank		2011-2015
1.	DuPage County	$39,336
2.	Lake County	39,299
3.	McHenry County	33,735
4.	Monroe County	32,889
5.	Piatt County	32,724
6.	Will County	31,310
7.	McLean County	31,305
8	**Kane County**	**31,056**
9.	Kendall County	31,053
10.	Sangamon County	31,024
11.	Cook County	31,013

Note: (1) Source: U.S. Bureau of the Census, American Community Survey 5-year estimates 2011 to 2015.

The following shows a ranking of median family income for the Chicago metropolitan area from the 2011-2015 American Community Survey.

Ranking of Median Family Income*(1)*

IL. County	Family Income	IL. Rank
DuPage County	$96,751	1
Lake County	93,668	2
Kendall County	91,612	3
McHenry County	89,768	4
Will County	87,950	5
Kane County	**81,718**	**8**
Cook County	67,324	23

Note: (1) Source: U.S. Bureau of the Census, American Community Survey 5-year estimates 2011 to 2015.

The U.S. Census Bureau 5-year estimated values reported that the Village had a median family income of $113,860. This compares to $81,718 for the County and $71,546 for the State. The following table represents the distribution of family incomes for the Village, the County and the State at the time of the 2011-2015 American Community Survey.

Family Income*(1)*

	The Village		The County		The State	
Value	Number	Percent	Number	Percent	Number	Percent
Under $10,000	14	0.6%	3,654	2.8%	137,468	4.4%
$10,000 to $14,999	0	0.0%	2,287	1.8%	83,523	2.7%
$15,000 to $24,999	0	0.0%	6,970	5.4%	219,861	7.0%
$25,000 to $34,999	36	1.5%	9,256	7.2%	247,041	7.9%
$35,000 to $49,999	110	4.6%	13,572	10.5%	372,279	11.9%
$50,000 to $74,999	360	15.1%	23,006	17.8%	572,734	18.3%
$75,000 to $99,999	393	16.5%	19,623	15.2%	460,502	14.7%
$100,000 to $149,999	770	32.2%	26,845	20.8%	554,220	17.7%
$150,000 to $199,999	202	8.5%	12,207	9.5%	234,835	7.5%
$200,000 or more	503	21.1%	11,506	8.9%	242,220	7.8%
Total	2,388	100.0%	128,926	100.0%	3,124,683	100.0%

Note: (1) Source: U.S. Bureau of the Census, American Community Survey 5-year estimates 2011 to 2015.

The U.S. Census Bureau 5-year estimated values reported that the Village had a median household income of $108,609. This compares to $70,696 for the County and $57,574 for the State. The following table represents the distribution of household incomes for the Village, the County and the State at the time of the 2011-2015 American Community Survey.

Household Income*(1)*

	The Village		The County		The State	
Value	Number	Percent	Number	Percent	Number	Percent
Under $10,000	26	0.8%	6,895	4.0%	343,101	7.2%
$10,000 to $14,999	30	0.9%	5,395	3.1%	217,426	4.5%
$15,000 to $24,999	81	2.6%	13,113	7.6%	477,279	10.0%
$25,000 to $34,999	49	1.5%	14,064	8.2%	449,729	9.4%
$35,000 to $49,999	101	3.2%	20,211	11.7%	610,069	12.7%
$50,000 to $74,999	598	18.9%	31,175	18.1%	851,656	17.8%
$75,000 to $99,999	514	16.2%	24,082	14.0%	609,496	12.7%
$100,000 to $149,999	983	31.0%	31,438	18.2%	676,505	14.1%
$150,000 to $199,999	250	7.9%	13,364	7.7%	272,382	5.7%
$200,000 or more	537	16.9%	12,742	7.4%	278,745	5.8%
Total	3,169	100.0%	172,479	100.0%	4,786,388	100.0%

Note: (1) Source: U.S. Bureau of the Census, American Community Survey 5-year estimates 2011 to 2015.

Retail Activity

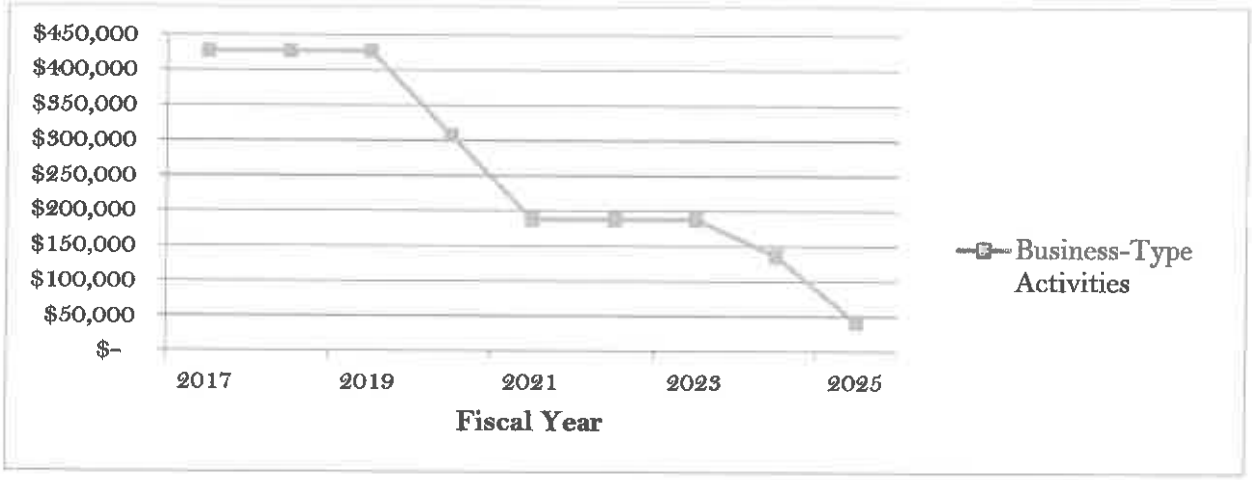
Following is a summary of the Village's sales tax receipts as collected and disbursed by the State.

Retailers' Occupation, Service Occupation and Use Tax*(1)*

State Fiscal Year Ending April 30	State Sales Tax Distributions(2)	Annual Percent Change + or (-)
2007	$422,508	45.27%(3) (4)
2008	522,869	23.75%
2009	472,933	(9.55%)
2010	451,437	(4.55%)
2011	472,808	4.73%
2012	518,905	9.75%
2013	596,116	14.88%
2014	774,523	29.93%
2015	839,226	8.35%
2016	836,213	(0.36%)
Growth from 2007 to 2016		97.92%

Notes:
(1) Source: The Village and the Village's Comprehensive Annual Financial Reports.
(2) Tax distributions are based on records of the Illinois Department of Revenue relating to the 1% municipal portion of the Retailers' Occupation, Service Occupation and Use Tax, collected on behalf of the Village, less a State administration fee. The municipal 1% includes tax receipts from the sale of food and drugs which are not taxed by the State.
(3) The 2007 percentage is based on a 2006 Sales Tax of $290,848.
(4) The Village had a Jewel-Osco store open in April 2006, with which it has a sales tax rebate agreement.

used for Tax calculations



Legal Debt Margin

Chapter 65, Section 5/8-5-1 of the Illinois Compiled Statutes provides, "no municipality having a population of less than 500,000 shall become indebted in any manner or for any purpose, to an amount, including existing indebtedness in the aggregate exceeding 8.625% on the value of the taxable property therein, to be ascertained by the last assessment for state and county purposes, previous to the incurring of the indebtedness or, until January 1, 1983, if greater, the sum that is produced by multiplying the municipality's 1978 equalized assessed valuation by the debt limitation percentage in effect on January 1, 1979". The Village's legal debt limit is $24,321,091, however, the Village has only issued general obligation alternate revenue bonds which do not count against the debt limitation. Even though the Village has not exceeded the debt limit, the Village has no plans to issue debt in the upcoming year since there are a number of outstanding debts currently being paid. The Village may consider a loan in the future to allow the Police Department to utilize the entire Village Hall building. The funding source for this loan will be from the increase in the number of businesses charging sales tax and adjusting other fees.

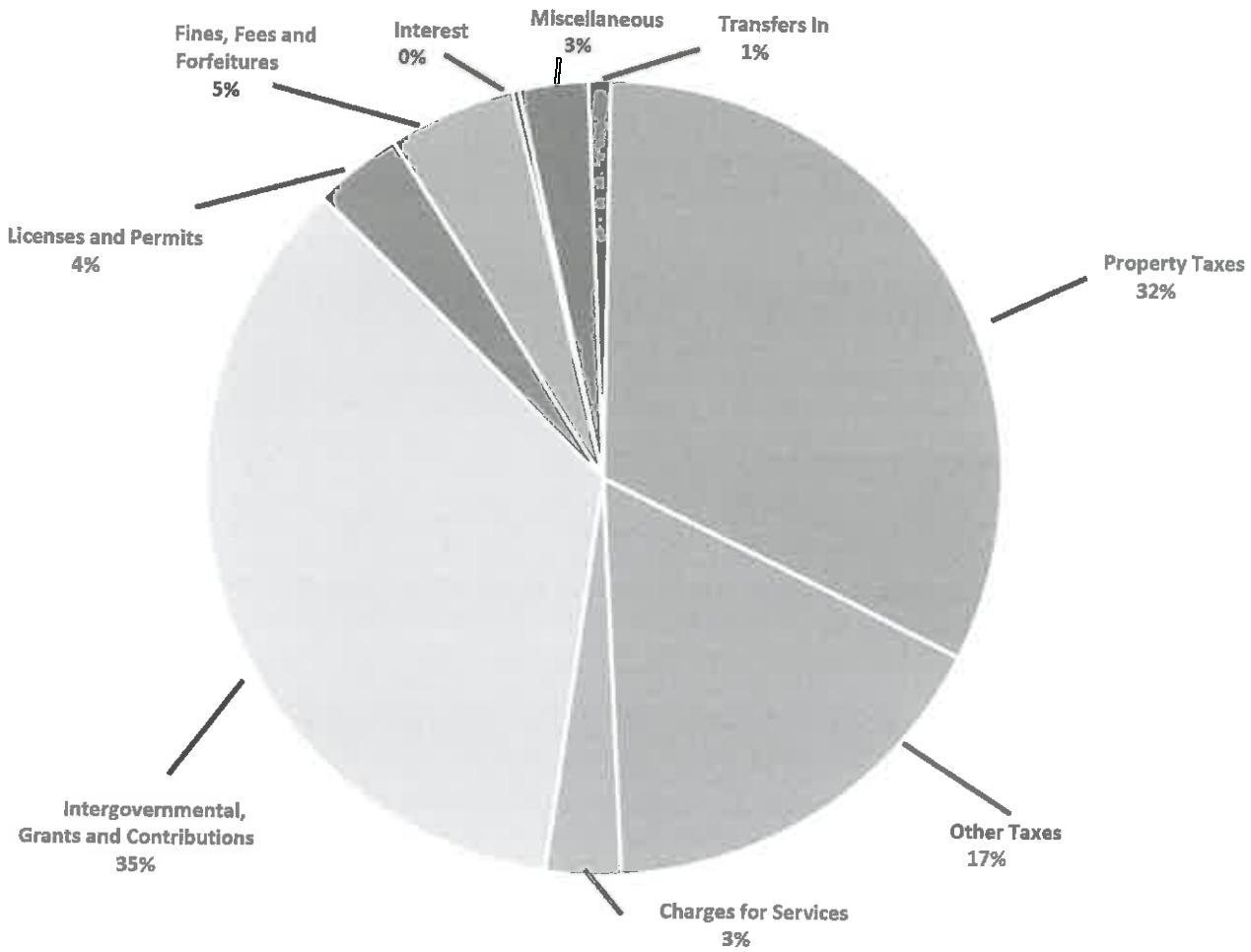
Assessed Valuation - 2016		$281,983,664
Legal Debt Limit - 8.625% of Assessed Value		$24,321,091
General Obligation Debt:		
Series 2006	$1,290,000	
Series 2008A	2,085,000	
Series 2009	1,180,000	
Series 2013A	4,850,000	
Series 2013B	0	
Total General Obligation Debt	9,405,000	
Less: Alternate Revenue Source Bonds	(9,405,000)	
Total Applicable Debt		0
Legal Debt Margin		$24,321,091

