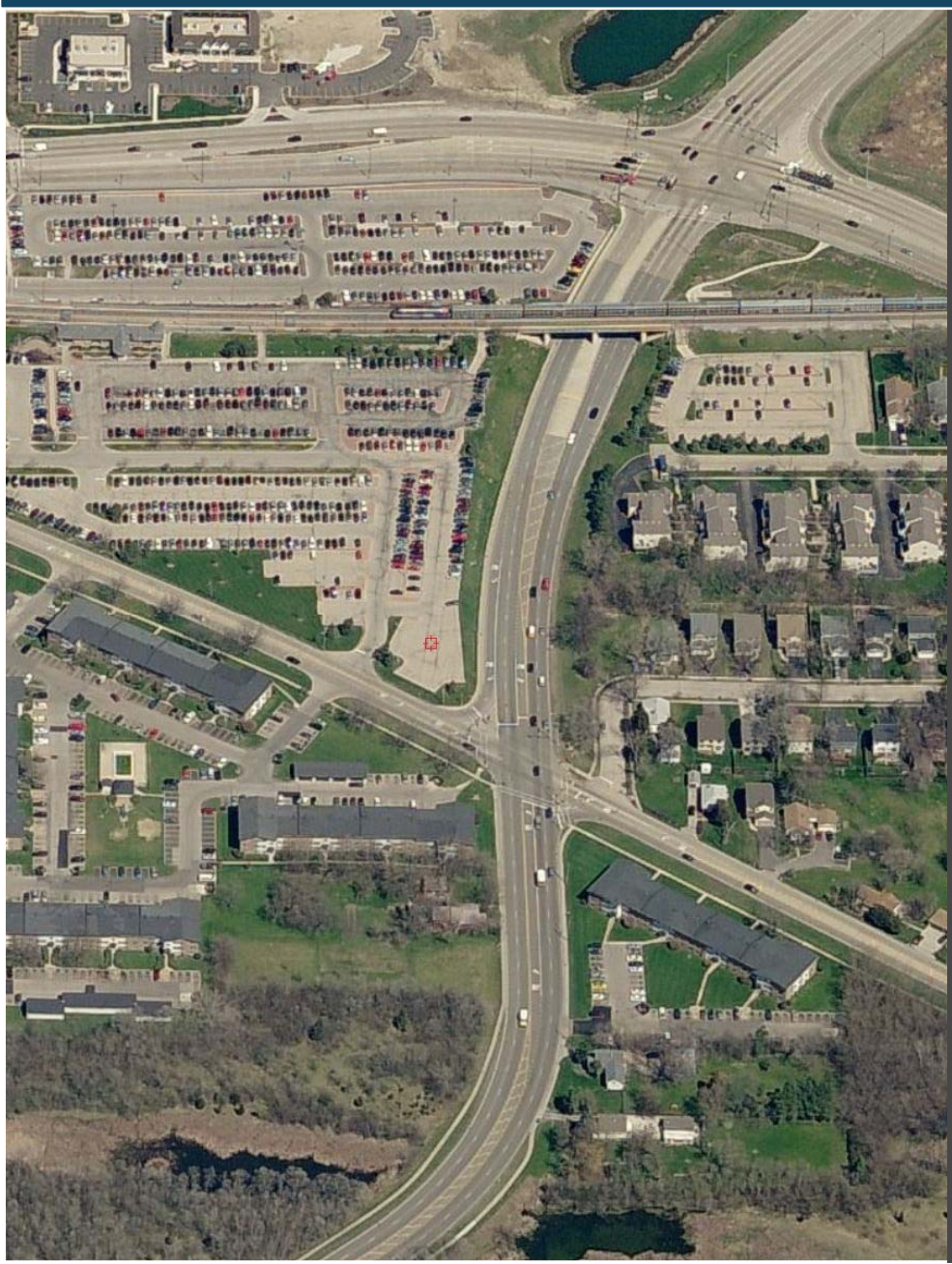
DuPage County Comprehensive Road Improvement Plan



DuPage County
Division of Transportation

December, 2021

ACKNOWLEDGEMENTS

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County Board Transportation Committee:

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Mary FitzGerald Ozog, Vice Chair
Elizabeth Chaplin
Brian Krajewski
Dawn DeSart
James Zay

Impact Fee Advisory Committee:

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DuPage County Board

Court Airhart,
Airhart Construction Company

Michael Smetana,
Village of Lisle

Steven Davidson,
Local 150 Operating Engineers

Paul Hoss, Zoning Division Manager
DuPage County Zoning Department

Jeff Merrinette, Director of Government Affairs
MAINSTREET Organization of Realtors -Suburban Chicago

Scott Miller,
Jones, Lang, LaSalle

T.J. Moore, Public Works Director
Village of Hanover Park

Marcie Schatz, TED Group Leader
City of Naperville

Christopher Snyder, County Engineer
DuPage County Division of Transportation

Table of Contents

Table of Figures

Preface

Impact fee programs are widely used by municipalities and local agencies throughout the United States to offset the high cost of providing fire, police, water, sanitary, school, road and other services to new residents and businesses locating within their jurisdiction. These programs are used particularly in fast growing suburban communities, locations with heavy tourism or retirement development and areas of extreme environmental sensitivity. By and large, the fees collected do not cover all of the costs an implementor accrues in providing a service. But they do allow the implementing agency the opportunity to use its primary funding sources such as property taxes, motor fuel taxes and state and federal assistance for the purpose of better maintaining the existing infrastructure.

General Goals

The Road Improvement Impact Fee Law created by the State of Illinois in 1989 cites two general goals for those agencies implementing impact fee programs in Illinois:

1. "…the imposition of such road improvement impact fees is designed to supplement other funding sources so that the burden of paying for road improvements can be allocated in a fair and equitable manner."

2. "…to promote orderly economic growth throughout the State by assuring that new development bears its fair share of the cost of meeting the demand for road improvements through the imposition of road improvement impact fees."

DuPage County supports these goals through the publication of this Comprehensive Road Improvement Plan for Impact Fees.

Objectives of the Plan

The Comprehensive Road Improvement Plan is a document required of each unit of authority wishing to implement the Road Improvement Impact Fee Law (605 ILCS 5/5-901 to 5/5-919). The Plan's primary function is to support the Law's goals by establishing where demand for new facilities will be created by new development, and by establishing a rational program for distribution of road improvement impact fees in DuPage County according to that need.

The second objective of the Plan is to demonstrate the methods and procedures used to establish the impacts of new development. It is a specific requirement of the Road Improvement Impact Fee Law that the implementing agency design and follow a reasonable set of procedures in implementing an impact fee program.

With recent changes to the DuPage County Ordinance, which interprets Impact Fee Law to allow use of impact fees by peer agencies looking to improve roads or streets that by their improvement benefit DuPage County highways, recommendations for short and long-range improvements on roads maintained by other jurisdictions will be included in the Plan in Appendix C-5.

Comprehensive Road Improvement Plan Framework

The Comprehensive Road Improvement Plan is comprised of seven (7) sections. The following outline gives the reader a general idea of what will be found in each section.

Section 1: Legislative Authority

Section 1 encapsulates State statutes that describe the processes that must be followed in implementing a Comprehensive Road Improvement Plan.

Section 2: Impact Fee Plan Methodology

The methodology that was used in producing this plan is described in Section 2. This section summarizes the process of getting from land use forecasts to capital program.

Section 3: Land Use Assumptions

Section 3 contains a summary of the approved 2015-2025-2040 Land Use Assumptions produced by the DuPage County Division of Transportation in anticipation of this plan. This section also contains more detailed information on major traffic generators such as O'Hare Airport and other new developments in and around DuPage.

Section 4: Existing Conditions

Section 4 provides background information on the roadway transportation system of DuPage County and gives the reader a state of the area report. Staff discusses typical highway design standards and the context for establishing highway conditions and need for improvement.

Section 5: Costs and Funding

Section 5 provides the reader a general context of how highway costs are computed and what assumptions are employed by staff in deriving these costs. Existing revenue stream and projected future revenues are included and explained in this section.

Section 6: Looking Ahead to 2025 and 2040

Section 6 discusses the methods and assumptions used to develop the capital program. Future system deficiencies and capital improvements lists setting forth the priorities of the department are included in this section. This section identifies the projects eligible for impact fee investment.

Section 7: Public Hearing Record and Public Comments

This section includes all public comment and public hearing proceedings and presentations.

Section 1: Legislative Authority

DuPage County was granted the authority to impose impact or user fees for travel upon DuPage County DOT highways by State Statute 605 ILCS 5/5-901-919 on July 26, 1989. This statute imposes a series of obligations upon each unit of local government that wishes to levy Road Improvement Impact Fees.

Some of the obligations pertinent to this Comprehensive Road Improvement Plan include:

Establishment of an Advisory Committee

The advisory committee will advise and assist the unit of local government by recommending proposed land use assumptions; make recommendations with respect to the development of a comprehensive road improvement plan; and advise the unit of local government of the need to update or revise the land use assumptions, comprehensive road improvement plan, or impact fees.

Consideration of Land Use Assumptions

The unit of local government intending to impose an impact fee shall adopt an ordinance or resolution establishing a public hearing date to consider land use assumptions that will be used to develop the comprehensive road improvement plan. The local government is also recommended to publish notices of intent to hold a public hearing, allow for public comment and then adopt by ordinance or resolution the land use assumptions.

Comprehensive Road Improvement Plan

The unit of local government intending to impose an impact fee shall prepare a comprehensive road improvement plan. The plan is required to contain certain elements that establish the conditions of the County's transportation system and the need for the impact fee revenues to improve the system in response to demand generated by development. Those elements are detailed in Section 4.

Consideration of the Comprehensive Road Improvement Plan

The unit of local government shall adopt an ordinance or resolution establishing a date for a public hearing to consider the comprehensive road improvement plan and the imposition of fees related thereto.

A public hearing to consider the adoption of the comprehensive road improvement plan and imposition of impact fees shall be held within the unit of local government subject to the same notice provisions as those set forth in (the land use hearing section).

Within thirty days after the public hearing has been held, the Advisory Committee shall make a recommendation to adopt, reject in whole or in part, or modify the proposed comprehensive road improvement plan and impact fees. The unit of local government shall have not less than 30 nor more than 60 days to approve, disapprove or modify by ordinance or resolution the proposed comprehensive road improvement plan.

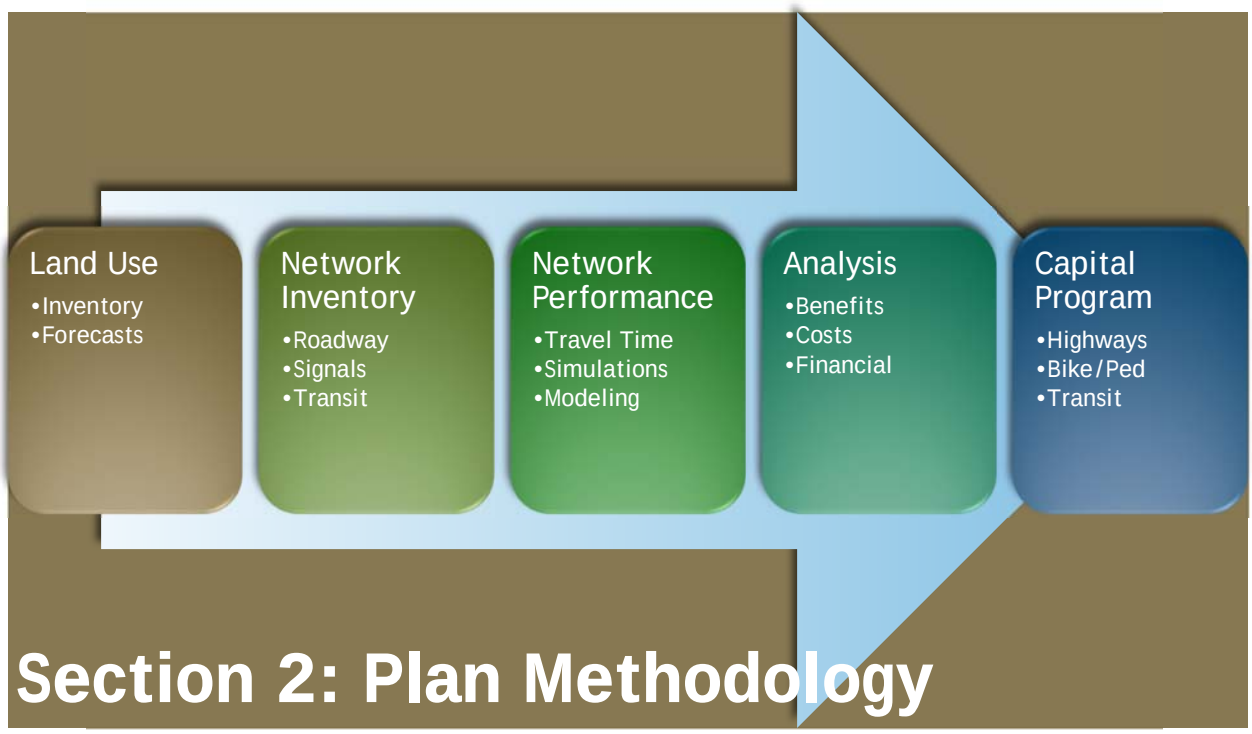
Impact Fee Ordinance Restrictions

The impact fee may only be imposed when the land use assumption and comprehensive road improvement plan requirements have been satisfied. Impact fee ordinance updates may be developed independently of the land use assumptions and comprehensive road improvement plan and the Ordinance may be amended when there are changes in the impact fee calculation method or significant changes in the fee schedule.

Statutes provide that impact fees may be used to cover the costs associated with the surveying and acquisition of land and rights of way, with engineering and planning costs and with all other costs which are directly related to the improvement, expansion, enlargement or construction of roads, streets or highways within the service areas or as designated in the comprehensive road improvement plan.

Impact fees shall not be imposed to cover costs associated with the repair, reconstruction, operation or maintenance of existing roads, streets or highways, nor shall an impact fee be used to cure existing deficiencies or to update, expand or replace existing roads in order to meet stricter safety or environmental requirements.

The proposed road improvement plan in Section 7 of this document indicates those projects eligible for impact fees in conformance with the requirements specified above.



Section 2: Plan Methodology

The DuPage County Division of Transportation Impact Fee Program is based on a "Needs-Driven" methodology wherein the DOT must establish, through the comprehensive road improvement plan, a rational process for establishing needed road improvements on the DCDOT system based on development. This programming process establishes a list of improvements upon adoption of the comprehensive road improvement plan by the County Board. The program list may only be updated through the legislated annual update process that the Impact Fee Advisory Committee oversees.

The Comprehensive Road Improvement Plan process for identifying the forecast needs involved the following four (4) technical phases.

Land Use Assumptions

The DuPage County Division of Transportation provided the foundation for the land use assumptions by establishing over 2000 internal, perimeter and special traffic analysis zones (TAZs). These zones range in size from about the size of one residential block to over six square miles. The traffic analysis zones were built to try to minimize land use diversity within each TAZ and to maximize the relevance of the TAZs to the road network. These traffic zones are then employed by staff in the traffic modeling stages of the plan methodology.

Year 2015, 2025 and 2040 land use data were developed by the Division of Transportation as part of the Land Use Forecast process. Staff used geographic information systems (GIS) to estimate current numbers of household and commercial units in each of the municipalities and traffic zones. Staff also used the GIS to find all vacant parcels and to assign those parcels a probability of development based on a variety of factors and a type of development based

on local zoning or local land use plans. Detailed information regarding the assumptions and the allocations of the land use data can be found in Section 3 and in the land use document referenced below.

Once the land use assumptions were developed, the assumptions were presented to the Impact Fee Advisory Committee as well as various regional and municipal agencies. Following the review of the assumptions, a public hearing was held to discuss and recommend the population and employment figures.

Following the public comment period and additional review by the Impact Fee Advisory Committee, the land use assumptions and allocation tables were amended where necessary and the final Land Use Assumptions document[1] was sent to the Transportation Committee and County Board for approval. The land use assumptions were approved by the DuPage County Board on July 17, 2018.

Existing Roadway Deficiencies

While the land use assumptions were being developed, staff evaluated the status of the existing road network in DuPage County. The evaluation of the road network was accomplished in two ways: 1) by placing all current traffic counts available on county, state, tollway and municipal roads into a highway performance model, and 2) by conducting detailed travel time studies many of the County's arterial roadway corridors.

The County's traffic system performance model integrates count data with street and intersection geometric information and with traffic signal programming and coordination data. A traffic network performance model was used to estimate intersection delays at more than 200 of the county's highest volume intersections and travel time data was collected on sixty corridors to enhance our understanding of traffic operations. With this data, staff was able to differentiate those roads and intersections that are operating adequately from those that are deficient. This process resulted in the deficiency lists shown in Section 4.

The data developed in these studies was used to validate the accuracy of the DuPage County DOT 2015 traffic model. Traffic models are tools that employ land use data, traffic network data, mathematical models of travel behavior and real traffic data to produce traffic forecasts. Most modern traffic models (including the one used by the DuPage County DOT) require a significant amount of data to be input into a model "network." The input data include information on speed limits, number of lanes, roadway capacity, class of road, intersection capacity, truck traffic, and traffic signals. Once all of the data has been loaded, staff goes through a four-stage process of calculating trip production and attraction from the TAZs, trip distribution (based on trip length models by type of trip and land use), traffic assignment and traffic assignment validation.

[1] 2015-2025-2040 DuPage County Land Use Assumptions, *DuPage County Division of Transportation*, July,2018.

Once the traffic model has been calibrated, the mathematical rules used in the calibration process are applied to the design year land use forecasts in order to estimate future effects of land use growth on the transportation system.

Financial Forecasts

This phase of the plan presents the expected revenues or budget for the 2025, 2030 and 2040 horizons. Cost estimation processes associated with performing the needed improvements related to the plan are discussed here also.

Revenue forecasts developed in this section are the result of analyses of recent revenue streams and anticipated revenue development. These forecasts assume the continued authorization to collect State and Local motor fuel tax as well as highway impact fees.

Before the County spends any money on future capacity needs, the County must ensure that it is meeting the baseline conditions for state of good repair for roadway and system assets. The County views these as obligations or commitments. Estimates have been derived for the minimum revenue needed to meet those obligations. The county will provide a review of anticipated expenditures on Operations, Capital Maintenance and Contractual obligations in order to maintain the system.

2021-2040 Forecasts, System Deficiencies and Programs

The long-range traffic forecast networks and the long range transportation needs analyses are required to be based upon a set of reasonable traffic network assumptions. Those assumptions were made by staff collating all of the short-term programs and long-term planned projects from the implementing agencies that might have an impact on design year traffic volume forecasts. These planned or programmed projects are allocated to one or more of several future traffic system scenarios depending upon project readiness and sponsorship.

The County produces traffic and system performance forecasts for each scenario and screens the results to determine the validity and impact of the results. If the forecasts are found to be reasonable and valid, they are examined in greater detail to determine the effectiveness of the proposed project.

Additional deficiencies are also often seen when looking at the results of the scenarios. Staff screens and examines these unprogrammed “needs” to determine the validity and extent of the need. Once verified, staff determines the best engineering response to correct the deficiency and whether the response is practicable given the context of the issue.

For those capital projects found to be practicable, staff generates cost estimates using discrete methods and conservative costing principles. Staff views these cost estimates as “planning estimates” because costs are likely to change as particular elements of each project (such as drainage, right of way, material, labor and engineering) are often unique to each project and construction contract. These costs are inflation adjusted according to the type of construction and proposed construction year.

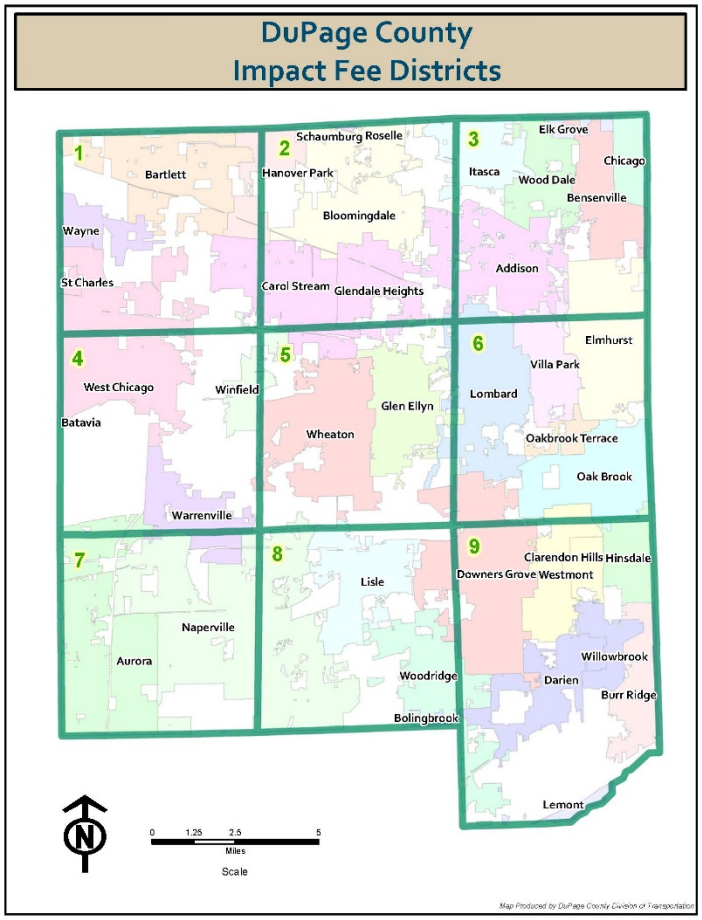
The capital projects are allocated to 5 year planning horizons and the projects will be determined to be either impact fee eligible or ineligible based on existing conditions.

Programmed, planned and other needed capital projects can be found in the Capital Projects lists in Appendices C-3 and C-4. This will include County, Tollway, State and municipal projects and their respective estimated costs.

Comprehensive Road Improvement Plan Implementation

Once the comprehensive plan project list is adopted by the County Board, the Division of Transportation then implements the program through the DuPage County Impact Fee Ordinance. That ordinance governs the processes of impact fee assessment, collection and distribution.

Figure 2-1: Impact Fee District Map



The ordinance uses a "fair share" assessment procedure that is based on land use category and the relative traffic impact each category has on DCDOT roads in the design hour. Detail on how the impact fee is calculated and the procedures for impact fee assessment can be found in the Fair Share Impact Fee Ordinance[2] and Impact Fee Procedures Manual[3]

Fees are assessed on individual developments prior to certificate of occupancy. The fees are then allocated to one of nine impact fee districts based on the location of the development. Fees are banked in accounts for use on projects that occur within that fee district and that are eligible for impact fee expenditure.

Banked fees are allocated to impact fee eligible projects established through this plan at the time that projects begin the engineering process. Fees are encumbered (obligated) to a project on the basis of availability. In some cases there will be multiple projects in a district and fees are allocated on a first-come first serve basis.

[2] DuPage County Impact Fee Ordinance ODT-021R-89.
[3] DuPage County Impact Fee Procedures Manual

Section 3: Land Use Assumptions

As required by State of Illinois Statute, County staff prepared detailed land use assumptions in 2017 and 2018. The assumptions were approved on July 17, 2018 by the DuPage County Board. A digital version of that document may be found online in the DuPage County Division of Transportation web page located at: www.dupageco.org/DOT/1569. A copy of the narrative can be located in Appendix A-1.

The document describes in detail the methods used to obtain current land use and the procedures used by staff to assess probable land use development over the next 20 year period.

3.1 Summary of Land Use Assumptions Document

Recent national and regional economic forces have complicated the development picture throughout the region. With this in mind, County staff solicited realistic development and redevelopment timelines from community leaders and real estate developers. The result of this interview process was the determination that new development and redevelopment projects would proceed at a slower rate than in previous decades. This is particularly relevant to commercial retail development where brick and mortar retailers are in competition with e-retailers and fewer larger mall or power retail center developments will be seen.

The County has also seen a slow down in single family residential units though additions and re-use of residential properties at higher density is steady or increasing. In contrast, development of multi- family units such as townhomes and apartments has been strong in downtowns and corridors. With little appetite for the prices of suburban and estate

development styles and the desire for walkable communities nearer urban activity centers, it is expected that this trend will remain strong into the future.

Existing Development

DuPage County is a highly suburban environment with multiple municipal centers and connecting arterial corridors which have been developed by communities as small lot corridor commercial. Land use in the County is typically suburban with almost 90 percent of its parcels being dedicated to residential uses. Figure 3-1 shows that single family residential units still outnumber multifamily units by about 80,000 units. Recent redevelopment activity has increased the number of townhome and condominium units near the downtown centers and rail stations. It is expected that the number of new single-family units will reach a ceiling by 2030 while the multifamily units will grow as developable property becomes more limited.

Table 3-1: Projected Residential Development in DuPage County, 2015-2040

Residential Units in DuPage County

Type	2010*	2015**	2025#	2040
Single Family	212,033	212,645	215,455	217,696
Multi-Family	133,631	141,043	149,279	156,100
Group Quarters(1)	NA	20,617	21,464	21,913

**2010 Values based on approved 2010 Land Use Assumptions report*

*** 2015 Values based on DOT surveys*

 # 2025 and 2040 values based on zoning and projected use

(1) Group quarters includes all senior, convalescent and dormitory living quarters

Non-residential structures are dominated by the warehousing category which occupies more than twice the floor space of any other category. Together with light industrial/business park uses, approximately 50% of all commercial space is dedicated to industrial or distribution uses (Table 3-2).

It should be noted that approximately 54,000 acres of the County remains unincorporated (or about 25%) while dedicated open space occupies almost 45,000 acres or about 21% of all area in the County. Better than one half of that open space lies in unincorporated DuPage County.

Table 3-2: Projected Non-Residential Development in DuPage County, 2015-2040

Non-Residential Units in DuPage County (x1,000 Sq Ft)

Type	2010*	2015**	2025#	2040
Retail	66,431	63,598	67,052	70,080
Downtown Retail	NA	4,725	5,212	5,649
Office	70,855	71,537	77,819	83,791
Industrial	189,707	51,322	54,897	57,917
Warehousing		145,887	151,917	156,595
Schools(1)	81,524	23,102	23,105	23,107
Trans/Utilities		4,372	4,342	4,322
Public Uses		14,058	14,615	15,100
Other(2)		22,124	23,729	24,989
TOTAL	**408,517**	**400,725**	**422,688**	**443,590**

**2010 Values based on approved 2010 Land Use Assumptions report, included square footage of airports under Trans/Util and Federal Labs under Other. These uses handled differently in 2015-40.*

*** 2015 Values based on DOT surveys*

 # 2025 and 2040 values based on zoning and projected use

(1) Schools include public and private K-12 schools.

(2) Other includes colleges, hospitals, convention centers and other non-categorical uses.

As of 2018, over 5900 acres (over 9 square miles or one quarter of a typical township) is vacant-developable in DuPage County. This does not include currently occupied property which might be reassembled, repurposed or redeveloped. As of the time of this report, approximately 1660 acres (not included in the 5911 acres in Table 3-3) are under development. Another 1500 acres are projected to be under development by 2025. After 2025, developable parcels that remain will be those that are challenged by environmental constraints such as floodplains and wetland or by network accessibility issues. As vacant property disappears, parcel re-use and land use densification will occur at accelerated rates.

Table 3-3
Vacant-Developable Properties in DuPage County in 2018

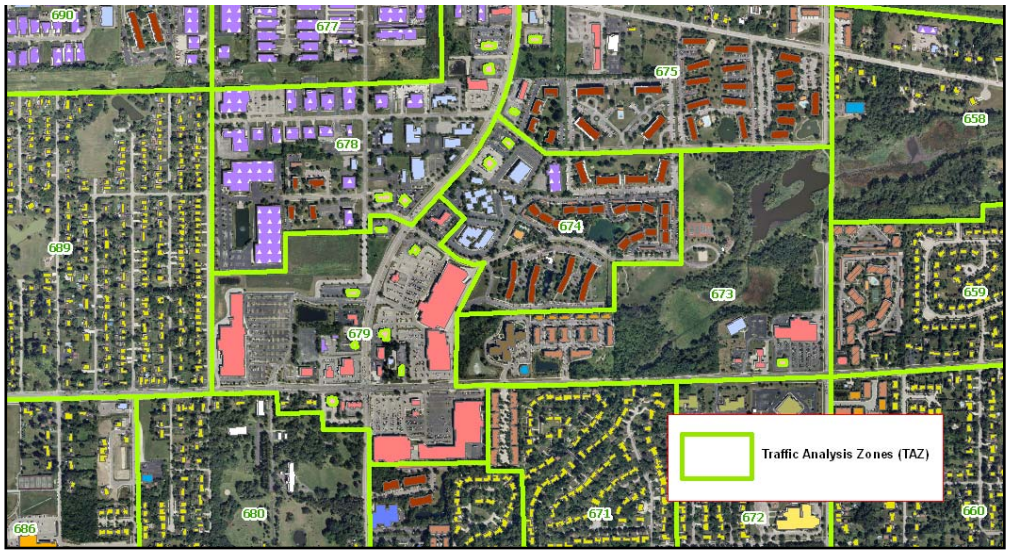
Vacant - Developable Properties -2018		
Land Use Category/Zoning	Acreage	Percentage
Residential	2785	47.1%
Business	836	14.1%
Commercial/Distinctive	728	12.3%
Industrial/Mfg/Warehousing	1069	18.1%
Office	449	7.6%
Unknown/Open Space	44	0.7%
	5911	100.0%

Integrating Land Use and Traffic Analysis

In 2005 staff migrated to a capital facility-based land use inventory rather than a person-based inventory. With better aerial and database inventory resources, staff is able to measure the square footage of structures, classify the structures by type of use and to determine and record vacancy or redevelopment information.

This information is co-located within the county's geographic information system. All of the building and land use classification information is then re-packaged into traffic zone geographies (see Figure 3-1 below).

Figure 3-1
Model Traffic Analysis Zones



The zones are linked to the street network through the County's traffic model. Traffic production and attraction is estimated for each zone using trip generation assumptions based on the type and density of development.

Traffic Analysis Zones (TAZs) are regions defined by staff to be the basic geographic units for traffic forecasting. TAZs are areas ranging in size from two or three square blocks to over three square miles in area but which are relatively homogeneous in terms of land use type. They have been constructed by DuPage County staff with an orientation to the street system in order to take advantage of residential and commercial traffic loading points. There are approximately 2000 TAZs in the DuPage County model area; almost 1300 are located inside the DuPage County boundary and about 700 are located on the perimeter of the county in Kane County, Cook County, Will County and Kendall County. Over 50 train station zones are included in the model as special generators. The model area TAZ system is presented in Appendix A-2 and may be found online at in the Land Use Assumptions document at www.dupageco.org/DOT/1569/.

Regional Land Use Impacts to the Transportation System

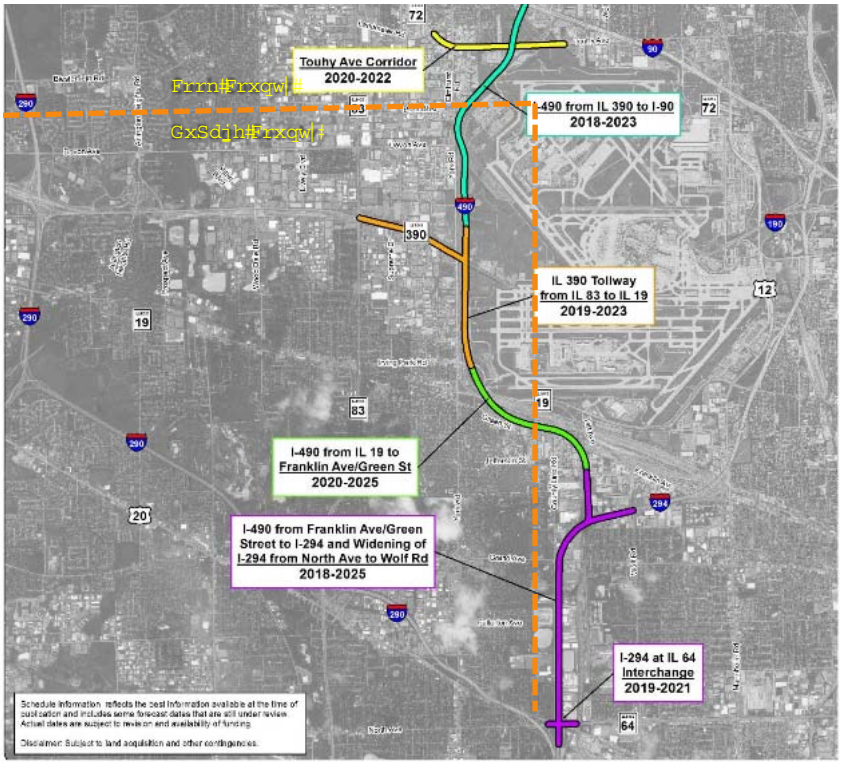
While there is general residential and commercial growth projected throughout the model region, there are a number of corridors or sites inside and outside of the county that will have substantial impact upon traffic over the course of the next 20 to 50 years. Some of these are noted in the sub area profiles below:

West O'Hare Area and Elgin-O'Hare (IL 390) Corridor

This area is a 10 mile corridor running from O'Hare Airport to Hanover Park. The Illinois Tollway will complete the IL 390 facility between York Road and US20/Lake Street by 2020. The IL 390 and IL 490 interchange and western access to the airport will be completed by 2023. Western access has not been fully designed but is intended to be the primary entrance for airport and airline employees with parking adjacent to the IL 390/490 interchange. Critical passenger thresholds and airline approvals will determine when additional western access will take place. DuPage County has conducted a broad O'Hare Airport assessment of airside and landside traffic based on completion of the O'Hare Master Plan and revised terminal plans. This document may be found in Appendix C-2. Airport access and new regional expressway facilities are modeled as part of the DuPage County 2025 and 2040 traffic model scenarios.

Figure 3-2

Northeast DuPage County/O'Hare Airport subarea

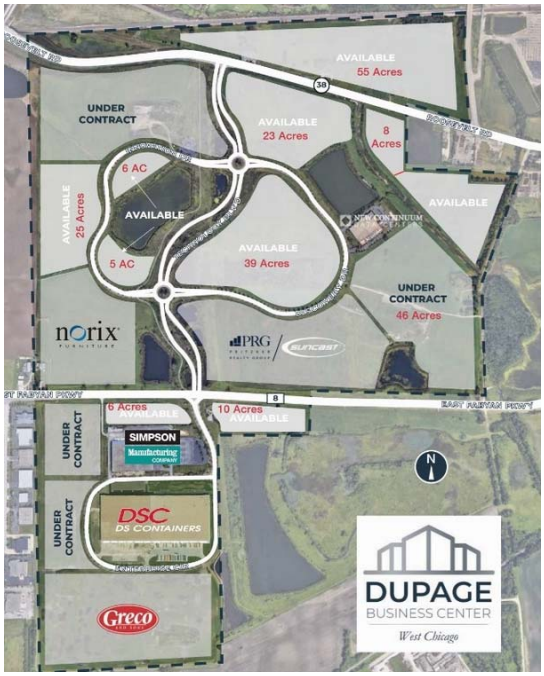


DuPage County jurisdiction includes highways 8 – York Road and 60/61 – North and South Thorndale Avenue (IL 390 frontage roads) in the area immediately adjacent to western access. Western access design incorporates direct access to the terminal area from York Road in addition to full access from IL 390 and 490. New development and redevelopment is already occurring along IL 390 and it is expected that will continue for some time with favorable economic conditions. Impacted County Highways:

- York Road (CH 8)
- North and South Thorndale Avenue (CH 60, 61)
- Grand Avenue (CH 20)
- Wood Dale Road (CH 28)

DuPage Business Center

Located in West Chicago near the DuPage-Kane County border, more than 5 Million square feet of business park uses could be built by 2030. New development of this intensity will significantly affect traffic volumes and congestion levels in western DuPage County and eastern Kane County. DuPage County and Kane County transportation programs are anticipating these demands and DuPage County 2025 and 2040 traffic models will include the land use and traffic programs.

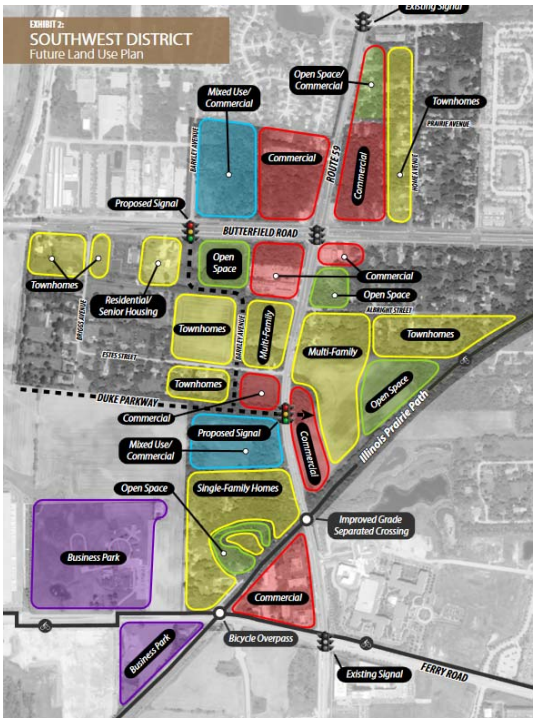


Impacted County Highways:

- Fabyan Parkway (CH 21)
- Kress/Powis Road (CH 18)

I-88 West / Ferry Road Corridor

This corridor involves three jurisdictions: City of Aurora, City of Naperville and City of Warrenville. The corridor is a 3.5 square mile area that includes the I-88 interchanges at Eola Road and IL 59. More than 2.7 million square feet of new commercial industrial development has been built in the corridor over the last five years. More than 200 acres remain for development, most in the City of Aurora.



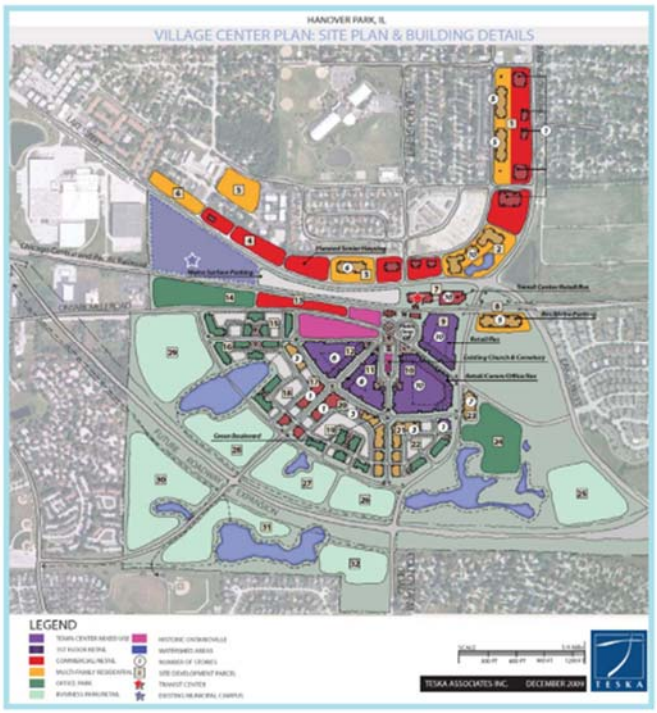
Impacted County Highways:

- Ferry Road (CH 3)
- Eola Road (CH 14)
- Raymond Drive (CH 1)

Hanover Park Downtown

The Village of Hanover Park has proposed to develop a new village center south of US 20/Lake Street and west of County Farm Road. The Village Center Plan concepts call for non-residential building area of over 1.2M square feet and more than 4,000 new dwelling units. A new circulation plan accompanies the development and is proposed to tie into an arterial highway extension of IL 390. The new center is a transit-oriented development centered on the Hanover Park Metra MDW rail station. The impact of these various development and highway facility proposals will be evaluated through this plan.

VILLAGE CENTER PLAN: SITE PLAN & BUILDING DETAILS



Impacted County Highways:

- County Farm Road (CH 43)
- Devon Avenue (CH 6)
- Stearns Road (CH 29)

Oak Brook Lakes/Royce Renaissance (Unincorporated York Twp)

This site located between Lombard, Oakbrook Terrace and Oak Brook has been in development for over a decade. Its current development plan includes two 18 story residential towers, townhomes, hotel, senior living center plus a commercial "downtown." The development is positioned near two state highways and two county highways. All of the aforementioned are severely congested roads with capacity limitations.

LAKES OF ROYCE RENAISSANCE DEVELOPMENT

Impacted County Highways:

- Meyers Road (CH 25)
- Midwest Road (CH 15)

Section 4: Existing Conditions

As stated in Section 1, State statutes include specific requirements for the Comprehensive Road Improvement Plan. According to the statutes, the CRIP must contain the following:

- A description of all existing roads, streets and highways within the service areas of the unit of local government (see Section 4.1below).
- A list of existing deficiencies on that system of roads, streets and highways (see Section 4.2 below).
- A commitment to cure existing deficiencies and a reasonable estimate of costs to mitigate those deficiencies (see Section 4.3 below).

Supporting information can be located in the appendices referenced in each of the following sections.

Section 4.1 Description of all existing roads, streets and highways

The objective of this section is to identify and classify the existing DuPage County DOT system of highways and to place it in the context of the surrounding transportation system.

DuPage County highway system

The County highway system has undergone some changes since the previous CRIP was published in 2010. Some highways have been transferred to other agencies:

- CH 26 – Thorndale Avenue (becomes Illinois Tollway IL 390)
- CH 2/41 – 59th Street/Old Hobson Road (transfers to Village of Downers Grove)

The County has also added some facilities:

- CH 60/61 – North and South Thorndale Frontage Roads

Figure 4-1 below represents the county highway system as of the beginning of 2019. As of 2019, including the changes, the County highway system includes just under 220 miles of arterial highway.

None of the county highway system is designated as expressway. The system is described more fully in table 4 below.

Roadway Jurisdiction

Well over 40 agencies own and maintain roadways in DuPage County. Most of the local roads are maintained by the municipal and township highway departments. The expressway and arterial class roads are generally maintained by the County, the Illinois Department of Transportation (IDOT), Illinois Toll Highway Authority (Tollway) and some of the more populous municipalities.

Table 4 describes the proportion of roadways by jurisdiction. As the table indicates, the County maintains about 20% of the primary road system (collector, arterial and expressway) and a little more than 20% of the total lane miles.

The standard county highway is a four or five lane suburban minor arterial carrying, on average, 20-25,000 vehicles per day. The County also maintains some regionally significant Principal arterials like 75th Street, Army Trail Road and County Farm Road. These roads typically have wider cross-sections – ranging from 5 lanes to 9 lanes at intersections – and have more limited access with the emphasis being on greater throughput and higher speeds. These highways often carry between 25 and 60,000 vehicles per day.

Table 4-1

Road and Highway System Length by Jurisdiction

Jurisdiction	Length in System (mi)	Length in System (%)
TOLLWAY[1]	137	12.33%
IDOT[2]	241	21.69%
COUNTY	220	19.80%
MUNI	507	45.63%
OTHER	6	0.54%
TOTAL	1111	100%

1 - includes mainline and ramps
2 - includes expressways and arterials

Figure 4-1
Roadway Jurisdiction in DuPage County, 2019

As DuPage County has grown, the highway network has expanded to accommodate more traffic. This is especially true at intersections where the county is seeing a high percentage of turning movements. Counts in recent years show that turning movements represent at least 33% of all movements at intersections[4]. This volume results in greater delays, congestion, inefficiency in signal programs and greater risk of crashes. Moreover, in order to accommodate these volumes and reduce congestion, the DOT has widened many of its intersections to include extra turn lanes. This type of construction often is very expensive as it involves buying property, relocating signals and utilities, relocating drainage and reconstructing driveways.

Table 4-2
DuPage County Highway System by Cross-section

Cross-Section (Lanes)	Length in System (%)[1]	Lane-Miles in System[2]
2	11.24%	5.1%
3	6.49%	4.5%
4	38.78%	36.2%
5	33.65%	39.2%
6	6.16%	8.6%
7	2.62%	4.3%
8	0.62%	1.2%
9	0.45%	0.9%

1 - based on approx 220 centerline miles of pavement

2 - based on approximately 968 lane-miles of pavement

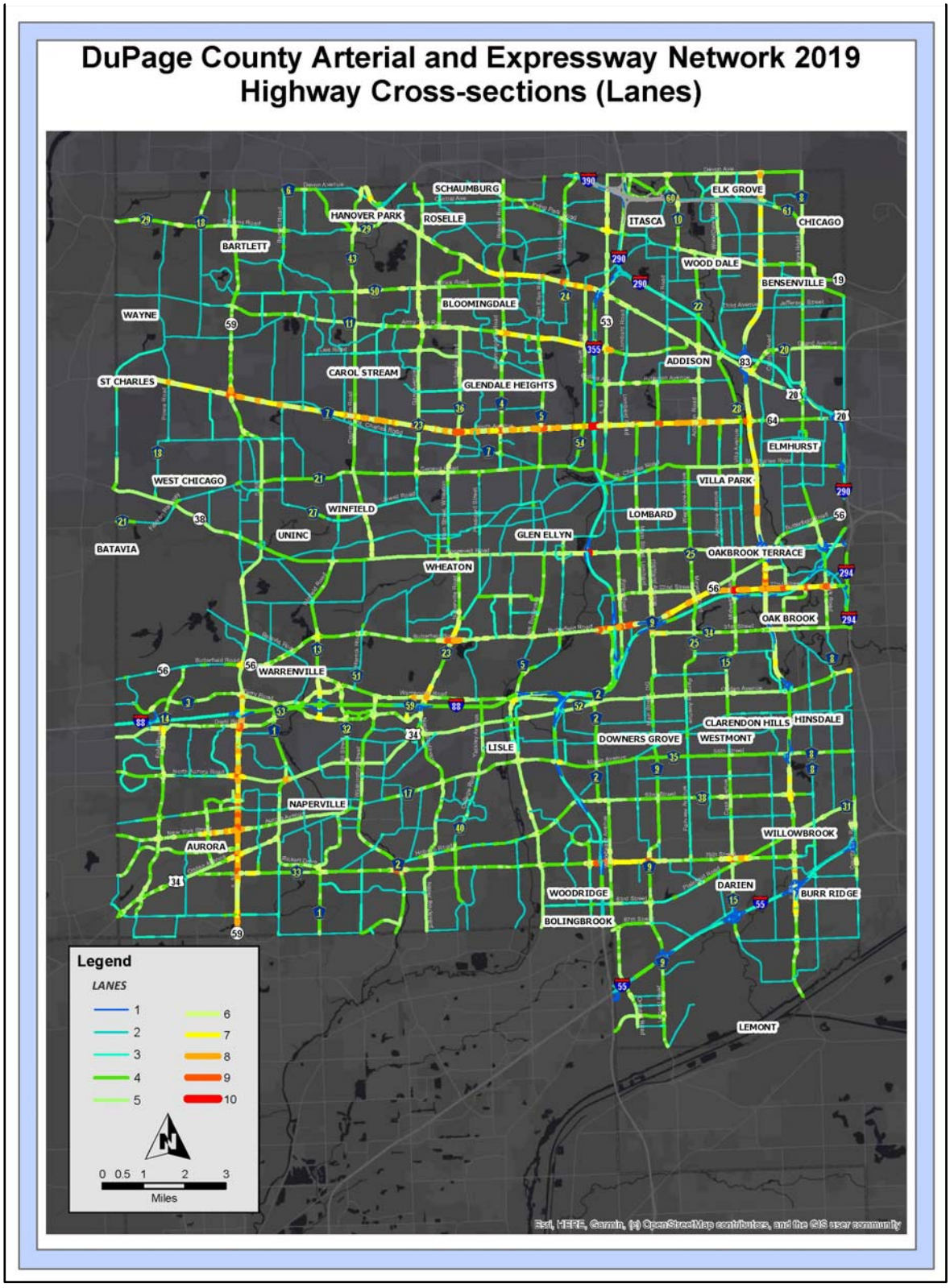
Table 4-2 demonstrates that more than less than 10% of the County highway system has a cross-section less than 4 lanes. The DuPage County DOT has provided capacity above and beyond the standard (including turn lanes or through lanes) at more than 20% of the county's 324 signalized intersections.

Figure 4-2 demonstrates that many of the county's regional or inter-county corridors are gradually being widened to provide as much capacity as possible. Corridors where there has been significant recent work include:

- IL 59 (I-88 to 87th Street)
- IL 64/North Avenue (Kautz Road to IL 59)
- 22nd Street (IL 56/Butterfield Road to west of York Road)
- IL 56/Butterfield Road (IL 59 to Naperville Road)
- Gary Avenue/CH 23 (IL 64/North Avenue to Army Trail Road)
- IL 53 (Devon Avenue to IL 64/North Avenue
- IL 390 (Elgin O'Hare Expressway)
- IL 19/Irving Park Road near O'Hare Airport
- 75th Street from Adams to Plainfield Road

[4] Based on a summary analysis of counts taken key intersections in the County.

Figure 4-2
DuPage County Arterial and Expressway Network by Roadway Cross-Section, 2019



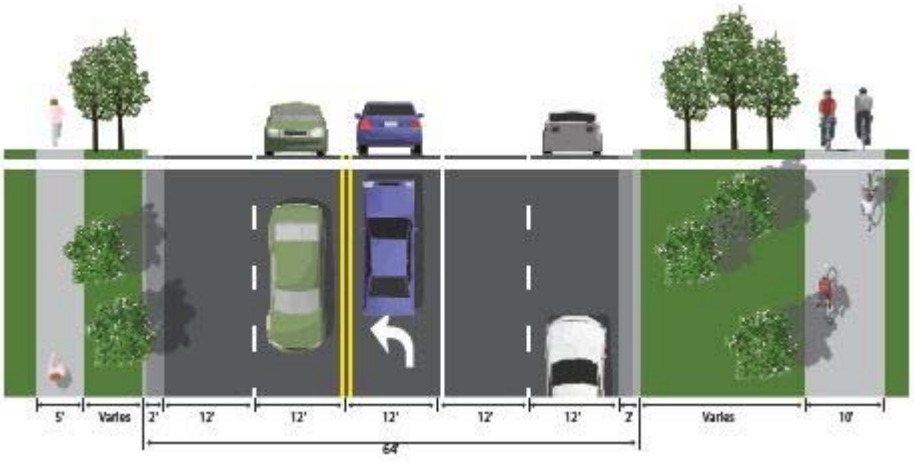
Roadway Design Standards

As the list of County Highways in Appendix B-1 indicates, there are currently a wide variety of roadway designs in the county; varying tremendously depending upon location, history, jurisdiction and relationship to other facilities. The County, Tollway, municipal and township road agencies, however, follow State (IDOT) guidelines in the design and maintenance of roadways. Jurisdictions do have some latitude to implement designs that differ from the "type" arterial based on the context of development. For example, roadways in open farmland or rural context will often be designed quite differently than roads passing through suburban areas or downtown areas.