Village of Sugar Grove
FY 2017-18 Budget
Fund 01 - General Fund
Fund Summary by Department

DESCRIPTION	2014-15 ACTUAL	2015-16 ACTUAL	2016-17 APPROVED BUDGET	2016-17 EST. ACTUAL	2017-18 FINAL BUDGET
FUND BALANCE, BEGINNING OF YEAR	$ 1,530,718	$ 1,539,717	$ 1,545,342	$ 1,545,342	$ 1,571,435
REVENUES	5,087,055	4,995,960	4,946,210	5,057,026	5,090,420
EXPENDITURES BY DEPARTMENT					
49-INFORMATION TECHNOLOGY	31,362	23,288	38,145	38,145	38,658
50-ADMINISTRATION	345,515	357,867	380,826	379,808	408,035
51-POLICE	2,192,073	2,363,541	2,400,251	2,370,542	2,521,486
53-PUBLIC WORKS- STREET DIVISION	1,253,535	1,212,232	1,102,667	1,166,519	1,053,691
54-BUILDING MAINTENANCE	156,618	165,966	157,689	162,984	163,100
55-COMMUNITY DEVELOPMENT	669,432	622,499	603,971	626,475	540,947
56-FINANCE	157,435	151,656	170,418	198,929	163,944
57-BOARD AND COMMISSIONS	272,086	93,286	88,123	87,531	92,967
TOTAL EXPENDITURES	5,078,056	4,990,335	4,942,090	5,030,933	4,982,828
NET CHANGE IN FUND BALANCE	8,999	5,625	4,120	26,093	107,592
FUND BALANCE, END OF YEAR	$ 1,539,717	$ 1,545,342	$ 1,549,462	$ 1,571,435	$ 1,679,027
GENERAL FUND RESERVE %	30.3%	31.0%	31.4%	31.2%	33.7%

Village of Sugar Grove
Fiscal Year 2017-2018
Fund 01 - General Fund
Revenues by Category

Revenues	FY2018 Budget	Percent of Budget
Property Taxes Loss of 15% = ($246,337)	$ 1,642,249	32.26%
Other Taxes	851,845	16.73%
Charges for Services	156,600	3.08%
Intergovernmental, Grants and Contributions	1,791,283	35.19%
Licenses and Permits	183,073	3.60%
Fines, Fees and Forfeitures	263,080	5.17%
Interest	14,000	0.28%
Miscellaneous	143,290	2.81%
Transfers In	45,000	0.88%
Total	**$ 5,090,420**	**100.00%**



Village of Sugar Grove
FY 2017-18 Budget
Fund 01 - General Fund
Revenues

ACCOUNT NUMBER	DESCRIPTION	2014-15 ACTUAL	2015-16 ACTUAL	2016-17 APPROVED BUDGET	2016-17 EST. ACTUAL	2017-18 FINAL BUDGET
01-00-3110	PROPERTY TAX - CORPORATE	$ 718,680	$ 898,751	$ 722,700	$ 742,151	$ 766,859
01-00-3111	PROPERTY TAX - AUDIT	9,974	11,439	12,870	11,494	10,890
01-00-3112	PROPERTY TAX - LIABILITY INSUR	69,434	54,713	44,550	54,975	39,600
01-00-3113	PROPERTY TAX - I.M.R.F.	38,949	44,765	39,600	44,481	44,550
01-00-3114	PROPERTY TAX - SOCIAL SECURITY	202,777	189,005	193,050	169,928	183,150
01-00-3115	PROPERTY TAX - STREET LIGHTING	57,641	58,690	54,450	59,975	54,450
01-00-3150	PROPERTY TAX - POLICE	141,724	198,954	138,600	189,920	148,500
01-00-3151	PROPERTY TAX - POLICE PENSION	272,190	86,545	364,502	311,843	352,850
01-00-3162	UTILITY TAX - ELECTRICITY	274,824	271,345	285,000	283,890	286,729
01-00-3163	UTILITY TAX - NATURAL GAS	143,016	93,448	117,500	98,489	103,413
01-00-3164	UTILITY TAX - TELECOMMUNICATION	283,758	235,838	235,000	230,598	242,128
01-00-3210	LIQUOR LICENSE	17,100	18,170	19,400	18,500	20,450
01-00-3250	FRANCHISE AGREEMENT	49,943	68,688	68,000	72,695	71,190
01-00-3291	CONTRACTORS LICENSE	55,855	33,750	37,500	37,000	37,500
01-00-3310	BUILDING PERMITS	244,977	82,151	59,865	110,000	86,775
01-00-3320	CERTIFICATE OF OCCUPANCY FEES	6,100	4,900	2,900	4,100	4,800
01-00-3330	PLAN REVIEW FEES	9,156	6,183	3,677	23,400	9,158
01-00-3340	REINSPECTION FEES	5,990	9,467	2,533	6,000	4,230
01-00-3380	TOWING FEES	34,000	31,983	35,000	36,500	37,000
01-00-3390	OTHER LICENSES,PERMITS & FEES	3,952	16,085	1,960	5,000	2,660
01-00-3410	STATE INCOME TAX	906,409	920,275	917,694	879,825	935,083
01-00-3420	REPLACEMENT TAX	2,110	1,945	2,000	2,000	2,000
01-00-3440	GRANTS	9,965	0	1,100	1,100	5,700
01-00-3449	STATE SALES TAX REBATE	(3,048)	(21,658)	(17,000)	(17,558)	(27,000)
01-00-3450	STATE SALES TAX	839,226	836,213	822,000	845,683	877,500
01-00-3451	STATE USE TAX	196,218	210,503	211,430	215,420	217,575
01-00-3453	STATE GAMES LICENSES	14,976	16,955	17,000	16,593	17,500
01-00-3460	ROAD & BRIDGE TAX	35,131	35,348	37,030	40,982	41,400
01-00-3510	COURT FINES	52,856	112,141	80,000	91,500	89,415
01-00-3520	FORFEITURES	0	0	1,000	0	0
01-00-3590	OTHER FINES	54,400	64,282	55,000	64,725	65,375
01-00-3740	ZONING & FILING FEES	7,250	3,050	11,000	6,315	11,000
01-00-3760	REVIEW & DEVELOPMENT FEES	129,649	98,648	123,700	91,945	133,000
01-00-3761	REIMBURSEMENT	123,265	189,025	59,100	102,200	86,700
01-00-3790	CHARGES FOR POLICE SERVICES	10,325	10,000	10,000	10,000	10,000
01-00-3791	OTHER CHARGES FOR SERVICES	3,248	6,346	1,940	2,064	2,600
01-00-3810	INTEREST INCOME	3,483	3,154	13,219	3,500	3,800
01-00-3811	INTEREST INCOME - CD	7,413	8,399	0	8,500	8,900
01-00-3817	INTEREST INCOME - MUNI BONDS	2,594	1,134	0	1,200	1,300
01-00-3820	RENTAL INCOME	11,010	26,320	28,240	39,615	56,390
01-00-3830	DONATIONS	2,800	0	0	0	0
01-00-3840	MAP/PLAN/CODE CHARGES	(4)	770	100	100	100
01-00-3880	GAIN (LOSS) - MUNI BOND REAL	0	0	0	638	0
01-00-3881	GAIN (LOSS) - MUNI BOND UNREAL	(1,102)	(164)	0	0	0
01-00-3888	GAIN (LOSS) - IMET	1,141	0	0	0	0
01-00-3890	MISCELLANEOUS INCOME	200	18,404	500	163	200
01-00-3990	INTERFUND OPERATING TRANSFER	37,500	40,000	132,500	139,577	45,000
	TOTAL REVENUES:	**$ 5,087,055**	**$ 4,995,960**	**$ 4,946,210**	**$ 5,057,026**	**$ 5,090,420**

Village of Sugar Grove
Fiscal Year 2017-2018
Fund 01 - General Fund
Expenditures by Department

Revenues	FY2018 Budget	Percent of Budget
Information Technology	$ 38,658	0.78%
Administration	408,035	8.19%
Police	2,521,486	50.60%
Public Works - Streets Division	1,053,691	21.15%
Building Maintenance	163,100	3.27%
Community Development	540,947	10.86%
Finance	163,944	3.29%
Boards and Commissions	92,967	1.87%
Total	**$ 4,982,828**	**100.00%**