DuPage County has implemented a policy on standard roadway designs and cross-sections. Figure 4-3 below provides a general guide on the type of road that the County builds. This cross-section can also be construed as the typical 4 or 5 lane cross-section that the county generally attempts to implement when it reconstructs and widens older, narrower, pavements. As mentioned above, the County is quite flexible in this standard and ultimately chooses its design based on development context, traffic volumes (now and in the future), type of traffic and a myriad of environmental and property related issues.

Recently, IDOT and suburban counties have been designing and building arterials with 6 lane cross-sections (i.e., 3 through lanes in each direction, with wider 8 or 9 lane cross-sections for turn lanes at major intersections). This is being done on select strategic corridors with high traffic volumes – usually regional principal arterials connecting Tollway and IDOT expressways. DuPage County has implemented those wider cross-sections on 75th Street, Army Trail Road and small sections on Naperville Road. With this wider cross-section, the County usually likes 120 to 200 foot right of way so that the DOT can include medians and sidewalk or multi-use path for pedestrians and bicyclists.

Figure 4-3
Typical DuPage County highway cross-section



Traffic Signals and Systems

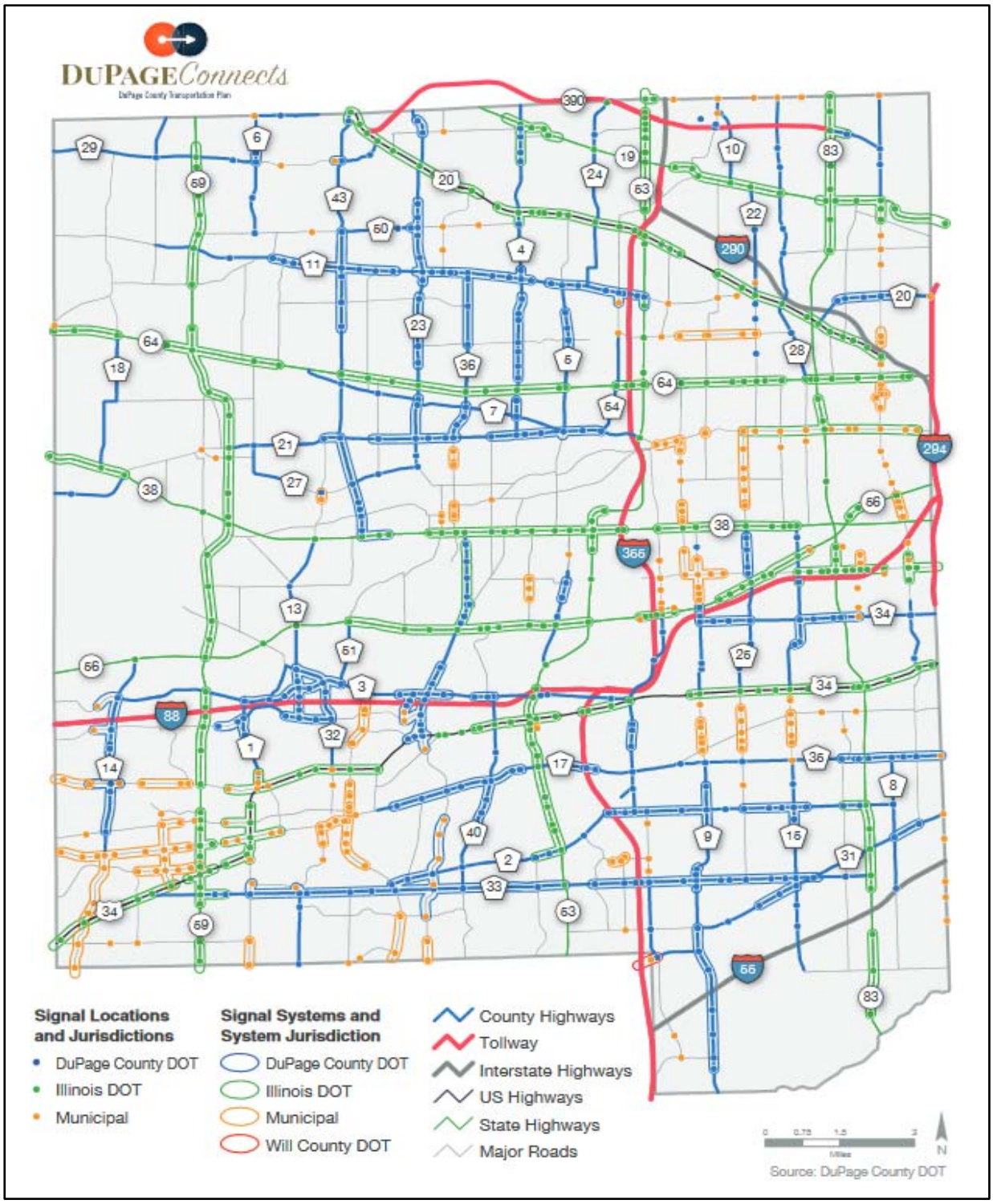
Traffic control systems have become more prevalent throughout the suburbs as a way to improve traffic flow, to minimize traffic congestion and to avoid or defer expensive construction. DuPage County is a leader in the implementation of systems and is in the process of integrating system communications into a virtual management center called the Central Signal System. The Central Signal System will provide the County with dynamic control over signals and traffic coordination that will help improve capacity of our highway network and mitigate delays and congestion due to crashes or incidents. Many of the traffic signal systems in the County currently support emergency vehicle pre-emption. Within the next decade some corridors will support transit vehicle pre-emption as well.

The DOT presently owns and maintains 324 traffic signals (37% of all signals in DuPage) and more than 40 systems. Eighty one percent (81%) of all County signals are included in a coordinated system. Some County maintained signals are included in systems maintained by other agencies. These arrangements are symbolic of the recognition of the network as a system and the partnership needed to ensure system-wide performance.

While impact fees are not used to install new traffic signals or relocate signal equipment, the County is using impact fees for enhancement of coordination between signals and the implementation of the Central Signal System. These activities have proven to enhance arterial performance. Over the next five to ten years, DuDOT will extend communications and signal monitoring technology to many of its signals and will be working alongside other agencies to implement coordinated regional system monitoring through a traffic management center. This arrangement will offer 24/7 management of all systems across all jurisdictions.

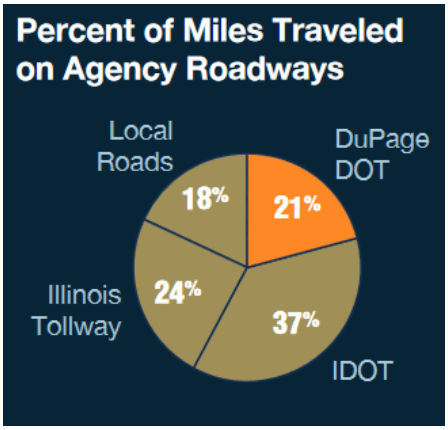
Figure 4-4, below, documents the current traffic signal systems active in DuPage.

Figure 4-4
Traffic Signal Systems in DuPage County, 2019



Section 4.2 Existing Deficiencies and DuPage County Highway System Performance

DuPage County is the most developed of all suburban counties in the state of Illinois. A 2017 geographic information system analysis of data collected by the State, Tollway, County and various municipalities estimates that more than 8 billion vehicle miles of travel (VMT) occurred on DuPage County roads in that year. Approximately 0.5 billion VMT (about 6%) were traveled by commercial vehicles[5].



Based on the data collected, about 21% of the vehicle-miles traveled occurred on County highways. In approximate numbers, this means almost 1.75 billion vehicle miles of travel occur on County highways annually and 4.8 million VMT daily. Using the previously established 220 miles of highway figure, County highways average a daily volume/mile of about 21,800 vehicles.

Figure 4-5 below provides the latest traffic volume figures available for the major arterial and expressway systems in DuPage.

Performance Measurement

DuPage County DOT has a long history of providing detailed measurement of highway performance. For many years, performance was estimated using detailed traffic modeling software. Those estimates were generated based on traffic counts, geometrics and traffic signal programs. The County still employs that system where direct performance measurement is not possible.

In 2016 through 2019, County staff performed direct measurement of highway conditions. These studies included detailed segment by segment travel time measurements. All county arterial highways not under construction or not influenced by construction were surveyed. Many State (IDOT) highways were also surveyed. Key municipal highways such as Washington Street and Naper Boulevard (Naperville), St. Charles Road (Lombard and Villa Park), Schick Road (Bloomingdale) and Devon Ave (Cook County) were also surveyed.

Surveys were taken during the peak periods of the day (0700-0900 and 1600-1800). Staff will report on the afternoon peak period only as this is the period with the heaviest volume of traffic and the period for which most highway design is accomplished. Figure 4-6 summarizes the findings of the County's travel time surveys.

Travel time surveys collected operating speed and delays on over 1700 roadway segments and 800 miles of arterial. These surveys were organized by corridor and each direction on each

[5] DuPage County DOT analysis of IDOT, Tollway and Municipal traffic counts.

segment was attributed with an average peak operating speed, level of service (LOS) and a statistic called the "Travel Time Index" or TTI.

Figure 4-5
Existing Arterial and Expressway Daily Traffic in DuPage County

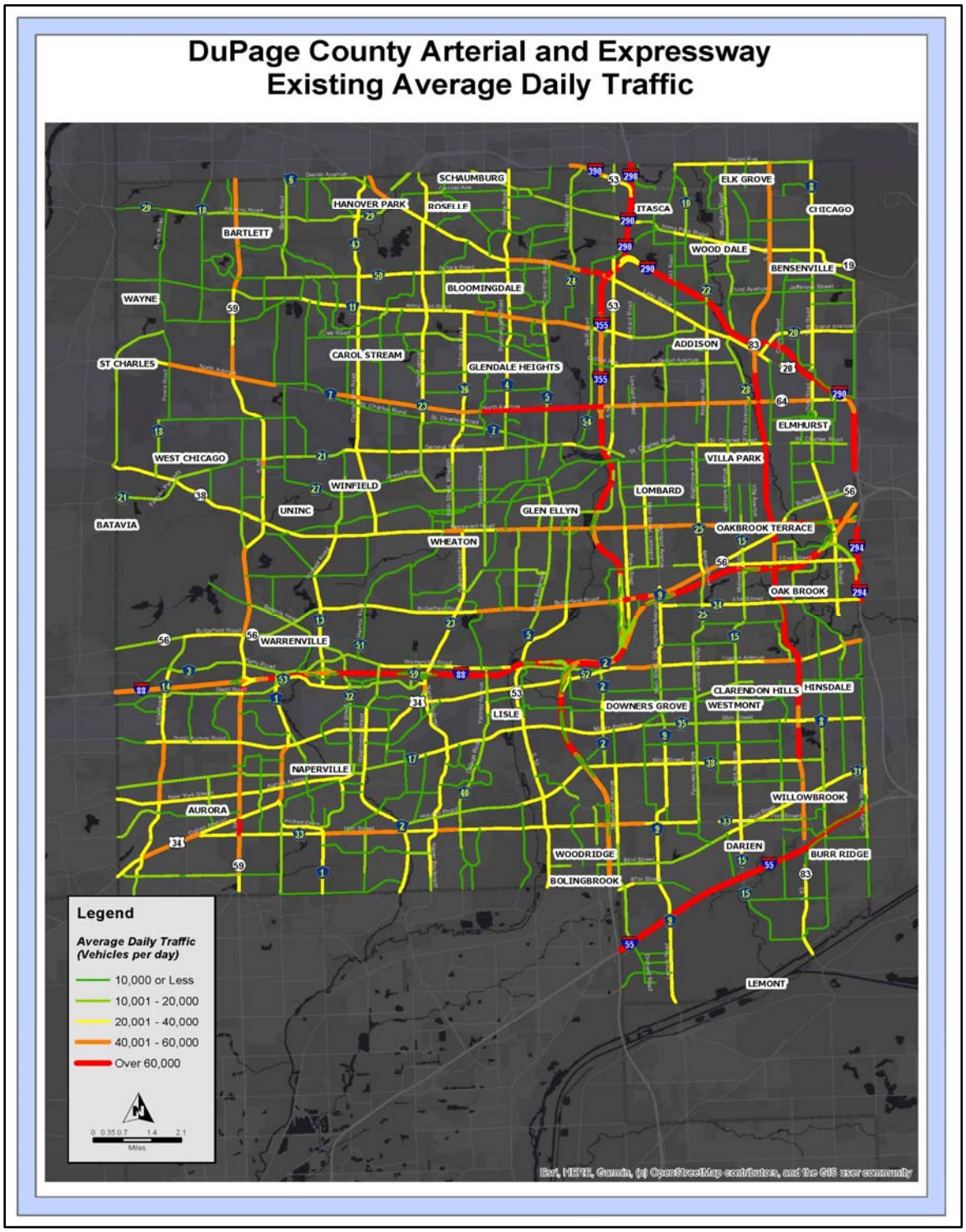
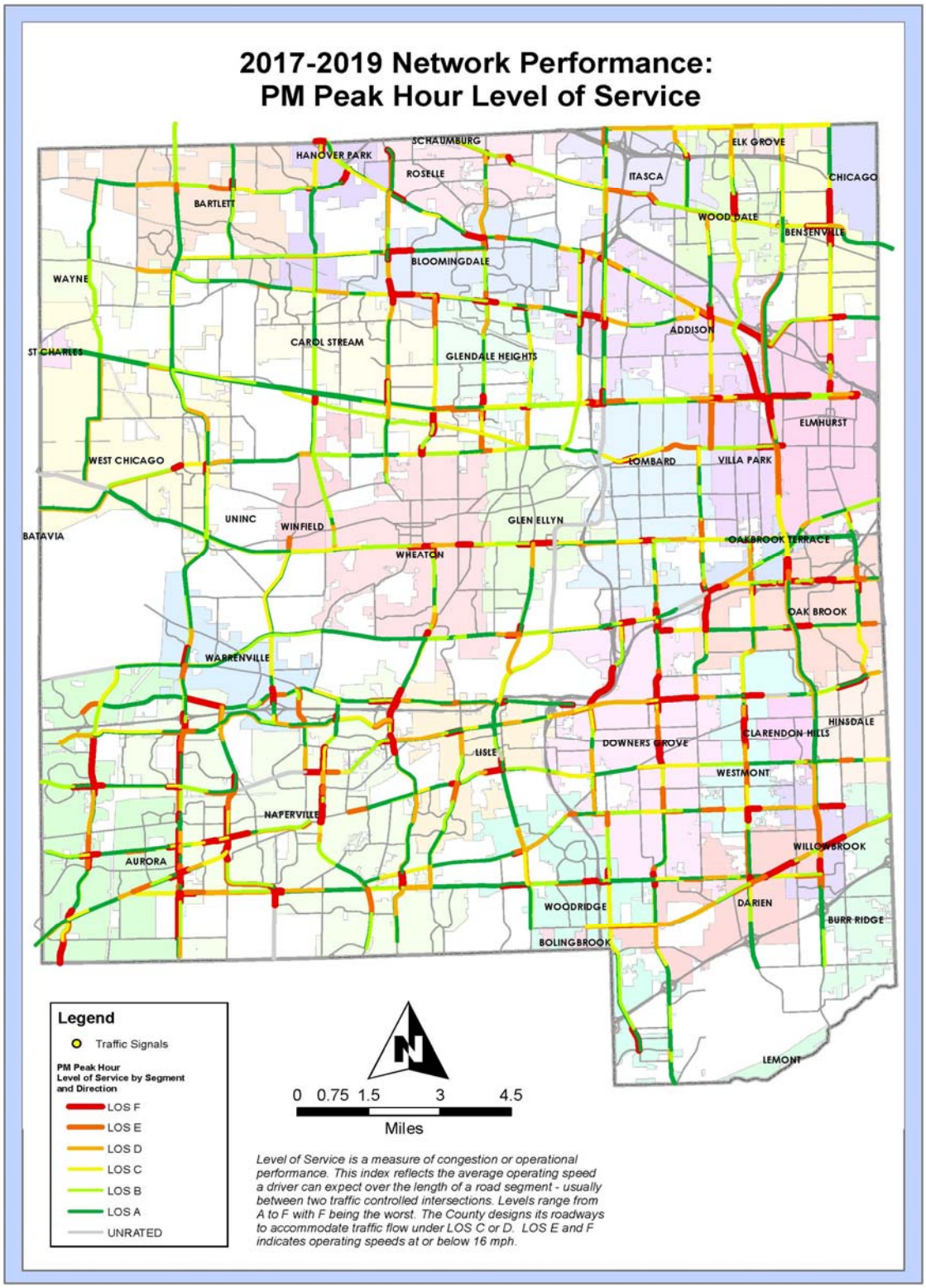


Figure 4-6
Evening Peak Hour Arterial Level of Service in DuPage County



Level of Service is determined using operating speeds and class of roadway to determine a performance grade of ‘A’ through ‘F’, with F being the worst condition. Table 4-3 below highlights the Level of Service criteria. Generally, all highways with average operating speeds less than or equal to 13 miles per hour are classified as “failing” under LOS E or F. LOS A through D reflect acceptable performance.

The results of the surveys indicated that approximately 108 miles of road out of the 800 miles surveyed currently operate at LOS E or F. This represents about 13% of all arterials (see Figure 4-7)[6].

Table 4-3
Arterial Class Level of Service Criteria

Arterial Class >>	I Sulqflsdo#Duwhuldo#	II P dmru2P lqru#Duwhuldo#	III Frochfwru#Urdgv#
Range of Free Flow Speeds	35 to 45 mph	30 to 35 mph	25 to 35 mph
Typical Free-flow Speed (mph)	40 mph	33 mph	27 mph
Level of Service	Average Travel Speed (mph)		
A	>= 35	>= 30	>= 25
B	>= 28	>= 24	>= 19
C	>= 22	>= 18	>= 13
D	>= 17	>= 14	>= 9
E	>= 13	>= 10	>= 7
F	< 13	< 10	< 7

[6] Transportation Research Board, *Highway Capacity Manual*, *Special Report 209* (Washington, D.C., 1994)

Figure 4-7
Existing Peak Hour Operating Conditions on DuPage Area Arterials

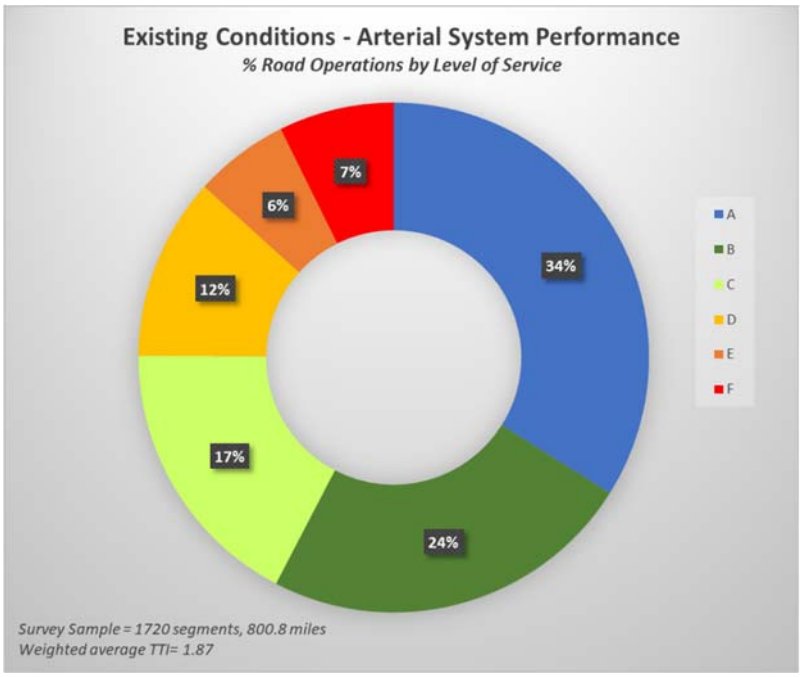


Table 4-4
Evening Peak Hour Arterial Performance Metrics, 2019

Metric	2010 CRIP	2020 CRIP
Deficient Ints	69	72
Avg Op Speed	27.86	27.34
TTI	1.85	1.87
VMT	22.5M Daily ~20% DCDOT	23.8M Daily ~21% DCDOT

Virtually all deficiencies identified here can be related to the performance of intersections adjacent to the survey sections. Staff compared the results of the latest surveys to those produced as part of the 2010 CRIP. Table 7 below provides summary metrics.

Peak hour performance has remained relatively steady over the last decade. This is somewhat surprising given the widespread reduction in traffic during the recession of 2009-2011. The business and housing recovery in DuPage County has been significant and has resulted in traffic levels surpassing those measured before the recession (e.g., 23.8 million VMT vs. 22.5 million in 2010). Despite these increases, average operating speed has declined by less than 2% and the number of deficient intersections has increased by 3. Of the 72 deficient intersections, 24 (33%) are under DuPage maintenance responsibility and 23 of the remaining (32%) are intersections where County is responsible for at least one leg of the intersection.

Section 4.3: Commitment to cure existing deficiencies and estimation of costs to mitigate those deficiencies

The DOT has committed to a program that ensures continuity of operations, a state of good repair (capital maintenance) and capital improvements after operations and maintenance are funded.

A list of deficient intersections was compiled from the segment surveys and is published in Appendix B-2 (see also Figure 4-8 below). This list also includes information on jurisdiction of the deficient facility, the fee district it resides in, the programming status of the deficient facility, and the practicability of remediating the deficiency.

Practicability is determined based on the following factors:

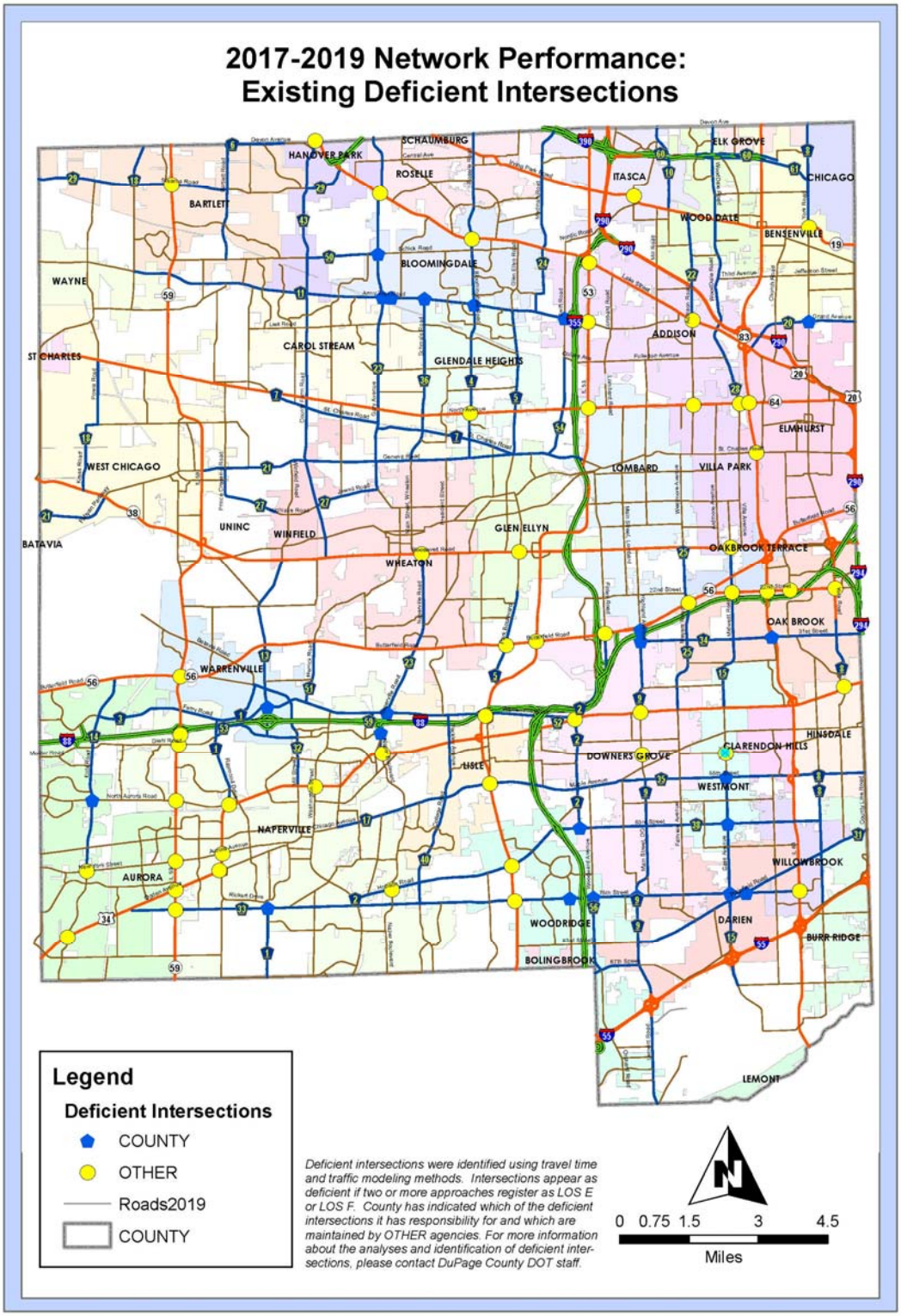
- Right of Way availability
- Property acquisition
- Signal operations
- Current geometrics
- Future geometrics required to mitigate deficiency
- Utilities and other obstructions

Many intersections in DuPage County remain on the deficient list from year to year (e.g., IL 64/North Avenue at IL 83 or IL 83 at 22nd Street) because the traffic demand at these intersections requires that the design escalate to a grade separated solution or some other design that requires extensive property acquisition and/or environmental remediation. With adjacent structures and the cost of acquiring them, facility expansion is sometimes deemed impracticable.

While many of the intersection deficiencies may be mitigated in the short-term through construction, latent demand for capacity may again push that intersection into level of service E or F. The County will weigh each case to determine the value and return on investment as opportunities present themselves.

Contractual and capital maintenance expenditures dedicated to maintaining the DOT system in a state of good repair in the future is summarized in Section 5 and listed by expenditure category in Appendix C-2.

Figure 4-8
Existing Deficient Intersections in DuPage County



Section 5: Costs and Funding

State statutes require the responsible agency to provide a reasonable estimate of all costs related to the improvement of roads, streets and highways proposed to be improved serving new development (see Section 5.1 below).

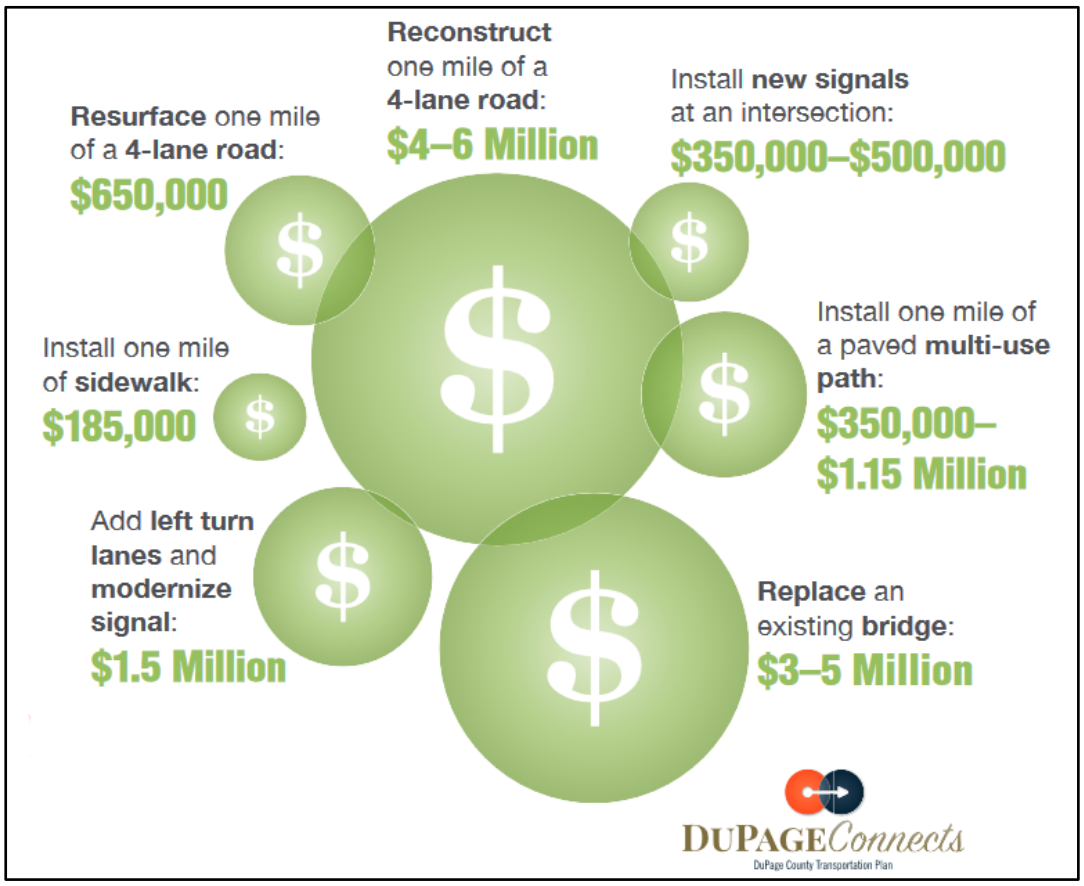
In addition, it is required than the agency identify all sources and levels of funding available to the unit of local government for financing road improvements (see Section 5.2 below).

Section 5.1: Cost Estimates Related to Improvement of Streets and Highways

The program lists included in Appendices C-3 and C-4 include cost estimates related to the project as scoped. It should be stated clearly that these figures are generally planning or engineering estimates that frequently change based on revisions to the scope of the project. Projects that are ongoing and are presently in Phase I or Phase II engineering are likely to have preliminary engineering cost estimates.

Projects that are planned and not currently underway have planning level cost estimates. This type of estimate uses average costs derived from recent successful bids on projects. The tabulations are compiled over the course two to five years. Every project varies depending upon the conditions at the site or along the corridor. Some of the typical costs or cost ranges for work performed on County highway projects are shown in Figure 5-1 below.

Figure 5-1: Typical DuPage County Roadway Improvement Costs



A typical intersection improvement where right of way is available but that would require new signals might typically cost the County a little more than $1.5 million. Prior to the 2010 CRIP, the DOT estimated the installation of a completely new 4/5 lane highway to cost a little more than $1.7 million per lane-mile (or about $8.5 million per centerline mile) including right of way. Over the past decade, indices show that costs have inflated at about 2.5% per year so that an add lane cost today is estimated at slightly more than $2.25 million per lane-mile or a little more than $11 million per centerline mile[7].

The costs above are purely construction cost examples; there are other cost elements that contribute to the overall project cost (not included in the estimates above):

- Right of Way acquisition
- Engineering Costs
- Utility relocation costs
- Addition of Structures (walls, etc.)
- Landscaping

[7] Engineering News Record City of Chicago Cost Index 2009-2019.

Engineering costs are typically 25-30 percent of the construction cost of a project and right of way costs are extremely variable depending upon the location and type of property being acquired.

Projects in the program list include these additional elements to the best of the DOT's ability to estimate what are often negotiated or unknown costs. As the project becomes active, it will appear in the DOT's Capital Improvement Program (CIP) and will provide greater detail on project schedule, funding and costs.

Future costs are estimated using project type base cost, plus engineering, land acquisition costs and project contingency escalated to the future using an inflation factor of 2.5% per year. These costs will be reviewed and adjusted periodically as detailed project schedule and scope information becomes available.

Section 5.2: Identification of all sources and levels of funding available to the unit of local government for financing road improvements

DuDOT collects revenue from the following sources:

- County Option Local Gas Tax (LGT)
- State Motor Fuel Tax (MFT)
- Impact Fees (IFF)
- State and Federal Grants
- Permit Fees and Services
- Other sources

State Motor Fuel Tax

In 2019, the State announced the *Rebuild Illinois* capital bill which increased MFT funding to the County. That additional funding is estimated at about $9.5 M. In addition to that amount, the State approved inflation indexing a portion of the new MFT and the county option local gas tax. The County has assumed a conservative approach to indexing and has, for this plan, adopted a lower average increase of about 1.75% per year.

The State has also made infrastructure bonds available to the County through the Rebuild Illinois plan. In 2020 through 2022, the County expects to receive approximately 35.6 Million in revenue that does not require County debt service payments.

Over the course of the twenty-year plan, however, it is assumed that gasoline tax revenues will continue to erode as passenger car and truck fleets convert to electric or alternative fuels and as combustion engines become more efficient. It is assumed that this erosion will partially offset the inflation indexing such that future revenue growth will be nominal.

County Option Local Gas Tax

The County has charged a fuel tax, collected at the pump, for over two decades. In late 2020, the County approved an increase of 4 cents per gallon, taking the total tax to maximum allowable 8 cents per gallon.

State and Federal Grants

State and federal grants have been a positive resource for DuPage County. The County has used impact fees, motor fuel taxes and other income to leverage funds that have provided significant benefit to the DOT program. This source of funding is variable, and depends upon funding availability, competition for funds, project readiness and project type. The DOT is committed to applying for this type of funding where it is prudent and beneficial.

Local match on funds tends to run between 10 and 50 percent with most of the significant federal funding (CMAQ and STP) requiring at least 20%. Grants are project specific and also have some limitations on how the revenues may be used (e.g., some may not be used on preliminary engineering, some may only be used for construction). It is assumed for the purposes of the CRIP that the County will be successful in garnering some grants and are assuming a steady annual receipt of approximately $5 M.

Permit Fees and Services

The DOT also assesses fees for highway, driveway and over-weight and over-dimension vehicle permits. The DOT also provides a variety of services to partner agencies and organizations. The DOT is projecting a slow expansion of this revenue source from about $2 M per year at present to about $2.3 M per year in 2040.

Impact Fees

The DOT has imposed impact fees since 1989 and has collected, on average, a little more than $2 M per year over the life of the program. Undeveloped land opportunities are declining across the county and future fees will most likely come from re-development at higher intensities. Given this prospective, it was staff's opinion that a reasonable expectation for annual revenue would be approximately $1 M per year. This assumes continued participation from community partners and a positive economic climate for development.

Projected Revenues, 2021-2030

As part of the County's Long Range Transportation Plan (LRTP), DuDOT developed a 20 year revenue forecast including the sources previously identified[8]. Assumptions and key factors related to the forecast are included in the LRTP. For this plan, the effects of vehicle fleet conversion from combustion engine to electric are assumed to be nominal for the first five years, with accelerating conversion after 2030.

The forecast also assumed the effects of Covid on driving would continue into 2022 but would effectively be through by 2023. However, with changes in work habits and the ability of non-frontline workers to work from home, the County assumed work from home increases and a general reduction in personal travel and miles traveled. Offsetting this is an increase in commercial delivery traffic. The net effects of these changes are not yet understood and

[8] DuPage County Division of Transportation Long Range Transportation Plan, Chapter 5, 2021.

future revenue forecasts will refine assumptions as trends become evident in the next 5 years.

Table 5-1 reflects the projected revenue by source and year between 2021 and 2030. These projections are as described in the DuPage County LRTP. This shows increases in local gas tax increasing from 2021 to 2022. DuPage County begins collecting the additional 4 cent tax imposed in 2020 in the third quarter of 2021 and it is expected that the full effect of the increase will be seen in 2023, assuming the pandemic is no longer influencing travel.

State Capital Bill bond payments show two payments in 2021 and 2022, completing the expected 35.4 M allocation to DuPage.

Table 5-1: Projected Revenue by Source and Year, 2021-2030

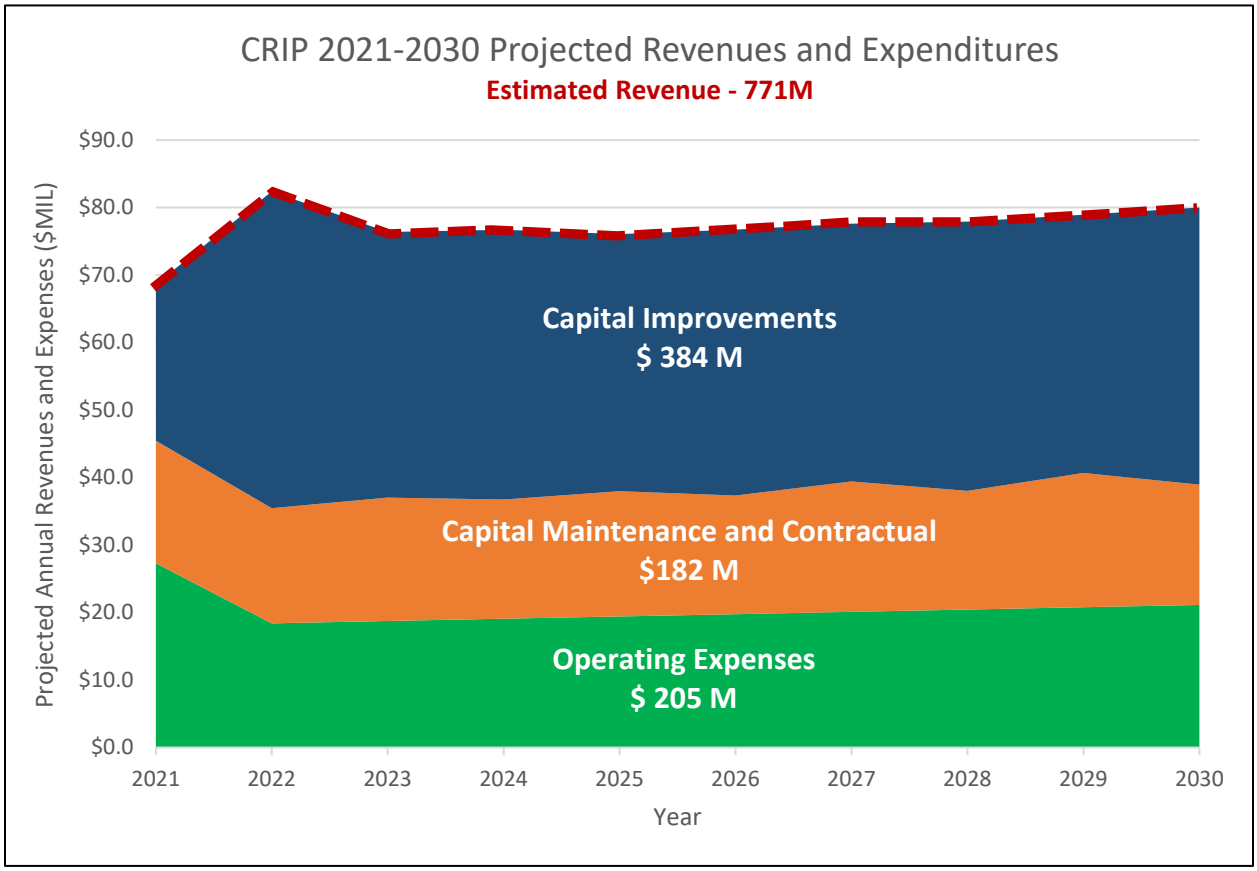
	Projected Revenue by Year										
Revenue Source	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	TOTAL
Local Gas Tax	$21.20	$36.61	$40.37	$40.56	$40.17	$40.77	$41.38	$41.55	$42.17	$42.79	$387.56
Motor Fuel Tax	$22.01	$24.21	$26.70	$26.82	$26.57	$26.96	$27.37	$27.48	$27.89	$28.30	$264.31
State Capital Bill Bond	$11.8	$11.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$23.60
Impact Fees	$1.5	$1.5	$1.5	$1.5	$1.5	$1.2	$1.0	$1.0	$1.0	$1.0	$12.65
State and Federal Grants	$7.9	$5.5	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$53.42
Licenses and Permits	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7	$0.7	$7.00
Charges for Services	$1.3	$1.3	$1.3	$1.3	$1.3	$1.4	$1.4	$1.4	$1.4	$1.4	$13.48
Investment Income	$0.1	$0.1	$0.1	$0.1	$0.1	$0.1	$0.1	$0.1	$0.1	$0.1	$1.00
Miscellaneous	$0.2	$0.2	$0.2	$0.2	$0.2	$0.2	$0.2	$0.2	$0.2	$0.2	$2.00
Transfers In	$1.4	$0.0	$0.0								$1.40
Agency Participation	$0.5	$0.5	$0.5	$0.5	$0.5	$0.5	$0.5	$0.5	$0.5	$0.5	$5.0
	$68.65	$82.39	$76.38	$76.70	$76.08	$76.74	$77.61	$77.91	$78.95	$80.00	$771.42

Altogether, the County expects that these revenue sources will bring a little more than $770 Million to the DOT. Approximately 85% of the revenue is expected to come from fuel taxes. Another $33 Million (4%) is expected to be generated through user fees (impact fees, permits and services).

The DuPage County LRTP is a "constrained" plan meaning that its proposed expenses cannot exceed its expected revenues. Figure 5-2 shows how the LRTP proposes to allocate the projected revenues.

DuPage County's primary obligation is to maintain its system of roads and assets before allocating resources to new capital programs. Operating Expenses and Capital Maintenance, as shown in the chart below, represent those obligations. Operating expenses include personnel, material, equipment, utility, insurance and other costs necessary for the upkeep of the highways, trails, sidewalks, bridges and other assets.

Figure 5-2: 2021-2030 Projected Revenues and Expenditures



Capital maintenance and contractual expenses include DuDOT's annual pavement, bridge, traffic signal, drainage, right of way and other maintenance contracts. Pavement maintenance, for example, requires approximately $10 Million per year to keep up a 16 or 17 year resurfacing cycle. Electrical maintenance contracts ensure that DuDOT's 324 traffic signals are maintained and operating well. This contract is important because it serves the County on a 24 hour, 7 day a week basis. It is meant to handle emergencies due to weather, crashes, or system malfunctions. These costs, projected over ten years, amount to $387 Million or just over 50% of all projected revenues.

In the constrained scenario presented in the LRTP, this leaves approximately $384 Million for capital projects. Capital improvements include the following:

- Roadway widening or add lane projects
- Roadway or intersection channelization
- Reconstruction of roadway or bridges
- New traffic signals and communication equipment
- Intersection widening
- New trails, sidewalk, and bike path
- New facilities
- Safety improvements

Under Impact Fee Law, only capacity improving projects are eligible for impact fee funds. Capacity improvements include roadway or bridge widening, add lanes, channelization, signal coordination and coordination infrastructure.

Section 6: Future Traffic and Program

With each new Comprehensive Road Improvement Plan, DuDOT continues to augment and update its methods to forecast the impact of land use and development on traffic throughout the County.

Section 6.1: Modeling Methods Summary

The DuPage County traffic model produces a preview of what facilities are likely going to be congested as a result of new development, traffic growth, and new traffic patterns. County modeling methods have remained mostly unchanged over the course of the last 20 years and a technical memo describing assumptions and processes can be found in Appendix C-1.

DuPage County Division of Transportation has maintained and used a version of the TransCad traffic simulation model since the 2000 CRIP. This model is a traditional 4 step model employing these elements:

I- Land Use
II- Trip Generation (including passenger cars and commercial vehicles)
III- Trip Distribution
IV- Trip Assignment

The County model includes all of DuPage County, and portions of Cook, Will, Kane, and Kendall Counties. DOT has already documented its process of estimating land use. The traffic model requires that that land use data be loaded into the model according to the traffic zone structure.

Trip Generation was calculated by time of day and segmented into various types of trip:

- Home Based Work Trip
- Home Based Other Trips
- Non-home based trips
- Commercial Trips

This data was supplemented with trip origin and destination data from street level traffic surveys, point source locations like shopping malls, airports and major traffic generators. Socioeconomic data (e.g., auto ownership, age, family size) also play a role in predicting trip generation from each zone in the traffic model. DuDOT staff have also produced a report documenting existing conditions and future assumptions at O'Hare Airport[9].

Trip Distribution is based upon assumptions made as to the length of trip by type of trip. Each type of trip has a unique profile with non-work trips tending to be shorter than work trips. According to Chicago Metropolitan Agency for Planning estimates, DuPage County has some of the shortest trips out of the entire metropolitan area. Trip lengths are displayed in Table 6-1 below.

Table 6-1: Average Trip Length by Trip Type[10]

County	Home Based Work	Home Based Other	Non Home Based	All Trip Types
DuPage	**11.09**	**4.97**	**5.44**	**7.03**
7 County Region	12.52	5.70	5.81	8.01

Three dimensional travel matrices are then estimated by type of trip, time of day and area of traffic model. These are augmented by CMAP zone to zone regional matrices for trips external to DuPage or passing through DuPage.

The travel matrices, the model highway network and the land use traffic zones are the basic inputs into the travel model. Traffic is assigned by time of day with the model highway network capacity, speed, facility type and other network factors impeding the interactions between zones. Assumptions and assignments are adjusted and run iteratively to calibrate the model in the base year. When the model has reached acceptable calibration, and highway and intersection deficiencies match empirical results, the assumptions and network adjustments are stored and used in future forecasts.

The County examined both the 2025 horizon (including the known projects that are programmed or are part of a published 5 year program) and a 2040 horizon. Modeled traffic

[9] DuPage County DOT, *Technical Memo on O'Hare Airport and Ground Transportation Modeling,* 2018.
[10] CMAP Trip Length by Township and County memo 8/18/2017

reflects the changes in density and type of development and new patterns of traffic, congestion and system performance emerge from the model.

The 2025 programmed projects are used as the foundation for the 2040 model forecasts. A "2040 Base" model is produced using the County's programmed projects and those of other agencies. This base model serves as the foundation for analysis of future impacts. Staff evaluates the forecast performance metrics including peak hour operating speeds, vehicle hours of travel, time in congestion, volume to capacity statistics, and directional traffic volumes. A forecast list of deficiencies is produced and evaluated to determine scope of potential remediation activities. Projects encompassing all jurisdictions (e.g., Tollway, State, municipal and County) are included in the evaluation. Project recommendations are developed by screening proposed projects to determine whether they meet long term performance, safety, environmental and system goals. Projects that offer a good possibility of a positive benefit-cost ratio are included in the design year project list. Projects are classified as "planned," in the case of DuPage County projects, or "other needs" in the case of projects under jurisdiction of other agencies. Those with little benefit, limited practicability and high cost are screened out.

The plan list is dynamic. The County evaluates the costs, scope and extent of each project periodically. When a project enters the Environmental Engineering phase (Phase I), the scope and project needs are more thoroughly evaluated and preliminary construction costs are produced. A project schedule becomes clearer at that time. The project then moves into design engineering, which lasts 12-30 months depending upon the complexity of the project, and project details are worked out in this phase. Land acquisition usually occurs when design has progressed sufficiently for DuDOT to know what easements and property will be needed for the project to be constructed. Final plans are produced and bids are taken. If the project involves federal funding, project schedules may be elongated due to documentation and plan review processes required by the State. FY2021-2025 projects have already advanced through one or two engineering phases or may even be in construction at the time of this plan. Projects appearing in the 2026-2030 list should be considered good faith efforts to prioritize those with greatest need with the realization that they move up or down the plan schedule depending on the conditions outlined above.

Section 6.2: 2021-2025 Projects

DuPage County has a well-developed five-year capital program. The program is an amalgamation of projects assembled from various sources including the previous Comprehensive Road Improvement Plan. There are varying types of projects on this list including safety, facility, intelligent transportation system, state of good repair and bike-ped projects. The complete list of 2021-25 Projects is included in Appendix C-3.

The 2025 program features the following projects:

- 75th Street: Millbrook to Greene Road, Intersection Channelization, ($4.8M)
- 87th Street at Woodward Avenue: Intersection Channelization, ($5.3M)
- Army Trail Road at West Branch DuPage River Bridge, ($7.5M)
- Bloomingdale Road Bridge Over CCP Railroad, ($6.2M)
- Central Signal System Expansion ($17.8M)
- DOT SW Campus improvements ($28.75M)
- Fabyan Parkway, Reconstruct and Widen, ($19M)
- Grand Avenue at York Road, Intersection Improvement, ($4.6M)
- Highlake Road at Sunset Blvd, Rail Crossing and Intersection, ($1.9M)
- Naperville Road at IL 38, Intersection Improvement, ($7.75M)
- Lemont Road, 83rd Street to 87th Street Intersection Channelization, ($6.7M)
- Naperville Road, I-88 to US 34/Ogden Avenue, Channelization, ($5.25M)
- Warrenville Road Bridge at E Branch DuPage River, Reconstruct, ($5.2M)
- York Road, Devon Avenue to Gateway Drive, Reconstruct, ($16M)

Altogether, the **2021-2025 Capital Improvements Program totals $174.2 Million**. As previously mentioned, additional projects may emerge in FY22 that will increase that total. CRIP amendments will address these on an annual basis.