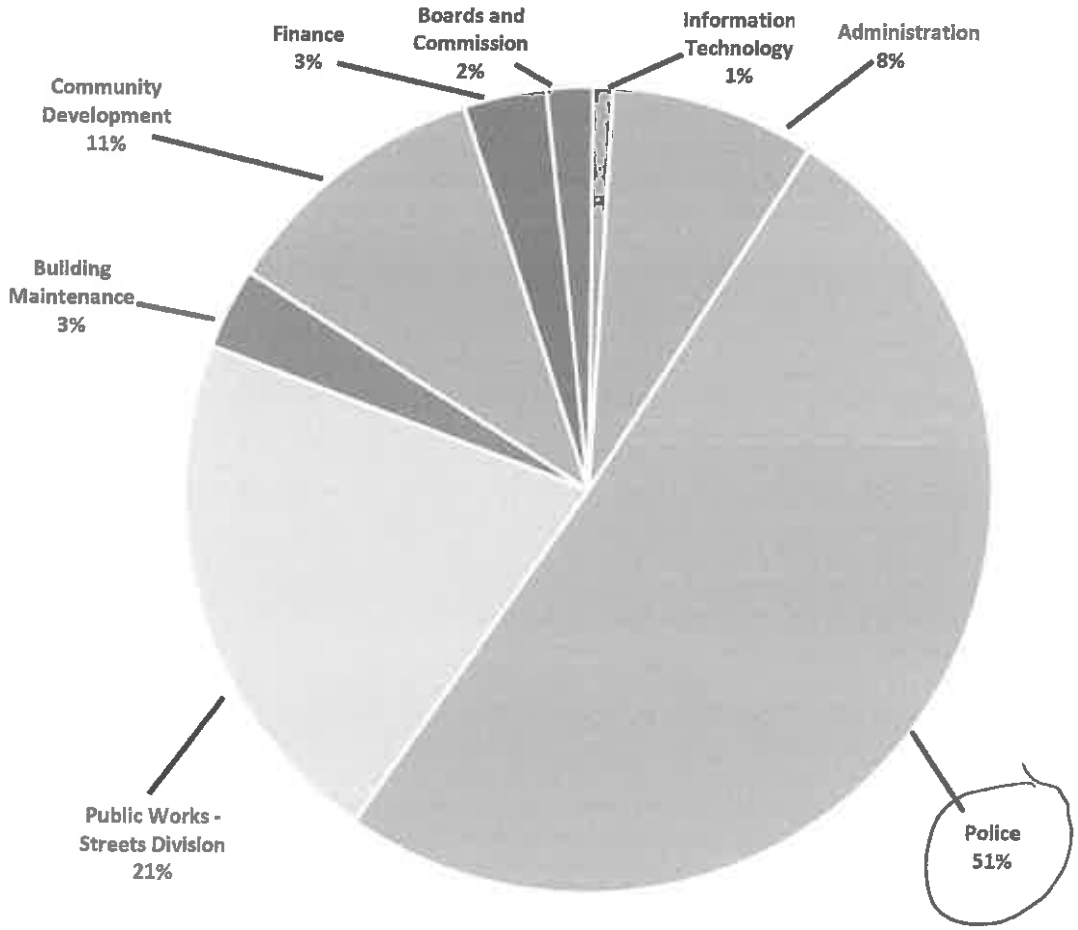


Exhibit B Sugar Grove Web Site

(Land Use Plan Narrative)

Sugar Grove Future Land Use Plan
Tollway Corridor Amendment

The Tollway Corridor amendment changes the predominant land use in the Tollway corridor from Lorang Road on the west to Lake Run on the east from Single-Family and Estate Residential to Business Park in order to exploit the infrastructure investment embodied in the Reagan Tollway (I-88) and the imminent expansion of the IL 47 interchange, and to respond to changing dynamics in the office and industrial real estate market in the I-88 corridor.

The land use categories used in the proposed amendment are consistent with the land use descriptions provided in the Comprehensive Plan, except as described below. The land use and transportation network recommendations of the 2004 Future Land Use Plan prevail except where the amendment recommends a different land use or transportation network improvement.

The key features of the Tollway Corridor amendment include the following:

- Open Space land use appears to be the dominant land use in the area north of the Tollway which is a result of mapping floodplain, open water, forested lands and wetlands and providing a realistic vision of developable land. Additionally, the Open Space land use recommendation accounts for locations of future storm water management facilities so that this function is incorporated in the open space system as an amenity, not a utility function, complementing the environmental features in the landscape.
- The Com Ed property and future substation at Bliss Road and I-88 are identified on the plan within the Business Park land use.
- The Business Park land use at IL 47 and Seavey Road may need to be thought of as flexible land use. The property having frontage on IL 47 could have some limited commercial applications but there may be access and visibility challenges with these tracts of land.
- With the exception of Seavey-Healy Road, Green Road, Norris Road, Denny Road and Bliss Road, the thoroughfares shown in the Business Park land use on the plan are flexible and may be removed or relocated without materially affecting circulation in the Business Park.
- A 200-foot buffer is recommended along Green Road, Norris Road and Main Street to maintain the character of these corridors. Uses such as agriculture, farmsteads and large estate lots would be appropriate uses within this buffer. Wherever possible,

storm water detention facilities are recommended as part of this buffer requirement. The buffer is generally shown as Estate Residential on the Land Use Plan amendment.

Land Use Recommendations

The Open Space land use shown on the plan represents environmental features such as wetlands, floodplain, open water and storm water management facilities and is ownership neutral and need not be publicly owned. However, the placement of storm water management areas adjacent the wetlands and floodplain provides the opportunity to create continuous and contiguous environmental corridors enabling landscape restoration and rehabilitation, and an extensive trail system to be developed in the midst of all the workspace in the business park. The Land Use Plan amendment assumes a regional or master planned approach to storm water management within the territory north of the Tollway. When the storm water management functions are organized in a coherent system, rather than the isolated bathtubs we are accustomed to, the open space benefits are multiplicative. The result is a utility function transformed into an amenity. The actual amount of land devoted to storm water management may be more or less than indicated on the Land Use Plan but the concept remains.

The proposed storm water management system and environmental corridors permit connection of the County's various Forest preserves adjacent the study area: Blackberry Maples, Dick Young/Nelson Lake, and Lake Run. A trail along Seavey Road Run with a pedestrian bridge over the Tollway would provide a connection to the Hannaford Woods/Nickels Farm Forest Preserve.

The Business Park land use aims to achieve the type of development described in the Comprehensive Plan. The development blocks depicted on the plan can accommodate any Business Park building typology. Office buildings, office-warehouse, warehouse, corporate campuses, and manufacturing buildings will fit and block sizes can be varied depending on building footprints, as well. It is not unreasonable to expect a small amount of commercial land uses to materialize in the Business Park land use to support the needs of employees and businesses in the Business Park land use area, and travel needs of the public on Interstate 88 and IL 47.

Where Business Park land uses are adjacent Green Road and Norris Road or Estate Residential land uses along these roads a significant transition yard, exclusive of parking and outdoor storage, should be provided. Uses such as agriculture, farmsteads and large estate lots would be appropriate uses within this buffer. Storm water management facilities could occupy these transition yards if topography permits. The buffer is generally shown as Estate Residential on the Land Use Plan amendment.

While not specifically identified in the amendment, it is conceivable that nodes of mixed-use development could appear in the Business Park land use in the future. These mixed-use development areas would need to be compact high-density multiple-family and commercial uses usually in mixed-use buildings with structured parking and organized around intersections along the arterial roadways.

Road Network Recommendations

The amendment recommends the creation of a new arterial roadway, Seavey-Healy Road that would extend from Harter Road on the west to Orchard Gateway in Aurora on the east. This alignment replaces the disjointed connection in the current Comprehensive Plan Thoroughfare Plan and avoids a direct

connect to Tanner Road. While outside the limits of the study area, the amendment also recognizes a planned re-alignment of Bliss Road and Fabyan Parkway at Main Street, along with the extension of Bunker Road to Bliss Road to provide convenient connection to the La Fox commuter rail station.

The thoroughfare plan, or road network, that is married to the plan shows re-connecting Seavey Road and Norris Road where they are separated by I-88. This is not a new idea since both re-connections were included in the Transportation Plan component of the 2004 Comprehensive Plan. Future land uses west of the Tollway are directly influenced by the realization of this improvement. Without reconnection of Seavey Road development of the territory west of I-88 for Business Park land uses is doubtful and the land use may remain agriculture well into the future. For the time being, the Future Land Use Plan recommends Business Park north and south of Seavey Road and west of the Tollway. Re-connection of Norris Road is not critical to the development of the Business Park land use but would provide a convenient alternative for crossing the Tollway for Village residents.

While the 2004 Thoroughfare Plan referenced an interchange at Bliss Road and I-88, the amendment shows the interchange. Access and circulation to the Business Park land uses north of the Tollway would benefit greatly by the presence of a Bliss Road interchange. This interchange also would benefit traffic volumes at the Orchard Road and IL 47 interchanges once it becomes operational.

The 2004 Thoroughfare Plan also recommended a new arterial road crossing the Tollway midway between Bliss Road and IL 47. This corridor is recommended because the development of large super-blocks of business park uses will require a more robust network of arterial streets to serve these land uses.

On the south side of the Tollway the amendment recommends realigning Merrill and Denny Roads to converge on property via a series of roundabouts providing traffic calming and access to IL 47 at or in the vicinity of Scott Road.

Intersection spacing along Seavey-Healy Road and Bliss Road is between 1/3 and ½ mile intervals. The Plan assumes these thoroughfares will be classified as arterial roadways and will be treated as limited or controlled access thoroughfares and they are identified as divided highways on the Plan. The final design of the thoroughfares on the Plan will be determined at a later date.

Seavey-Healy Road and Bliss Road are assumed to be limited access arterial thoroughfares and a parallel thoroughfare is envisioned along these arterial roads to provide direct access to land uses along the arterial thoroughfares. It is also envisioned that these thoroughfares will be designed as parkways with copious amounts of landscaping and parallel off-street trails for pedestrians and bicyclists. An off-street path system along the primary thoroughfares would complement a path system that could be developed in the open space system represented on the Plan.

The road network in the Business Park land use is disconnected from Green Road, Norris Road and Seavey Road adjacent the Black Sheep Golf Club. This is accomplished by providing a road network in the Business Park land use that functions independently of these roads. The intention behind disconnecting these roads from the Business Park land use is to retain their present road cross section and character of development along the road frontages, e.g. agriculture lands, farmsteads, estate lots. Storm water detention facilities designed as wet prairies also could occupy the frontage of these roads where topography dictates. By segregating the Business Park land uses from these roads the potential for

Mosquito Heaven

mixing Business Park traffic with local traffic is greatly reduced. And without direct access to these roads the Business Park land uses are not inclined to develop the frontage of these roads, thereby contributing to the preservation of the character of these roads.