The following are a sample of the programmed projects in Tollway, State and municipal programs that the County included the 2040 Base Model:

Tollway

- I-294, Balmoral Avenue to 95th Street, Reconstruction and Widening
- I-490, I-90 to I-294, New Tollway
- IL 390, at York Road, West O'Hare Access and I-490, Interchange
- IL 390, US 20/Lake Street to County Farm Road, ramp extension

IDOT

- IL 38/Roosevelt Road, Winfield Road to Westhaven, Corridor and Intersection
- IL 56/Butterfield Road, W of IL 53 to W of I-355, Reconstruct & Add Lane
- IL 53, IL 56 to Park Blvd, Add Lane
- IL 59 at Army Trail Road, intersection improvement
- IL 59 at Garys Mill Road, intersection improvement and new signal
- IL 64, 22nd Street, IL 38 Cook-DuPage Corridor Signal Coordination and Improvements
- I-55 Managed Lanes, I-355 to I-90/I-94

Municipal/Other Agency

- North Aurora Road at CN Railroad, Bridge widening
- North Aurora Road, Frontenac to Fairway Dr, Add Lanes
- Commons Drive, US 34 to 75th Street
- East County Line Road, Grand Avenue to IL 64, corridor and intersection improvements
- IL 64/North Avenue at US 20/Lake Street and County Line Road, alignment and grade separation.

Figure 6-1: FY2021-2025 County and Peer Agency Programmed Projects

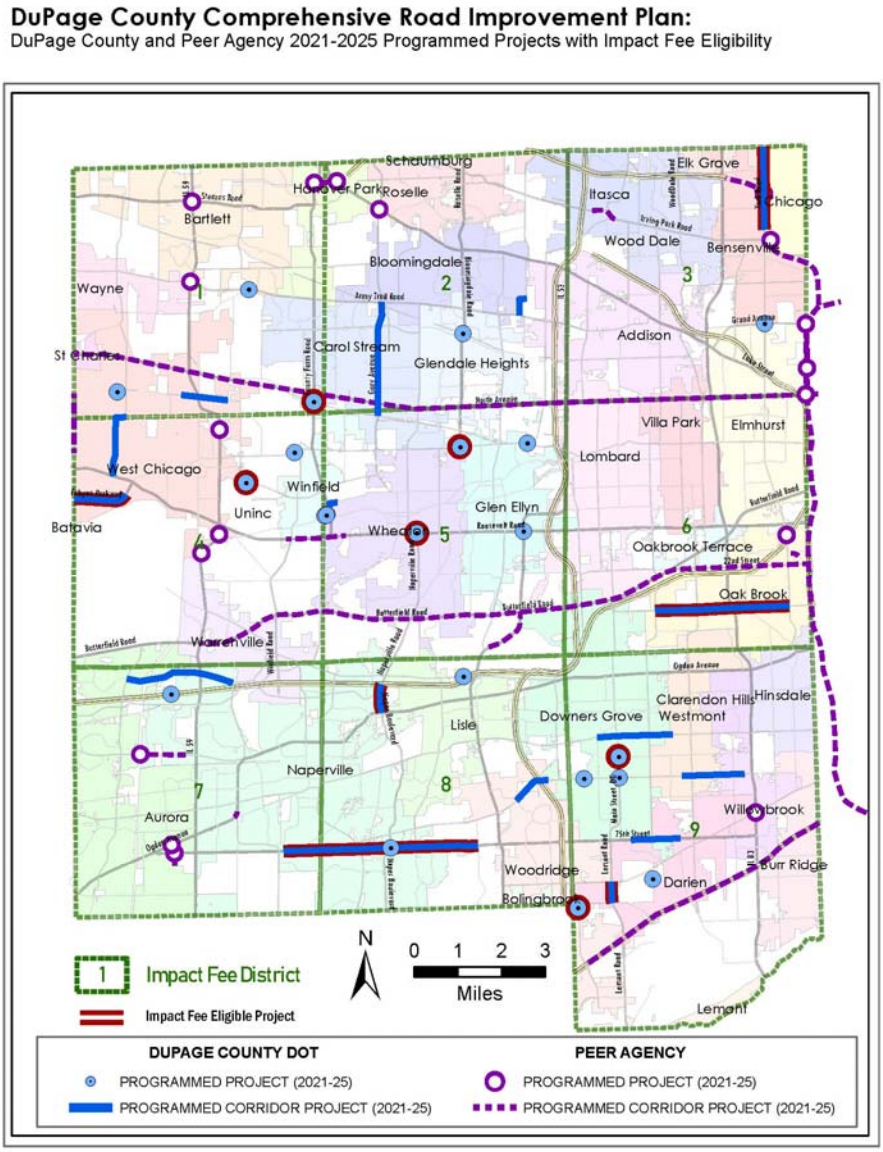


Figure 6-1 describes the programmed projects included in the 2021-2025 period and which are included in the 2040 Base Forecast model. This map includes all capital projects. For details on the projects please see Appendix C-3.

The project list in Appendix C-3 includes information on which of the projects are impact fee partially or fully eligible. Thirteen of the projects in the 2021-25 program are eligible for impact fee allocation. All nine (9) districts have fee eligible projects. Table 6-2 summarizes project eligibility by fee district:

Table 6-2: DuPage County 2021-25 Program Impact Fee Eligibility

Impact Fee District	Township	Eligible Projects*	Total Project Cost Eligibility*
1	Wayne	1	TBD
2	Bloomingdale	1	TBD
3	Addison	1	$ 16 M
4	Winfield	3	$ 21.9 M
5	Milton	2	$ 8.54 M
6	York	1	$ 7.16 M
7	Naperville	1	$ 2.4 M
8	Lisle	2	$ 6.65 M
9	Downers Grove N/S	3	$13.24 M
All Districts		1	$17.8 M
		13	$ 94.7 M

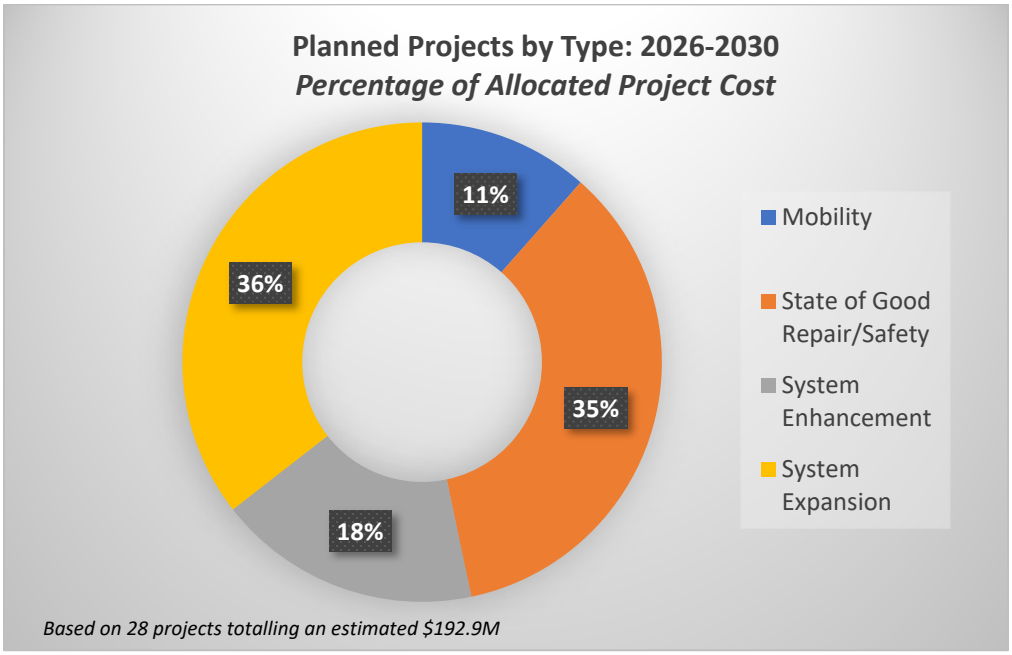
** Some projects appear in multiple districts. Cost eligibility will be determined as the project design advances and construction is awarded.*

Section 6.3: 2026-2030 Projects

The 2026-2030 capital program list includes the entire spectrum of project types including, state of good repair, safety, mobility, facility, system enhancement (minor capacity projects) and system expansion (major capacity projects).

The proposed 2026-2030 Project list includes 28 projects totaling more than $192M. Figure 6-2 demonstrates the allocation of cost between the representative project categories.

Figure 6-2 - 2026-2030 Planned Project Cost Allocation



The following capital projects are a sample of the proposed 2026-2030 $192M program:

State of Good Repair/Reconstruction

- 63rd Street, E of Cass Avenue to Clarendon Hills Road Reconstruction
- WoodDale Road, Montrose to N of US 20/Lake Street Reconstruct, safety and mobility

System Enhancement

- 63rd Street, at Cass Avenue, Intersection improvement
- Army Trail Road at Munger Road, Intersection and safety improvement
- Cass Avenue, I-55 Frontage Road to 91st Street, Corridor improvement and safety
- County Farm Road at Stearns Road, Intersection improvement
- County Farm Road at IL 390 ramps, new intersection and safety
- Gary Avenue at Schick Road, intersection improvement
- Maple Avenue at Naper Blvd, Channelization
- Maple Avenue at Belmont Road, Channelize and Traffic Signal Modernization
- US 34/Ogden Avenue at Finley Road, intersection improvements
- Yackley Avenue at US 34/Ogden Avenue, intersection improvement

System Expansion

- Eola Road, North Aurora Road to Ferry Road, Add lanes and widen bridge

Mobility

- E Branch DuPage River Trail, Great Western Trail to IL 38/Roosevelt, New Path
- 31st Street, Highland Avenue to Meyers Road, New Path
- Stearns Road Trail, County Line to IL 59, complete path.

Of these projects, sixteen (16) are impact fee eligible with a combined cost of $95.4 Million. Projects are distributed across the County and eligible projects are located in Districts 1, 3, 4, 5, 7, 8 and 9. As indicated in prior sections, this does not preclude the possibility of impact fees from being used to engineer projects in the districts where there are no eligible projects. The full list of 2026-2030 projects can be located in Appendix C-4.

Section 6.4: 2031-2040 Projects

Looking ahead even farther, based on future year traffic forecasts and the backlog of state of good repair projects, DuDOT is extrapolating the need for another forty (40) capital projects totaling almost $372 M. Eighteen of these projects are impact fee eligible with an estimated cost of about $195M. All but districts 4 and 6 are represented in this ten year project list. As the program evolves and priorities change, it is likely that programs in those districts will emerge and funding will be available.

Some of the key needs that DuDOT expects to address in the 2031 to 2040 program include:

State of Good Repair

- 55th Street, East County Line Road to E of IL 83, Reconstruct
- 75th Street, IL 83 to E of Plainfield Road, Reconstruct
- Maple Avenue, Walnut to Dunham, Reconstruct and align
- Medinah Road, IL 19 to US 20, Reconstruct
- St. Charles Road, County Farm Road to Bloomingdale Road, Reconstruct
- Yackley Road Bridge over BNSF RR and Rott Creek, Reconstruct

System Enhancement

- Army Trail Road at County Farm Road, Intersection Improvement
- Bloomingdale Road at Schick Road, Channelization
- College Road, Maple Avenue to Hobson Road, Channelize and align
- Naperville Road, Danada Drive to Loop Road, channelize and widen
- Stearns Road, DuPage County Line to Bartlett Road, Widen and channelize

System Expansion

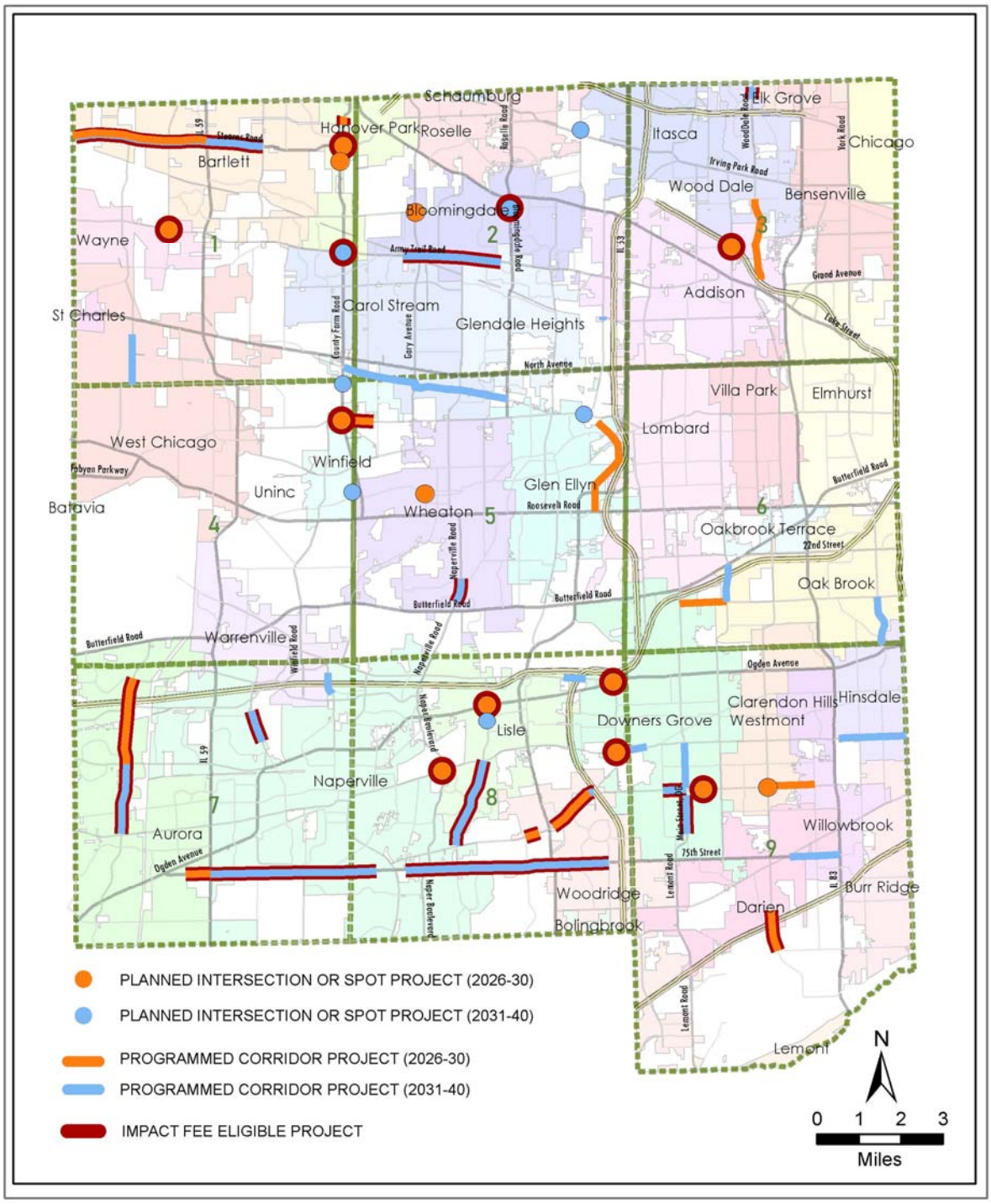
- 75th Street, Janes Avenue to E of Washington, Add Lanes
- 75th Street, W of Washington to IL 59, Add Lanes
- Army Trail Road, Gladstone Ct to W of Gary Avenue, Widen and Channelize, intersection improvements
- Eola Road, North Aurora Road to E New York Street, Add Lanes and Bridge.

Mobility

- East Branch DuPage River Trail, IL 38 to IL 56, New Path
- Meyers Road (Central DuPage Trail), 31st Street to IL 56, Widen Bridge, Bike Path
- Mill Street, N of I-88 to Shuman Blvd, Bridge and New Path

The complete list of 2031 – 2040 capital projects can also be found in Appendix C-4. Figure 6-3, below, depicts the DuPage County 2026-2030 and 2031-2040 Capital Projects listed in the appendices.

Figure 6-3 - DuDOT 2026-2040 Planned Projects with Impact Fee Eligibility



Section 6.5: Program Summary

DuPage County is transitioning from a high growth period to a period of maintenance and system enhancement. Much of the future transportation program involves rebuilding and modernizing older roads and the infrastructure associated with these roads. Certain of these reconstruction projects may involve elements that are impact fee eligible. Until the plans are presented, staff has assumed that the entire reconstruction (State of Good Repair or Safety) project is currently ineligible for impact fees.

This Plan is recommending 29 impact fee eligible projects for the ten-year period from 2021-2030. These projects have a cumulative cost of $190.1M. All impact fee districts are represented with projects in the ten-year program.

In addition, another eighteen projects totaling $195M have been established as impact eligible future needs. Given the levels of impact fee revenue over the ten and twenty year periods described here, project costs far outweigh the ability of the fee program to pay for the projects.

DuPage County has also reviewed programmed and other needed projects under the jurisdiction of other agencies. Fourteen projects have been identified that are partially or fully eligible for impact fees due to the incorporation of DuPage County highways in larger projects. The County, enacting policy changes promulgated in the DuPage County Fair Share Impact Fee Ordinance, will consider municipal and State applications for use of impact fees on capital projects. Applications should prove need for funding and eligibility consistent with the practices of this CRIP. DuDOT will evaluate each application and will recommend or reject applications and advise the Impact Fee Advisory Committee. At this time, all future projects included in the deficiency lists in Appendix B-2 will be considered ineligible.

Section 7: Public Outreach

This section provides the reader a public record of all public hearing notices, public hearing records and public comments on the FY 2021 Comprehensive Road Improvement Plan.

DuPage County is required under State Statute 605 ILCS 5/5-905 to notify the public in accordance with stipulated procedures, to conduct a public hearing on the Comprehensive Road Improvement Plan, and to accommodate public comments. Public hearing notice documentation is included in Appendix D-1. The public hearing included a presentation which can be found in Appendix D-2 or online at www.dupageco.org/impactfees.

Comments received as part of the public hearing by the DuPage County Division of Transportation related to this document will be included in Appendix D-3.

If you have any comments or questions about the Road Improvement Plan, any of the programs listed in the Plan, or any of the processes described herein, please contact us at the following address:

DuPage County Division of Transportation
Attention: John E. Loper, Project Manager
421 N. County Farm Road
Wheaton, IL 60187
630.407.6900
impactfees@dupageco.org

APPENDIX A-1

LAND USE ASSUMPTIONS

DUPAGE*Connects*
DuPage County Transportation Plan

2015 – 2025 - 2040 LAND USE ASSUMPTIONS

For DuPage County Impact Fees and Long Range Transportation Plan

ADOPTED
JULY, 2018

Contents

2015 – 2025 - 2040 LAND USE ASSUMPTIONS

I CONTEXT

DuPage County is required by law to produce a land use assumptions document that will be used in the assessment of traffic impacts of new development[1]. The assessment of impact is established by the use of a traffic model that integrates land use information, roadway network information and various fiscal and project programming assumptions.

The Land use assumptions document, as defined by the State Impact Fee Law, is information used in support of the Comprehensive Road Improvement Plan and the establishment of needs therein. The assumptions document is not intended to be, nor is specifically mentioned to be by Law, a land use plan or a policy document that will guide unincorporated or incorporated development over the life of the Comprehensive Road Plan. Simply put, this is a document that establishes facts about existing land uses, land use trends and attempts to use rational means to produce a set of land use forecasts that are reasonable and attainable.

DuPage County typically produces ten (10) year forecasts consistent with the planning horizon of the Comprehensive Road Improvement Plan. For the Long Range Transportation Plan, the County has extended its projection to 2040, a 25 year plan horizon.

II LAND USE MODEL METHOD OVERVIEW

The land use model involves a two-step process: 1) Develop a base year or existing land use condition or inventory, and 2) Project future land use in the critical ten (2025) and twenty-five (2040) year planning horizons.

EXISTING LAND USE

DuPage County DOT has a long history of preparing existing land use with the support of the County Development Department, Building and Zoning Department, and the Geographic Information System section. Existing land use is built on aerial and empirical data. Aerial information is updated frequently through contract with photogrammetry companies. DuPage County is especially well situated to keep very good inventory of its land use. DuPage County utilized the following information to assess growth between 2010 and 2015:

- DuPage County aerials (2011, 2012, 2013, 2014 and 2016)
- DuPage County Building Planimetrics (2014)
- US Census Bureau Block Group and Census Tract Data
- DuPage County area Pictometry oblique aerials (various years)
- Municipal and County building and impact fee records
- CoStar Commercial Real Estate Subscription Service
- Municipal interviews

These visual and data records were used to validate new housing and commercial activity between 2010 and 2015. Aerials were used to screen activity. Pictometry, building, impact fee and municipal interviews were used to confirm housing units and commercial square footage added with each new development or redevelopment.

[1] Illinois Compiled Statutes 605 ILCS 5/5-901, et.seq.

LAND USE ORGANIZATION

In order to better assess land use impacts on DuPage County, DuPage County has extended its model area well outside the county boundaries to include portions of Kane County, Northwest Cook County, West Cook County, Will County and Kendall County (*Figure 1).*

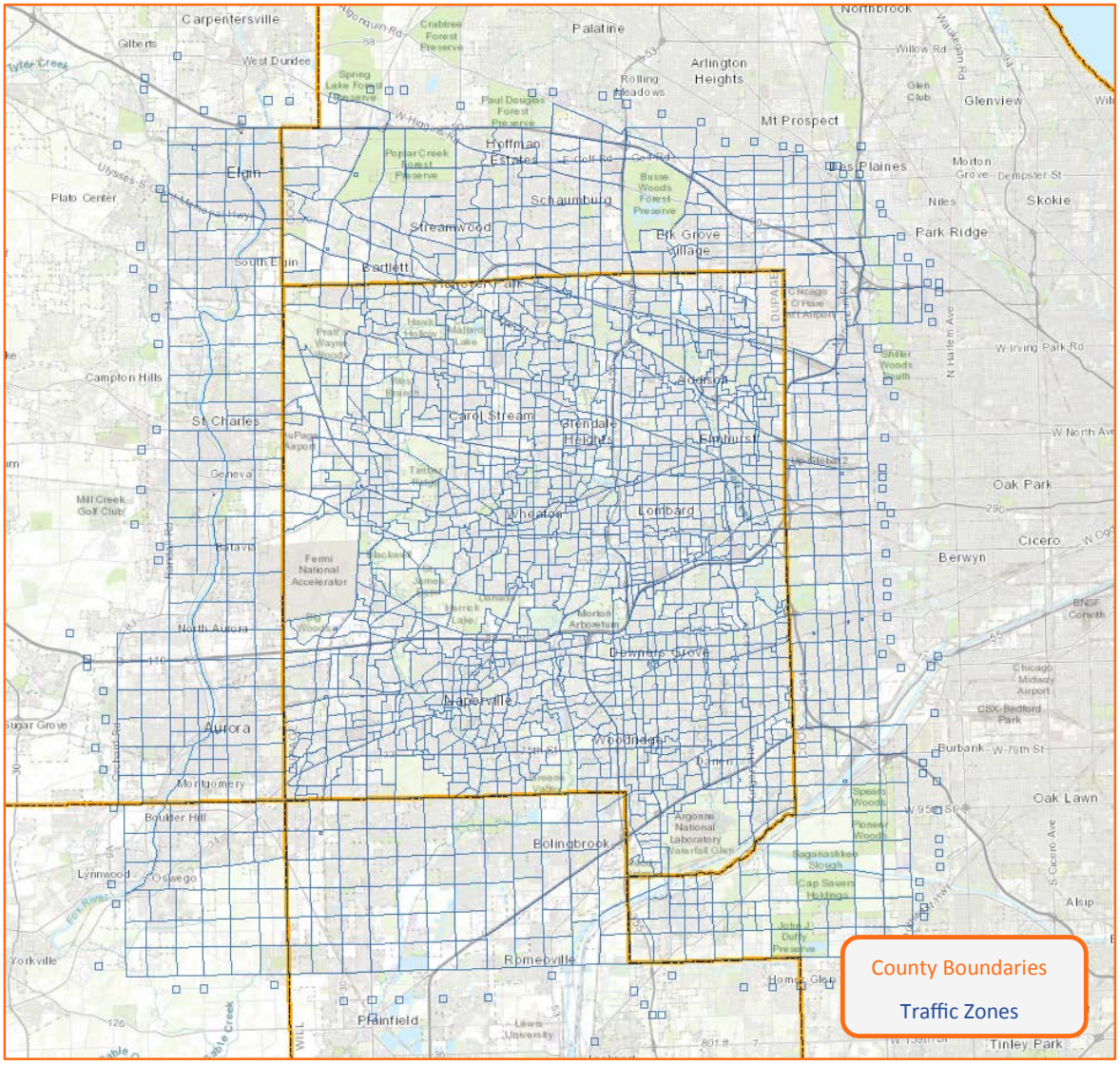


FIGURE 1 - DUPAGE COUNTY MODEL AREA

DuPage County has organized its land use divisions into what are known as Traffic Analysis Zones (TAZ). TAZ range in size from a square block to more than a square mile (*Figure 2*). Over the past 25 years, DuPage County staff have amended the TAZ structure to reflect changing road and land use patterns across the model area. While this does not lend itself to backward comparison at the TAZ level, subregional and county comparisons can be made.

For the 2015-2025-2040 model, there are 1293 TAZ internal to DuPage County and 549 TAZ in the neighboring counties for a total of 1,842 land use TAZ. More than 200 other TAZ also exist in the model area. These are transportation TAZ representing Metra stations and key external arterials.