Storing Harm: the Health and Community Impacts of Goods Movement Warehousing and Logistics

THE Impact Project Policy Brief Series

January 2012

Trade, Health and Environment Impact Project
www.theimpactproject.org

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Introduction

Every year millions of ocean freight containers – over half of those offloaded at the Ports of Los Angeles and Long Beach – are transported through and beyond southern California to their ultimate destination across the country. Before reaching the shelves of the nation's stores, the contents of many of these containers are stored in warehouses along transportation routes from the coastal ports to the inland deserts. Distribution center activity significantly impacts public health due to particulate pollution emitted by the trucks and trains that supply the huge warehouse buildings with goods in shipping containers. The giant warehouses used by the goods movement industry are also a sprawling and ugly land use that swallows farmland and overwhelms the scale of adjacent residential and commercial neighborhoods. Environmental justice advocates have been following the growth in the warehousing/logistics industry with concern. They have advocated for attention to be paid to residential communities impacted by warehouse expansion. Their work provides a way forward, with strategies to mitigate the health impacts of existing warehouses, design, and operate storage facilities in a more responsible manner, limit excessive concentrations of warehouses, and better regulate land use so that the future of the region is brighter than being the rent-a-storage for the nation's freight movers and retailers.

The warehouse/logistics industry

Warehousing is an integral link in the goods movement chain that distributes products imported from Asia throughout the United States. Approximately 40% of the 13-15 million shipping containers entering the region's ports each year are 'transloaded' before leaving greater Los Angeles, meaning that they spend some time in warehouse storage facilities being unpacked and repacked for their final destination.[1] The Los Angeles region currently has approximately 840 million square feet of warehouse facilities.[2] Clusters of warehouses exist along the I-710 and I-110 freeways north of the ports, in such cities as Carson, Compton, Commerce and

Bellflower; south and southeast of downtown Los Angeles; along the 91 freeway near Cerritos and Buena Park; along the 60 freeway in Puente and Rowland Heights; and in the Inland Valleys with massive concentrations in Ontario and Mira Loma (see figure 1). Modern warehouses used by the goods movement industry are vast buildings, some larger than 1.5 million square feet.[3] As close as one can come to "sprawl in a box," these structures are spartanly built, lined with dozens of truck bays. The purpose of warehouses are to service distant points – factories in China, rail yards near the ports, Wal-Mart stores in Illinois – with little connection to the fabric of life in the communities where they are located.

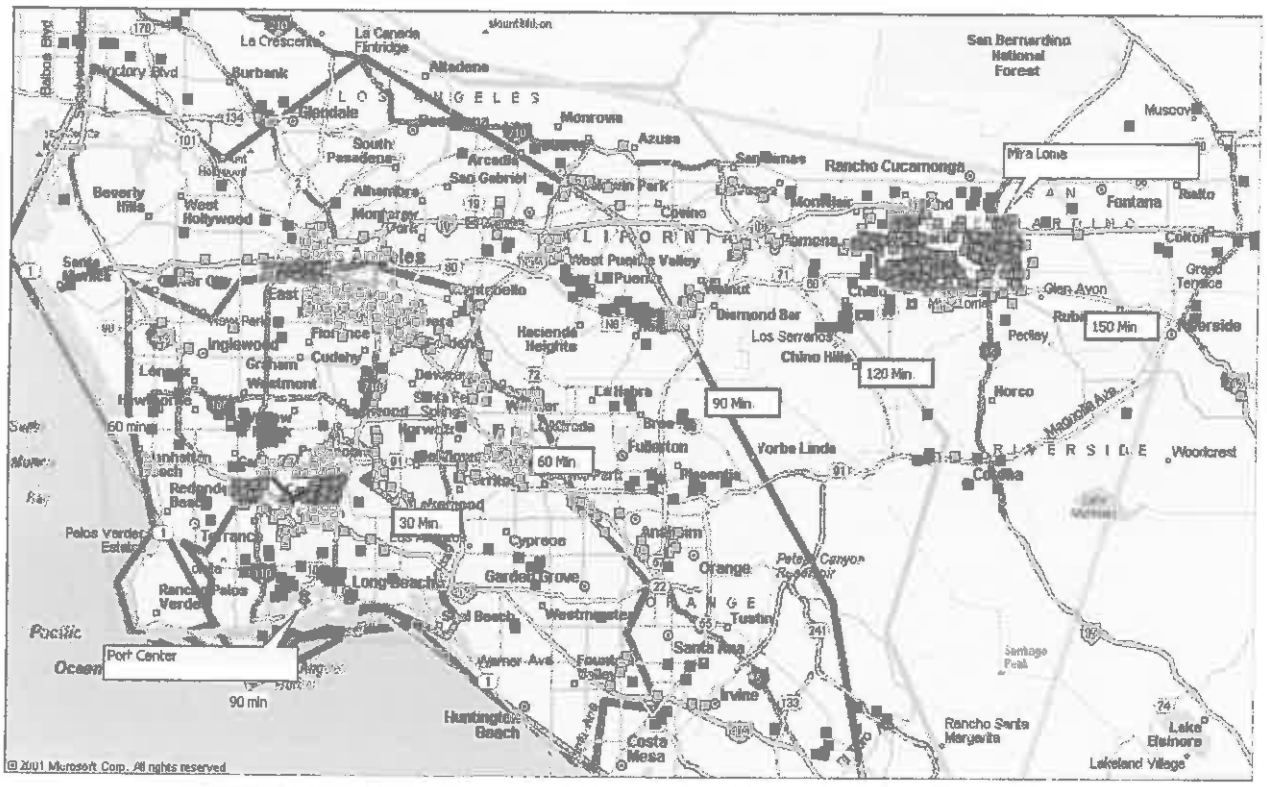

Figure 1: Map of warehouses in the Los Angeles region. From Cambridge Systematics, "Comprehensive Regional Goods Movement Plan and Implementation Strategy Study Update," Presentation to SCAG, December 3, 2009.

Case study: warehouses in the Inland Valleys

The fastest growing cluster of warehouses serving the goods movement and logistics industry lies in the Inland Valleys of Riverside and San Bernardino Counties in California. See Figure 2. In 2004, one-sixth of the commercial development in the entire nation was taking place in this area due to the rapid construction of warehouses.[4] The unchecked growth in this network of warehouses and the roads and railyards that serve them is transforming the landscape of the Inland Valley area and the health of its residents in a dramatic fashion. Farmland has been converted to immense, windowless warehouses surrounded by asphalt and chain link fencing—and some of the worst air pollution in the nation. Mira Loma, a low income Latino community in Riverside County, which is surrounded by warehouses and distribution centers,

is known to have among the highest levels of particulate pollution in the nation.[5] That pollution has resulted in startling findings — Mira Loma children have the slowest lung growth and weakest lung capacity of all children studied in southern California.[6]

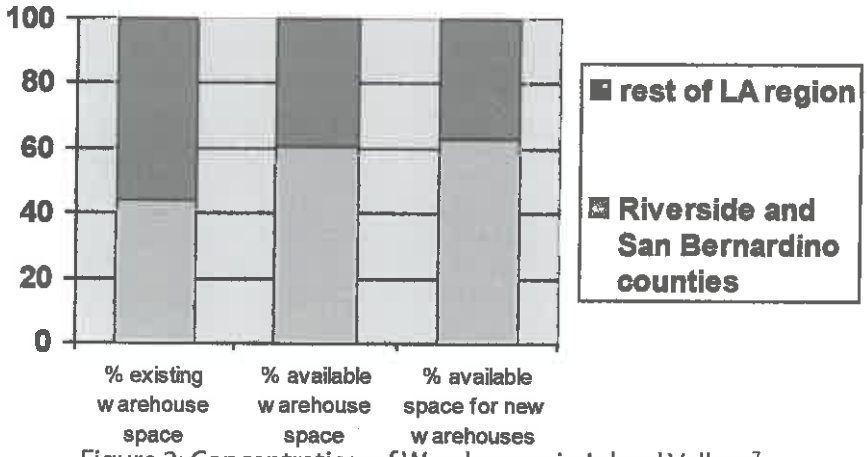

Figure 2: Concentration of Warehouses in Inland Valleys[7]

Huge warehouses and distribution centers are not just a California phenomenon. Wal-Mart alone has 40 regional distribution centers around the United States that are larger than one million square feet each. The corporation boasts that it has 53,000 trailer trucks on the move across the United States.[8] In 2007, Target opened its largest U.S. distribution center in Savannah, Georgia, which was 2.1 million square feet. In addition, there is a move to develop "inland ports" with intermodal rail facilities and distribution centers to serve East Coast ports, which anticipate a rise in imports from Asia when the Panama Canal expansion is completed in 2014.[9] Figure 3 shows some large warehouses/distribution facilities located across the country.

Figure 3: Some large distribution centers in the United States[10,11,12,13,14]

Corporation	Location	Size (millions of square feet)
Wal-Mart	Ellwood, IL (near Chicago)	3.4
Wal-Mart	Hampton Roads, VA	2.1
Target	Hampton Roads, VA	1.8
Ross Stores	Moreno Valley, CA	1.4
Ross Stores	Fort Mill, SC	1.3
Mattel	San Bernardino, CA	1.2
Pier 1	Savanna, GA	.78
Home Depot	Braselton, GA	.55

Community impacts of warehousing

Local, state, and federal environmental protections have not kept pace with the rapid growth of warehousing in the Los Angeles region. The concentration and proximity of diesel trucks and the warehousing facilities that service them threatens the health of people living and working near busy roads and logistics facilities. The trucks and trains that carry freight to be warehoused (and trucks idling engines at or near warehouse sites) pollute by emitting small toxic particles

called particulate matter (PM) into the air. These particles are of varying size and toxicity—from PM_{10} (dust and soot of 10 microns or less in size, that can irritate the throat and lungs); $PM_{2.5}$ (particles of 2.5 microns or less in size that are considered dangerous; and ultrafine particles (less than .01 microns in size) from fuel combustion, especially trucks and motor vehicles. Particulate emissions from diesel vehicles and equipment contribute to health problems that include cardiovascular problems, cancer, asthma, decreased lung function and capacity, reproductive health problems, and premature death.[15]

Beyond health threats from the transportation of freight, warehouses are also associated with negative impacts on residents' quality of life. Residents often feel a sense that they are losing their community to encroachment by warehouses and kept in the dark about what is being stored in facilities near their homes. Trucks servicing the facilities park and idle on public streets, sometimes using streets as "staging areas" because a warehouse property is over capacity or does not provide adequate on-site parking. There are also safety concerns as residents share roads not originally designed for heavy vehicles with lines of trucks. Warehouse centers also deprive local communities of land that could be used for future green space, schools and public buildings, and new residential, retail, and commercial centers.

Policy Recommendations

Local government decisions have facilitated rapid and at times irresponsible warehouse development. Acres and acres of formerly agricultural land located next to residential areas have been rezoned to permit heavy industrial uses. Once warehouses are allowed, city and county officials approve new warehouse developments very close to existing residences, schools and other sensitive receptors, even though additional scientific research shows that health risks from particulates increases significantly when pollution sources are close to where people live.[16] Jurisdictions eager to attract new development have even fast-tracked warehouse projects, approving warehouses within 90 days of submitted plans, without adequate time for nearby residents to comment on a proposed project. Officials have also regularly granted "negative declarations" to proposed warehouse developments, meaning that warehouses do not have to undergo environmental impact assessments, despite the evidence of health harms associated with warehouses and trucks.[17]

The Impact Project is committed to zero emissions technologies and regulations across all stages of goods movement. Policy recommendations to reduce rather than eliminate emissions should be considered important interim steps towards achieving zero emissions.

1. <u>Use zoning rules to protect health and quality of life and preserve farmland</u>
   - Create buffer zones. The California Air Resources Board recommends buffer zones between logistics facilities and sensitive receptors (homes, schools).[18] Community organizations active in THE Impact Project have often called for 1500 foot buffer zones. In addition, these rules should apply in both directions: no location of new industrial facilities near sensitive receptors, as well as no new sensitive receptors near industrial facilities.

- Do not allow additional warehouses in air pollution hot spots. New warehouses should not be permitted in residential (homes, schools, parks, etc) areas that already experience unusually high concentrations of particulate pollution until pollution levels are reduced.[19]
- Protect high value farmland. Do not allow conversion of farmlands to warehouses, especially those designated by the state as high value farmland.
- Manage traffic routes and parking. Establish warehouse facility truck operating capacity limits and ensure that warehouses have enough property to allow deliveries and truck parking on site so trucks are not using public streets as staging areas. Designate truck routes with posted no stopping and parking signs on adjacent streets. Warehouse owners should be held accountable for parking and idling violations by trucks visiting their facility.
- Limit noise and light pollution. Require sound barriers, lower lights and light deflectors; and restrict hours of operation to limit noise and light pollution to nearby residential areas.

2. Require environmentally responsible operations by warehouse operators and truck drivers
   - Require clean trucks, with warehouse owners helping subsidize purchases of new vehicles.[20] Older trucks should be phased out in order to reduce emissions. Warehouses should be electrified so that arriving vehicles can plug in rather than run their engines.[21] In the mid to long term future, all new trucks should have electric rather than internal combustion engines.
   - Plant trees and provide air filters to capture particulates. Warehouse owners should be required to plant trees around the edge of their property, especially in between the warehouse and adjacent residences. Warehouse owners should also be required to provide air filters to residents and schools located within 1500 feet of the facility. While reducing emissions should be the priority, air filters and mature trees may help reduce health impacts on nearby residents.[22,23]
   - Require sustainability features in warehouses. Warehouse roofs should be white in color to deflect heat and reduce temperatures and air conditioning.
   - Require companies to protect worker health. Warehouse workers should be given respiratory masks when opening containers because some shipping containers have had fumigant chemicals sprayed or released at their place of origin.

3. Inform and empower the public to improve community oversight
   - Notify the public about potentially toxic substances stored in warehouses and shipped on trucks. The public has a right to know what is being stored in facilities.[24]
   - Require new warehouse developments to complete environmental impact assessments. If significant impacts are found, operation should not be permitted unless these impacts are mitigated.

Conclusion

Corporations build and operate warehouses according to their own logistical needs and profit motives. Clusters of warehouses develop where land is located close to transportation infrastructure and is relatively inexpensive. But people also live near many warehouses, and warehouses bring pollution and noise, shape traffic patterns, and influence future economic and community development options. Decision-makers need to update land use rules and conditional use permits to ensure that warehouses are better neighbors, and, when appropriate, block new warehouses that would unfairly burden communities already facing polluted air.

Acknowledgements

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1. INTRODUCTION

Kimley-Horn was retained by Crown Community Development to perform a traffic impact study for a proposed mixed-use development in Sugar Grove, Illinois. The subject site is comprised of select parcels north and south of the Interstate 88 (I-88) interchange with IL Route 47. Between the I-88 interchange and Seavey Road, the subject site includes parcels on both the east and west sides of IL Route 47; north of Seavey Road, the subject site is located on the east side of IL Route 47 only. South of the I-88 interchange with IL Route 47, the subject site includes parcels located on the east side of IL Route 47 generally between Finley Road and Merrill Road. An aerial view of the study location and the surrounding roadway network is presented in **Exhibit 1**.

The conceptual development plan includes a total of 8,084,125 square feet of industrial warehouse/distribution use, 149,000 square feet of retail use, and 177 single-family residential units. The concept site plan is organized by development zone (Zone A to Zone F) based on geographic boundaries (e.g., roadways, wetlands), land use, and access. The proposed development is anticipated to be constructed in phases. As this development progresses, infrastructure improvements may be necessary in the relatively near term to facilitate site access and support the addition of site-generated traffic on the local roadway network. In order to quantify the impact of site-generated traffic, and to identify near-term infrastructure needs, this study evaluates the impact of Phase A under a Year 2030 build scenario. Because further infrastructure improvements may be needed to support continued traffic growth within the study area, a Year 2040 Build condition was also evaluated to analyze the impact of future background traffic and site-generated traffic at full buildout. **Table 1** summarizes the assumed phasing for the proposed development.

Table 1. Summary of Proposed Development

Zone	Land Use		
	Industrial Warehouse (square feet)	Retail (square feet)	Residential (units)
Phase A			
Zone E	4,062,225	–	–
Subtotal Phase A	*4,062,225*	–	–
Phase B			
Zone A	423,000	–	–
Zone B	1,634,900	56,660	–
Zone C	1,964,000	–	–
Zone D	–	92,340	–
Zone F	–	–	177
Subtotal Phase B	*4,021,900*	*149,000*	*177*
Total	**8,084,125**	**149,000**	**177**

With development of Phase A, two new east-west roadways would be constructed to facilitate access to the industrial warehouse/distribution development. A new roadway is proposed to align with Scott Road and extend east of IL Route 47 (referred to as Denny Road for the purposes of this study). In addition, Merrill Road would be realigned opposite South Thornapple Tree Road (referred to as Realigned Merrill Road for the purposes of this study).

Appendix.

Table 5. ITE Trip Generation Data by Land Use

ITE Land Use / Unit	Unit	Type	Weekday		
			Daily	AM Peak	PM Peak
High-Cube Transload and Short-Term Storage Warehouse (LUC 154)	Per 1,000 sq. ft.	Passenger Vehicles	0.946X 50% in/50% out	0.056X 77% in/23% out	0.077X 28% in/72% out
		Heavy Vehicles[1]	0.454X 50% in/50% out	0.024X 77% in/23% out	0.023X 28% in/72% out

T – Site-generated trips X – 1,000 square feet gross floor area

[1] The ITE Trip Generation, Tenth Edition manual does not provide data for heavy vehicles. Per guidance provided in the ITE manual for LUC 154, data provided in the *High-Cube Warehouse Vehicle Trip Generation Analysis*, published in October 2016 was assumed. Tables 5-7 of the *High-Cube Warehouse Vehicle Trip Generation Analysis* outline the daily and peak hour trip generation rates for heavy vehicles. A copy of the supplemental data is provided in the appendix. The in/out distribution percentages were obtained from the Trip Generation, Tenth Edition manual.

The site-generated trips generated during the peak hour were rounded to the nearest multiple of five for the purposes of this analysis, and daily trips were rounded to the nearest multiple of ten. A summary of projected site trips is provided in **Table 6**.

Table 6. Site-Generated Traffic Projections[1]

Land Use	Size	Type	Weekday						
			Daily	AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
Phase A									
High-Cube Transload and Short-Term Storage Warehouse (LUC 154)	4,062,225 sq. ft.	Passenger Cars	3,840	175	50	225	90	225	315
		Heavy Vehicles	1,840	75	20	95	25	70	95
Total (Phase A)			5,680	250	70	320	115	295	410

Heavy Vehicles
1840 Daily
X 2 Tot bldg out
3680 or More daily

[1]In/Out volumes are rounded to the nearest multiple of five. For rounding purposes, the total volumes are a sum of in and out trips.

The distribution of site-generated truck traffic was based on prevailing truck traffic volumes/patterns and the planned I-88 interchange improvements at IL Route 47. The distributions estimated for passenger vehicle traffic are based on a number of factors, including the nature of surrounding land uses, prevailing traffic volumes/patterns, characteristics of the street system, and the ease with which motorists can travel over various sections of that system. The planned interchange improvements were also considered for the estimated passenger vehicle distributions. The estimated trip distributions are summarized in **Table 7**.

- Trailers stored on a lot shall not exceed the ratio of two (2) trailers per one (1) truck dock.
- Trailers shall not be used for storage.
- Trailer storage is permitted only as an accessory use on a lot.

Pedestrian Circulation

All parking areas shall be designed without conflict between vehicles and pedestrians. Parking lots adjacent to the office areas of industrial buildings shall be constructed with a minimum five foot (5') wide raised pedestrian sidewalk between the parking lot and the building along the office frontage. Parking lots adjacent to commercial buildings shall be constructed with a minimum eight foot (8') raised pedestrian sidewalk between the parking lot and the building. All accessibility codes shall be met.

Bicycle Facilities

Commercial and multifamily residential uses shall comply with section 11-12-10 of the Village of Sugar Grove Zoning Ordinance.

Industrial uses shall provide bicycle facilities at the rate of one percent (1%) of the total vehicle parking spaces provided.

Illumination

All uses shall comply with Chapter 18 of the Village of Sugar Grove Zoning Ordinance with the following exception:

- On industrial lots, the maximum light pole height behind the front building line is forty feet (40').

Fencing

A maximum fence height of eight feet (8') shall be permitted within the interior and rear yards of industrial lots. A maximum fence height of six feet (6') shall be permitted within the interior and rear yards of commercial and multifamily lots. No fences are permitted within the street yards, with the exception of the I-88 street yard. Metal fences, including chain link fences, shall be black. Solid fencing shall be finished wood or composite material. Vinyl fencing is not permitted.