FIGURE 2 - TRAFFIC ZONE STRUCTURE

Traffic zones have been built to reflect the roadway network and parcel geography rather than the underlying Public Land Surveying System (PLSS) boundaries such as quarter sections, sections or townships. This sort of organization does not hamper inventory or forecasting efforts as each TAZ has been used by GIS tools to compute the number of buildings by class, type and size.

In addition, the County has included transit station zones which are uniquely assigned to train stations both in and outside of the County. These zones have no land use associated with them and are used for traffic modeling only.

DuPage County retains these zone boundaries throughout the 25 year projections for consistency purposes.

III EXISTING LAND USE

For the purposes of traffic modeling, DuPage staff has categorized the land use in each TAZ according to the following uses:

- Residential
  - Single Family Dwelling Units
  - Multifamily Dwelling Units (i.e., apartments, condominiums)
  - Group Quarters (i.e., College dormitories, elder housing)
- Commercial (all units in 1,000 SF)
  - Retail (i.e., commercial malls, stand-alone stores, restaurants, banks)
  - Office
  - Industrial
  - Warehousing
  - Schools (K-12 and private)

- TCU (transportation and utility focused land uses)
- Public (e.g., Libraries, police, fire, recreational uses)
- Special Generators (Hospital, Hotels, Colleges, Convention Centers, Airports)

The following table summarizes the totals by category for DuPage County and surrounding counties.

TABLE 1 - 2015 LAND USE BASE

		COUNTY					
Land Use Category	**DUPAGE 2010**	**DUPAGE 2015**	COOK	KANE	KENDALL	WILL	TOTAL
SFDU(1)	**211,591**	**212,645**	125426	73399	13248	40158	464876
MFDU(1)	**132,052**	**141,043**	94034	32147	4442	11960	283600
GQ(1)	**19,072**	**20,617**	2157	2757	NA	621	26152
RETAIL(2)	**65,639**	**63,598**	41564	14499	3623	10797	134081
RET-DT(2)	**NA**	**4,725**	2422	4365	187	NA	11698
OFFICE (2)	**70,322**	**71,537**	53168	10282	461	2998	138447
INDUSTRIAL(2)	**48,157**	**51,322**	37658	20905	3121	13239	126245
WAREHOUSING (2)	**138,441**	**145,887**	98707	44449	4758	48851	342652
SCHOOL(2)	**22,993**	**23,102**	12121	7045	1916	4512	48695
TCU(2)	**NA**	**4,372**	3440	841	36	1356	10046
PUBLIC(2)	**12,901**	**14,058**	5607	2213	338	1090	23304
HCC(2)	**20,564**	**22,124**	19233	2348	207	1152	45064

(1) Residential dwelling units, (2) – Commercial units (x1,000sf)

In DuPage County, the number of households has grown by almost 10 thousand units since 2010. Most of the growth (almost 9 out of 10 units) has been in the multifamily townhome class. Group quarters, including dormitories, senior housing (i.e., independent living and memory care) continues to steadily expand as DuPage residents age in place.

Retail and office sector development has slowed considerably in the County with approximately 1 Million square feet per year developed from 2010 to 2015.

Growth has occurred in the industrial and warehousing sectors with over 10 Million square feet having been built between 2010 and 2015. This represents growth of more than 2 million square feet per year.

As of 2015, there were approximately 9800 parcels (with about 8600 acres) identified as vacant remaining in DuPage County. Since early 2015, over 1800 of these parcels (at about 2200 acres) have been acquired and have been developed. As of this date, it is estimated that only 6400 acres (10 square miles) remain to be developed. This is about 3% of the total land area of the County.

The detailed baseline 2015 land use inventory can be found in Appendix A to this report. Figures 3 and 4, below, map out residential and non-residential land use densities in the County study area.

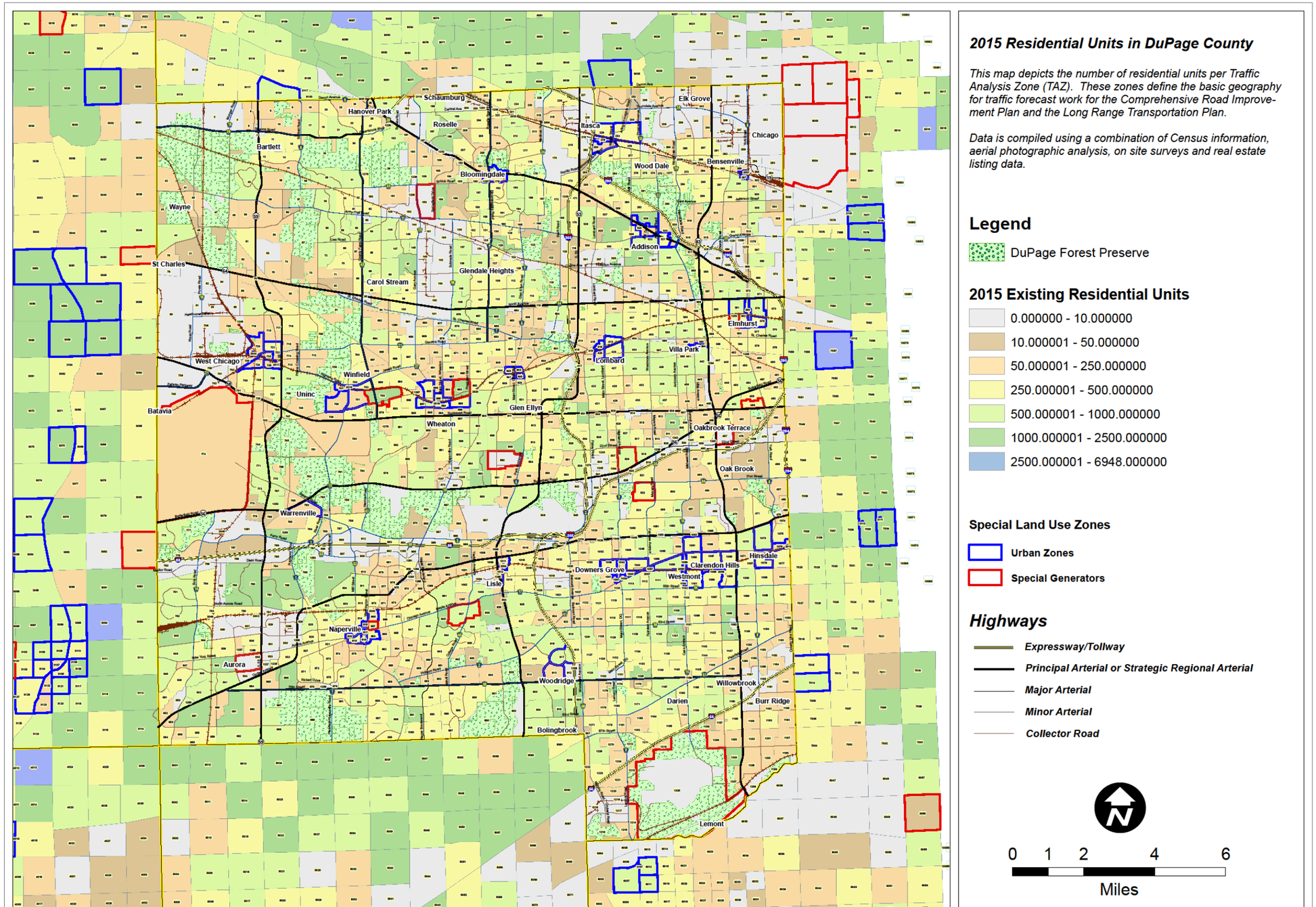


FIGURE 3 - EXISTING (2015) RESIDENTIAL LAND USE IN DUPAGE AND SURROUNDING COUNTIES

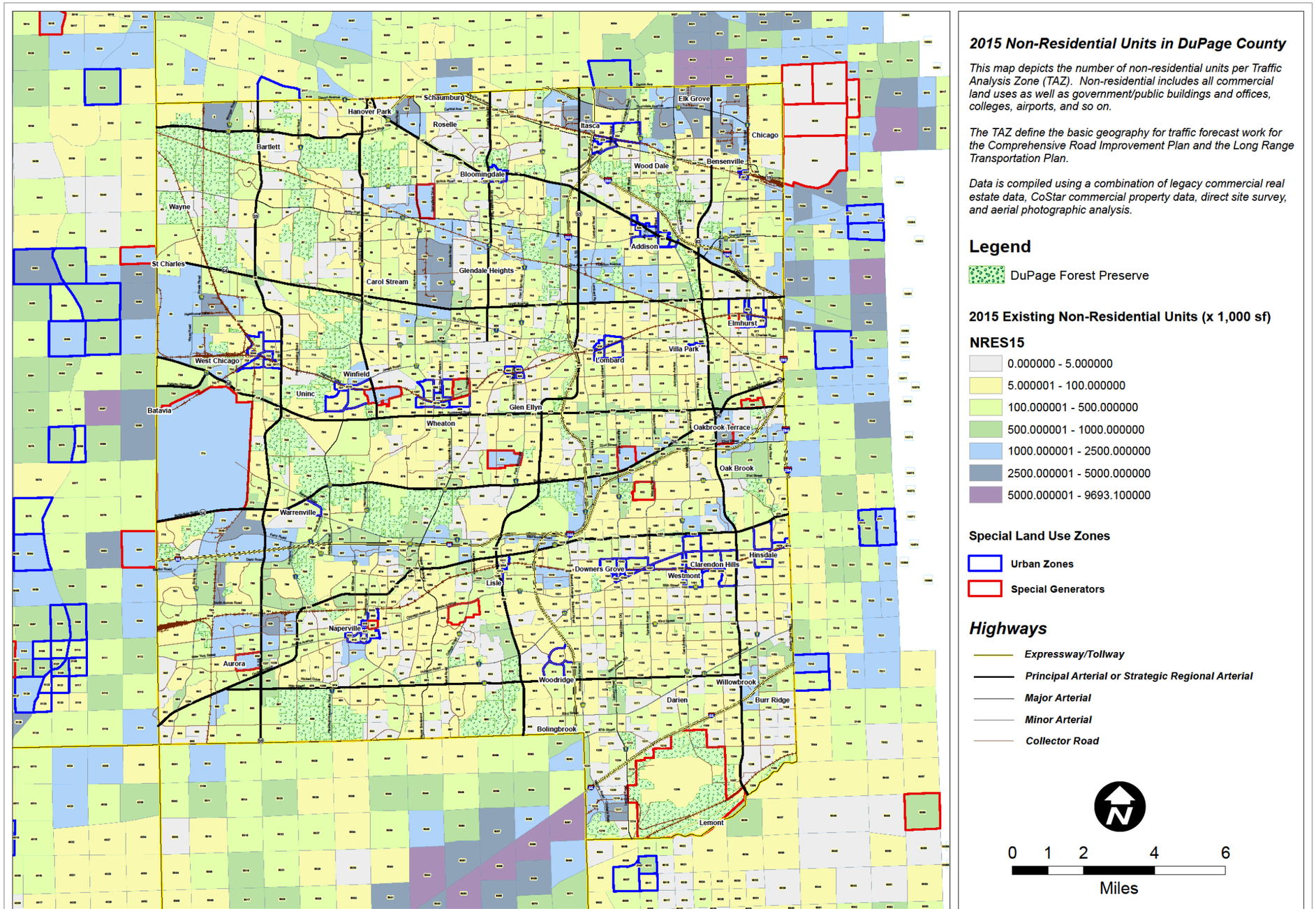


FIGURE 4 - EXISTING (2015) NON-RESIDENTIAL LAND USE IN DUPAGE AND SURROUNDING COUNTIES

IV FUTURE LAND USE

Future land use projections require a series of assumptions that are often more difficult to support the farther the projection from the base year. Some of the key assumptions behind the DuPage County 2025 and 2040 projections are:

GENERAL ASSUMPTIONS

1) General Assumptions

a) National/regional economy

i) Continued general expansion of the economy

ii) No assumption of recessions or significant changes in technology, finance, or energy have been assumed which will influence major land use pattern changes.

b) Local economy

i) Changes in methods of consumer purchasing and delivery may result in fewer retail commercial new starts

2) Projecting land uses

a) Resources

i) A variety of resources including Municipal and County Comprehensive Plans, Zoning maps and ordinances, and CoStar property management database have been used to classify future uses of vacant and redeveloping property

ii) Assumes community land use plan maps and comprehensive plans will not change substantially between 2015 and 2025

iii) Assumes identified land use focus areas will remain substantially intact moving forward.

iv) Assumes community and planned open space (not privately held) will continue to be protected/preserved from 2015 through 2040.

v) Where future growth or redevelopment is unspecified within a plan, DOT will generally allocate vacant or redeveloping area to one or more of the following major land use categories:

(1) Single Family Residential

(2) Multi-Family Residential

(3) Commercial Retail/Business

(4) Commercial Office

(5) Commercial Industrial

(6) Commercial Warehousing

(7) Commercial Service (Hospital, Hotel, College/School)

vi) Unless the comprehensive plans, community comments or land ownership records indicate specific plans for public buildings (governmental offices, religious, library, police, fire, public works and postal), senior housing or transportation/ communication infrastructure, DOT will allocate to one of the categories above.

3) Zoning and Development Policies

i) Assumes community zoning maps will not change substantially between 2015 and 2025.

ii) Assumes community density policies remain largely unchanged between 2015 and 2025

iii) Assumes community downtown densities will be allowed to increase nominally through redevelopment, mixed development and new parking policies.

iv) Where property was designated Agricultural and no plans for different uses were specified, staff did not assume that property was vacant and would undergo conversion.

4) Environmental Constraints

i) Assumes environmental regulations on building in floodplains and in wetlands will continue and will likely become even more stringent over time.

5) Redevelopment

i) Will largely occur as a replace in kind development

ii) Will likely occur at same density but will likely consolidate through multiple demolitions

iii) Will likely occur with older, less efficient, and functionally obsolete building first

6) Development timing

i) Assume areas with less transportation, utility access will develop 2025-2040 or later
ii) Assume areas with floodplain and/or wetland encroachment will take longer to develop
iii) Assume areas currently under development, or are platted will develop by 2025
iv) Assume infill in economically active areas will proceed by 2025
v) Assume locations listed as "under construction" by CoStar Commercial Property database will be complete by 2020 or 2025.
vi) Assume locations listed as "proposed" by CoStar Commercial Property database will be built from 2025-2040.

It is likely that technology and development economics will change by 2040. Some have hypothesized that autonomous vehicles will change land use in a way that analysts cannot foresee. It is staff's opinion that significant changes due to energy and technology will be slow to take hold throughout the region and that significant population and economic forces will continue to exert pressure on the urban and suburban boundaries.

While this development outlook will have a lesser effect on DuPage County due to the county's lack of significant quantities of developable property, it will have the effect of continuing and enhancing the intercounty traffic demand. This will cause the County, State and Tollway to continually plan, analyze and construct facilities to accommodate emerging development, developing corridors, new travel markets and so on.

LAND USE FORECASTING METHODS

DuPage County's land use forecasting method evolved over the course of three decades of producing the Comprehensive Road Improvement Plan for Impact Fees. In its present form, the County uses a variety of filters and models to assess the likelihood that a parcel will develop within the planning horizon (Figure 3).

The following screens are used to produce the 2025 and 2040 estimates:

- Base Land Use
- Regulatory Filters
- Environmental Filters
- Development Plans

These filters result in a probability of development being assigned to each parcel or subarea. This probability informs a growth model which includes development density (i.e., floor area ratio or units per acre) and development type.

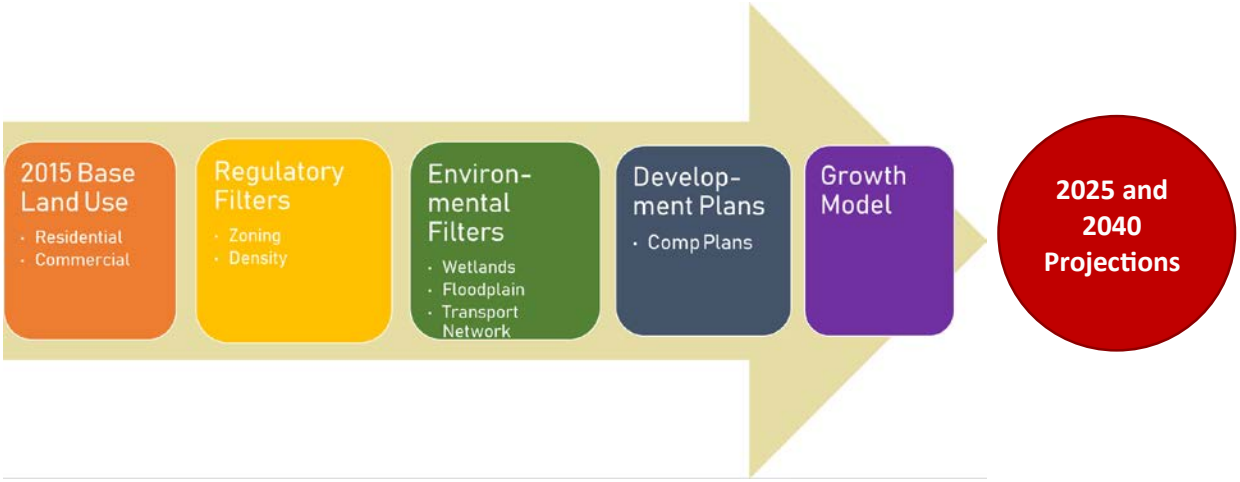


FIGURE 5 - DUPAGE COUNTY LAND USE FORECASTING PROCESS

REGULATORY FILTERS

DuPage County utilizes municipal zoning ordinances and maps to assess the range of development types possible for vacant or redeveloping property. Density standards were also researched using the ordinances but in some cases the County performed assessments of existing facilities to generate prevailing floor area ratios (FAR).

ENVIRONMENTAL FILTERS

The County examined a variety of environmental documents or data sources including wetlands (ESRI National Wetland Inventory), FEMA 100 and 500 year floodplain maps, and maps of local parks and county forest preserves. Transportation and utility network development was also assessed as part of the equation to place a likelihood of development on a parcel or subarea.

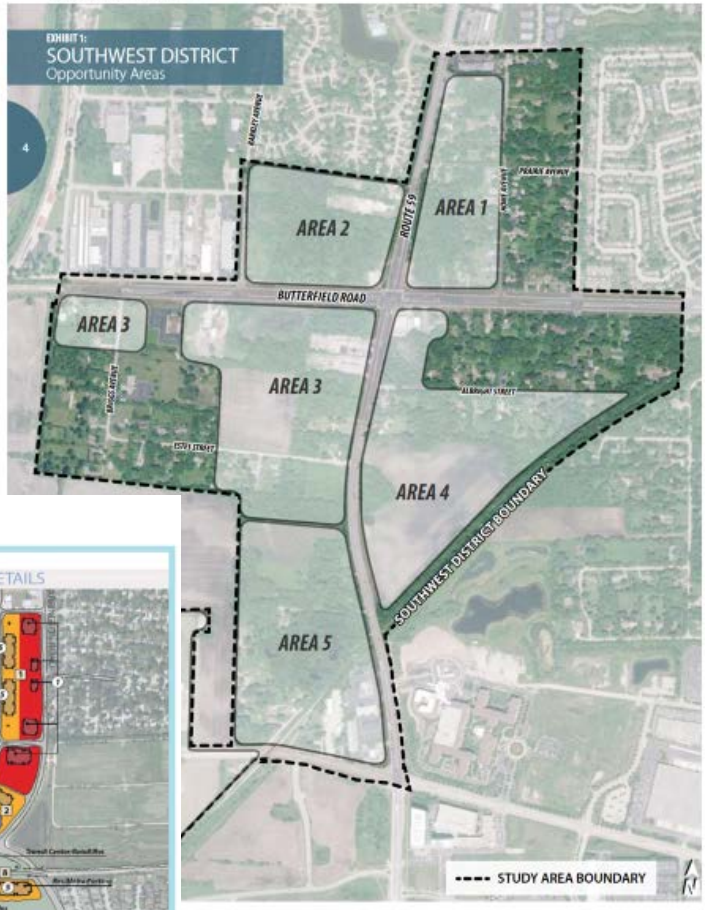
DEVELOPMENT PLANS

Municipal Comprehensive Plans are key elements in the determination of type and density of future development and redevelopment. The County reviewed more than 80 comprehensive plans and, from those plans, developed over 250 Land Use Focus Areas (LUFA) which communities highlighted. These focus areas are locations along corridors or in downtown areas that the community feels will be integral to the success of the community in the future. Examples of such areas are included in the graphics below.

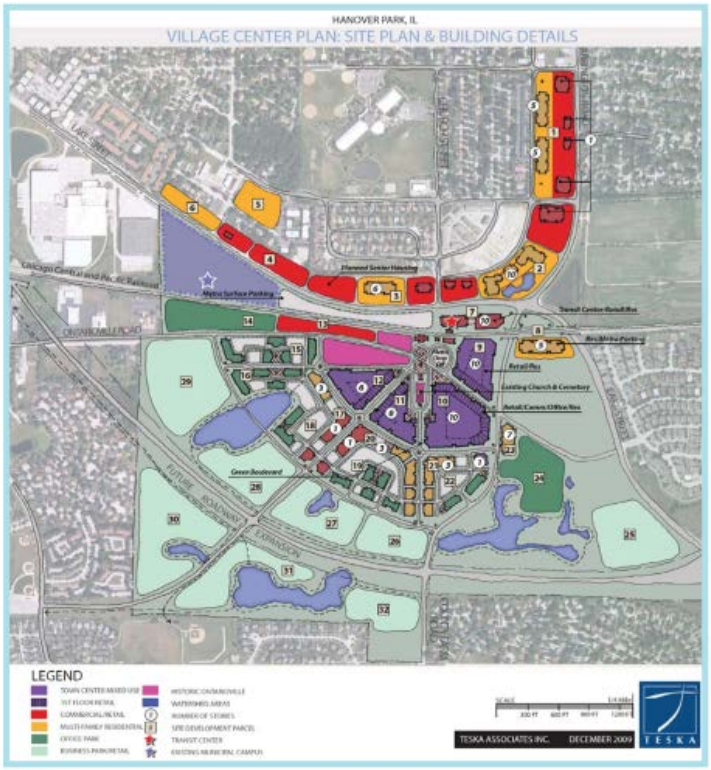
Some of the LUFA are areas where there is a considerable amount of vacant property. The comprehensive plans were used to inform our assumptions of the type and density of future development.

In other cases, the LUFAs were located in existing suburban centers or downtown areas which are largely built out and are planned for redevelopment.

City of Warrenville



VILLAGE CENTER PLAN: SITE PLAN & BUILDING DETAILS



In cases like those shown in the following figure for Addison, LUFA involved a significant amount of demolition and replacement in kind or at higher intensity. County Staff interpreted the data available and accounted for the changes within the appropriate traffic zones in the most logical planning horizon.

Staff also utilized development reports from sources such as the CoStar Commercial Real Estate database which provided leads to developer website and project webpages such as the FitzGerald Lakes of Royce Renaissance project in unincorporated DuPage County.

LAKES OF ROYCE
RENAISSANCE DEVELOPMENT

All of these resources were combined to produce a picture of the probability that vacant and redeveloping property in key locations would undergo a change during the 2025-2040 planning horizon.

In addition to planned development in the LUFA, many areas of the County and surrounding counties include vacant properties for which there are no apparent municipal plans or for which property owners are holding for the right opportunity. DuPage County staff applied the same filters to these parcels whether individual residential parcel or 100 acre parcel assemblages zoned for commercial purposes.

For these, the County used the municipal zoning maps and ordinances to assign a probable category of development and density. Staff then applied a hypothetical growth function as shown in Figure 4 below, indicative of the location and condition of the property with respect to the filters. County staff developed three different curves: An aggressive growth curve, a moderate or steady growth curve and a delayed growth curve.