Truck Docks

Truck docks shall not be located on facades which are parallel with, or within twenty percent (20%) of parallel, a street lot line. Landscaping in truck court islands shall be installed and maintained to screen views from public rights of way and contain one (1) evergreen tree per ten linear feet (10').

Open Space

All permanently preserved open space shall be accessible by an interconnected multi-use path system where site conditions allow. Any path constructed shall be a minimum ten feet (10') wide and shall be paved. All permanently preserved open space and paths shall be owned and/or maintained by a property owner's association.

Path and open space development shall conform to attached Landscape Plan dated _____

Signage

- Temporary Signs

  Before Occupancy: Regulated by Annexation Agreement

  After Occupancy: Temporary signs shall comply with Chapter 14 of the Village of Sugar Grove Zoning Ordinance as amended from time to time.

- Permanent Signs

  Wall Signs along I-88: ten percent (10%) of the façade surface area up to a maximum of two hundred (200) square feet in sign surface area. A building of ten (10) or more stories may be allowed twenty percent (20%) of the façade surface area up to a maximum of three hundred (300) square feet of sign surface area.

  Wall Signs along all other public streets: one (1) square foot of signage per one (1) linear foot of street facing façade width up to a maximum of two hundred (200) square feet of sign surface area. Illumination shall comply

with the Village of Sugar Grove Zoning Ordinance with the exception of wall signage facing Denny Road. Wall signs facing Denny Road shall **not** be illuminated.

Freestanding Signs on individual lots: one (1) monument style sign per each one hundred fifty feet (150') of public street frontage. Each freestanding sign shall be no more than one hundred twenty (120) square feet in structure size with a maximum height of ten feet (10'). The area devoted to sign surface area shall not exceed sixty (60) square feet.

Development Identification Signs

Development identification signs shall comply with attached Sign Plan dated 12.26.18

Patios	P Maximum 2' into building setback	P Maximum 2' into building setback	P Minimum 7.5'
Pergolas, arbors, and trellises	P Maximum 5' into building setback	P Minimum 5'	P Minimum 5'
Picnic benches	P Minimum 5'	P Minimum 5'	P Minimum 5'
Ponds	P Minimum 5'	P Minimum 5'	P Minimum 5'
Porch, open	P Maximum 5' into building setback	P Maximum 5' into building setback	P Maximum 5' into building setback
Sidewalks	P Minimum 1'	P Minimum 1'	P Minimum 1'
Signs, flags, and flagpoles	P	P	P
Solar panel	N	P	P
Stairs, steps (maximum 4' above grade)	P Minimum 1'	P Minimum 1'	P Minimum 1'
Terrace, open	P Maximum 24" into building setback	P Maximum 24" into building setback	P Maximum 24" into building setback
Trailer storage on industrial lots	N Exception is I-88 street yard with 50' minimum	P Vehicle use area setback must be met	P Vehicle use area setback must be met
Trash dumpster enclosures	N	P Minimum 5'	P Minimum 5'
Wind turbines	N	P	P

	Nonresidential off street parking lots and drive aisles and driveways	N	A*
	Ornamental towers, scenery lofts, monuments, domes, spires, steeples, and water towers	A	A
	Outdoor fireplaces and ovens	A	A
	Parking lot light poles	S	A*
	Patios, sidewalks	A	A
	Pergolas, arbors, trellises	A	A
	Picnic benches	A	A
	Ponds	A	A
	Recreational equipment (including basketball hoops, trampolines, etc.)	A	A
	Residential communications antennas (TV, radio, etc.) and satellite dishes, including amateur radio and commercial communications antennas which are "customer end" antennas placed at a commercial location for purposes of providing services at the same location in which it is installed	A	A
	Residential mechanical equipment (including generators, air conditioners, etc.)	A	A
	Residential off street parking areas and driveways	A	A
	Signs	A*	A*
	Single bay car wash	N	A
	Solar panel	A*	A*
	Stairs, steps	A	A

	Awnings and canopies	A	A
	Balconies	A	A
	Bay windows	A	A
	Cart corrals	N	A*
	Children's playhouses and playground equipment	A	S
	Children's tree houses	A	N
	Chimneys	A	A
	Clotheslines for laundry	A	N
	Commercial communications antennas and satellite dishes, including all transmitting, except for amateur radio, which are not "customer end" antennas and which are used to provide service or signals beyond the location in which they are installed	S	S
	Commercial mechanical equipment (including generators, air conditioners, etc.)	N	A
	Decks	A	A
	Eaves and gutters	A	A
	Fences, walls	A*	A*
	Fuel or gas tanks (including above and below ground)	N	S
	Gardens (vegetable, crop)	A	A
	Hot tubs and outdoor spas	A	N
	Kennels, dog runs	A	S
	Loading docks	N	A*
	Mailboxes	A	A

EPA

Table 2: Average Heavy-Duty Truck Emission Rates by GVW Class*
(in grams per mile)

Pollutant	Fuel	IIb	III	IV	V	VI	VII	VIIIa	VIIIb
VOC	gas	1.353	1.067	4.234	2.632	2.477	2.857	3.628	**
	diesel	0.189	0.201	0.262	0.274	0.365	0.453	0.455	0.545
	gas	1.400	1.713	4.319	2.693	2.535	2.920	3.704	**
	diesel	0.194	0.204	0.266	0.278	0.370	0.459	0.461	0.552
CO	gas	11.220	15.810	33.860	19.580	18.130	23.130	28.560	**
	diesel	0.839	0.908	1.163	1.189	1.367	1.719	2.395	3.109
NOx	gas	2.734	2.920	4.133	3.735	3.650	4.199	4.892	**
	diesel	3.088	3.298	4.352	4.548	5.990	7.471	9.191	10.990
PM2.5	gas	0.043	0.045	0.058	0.046	0.045	0.046	0.049	**
	diesel	0.091	0.073	0.089	0.079	0.172	0.177	0.215	0.238
PM10	gas	0.049	0.051	0.074	0.055	0.054	0.056	0.061	**
	diesel	0.099	0.079	0.096	0.085	0.186	0.192	0.233	0.259

Particulate matter calculations: .448 grams/mile
x 3680 Trucks/day
1648.64 grams/mile daily
= 7.23 lbs/mile
x 10 miles
72.31 lbs
x 2 in+out
Daily = 144.62 lbs.
x 7
weekly 1012.32 lbs
Monthly = 30,370 lbs
annually = x 12
364,436 lbs
or 182.22 Tons annually

** There are no gasoline-fueled heavy trucks in this weight category.
* See Endnotes

For More Information

The other fact sheets in this series and additional information are available on the Office of Transportation and Air Quality's Web site at

Emission factor fact sheets www.epa.gov/otaq/consumer.htm

Modeling and estimating vehicle emissions: www.epa.gov/otaq/models.htm

Converting heavy-duty engine emission rates to in-use heavy-duty truck emission rates:
www.epa.gov/otaq/models/mobile6/r02006.pdf
www.epa.gov/otaq/models/mobile6/r02005.pdf

Endnotes

1. Figures presented in this document are averages only. Individual trucks may differ substantially in terms of pollution emitted per mile from values indicated here. Values may differ slightly from original sources due to rounding.

2. These emission factors are averages for the entire in-use fleet as of July 2008. Newer trucks generally will have lower emissions, as they are built to comply with more stringent emission standards and have not yet accumulated high odometer mileages, while older trucks generally

Emission Facts

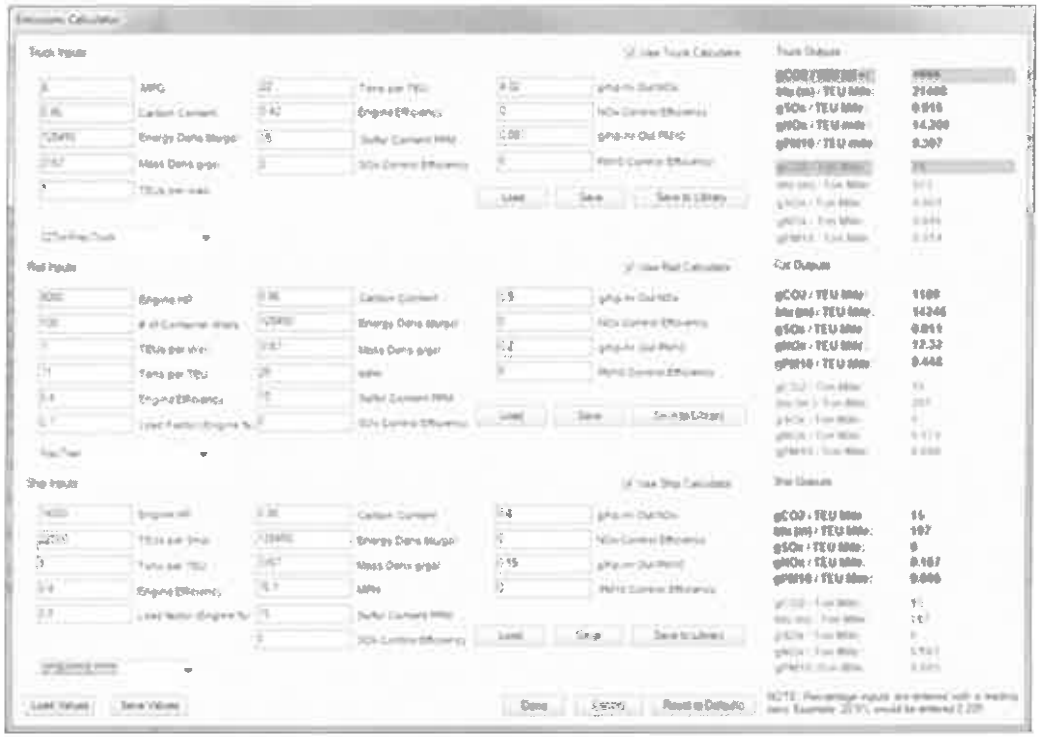


Figure 5: Example of the emissions calculator in the GIFT model

Table 3: Emissions Rates from Average In-use Fleet estimates (EPA, 2010) and MY2007 standards (EPA, 2000). Numbers highlighted in red reflect those emissions that were impacted following the implementation of the 2007 highway rule.

Pollutant	Average Emissions Rate	Model Year 2007 emissions rate (if relevant)
CO_2	1740 g/mile	1740 g/mile
CO	2.311 g/mile	2.311 g/mile
NO_x	8.613 g/mile	**0.725 g/mile**
PM_{10}	0.219 g/mile	**0.036 g/mile**
SO_x	0.012 g/mile	0.012 g/mile
VOC	0.447 g/mile	0.447 g/mile

From EPA site

Table E1. Summary of Key Potential Impacts of Business Parks

Potential Receptors of Impact		Activities and Potential Impacts		
		Construction phase	Operation phase/on-going site maintenance	Decommissioning / Post-operation
WATER	surface water hydrology & channel morphology	**Use of vehicles and machinery** • increase in surface runoff from soil compaction **Works next to or near water courses** • change in flow velocities • increased erosion and subsequent changes in bed and bank stability • increased flood risk **Earthworks** • increased sedimentation in watercourses	**Use of vehicles and machinery** • increase in surface runoff from soil compaction **Site drainage** • rapid transfer of rainwater to watercourses via drains • changes to flow regimes in watercourses downstream of the development • change in deposition regime, from changes in flow and possible increase in sediment input from soil erosion • increased flood risk **Water abstraction** • reduced surface water level	**Site drainage** • continued flood risk
	surface water quality	**Earthworks** • pollution from suspended material • disturbance of contaminated soil and subsequent pollution of watercourses **Materials management** • pollution from spills or leaks of fuel, oil and construction materials	**Materials and waste management** • pollution from spills or leaks of fuel, oil and waste **Use of machinery** • sediment-loading of watercourses **Site drainage** • increased risk of contamination from effluent **Space heating** • change in water temperature	
	groundwater hydrology	**Earthworks and site drainage** • reduction in water table • changes to groundwater distribution and flow	**Water abstraction** • continued reduction in water table and change to groundwater distribution and flow	
	groundwater quality	**Earthworks** • disturbance of contaminated soil and subsequent groundwater pollution **Materials management** • pollution from spills or leaks of fuel, oil and building materials	**Materials and waste management** • contamination from spills or leaks of fuel, oil and waste **Site drainage** • increased risk of contamination from effluent **Space heating** • change in water temperature	

Potential Receptors of Impact		Activities and Potential Impacts		
		Construction phase	**Operation phase/on-going site maintenance**	**Decommissioning / Post-operation**
LAND	landscape	**Excavations & earthworks** • creation of new landform	**Physical presence of business park** • change in character of landscape including light intrusion **Increased transport** • light intrusion	• possible enhancement of land character by appropriate restoration plan
	soils	**Use of vehicles and machinery** • compaction • erosion • contamination from spills or leaks of fuel, oil and construction material **Earthworks** • further erosion of exposed soil • land take and loss of soils	**Increased business activity** • increased risk of contamination by waste and effluent • potential for soil contamination for polluted runoff and from short-range deposition from vehicles **Site drainage** • further erosion or sediment loading	
	geology	**Excavations** • removal of rock by excavation works		
AIR	local air quality	**Use of vehicles and machinery** • dust generation	**Increased transport** • increased exhaust emissions and dust generation **Increased business activity** • increased emissions • odour from waste	

Potential Receptors of Impact		Activities and Potential Impacts		
		Construction phase	**Operation phase/on-going site maintenance**	**Decommissioning / Post-operation**
FLORA & FAUNA	aquatic ecology	**Drainage works and use of vehicles** • negative impact on flora and fauna from increased sediment loading of streams **Materials management** • harm to aquatic flora and fauna from oil, fuel, cement or other substances entering watercourses	**Site drainage** • indirect effect on aquatic flora and fauna from ongoing changes to stream hydrology and morphology **Materials and waste management** • direct and indirect effects from oil, fuel or other substances entering the aquatic environment **Business activity** • increased vibration, heat release and effluent could cause alteration or loss of aquatic habitat	**Post closure land-use** • continued effects of soil contamination **Restoration design** • opportunity for enhancement of nature conservation value
	terrestrial ecology	**Earthworks and excavations** • habitat removal, fragmentation or severance • disturbance to, or loss of, species (including rare and sensitive species)	**Physical presence of business park** • alteration, loss or fragmentation of terrestrial habitats and corridor • disturbance to, or loss of, species (including rare and sensitive species)	**Restoration design** • positive or negative effect on existing ecology from introduction of new (possibly non-native) species

Potential Receptors of Impact		Activities and Potential Impacts		
		Construction phase	**Operation phase/on-going site maintenance**	**Decommissioning / Post-operation**
HUMAN ENVIRON -MENT	socio-economic[1]	**Earthworks and excavations** • disruption of services such as electricity, gas, water, or telecommunications due to the presence of underground cables and pipes • construction-related employment	**Business activity (depending on the nature and size of business involved)** • modal shift in traffic pattern • employment creation or crowding-out effects on local labour force • change in wage level in locality • business opportunity or competition for established businesses • immigration from other areas • growth of local economy • change in consumption pattern of local households • revenue for local authority **Increased demand on infrastructure** • impact on telecommunication access • impact on local energy consumption pattern • Impact on local water supply strategy • Impact on local waster management plan	**Restoration design and after-use** • public perception of the area may improve following sensitive restoration plans **Closure of business park** • change in traffic pattern • impact on local economy • risk of vandalism in vacated site
	health and safety[1]	**Earthworks and excavations** • risk of injury on construction site	**Increased traffic** • risk of accident • degradation of air quality	
	amenity		• possible alteration of rights of way or reduction in access	**Restoration design** • provision of amenity or recreational area
	nuisance	**Use of vehicles and machinery** • noise from construction traffic and operations • mud on roads	**Increased traffic** • noise and light intrusion	
	architectural and archaeological heritage[1]	**Use of vehicles and machinery** • damage to features of archaeological or cultural importance		

[1] The Agency considers that key impacts to be identified and assessed are likely to include the following, but further advice and guidance should be sought from the relevant competent authority, as included in the Scoping Handbook.

implement

4. Mitigation measures

4.1 Following the scoping exercise and the identification of potential environmental effects, mitigation measures should be proposed to avoid or reduce potential negative impacts to air, water, land, ecology and humans, or to introduce positive aspects to the development. For example, such measures could aim to minimise nuisance in the locality, ensure safety and the possibility of enhancing amenity value. Guidance has been provided by the Environment Agency to assist developers on a range of relevant subjects in the form of Pollution Prevention Guidelines (see "References and Further Reading" in the Scoping Handbook). Other relevant publications are listed in Section Five, below.

4.2 A primary consideration in impact mitigation must be the siting of a business park. The development should avoid damage to important ecological sites and high quality landscapes. Also, it is Environment Agency policy to seek the preferential location of developments in areas which are not vulnerable to groundwater pollution (Environment Agency, 1998a). It is strongly recommended, therefore, that developers undertake an assessment of alternative sites.

Mitigating the impacts of construction activities

4.3 Construction activities have the potential to affect all environmental receptors. However, the following list summarizes the mitigation measures most relevant to business park developments:

- phasing of construction work to minimize disturbance to wildlife at sensitive times of year, such as during the breeding season or when young are being raised;
- use of techniques to minimize compaction of soil, such as restricting access during wet conditions and using protective boarding and low ground pressure machinery. If necessary, soil should be carefully removed and stored for subsequent reinstatement;
- use of dust control strategies;
- storage of fuel, equipment and construction materials so as to minimize the risk of soil contamination or water pollution (see Environment Agency, 2000);
- setting the routing and timing of construction traffic so as to avoid residential areas or other sensitive human receptors (e.g. schools, hospitals, nursing homes);
- access roads should avoid riparian zones and should be built using appropriate construction materials.

Mitigating the impacts of the operational phase

4.4 Although sensitive siting and design of a business park are the primary means for avoiding or reducing its environmental impacts, further measures can be introduced to minimize impacts occurring from the ongoing management of the site. An overall consideration for the proposed business park development is that its design and operation are in accordance with planning conditions, the Duty of Care and other relevant legislation. Developers should seek independent legal advice to ensure that all legal requirements relating to the proposed development are identified and complied with.

4.5 The measures have been arranged according to their primary receptor. However it should be noted that many of the following mitigation measures are inter-related. For example, correct handling and storage of chemicals, plus bunding to contain spills, would serve to reduce the impacts of such an incident on soils, surface and ground waters, and ecology.

Protecting the water environment

4.6 In order to minimize potential impacts on the water environment in the design and running of an operation, a system must be in place to ensure that:

- an appropriate water management system should be considered such as Sustainable Drainage Systems (SuDS), including the use of porous paving, swales and constructed wetlands (and ponds) for receiving site runoff to reduce the impact of runoff on nearby watercourses;
- hazardous or potentially polluting materials such as fuel, oil or wastes must be sited on an impervious base away from water, properly bunded, and kept locked when unattended;
- a risk assessment is carried out for each substance to be used or stored on site and the appropriate containment measures installed;
- an Emergency Plan is formulated and tested through exercises to ensure that procedures to prevent or mitigate impacts due to accidents or spillages are in place and operate effectively (some developments may require such plans to be formulated and the Environment Agency should be consulted to identify where this is the case);
- an appropriate waste management system is employed so as to prevent spills, leaks, dust generation and odour.

Protecting the land environment

4.7 Certain measures noted above for protecting the water environment, such as efficient site drainage, material handling, waste management and risk assessment, would also reduce the likelihood of soil contamination. Impacts on soils and landscape may also be mitigated by the following:

- appropriate designs for buildings and structures on site;
- appropriate screening for visual impacts;
- effective stabilisation of altered landforms so as to minimize soil erosion and the potential for water pollution from suspended solids.

Protecting the air environment

4.8 Developers should consider the aspects of the development that are likely to lead to air emissions. Such aspects can include emissions from vehicles and ventilation ducts. Suitable mitigation measures may include the employment of energy efficient buildings including heating system (such as appropriate office lay-out, building and insulation materials) and vegetation screens to act as a barrier to gaseous and particulate emissions.

Protecting ecology

4.9 Measures designed to prevent or reduce impacts to water or land will also benefit ecological populations. The following list identifies further strategies for reducing or avoiding impacts to terrestrial and aquatic species and their habitats:

- existing habitat features should be incorporated into site design and protected from change;
- further habitats should be created to compensate for habitat losses and to improve the landscape and ecological potential for the site;

- restoration plans should incorporate measures to improve the ecological status of the site.