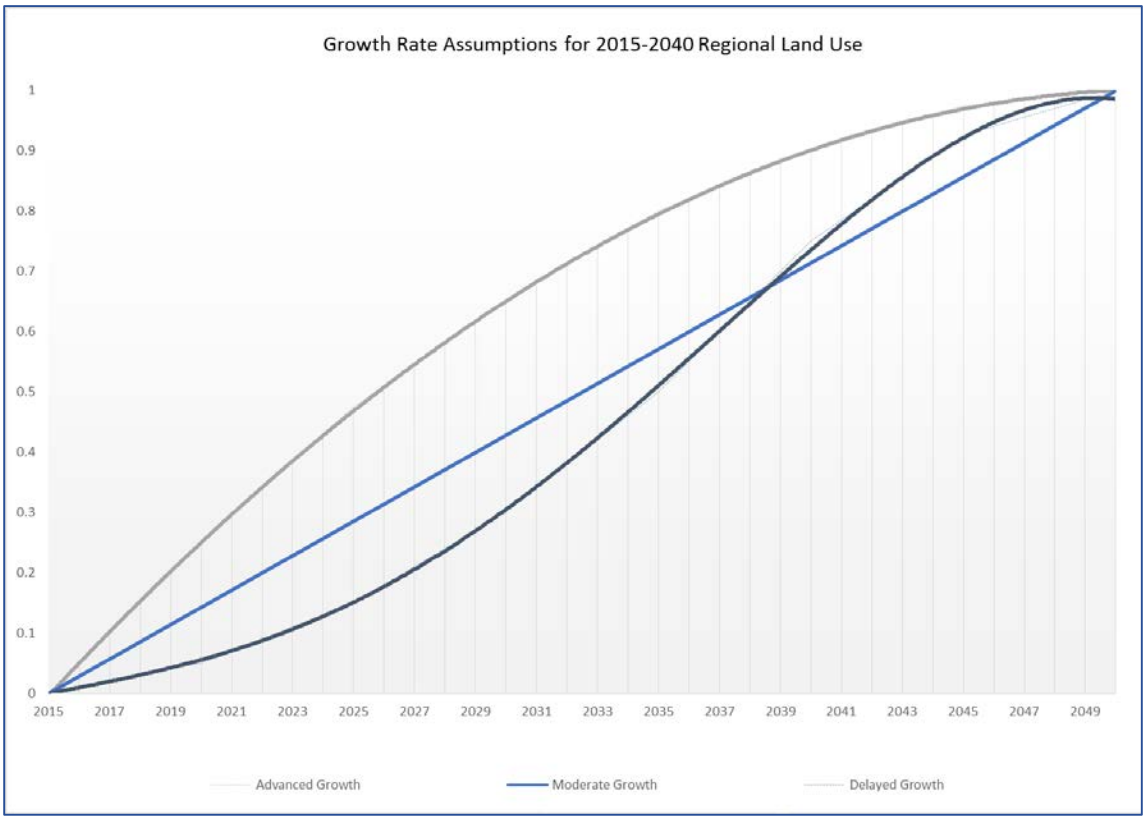


FIGURE 6 - GROWTH RATE CURVES FOR UNPLANNED AREAS

The aggressive growth curve is characteristic of infill development and has been applied to many of the undeveloped small parcels of DuPage and Cook County.

Moderate growth represents a steady growth state with more and somewhat larger vacant parcels in suburbs that are still developing. Areas covered by this curve include portions of northwest Cook, Kane County and Will County.

Delayed growth curve is applied to locations at the corners or edges of the model where there are larger undeveloped or agricultural properties that are zoned for something other than agriculture. This curve assumes slow development through 2025 with more explosive growth from 2035 through 2050.

All curves project development through 2050 rather than 2040 because many of the larger properties may not, in fact, fully develop within this study's planning horizon.

2025 LAND USE PROJECTIONS

DuPage County will utilize the 2025 projections for its Comprehensive Road Improvement Plan Update as mandated by Impact Fee Law. Table 2 below reflects the application of all filtering methods and growth curves to the LUFA and vacant parcels as described herein.

TABLE 2 - 2025 MODEL AREA PROJECTED LAND USE

		COUNTY					
Land Use Category	**DUPAGE 2015**	**DUPAGE 2025**	COOK	KANE	KENDALL	WILL	TOTAL
SFDU (1)	**212,645**	**215,455**	126364	74855	14524	40830	471443
MFDU (1)	**141,043**	**149,279**	96091	37009	4877	12366	299226
GQ (1)	**20,617**	**21,464**	2229	2941	NA	659	26952
RETAIL (2)	**63,598**	**67,052**	42595	15548	3967	11043	140306
RET-DT (2)	**4,725**	**5,212**	2594	4496	199	NA	12502
OFFICE (2)	**71,537**	**77,819**	54539	11555	529	3247	148262
INDUSTRIAL (2)	**51,322**	**54,897**	38945	22607	3170	14050	133544
WAREHOUSING (2)	**145,887**	**151,917**	102023	52130	4913	50455	360637
SCHOOL (2)	**23,102**	**23,105**	12284	7309	2041	4588	49327
TCU (2)	**4,372**	**4,342**	5416	841	36	1356	11994
PUBLIC (2)	**14,058**	**14,615**	5790	2488	423	1130	24431
HCC (2)	**22,124**	**23,729**	19604	2668	207	1177	47141

(1) Residential dwelling units, (2) – Commercial units (x1,000sf)

Residential growth is anticipated to continue with more on emphasis on multiple family units than single family (at about a 3 to 1 ratio) through 2025. It is expected that multi-family housing will continue to develop at higher densities around train stations and suburban downtowns, and that single family units will develop as infill rather than extensive new subdivisions.

Retail growth is expected to flatten somewhat with a model area growth of a little more than 600,000 square feet per year. Growth in other commercial sectors also is relatively flat except for the warehousing sector where almost 6 million square feet of new warehouse is projected by 2025.

It is extremely difficult to predict school, group quarter and public facility uses. Throughout the 2025 and 2040 projections, the County has assumed that these facilities will accompany residential development at a density commensurate with existing suburban rates.

Figures 7 and 8 below map out the location of where residential and non-residential development is projected to occur between 2015 and 2025. See Appendix B for detailed 2025 projections.

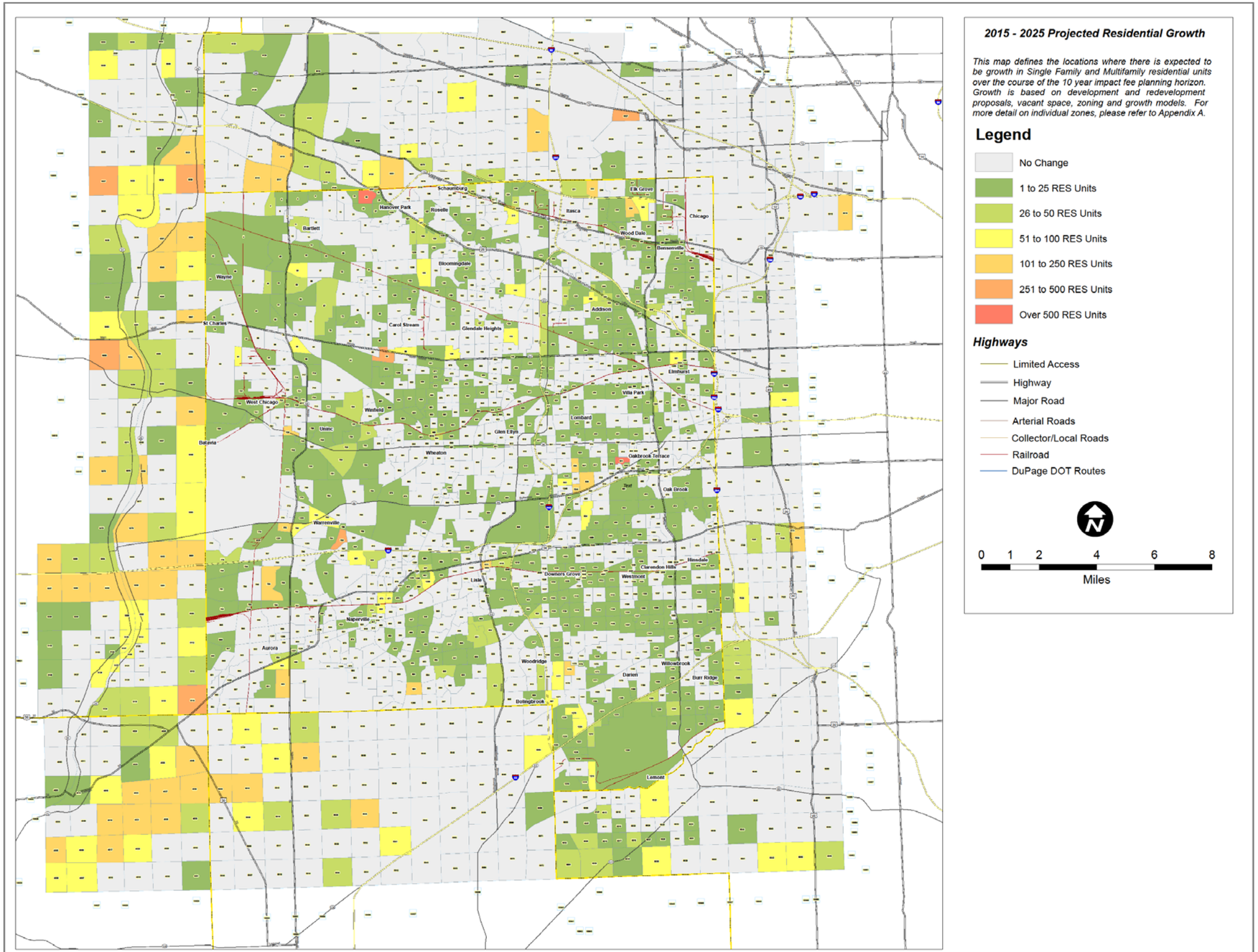
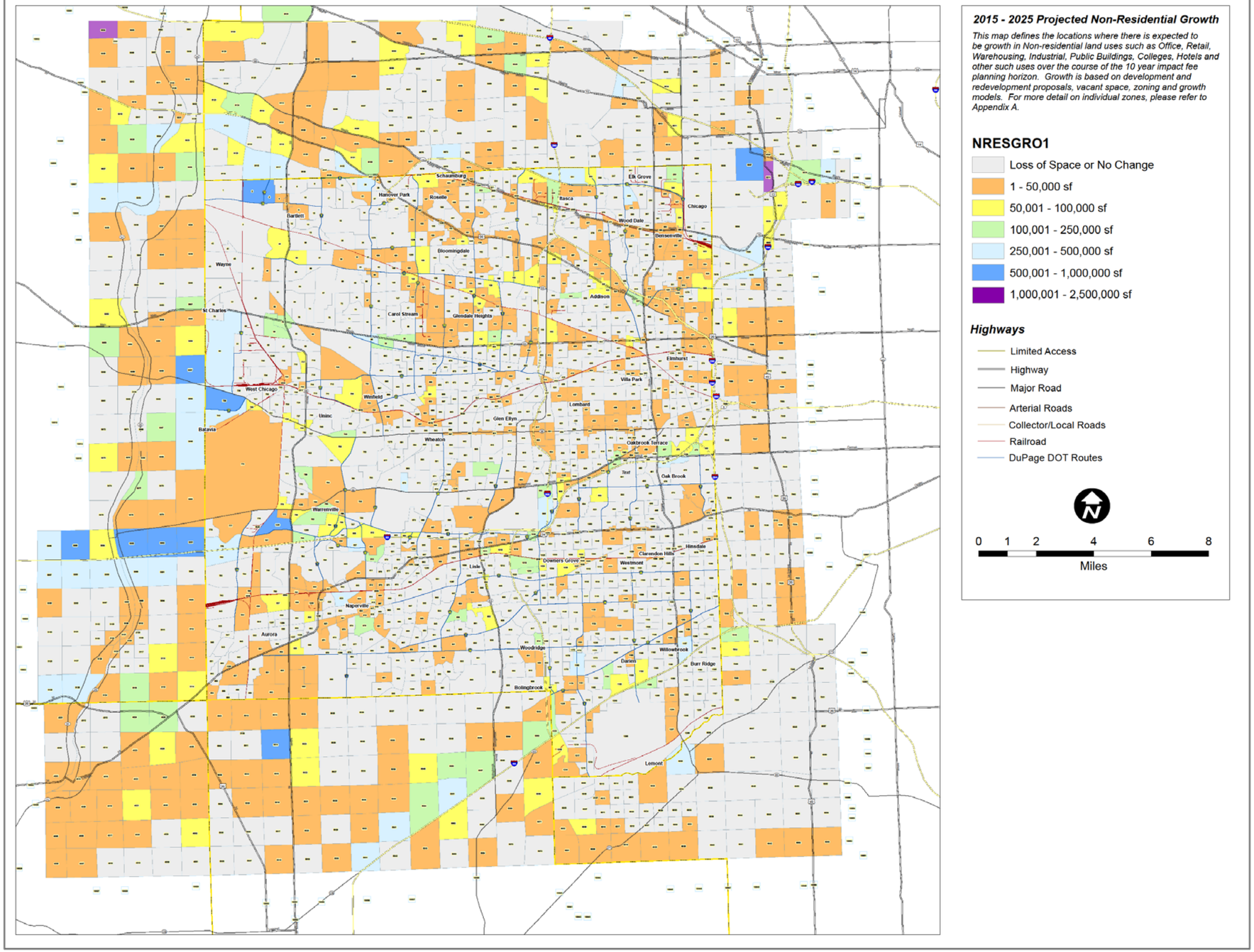


FIGURE 7 - PROJECTED RESIDENTIAL GROWTH BY 2025 IN DUPAGE AND SURROUNDING COUNTIES



2015 - 2025 Projected Non-Residential Growth

This map defines the locations where there is expected to be growth in Non-residential land uses such as Office, Retail, Warehousing, Industrial, Public Buildings, Colleges, Hotels and other such uses over the course of the 10 year impact fee planning horizon. Growth is based on development and redevelopment proposals, vacant space, zoning and growth models. For more detail on individual zones, please refer to Appendix A.

NRESGRO1

- Loss of Space or No Change
- 1 - 50,000 sf
- 50,001 - 100,000 sf
- 100,001 - 250,000 sf
- 250,001 - 500,000 sf
- 500,001 - 1,000,000 sf
- 1,000,001 - 2,500,000 sf

Highways

- Limited Access
- Highway
- Major Road
- Arterial Roads
- Collector/Local Roads
- Railroad
- DuPage DOT Routes

0 1 2 4 6 8

Miles

FIGURE 8 - PROJECTED NON-RESIDENTIAL GROWTH BY 2025 IN DUPAGE AND SURROUNDING COUNTIES

2040 LAND USE PROJECTIONS

DuPage County will utilize the 2040 projections for its Long Range Transportation Plan travel demand assessment. The data will be used to test a variety of potential medium and major capital programs within the model area. Table 3 below reflects the application of all filtering methods and growth curves to the LUFA and vacant parcels as described herein.

TABLE 3 - 2040 MODEL AREA PROJECTED LAND USE

	COUNTY					
Land Use Category	**DUPAGE**	COOK	KANE	KENDALL	WILL	TOTAL
SFDU (1)	**217696**	127615	77030	19779	43118	484656
MFDU (1)	**156100**	98489	39464	6659	13186	313673
GQ (1)	**21913**	2352	3105	NA	813	26952
RETAIL (2)	**70080**	43801	17120	5381	11560	148179
RET-DT (2)	**5649**	2829	4692	251	NA	13421
OFFICE (2)	**83791**	55963	13465	808	3742	158510
INDUSTRIAL (2)	**57917**	40563	25161	3373	16122	143075
WAREHOUSING (2)	**156595**	105972	63651	5552	54233	385201
SCHOOL (2)	**23107**	12484	7707	2556	4818	50671
TCU (2)	**4322**	7114	841	36	1356	13669
PUBLIC (2)	**15100**	6020	2901	775	1265	26045
HCC (2)	**24989**	19975	3149	207	1216	49291

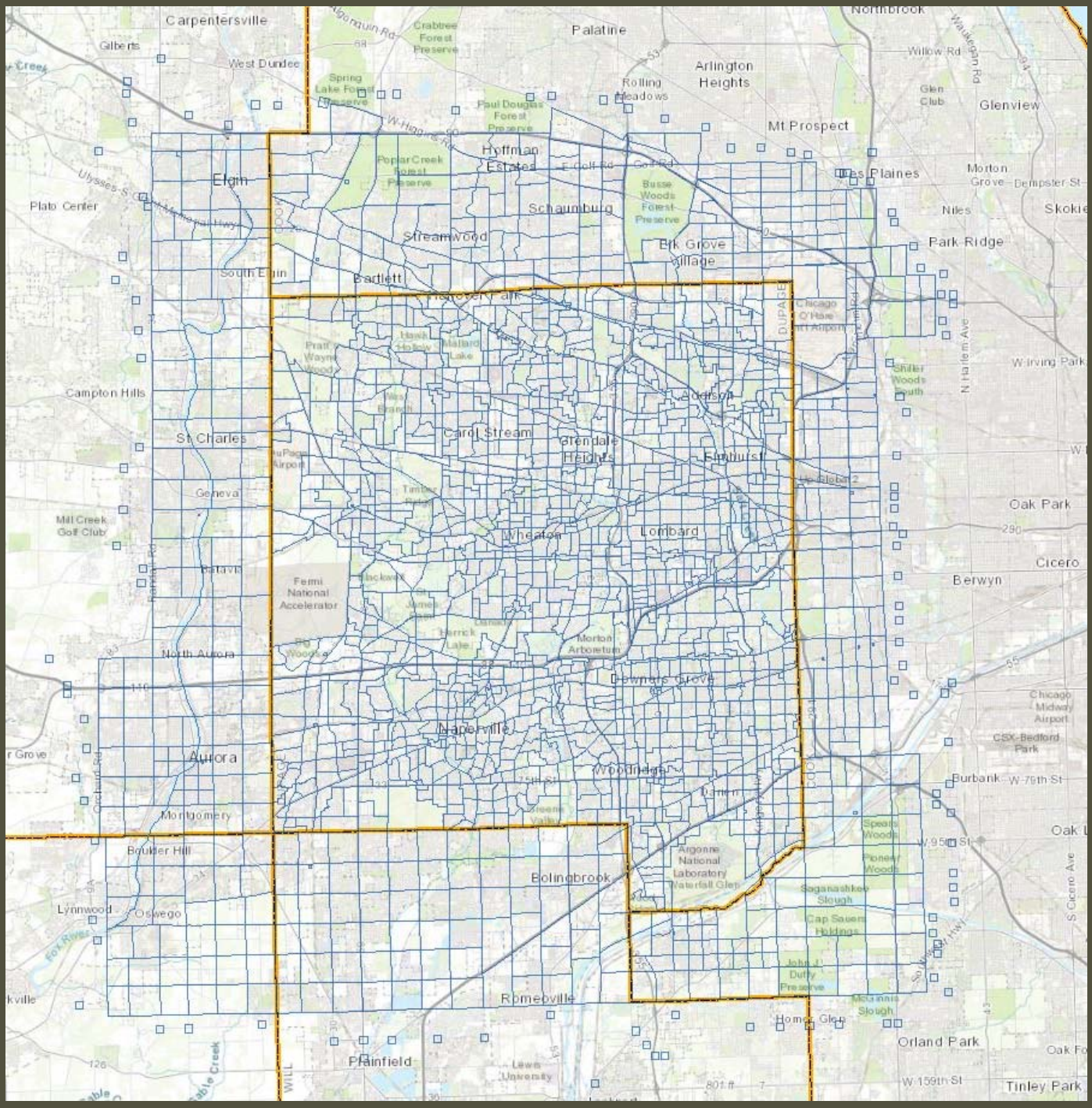
2040 projections reflect a slowing growth rate in DuPage County and Cook County with some isolated locations (e.g., Lakes of Royce, Wood Dale downtown, DuPage Technology Park and Hanover Park downtown) where major development will continue through 2040 or 2050.

Portions of Kane, Will and Kendall Counties, where there are significant tracts of vacant parcels will see greater percentage growth in the second period between 2025 and 2040 as Cook and DuPage afford developers fewer development opportunities.

All 2040 TAZ level projections are included in Appendix C.