Protecting the human environment

4.10 Some of the measures noted above can also reduce possible impacts on humans, notably the risk assessment and emergency planning measures. Further mitigation measures more specific to the human environment are listed below:

- management operations should aim to minimize disturbance to adjacent residential and recreational uses;
- where access restrictions result from the development, arrangements for alternative access should be made with the provision of gates, bridges or stiles;
- safety concerns should be addressed by such measures as implementing strict health and safety procedures for workers on-site and the installation of adequate fencing and other site security to prevent trespass and vandalism;
- sites of archaeological or cultural interest should be preserved *in situ* where possible. As relocation is rarely possible, thorough archaeological investigations should be carried out where damage is unavoidable;
- public participation should be encouraged to cope with socio-economic impacts on established business and the local population. It should include the disclosure of information to clarify the rationale behind the business park development, such as economic surveys, forecast demand growth in conjunction with the other development in the area;
- reducing traffic-jams at rush-hours by, for example, flexible-working, encouraging green-commuting by workers, or parking restrictions on those who drive alone should be considered after the thorough study of possible options.

5. References and further reading

1. Construction Industry Research and Information Association (2001) Sustainable urban drainage systems – Best Practice Guide. C523, CIRIA, London.

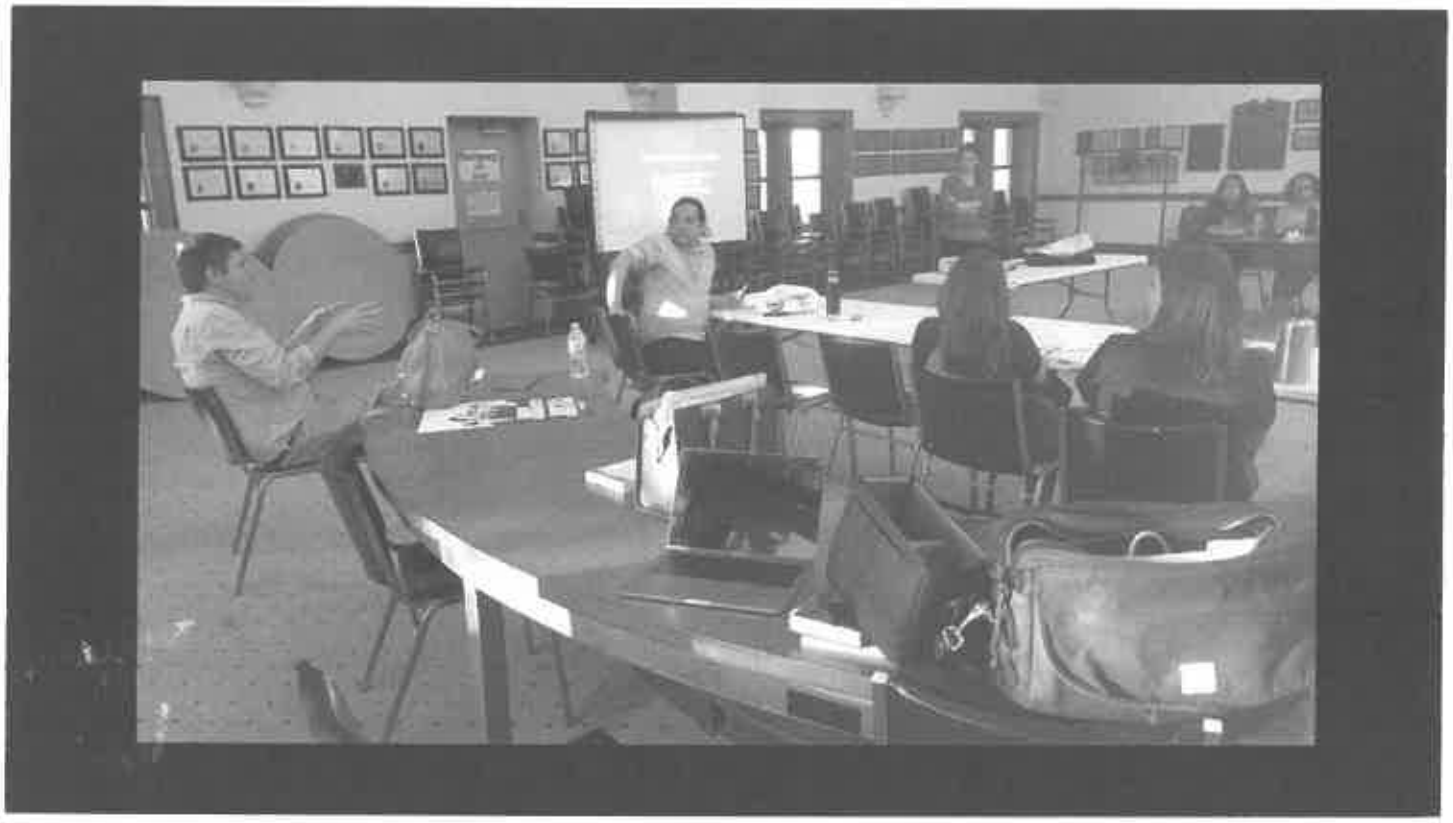
2. Construction Industry Research and Information Association (2000) Sustainable urban drainage systems – Design manual for England and Wales. C522, CIRIA, London.

3. Construction Industry Research and Information Association (1997) *Review of the Design and Management of Constructed Wetlands*. Construction Industry Research and Information Association, London.

4. Construction Industry Research and Information Association (1994) Environmental Assessment. Special Publication 96. CIRIA, London.

5. Department for Environment, Food & Rural Affairs (2000) Integrated Pollution Prevention and Control: a Practical Guide. [Online] Available from: http://www.defra.gov.uk/environment/ppc/ippcguide/index.htm. DEFRA, London. [Last accessed 11/09/01]

Groups talk concerns about rampant warehouse developments: 'The system is set up to put the cost on us'



Mark Meinster, far left, executive director of Warehouse Workers for Justice, discusses social costs of the supply chain economy during a forum on May 24, 2018, at the Joliet Public Library. (Ted Slowik / Daily Southtown)

By **Ted Slowik**
Daily Southtown

Temp Agencies Elwood & by Joliet

MAY 26, 2018, 10:30 AM

Upton Sinclair's 1906 novel "The Jungle" sought to expose appalling working conditions in Chicago's meat-packing industry.

Sinclair wrote about a company cheating its workers out of wages. He described how workers using knives lost fingers and how others injured their backs hauling 100-pound slabs of meat.

His fictitious account was based on actual events. He wrote about disregard for environmental concerns. He described how companies discharged animal waste into Chicago's infamous Bubbly

Creek.

The biggest impact of Sinclair's work was his account of unsanitary conditions.

"Almost as an afterthought, Sinclair included a chapter on how diseased, rotten, and contaminated meat products were processed, doctored by chemicals, and mislabeled for sale to the public," the Constitutional Rights Foundation says about "The Jungle."

"Sinclair was dismayed, however, when the public reacted with outrage about the filthy and falsely labeled meat but ignored the plight of the workers. Meat sales dropped sharply. 'I aimed at the public's heart,' he said, 'and by accident I hit it in the stomach.'"

As a result of "The Jungle," President Theodore Roosevelt appointed a special commission to investigate Chicago's slaughterhouses. Food safety laws were passed. Sinclair went on to write about abuses in other industries, including coal and oil.

More than a century later, Sinclair's work came to mind after I attended a forum Thursday night about the impact of warehouse developments in the Chicago area, particularly in Will County.

About two dozen people attended the forum at the Joliet Public Library. Presenters represented the groups Warehouse Workers for Justice, Sierra Club Illinois, Just Say No to Northpoint and the Little Village Environmental Justice Organization.

The theme of the evening was public concern about the health, safety and environmental aspects of widespread warehouse and logistics developments.

Like Sinclair's work, though, the coalition of common interests also seeks to address economic conditions for people who work in warehouses and throughout the supply chain.

Many warehouse personnel are employed by agencies that provide temporary workers, said Mark Meinster, executive director of Warehouse Workers for Justice. Many work part-time for low wages and do not qualify for health insurance and other benefits, he said.

"Joliet has the highest concentration of temp agencies in the Midwest," Meinster said. "It's second only to the Inland Empire," a southern California region with a proliferation of warehouses and industry.

One mission shared by the groups is to counter the narrative that warehouse and logistics developments create good-paying jobs and support a local economy's tax base.

"Temps don't get benefits. They don't get sick days or vacations. They're not paid a living wage," Meinster said.

Wage theft, worker safety violations, discrimination and retaliation are common problems in the highly competitive warehouse industry, he said.

Conditions have improved since 2012, when local clergy and residents joined a Warehouse Workers for Justice protest in Elwood, he said.

"Wages have risen and safety has improved," he said. "We won paid sick days for temp workers. There are still many problems with the temp system."

Representatives of an organization of residents from Chicago's Southwest Side talked about their efforts to regulate industrial development in their neighborhood.

"Thirty-eight percent of the land in Little Village is in a manufacturing district," said Nancy Meza of the Little Village Environmental Justice Organization, or LVEJO. "One of our biggest concerns was when we started to see a lot of trucks in our neighborhood."

Residents collected data by conducting traffic counts and measuring the amount of particulates in the air emitted from diesel trucks, she said. One of the group's goals is to show elected officials the environment costs of development.

"(Developers) are using jobs as a bait tool in our community," Kim Wasserman, LVEJO executive director, said.

Ann Baskerville, of Sierra Club Illinois, said group members have taken air-quality readings along Route 53 near Elwood and Joliet that showed high levels of particulates from diesel emissions.

"The Sierra Club is very concerned about what is going on here," she said. "We've called for a moratorium on warehouse developments in Will County."

Stephanie Irvine, of the grassroots citizens group Just Say No to Northpoint, talked about how residents rallied to oppose a 2,200-acre warehouse development proposed for Elwood and Manhattan.

"The community as a whole shared the same concerns," she said. "As soon as we started learning more about it, we realized it wasn't going to bring the benefits that were touted."

A core group of about 10 members obtained documents through the Freedom of Information Act that enabled them to challenge information presented at public meetings and ultimately sway Elwood officials to not approve the proposal, she said.

"We brought more to the table than just whining," Irvine said. "We brought forth an educated position."

As I listened to the speakers, I better understood how residents and activists used science and data and applied an evidence-based approach to persuade elected officials who decide the fate of development requests.

I appreciate the need for economic development, especially commercial and industrial projects that help reduce the property tax burden for homeowners.

I also appreciate the desire for residents to live in safe neighborhoods. I think concerns about traffic and air quality are valid and that elected officials must address them when considering new warehouse and logistics developments.

I also gained a deeper appreciation for the health, safety and economic well-being of people who work in warehouses.

I think local municipal officials can do more to address the operations of warehouse developments they allow in their communities. This region is desirable because of its location as a transportation hub. Local officials shouldn't have to "give away the store" through tax breaks and incentives.

"The logistics industry has to be in this area," Meinster said. "The system is set up to put the cost on us.