APPENDIX A-2

TRAFFIC ANALYSIS ZONE MAP



DuPage County Traffic Model Area with Land Use Zones

DuPage County Division of Transportation, 2015-2040

APPENDIX B-1

COUNTY HIGHWAY SYSTEM LIST

County Highway	Street Name*	From	To	FromStn	ToStn	Length (mi)	Design Xsec	Lane-Miles	Speed	Func Class	Right of Way	Average ADT on Segment	Latest Truck Percentages	Signals	Access	Access Density	Structures	Sidewalk	Drainage
01	Plainfield-Naperville Road	75TH ST	BAILEY RD	100000	101555	0.295	4-5 lanes	1.373	45	Minor Arterial	73-100	26500	3.1%		5	16.98		Complete 1 side, Part	Closed
01	Plainfield-Naperville Road	BAILEY RD	87TH ST	101555	107955	1.212	4-5 lanes	5.270	45	Minor Arterial	66-100	25000	3.1%	1	3	2.48	2	Partial 1 side	Closed
01	Raymond Drive	FERRY RD	DIEHL RD	80000	81930	0.366	4-5 lanes	1.682	45	Minor Arterial	140-210	18000	3.4%	2	1	2.74	1	Complete 2 side	Closed
01	Raymond Drive	DIEHL RD	MCDOWELL RD	81930	83850	0.364	4-5 lanes	1.705	45	Minor Arterial	66 - 86	30500	3.7%	1	2	5.50	1	Partial 1 side	Closed
01	Raymond Drive	MCDOWELL RD	BROOKDALE DR	83850	88375	0.857	4-5 lanes	3.393	40	Minor Arterial	66-100	31500	4.3%	1	5	5.83	1	Complete 1 side	Closed
01	Raymond Drive	BROOKDALE DR	US 34 (OGDEN AVE)	88375	90082	0.323	4-5 lanes	1.573	40	Minor Arterial	100	26500	4.6%	1	4	12.37	1	Complete 2 side	Closed
01	River Road	WARRENVILLE RD	FERRY RD	75744	80000	0.806	2-3 lanes	1.554	40	Collector	66	4000	NA	1	24	29.77		Partial 2 side	Mixed
02	Belmont Road	US 34 (OGDEN AVE)	PRAIRIE AVE	81220	83915	0.510	4-5 lanes	2.050	35	Minor Arterial	73-90	22500	4.0%	1	40	78.37		Complete 1 side	Closed
02	Belmont Road	PRAIRIE AVE	WARREN AVE	83915	85270	0.257	4-5 lanes	1.323	35	Minor Arterial	110-115	24000	4.0%	1	10	38.97		Complete 2 side	Closed
02	Belmont Road	WARREN AVE	CURTISS ST	85270	86370	0.208	4-5 lanes	0.920	35	Minor Arterial	100-120	24500	4.0%	1	5	24.00	1	Complete 2 side	Closed
02	Belmont Road	CURTISS ST	MAPLE AVE	86370	89265	0.548	4-5 lanes	2.128	35	Minor Arterial	73-94	24000	4.1%	1	26	47.42		Complete 2 side	Closed
02	Belmont Road	MAPLE AVE	59TH ST	89265	91145	0.356	4-5 lanes	1.399	40	Minor Arterial	63-90	24000	4.5%	1	24	67.40		Complete 2 side	Closed
02	Belmont Road	59TH ST	63RD ST	91145	93788	0.501	4-5 lanes	1.901	40	Minor Arterial	63-90	20500	5.0%	1	51	101.88		Complete 2 side	Closed
02	Finley Road	IL 56 (BUTTERFIELD RD)	OPUS PL	70000	72020	0.383	4-5 lanes	1.946	45	Minor Arterial	100	22500	6.7%	1	8	20.91		Complete 2 side	Closed
02	Finley Road	OPUS PL	LACEY RD	72020	75600	0.678	4-5 lanes	3.281	45	Minor Arterial	-115/Variable	19000	7.1%	1	7	10.32	3	Complete 1 side, Part	Closed
02	Finley Road	LACEY RD	WARRENVILLE RD	75600	81050	1.032	4-5 lanes	5.025	45	Minor Arterial	100-120	21500	4.8%		11	10.66	2	Complete 1 side	Closed
02	Finley Road	WARRENVILLE RD	US 34 (OGDEN AVE)	81050	81220	0.032	4-5 lanes	0.163	45	Minor Arterial	200	20500	6.0%	1	0	0.00		Complete 1 side	Closed
02	Hobson Road	WASHINGTON ST	OLESEN DR	50000	51765	0.334	3-4 lanes	1.157	40	Minor Arterial	100	15000	9.2%	2	5	14.96	1	Complete 2 side	Closed
02	Hobson Road	OLESON DR	NAPER BLVD	51765	54485	0.515	3-5 lanes	2.133	40	Minor Arterial	100	15000	4.2%	1	9	17.47		Complete 2 side	Closed
02	Hobson Road	NAPER BLVD	COLLEGE RD	54485	57730	0.615	3-5 lanes	2.470	40	Minor Arterial	84-100	16000	5.0%	1	8	13.02		Complete 2 side	Closed
02	Hobson Road	COLLEGE RD	GREENE RD	57730	65650	1.500	3-5 lanes	5.175	45	Minor Arterial	86-100	17000	5.3%	1	21	14.00		Complete 2 side	Closed
02	Hobson Road	GREENE RD	DOUBLE EAGLE DR	65650	67145	0.283	3-4 lanes	0.876	45	Minor Arterial	100	21000	8.5%	1	0	0.00	1	Complete 2 side	Closed
02	Hobson Road	DOUBLE EAGLE DR	IL 53	67145	68495	0.256	4-6 lanes	1.283	45	Minor Arterial	100	20500	NA	1	4	15.64		Complete 1 side, Part	Closed
02	Hobson Road	IL 53	WOODRIDGE DR	68495	71385	0.547	4-6 lanes	2.641	45	Minor Arterial	100-106	24000	3.7%	1	14	25.58		Complete 1 side, Part	Closed
02	Hobson Road	WOODRIDGE DR	63RD ST	71385	74605	0.610	4-5 lanes	2.658	45	Minor Arterial	100-127	29000	4.3%		24	39.35		Partial 2 side	Closed
03	Warrenville Road (78)	MILL ST	HERRICK RD	44500	46500	0.379	4-7 lanes	2.037	40	Minor Arterial	100 - 130	21000	3.2%	1	2	5.28	0	None	Mixed
03	Warrenville Road (78)	HERRICK RD	WASHINGTON ST	46500	49400	0.549	4-5 lanes	2.315	45	Minor Arterial	80 - 135	21000	6.0%	1	0	0.00	1*	None	Open
03	Warrenville Road (78)	WASHINGTON ST	INDIAN HILLS WEST	49400	52965	0.675	5-6 lanes	3.536	45	Minor Arterial	90 - 100	23500	5.6%	1	4	5.92	2*	Partial 1 side	Open
03	Warrenville Road (78)	INDIAN HILLS WEST	FREEDOM DRIVE	52965	54625	0.267	4-7 lanes	1.515	45	Minor Arterial	100-130	24500	6.9%	1	1	3.75		None	Mixed
03	Warrenville Road (78)	FREEDOM DRIVE	NAPERVILLE RD	54625	55870	0.284	6-7 lanes	1.985	45	Minor Arterial	155-164	31000	3.5%	1	0	0.00		Complete 1 side	Closed
03	Warrenville Road (78)	NAPERVILLE RD	CORPORATE WEST DR	55870	57590	0.326	5-7 lanes	1.979	45	Minor Arterial	100-136	24000	3.2%	1	2	6.14	3	Partial 1 side	Mixed
03	Warrenville Road (78)	CORPORATE WEST DR	CABOT DR	57590	60930	0.633	4-5 lanes	2.867	45	Minor Arterial	100-110	21500	4.6%	1	1	1.58		None	Mixed
03	Warrenville Road (78)	CABOT DR	LEASK LN	60930	62320	0.263	4-6 lanes	1.265	45	Minor Arterial	100	23000	6.4%	1	0	0.00		Complete 1 side, Part	Mixed
03	Warrenville Road (78)	LEASK LN	YACKLEY AVE	62320	62925	0.115	5-6 lanes	0.625	45	Minor Arterial	90-100	25000	6.0%	1	1	8.73		Complete 1 side	Mixed
03	Warrenville Road (78)	YACKLEY AVE	IL 53	62925	67165	0.803	4-7 lanes	3.844	45	Minor Arterial	100	23000	7.3%	1	13	16.19	2	Partial 2 side	Mixed
03	Warrenville Road (78)	IL 53	MAIN ST. LISLE	67165	68025	0.163	5-7 lanes	1.119	45	Minor Arterial	78-300	12000	3.4%	1	1	6.14		Complete 1 side	Closed
03	Warrenville Road (78)	MAIN ST. LISLE	ARBORETUM LAKES	68025	68735	0.134	5 lanes	0.701	45	Minor Arterial	100	11500	3.0%	1	1	7.44	1	None	Closed
03	Warrenville Road (78)	ARBORETUM LAKES	AUTHORITY DR	68735	74335	1.061	4-5 lanes	5.226	45/40	Minor Arterial	100-165	11500	3.3%	0	9	8.49		Partial 2 side	Closed
03	Warrenville Road (78)	AUTHORITY DR	CROSS ST	74335	75500	0.221	5 lanes	1.107	40	Minor Arterial	100-165	11000	4.3%	1	3	13.60		Complete 2 side	Closed
03	Warrenville Road (78)	CROSS ST	FINLEY RD	75500	77450	0.369	3 lanes	1.155	40	Minor Arterial	100	9500	5.9%		16	43.32		Partial 1 side	Open
03	Ferry Road	EOLA RD	IL 59	20000	29670	1.831	4-6 lanes	8.878	45	Minor Arterial	120 - 240	11500	7.0%	2	11	6.01	2	Complete 1 side, Part	Closed
03	Ferry Road	IL 59	RAYMOND DR	29670	33945	0.810	5-6 lanes	4.396	45	Minor Arterial	100 - 142	15000	4.8%	1	13	16.06		Complete 2 side	Closed
03	Ferry Road	RAYMOND DR	RIVER RD	33945	36580	0.500	4-5 lanes	2.449	40	Minor Arterial	78 - 134	20000	5.0%	1	16	32.02	1	Complete 2 side	Closed
03	Ferry Road	RIVER RD	WINFIELD RD	36580	39660	0.693	4-7 lanes	3.850	40	Minor Arterial	130	20000	3.0%	2	4	5.77	1	Complete 2 side	Closed
03	Ferry Road	WINFIELD RD	MILL ST	39660	42380	0.516	5-7 lanes	3.491	40	Minor Arterial	120 - 160	16500	4.1%	2	0	0.00	0	Complete 2 side	Closed
04	Bloomingdale Road (11)	FOSTER AVE	US 20 (LAKE ST)	18515	22365	0.729	4-6 lanes	2.916	35	Minor Arterial	66-100	22500	6.2%	1	16	21.94	1	Complete 2 side	Closed
04	Bloomingdale Road (11)	US 20 (LAKE ST)	SCHICK RD	22365	23645	0.242	4-6 lanes	1.119	35	Minor Arterial	66-104	30000	4.6%	1	8	33.00		Complete 2 side	Closed
04	Bloomingdale Road (11)	SCHICK RD	FAIRFIELD WAY	23645	25710	0.391	5 lanes	1.947	40	Minor Arterial	90-100	28000	4.0%	1	13	33.24		Complete 2 side	Closed
04	Bloomingdale Road (11)	FAIRFIELD WAY	EDGEWATER DR	25710	26670	0.182	5 lanes	0.907	40	Minor Arterial	90-100	28000	3.4%	1	1	5.50		Complete 2 side	Closed
04	Bloomingdale Road (11)	EDGEWATER DR	WHITMAN BLVD	26670	29365	0.510	5 lanes	2.421	40	Minor Arterial	100-110	28000	4.5%	1	3	5.88		Complete 2 side	Closed
04	Bloomingdale Road (11)	WHITMAN BLVD	ARMY TRAIL RD	29365	29870	0.096	6 lanes	0.580	40	Minor Arterial	100-128	28000	4.3%	1	2	20.91	1	Complete 2 side	Closed
04	Bloomingdale Road (11)	ARMY TRAIL RD	GLADSTONE	29870	31045	0.223	5 lanes	1.182	40	Minor Arterial	100	28000	5.3%	0	7	31.46		Complete 2 side	Closed
04	Bloomingdale Road (11)	GLADSTONE	N BRANDON	31045	32110	0.202	5 lanes	1.035	40	Minor Arterial	100	29000	5.3%	1	3	14.87		Complete 2 side	Closed
04	Bloomingdale Road (11)	N BRANDON	GLEN POINTE	32110	33865	0.332	4-6 lanes	1.688	40	Minor Arterial	100-212	28000	6.3%	1	1	3.01	1	Complete 2 side	Closed
04	Bloomingdale Road (11)	GLEN POINTE	STEVENSON	33865	34545	0.129	4-5 lanes	0.673	40	Minor Arterial	100	26000	6.3%	1	1	7.76		Complete 2 side	Closed
04	Bloomingdale Road (11)	STEVENSON	FULLERTON AVE	34545	37070	0.478	4-5 lanes	2.013	40	Minor Arterial	100	25000	7.6%	1	14	29.28		Complete 2 side	Closed
04	Bloomingdale Road (11)	FULLERTON AVE	QUEEN BEE	37070	38125	0.200	4-5 lanes	0.843	40	Minor Arterial	83-100	25000	7.6%	1	8	40.04		Complete 2 side	Closed
04	Bloomingdale Road (11)	QUEEN BEE	ARMITAGE AVE	38125	39735	0.305	4-5 lanes	1.287	40	Minor Arterial	90	24000	7.6%	1	26	85.27		Complete 2 side	Closed
04	Bloomingdale Road (11)	ARMITAGE AVE	SIDNEY	39735	41065	0.252	4-5 lanes	1.066	40	Minor Arterial	90-100	23000	6.4%	1	19	75.43		Complete 1 side, Part	Closed
04	Bloomingdale Road (11)	SIDNEY	IL 64 (NORTH AVE)	41065	42435	0.259	4-6 lanes	1.221	40	Minor Arterial	73-100	21500	6.4%	1	15	57.81		Complete 1 side, Part	Closed
04	Bloomingdale Road (11)	IL 64 (NORTH AVE)	SHOREWOOD	42435	43685	0.237	5-6 lanes	1.273	40	Minor Arterial	100-150	20000	5.5%	1	6	25.34		Complete 2 side	Closed
04	Bloomingdale Road (11)	SHOREWOOD	ST. CHARLES RD	43685	45440	0.332	4-5 lanes	1.425	40	Minor Arterial	83-100	19000	5.9%	1	9	27.08	1	Complete 1 side, Part	Closed
04	Bloomingdale Road (11)	ST. CHARLES RD	GENEVA RD	45440	47525	0.395	3-5 lanes	1.310	40	Minor Arterial	90-100	12000	3.2%	1	18	45.58		Partial 2 side	Closed
04	Roselle Road (65)	DEVON AVE	IL 19 (IRVING PARK RD)	10165	12285	0.402	4-5 lanes	1.710	30	Minor Arterial	73-80	21000	7.0%	1	14	34.87		Complete 2 side	Closed
04	Roselle Road (65)	IL 19 (IRVING PARK RD)	CENTRAL AVE	12285	12795	0.097	5 lanes	0.421	30	Minor Arterial	73-87	23000	10.4%	1	2	20.71	1	Complete 2 side	Closed

County Highway	Street Name*	From	To	FromStn	ToStn	Length (mi)	Design Xsec	Lane-Miles	Speed	Func Class	Right of Way	Average ADT on Segment	Latest Truck Percentages	Signals	Access	Access Density	Structures	Sidewalk	Drainage
04	Roselle Road (65)	CENTRAL AVE	MAPLE AVE	12795	13745	0.180	4-5 lanes	0.723	30	Minor Arterial	66-80	21500	5.6%	1	8	44.46	0	Complete 2 side	Closed
04	Roselle Road (65)	MAPLE AVE	BRYN MAWR AVE	13745	15500	0.332	4 lanes	1.321	30	Minor Arterial	66-100	21500	5.9%	1	19	57.16		Complete 2 side	Closed
04	Roselle Road (65)	BRYN MAWR AVE	WALNUT ST	15500	16500	0.189	4-5 lanes	0.802	35	Minor Arterial	83-100	21500	8.0%	1	11	58.08		Complete 2 side	Closed
04	Roselle Road (65)	WALNUT ST	FOSTER AVE	16500	18320	0.345	4-5 lanes	1.307	35	Minor Arterial	66-100	21500	6.2%	0	13	37.71		Complete 2 side	Closed
04	Roselle Road (65)	FOSTER AVE	END OF ROSELLE	18320	18515	0.037	4 lanes	0.168	35	Minor Arterial		21500	4.0%	0	3	81.23			
05	Glen Ellyn Road (30)	ARMY TRAIL RD	REGENCY DR	30000	31745	0.330	4-6 lanes	1.527	40	Minor Arterial	100-124	21500	5.7%	0	8	24.21		Complete 1 side, Part	Closed
05	Glen Ellyn Road (30)	REGENCY DR	GREGORY	31745	33090	0.255	5 lanes	1.266	40	Minor Arterial	100	22500	5.7%	1	2	7.85		Complete 1 side, Part	Closed
05	Glen Ellyn Road (30)	GREGORY	WINDY POINT DR	33090	34860	0.335	4-5 lanes	1.468	40	Minor Arterial	100	21500	5.8%	1	2	5.97	1	Complete 1 side	Closed
05	Glen Ellyn Road (30)	WINDY POINT DR	FULLERTON AVE	34860	36230	0.259	4-5 lanes	1.200	40	Minor Arterial	100	21500	5.2%	1	18	69.37		Complete 2 side	Closed
05	Glen Ellyn Road (30)	FULLERTON AVE	ARMITAGE AVE	36230	38845	0.495	4-5 lanes	2.107	40	Minor Arterial	100	20000	5.5%	1	44	88.84		Complete 2 side	Closed
05	Glen Ellyn Road (30)	ARMITAGE AVE	IL 64 (NORTH AVE)	38845	41617	0.525	4-7 lanes	2.503	40	Minor Arterial	100-160	20000	6.4%	1	32	60.95		Complete 2 side	Closed
05	Main Street GE (46)	IL 64 (NORTH AVE)	POSS ST	41617	44625	0.570	4-7 lanes	2.518	40	Minor Arterial	83-125	14000	6.2%		43	75.48		Complete 1 side, Part	Closed
05	Main Street GE (46)	POSS ST	GENEVA RD/ST. CHARLES RD	44625	46547	0.364	4-5 lanes	1.443	40	Minor Arterial	83-100	14000	7.1%	1	31	85.16		Complete 1 side, Part	Closed
05	Park Boulevard (57)	BUENA VISTA DR	FAWELL BLVD	70000	71315	0.249	4-5 lanes	0.992	35	Minor Arterial	100	18000	2.1%	1	15	60.23		Complete 2 side	Closed
05	Park Boulevard (57)	FAWELL BLVD	COLLEGE ST	71315	73020	0.323	4-5 lanes	1.377	40	Minor Arterial	100	16500	2.1%	1	5	15.48		Complete 2 side	Closed
05	Park Boulevard (57)	COLLEGE ST	RAIDER LN	73020	75215	0.416	4-5 lanes	1.699	40	Minor Arterial	100	20000	2.1%	1	15	36.08		Complete 2 side	Closed
05	Park Boulevard (57)	RAIDER LN	IL 56 (BUTTERFIELD RD)	75215	76185	0.184	4-5 lanes	0.813	40	Minor Arterial	100-110	20000	2.1%	1	5	27.22		Complete 2 side	Closed
05	Park Boulevard (57)	IL 56 (BUTTERFIELD RD)	IL 53	76185	80969	0.906	2-4 lanes	2.021	35	Minor Arterial	66-100	14000	3.8%	1	58	64.01		Partial 1 side	Open
06	Bartlett Road (9)	DEVON AVE	STEARNS RD	10000	15210	0.987	3-5 lanes	3.254	30/35	Minor Arterial	66-100	12000	6.3%	2	66	66.89		Complete 2 side	Closed
06	Bartlett Road (9)	STEARNS RD	STRUCKMAN BLVD	15215	19265	0.768	2-5 lanes	2.646	40	Minor Arterial	100	13500	3.5%	1	10	13.02		Complete 2 side	Closed
06	Bartlett Road (9)	STRUCKMAN BLVD	SCHICK RD	19265	23370	0.777	2-4 lanes	1.972	40	Minor Arterial	80-100	10000	3.3%	1	2	2.57		Complete 1 side	Mixed
06	Devon Avenue (21)	BARTLETT RD	PROSPECT AVE	40000	42757	0.522	4-5 lanes	2.049	35	Minor Arterial	50	11000	5.2%	1	9	17.24		Complete 1 side	Closed
06	Devon Avenue (21)	PROSPECT AVE	NEWPORT BLVD	42757	44420	0.315	4-5 lanes	1.280	35	Minor Arterial	50	11000	NA	0	1	3.17		Complete 1 side	Closed
06	Devon Avenue (21)	NEWPORT BLVD	BARTLETT CORP LIMIT	44420	46773	0.446	2-3 lanes	1.206	35	Minor Arterial	66-73	8000	NA	0	13	29.17		None	Closed
07	St. Charles Road (68)	IL 64 (NORTH AVE)	COUNTY FARM RD	40000	43993	0.756	2-3 lanes	1.851	45	Minor Arterial	66-73	5000	17.3%	1	7	9.26		None	Open
07	St. Charles Road (68)	COUNTY FARM RD	PLEASANT HILL RD	43993	48060	0.770	2-4 lanes	1.550	40	Minor Arterial	66-100	7000	8.3%	0	32	41.54	1	None	Mixed
07	St. Charles Road (68)	PLEASANT HILL RD	GARY AVE	48060	52368.4	0.816	2-3 lanes	1.603	40	Minor Arterial	66-100	6000	11.6%	1	13	15.93		None	Open
07	St. Charles Road (68)	GARY AVE	SCHMALE RD	52368.4	57570	0.985	2-5 lanes	2.485	40	Minor Arterial	66-80	9000	5.6%	1	35	35.53		None	Mixed
07	St. Charles Road (68)	SCHMALE RD	PRESIDENT ST	57570	60315	0.520	2-5 lanes	1.273	40	Minor Arterial	80-90	9000	4.7%	0	19	36.55		Partial 1 side	Mixed
07	St. Charles Road (68)	PRESIDENT ST	BLOOMINGDALE RD	60315	63055	0.519	2-5 lanes	1.203	40	Minor Arterial	86-110	10000	3.4%	1	24	46.25		Partial 1 side	Mixed
07	St. Charles Road (68)	BLOOMINGDALE RD	WESTERN AVE	63055	65835	0.527	2-5 lanes	1.134	35	Minor Arterial	100	10000	2.9%	0	24	45.58		Partial 2 side	Open
07	St. Charles Road (68)	WESTERN AVE	GLEN ELLYN RD	65835	68358	0.478	1-2 lanes	0.825	35	Minor Arterial	66-72	6500	NA	1	30	62.78		Partial 2 side	Open
07	St. Charles Road (68)	MAIN ST., GE	RIFORD RD	68358	70400	0.387	4-5 lanes	1.671	40	Minor Arterial	66-100	26000	4.0%	1	26	67.23		Partial 2 side	Closed
07	St. Charles Road (68)	RIFORD RD	SWIFT RD	70400	72340	0.367	4-5 lanes	1.597	40	Minor Arterial	83-100	24000	4.0%	1	7	19.05	1	Partial 1 side	Open
07	St. Charles Road (68)	SWIFT RD	IL 53	72340	76610	0.809	4-5 lanes	3.336	40	Minor Arterial	93-100	20000	3.5%	1	16	19.78	1	None	Open
08	Madison Street (42)	55TH ST	59TH ST	90000	92650	0.502	2-3 lanes	1.286	30	Minor Arterial	66-100	11000	6.3%	0	41	81.69		Complete 2 side	Closed
08	Madison Street (42)	59TH ST	63RD ST	92650	95320	0.506	2-3 lanes	1.321	35	Minor Arterial	66-83	11000	5.9%	1	16	31.64		Complete 1 side	Closed
08	Madison Street (42)	63RD ST	PLAINFIELD RD	95320	98980	0.693	2-3 lanes	1.857	35	Minor Arterial	100	13500	4.9%	1	24	34.62	1	Complete 2 side	Closed
08	Madison Street (42)	PLAINFIELD RD	71ST ST	98980	100630	0.313	3-4 lanes	1.091	40	Minor Arterial	100	13500	8.4%	0	6	19.20		Complete 2 side	Closed
08	Madison Street (42)	71ST ST	JOLIET ST	100630	104817	0.793	3 lanes	2.536	40	Minor Arterial	100	11000	5.8%	0	31	39.09		Complete 2 side	Closed
08	York Road (85)	DEVON AVE	THORNDALE AVE	10000	16025	1.141	5 lanes	5.944	45	Minor Arterial	100-200	27500	14.8%	1	13	11.39	5	Partial 1 side	Mixed
08	York Road (85)	THORNDALE AVE	FOSTER AVE	16025	17800	0.336	5-6 lanes	1.833	45	Minor Arterial	100	27500	17.8%	2	2	5.95		Partial 1 side	Mixed
08	York Road (85)	FOSTER AVE	GATEWAY	17800	20690	0.547	5 lanes	2.769	45	Minor Arterial	100-120	30000	17.8%	0	13	23.75		Complete 1 side	Mixed
08	York Road (85)	GATEWAY	IL 19 (IRVING PARK RD)	20690	21865	0.223	5 lanes	1.074	40	Minor Arterial	120	30000	17.8%	1	4	17.97	1	Complete 1 side	Mixed
08	York Road (86)	BEGIN CO JURIS	WINDSOR DR	66100	67340	0.708	5 lanes	1.166	40	Minor Arterial	100-120	16500	3.5%	0	4	5.65		Complete 1 side	Closed
08	York Road (86)	WINDSOR DR	31ST ST	67340	68945	0.304	4-5 lanes	1.425	40	Minor Arterial	80-115	16500	3.5%	1	0	0.00		Complete 1 side, Part	Closed
08	York Road (86)	31ST ST	SPRING RD	68945	74055	0.968	2-5 lanes	2.577	35	Minor Arterial	66-100	13500	5.8%	1	35	36.16	1	Complete 1 side, Part	Mixed
08	York Road (86)	SPRING RD	US 34 (OGDEN AVE)	74055	74500	0.216	3-5 lanes	0.273	35	Minor Arterial	66-100+	18500	6.8%	1	15	69.47		Complete 1 side, Part	Closed
09	Highland Avenue (36)	IL 56 RAMPS	I-88 WB RAMPS	70000	70330	0.063	9 lanes	0.548	35	Minor Arterial	Variable	39500	NA	2	2	32.00	1	None	Closed
09	Highland Avenue (36)	I-88 WB RAMPS	I-88 EB RAMPS	70330	71015	0.130	8 lanes	1.114	35	Minor Arterial	Variable	39500	NA	1	2	15.42	1	Complete 1 side	Closed
09	Highland Avenue (36)	I-88 EBD RAMPS	31ST ST	71015	71615	0.114	8-9 lanes	0.915	35	Minor Arterial	165 min	37500	3.5%	1	2	17.60		Complete 1 side	Mixed
09	Highland Avenue (36)	31ST ST	GOOD SAMARITAN HOSPITAL	71615	76275	0.883	4-6 lanes	4.393	40	Minor Arterial	100-120	27500	5.3%	1	13	14.73	1	Complete 2 side	Closed
09	Highland Avenue (36)	GOOD SAMARITAN HOSP	39TH ST	76275	76945	0.127	5-6 lanes	0.737	35	Minor Arterial	100	25000	5.3%	1	1	7.88		Complete 2 side	Closed
09	Lemont Road (41)	OLD MAIN ST	DUNHAM RD	98765	100140	0.260	4-5 lanes	1.238	40	Minor Arterial	100	18000	7.9%	1	1	3.84		Complete 2 side	Closed
09	Lemont Road (41)	DUNHAM RD	GROVE SHOPPING CENTER	100140	100760	0.117	5-6 lanes	0.653	40	Minor Arterial	100-116	21000	7.9%	1	1	8.52		Complete 2 side	Closed
09	Lemont Road (41)	GROVE SC	75TH ST	100760	101458	0.132	6-7 lanes	0.841	40	Minor Arterial	116	26000	7.9%	1	3	22.69		Complete 2 side	Closed
09	Lemont Road (41)	75TH ST	CHESTNUT CT	101458	102085	0.119	5-7 lanes	0.738	40	Principal Arterial	100+	30000	7.8%	1	3	25.26		Complete 1 side	Closed
09	Lemont Road (41)	CHESTNUT CT	83RD ST	102085	106767	0.887	4-6 lanes	4.243	40	Principal Arterial	100-112	30000	7.8%	1	25	28.19		Partial 2 sides	Mixed
09	Lemont Road (41)	83RD ST	87TH ST	106767	109430	0.504	5-6 lanes	2.512	40	Principal Arterial	100-118	30000	5.0%	1	14	27.76		Complete 1 side, Part	Closed
09	Lemont Road (41)	87TH ST	TIMBER TRAILS	109430	111700	0.430	4-5 lanes	1.908	40	Principal Arterial	83-100+	32500	5.9%	1	13	30.24		None	Mixed
09	Lemont Road (41)	TIMBER TRAILS	97TH ST/WESTGATE RD	111700	116325	0.876	4-5 lanes	4.262	50	Principal Arterial	Variable	32500	11.8%	1	8	9.13		None	Mixed
09	Lemont Road (41)	97TH ST/WESTGATE RD	101ST ST	116325	119065	0.519	4-5 lanes	2.274	50	Principal Arterial	100-128	26000	9.2%	1	32	61.66		None	Open
09	Lemont Road (41)	101ST ST	103RD ST	119065	120275	0.229	4-5 lanes	1.072	50	Principal Arterial	90-100	24000	11.5%	1	2	8.73	1	None	Open
09	Lemont Road (41)	103RD ST	INTERNATIONALE PKWY	120275	121700	0.270	4-6 lanes	1.309	50	Principal Arterial	90-100	24000	11.5%	1	6	22.23		None	Open
09	Lemont Road (41)	INTERNATIONALE PKWY	SOUTH COUNTY LINE	121700	125700	0.758	4-6 lanes	3.761	45	Principal Arterial	86-100	24000	10.0%	1	20	26.40		None	Open

County Highway	Street Name*	From	To	FromStn	ToStn	Length (mi)	Design Xsec	Lane-Miles	Speed	Func Class	Right of Way	Average ADT on Segment	Latest Truck Percentages	Signals	Access	Access Density	Structures	Sidewalk	Drainage
09	Main Street DG (43)	39TH ST	US 34 (OGDEN AVE)	76945	79790	0.539	4-6 lanes	2.469	30	Minor Arterial	80-93	24000	3.3%	1	56	103.93		Complete 2 side	Closed
09	Main Street DG (45)	55TH ST	59TH ST	87575	90230	0.503	4 lanes	1.886	35	Minor Arterial	66-83	22000	5.6%	1	57	113.36		Complete 2 side	Closed
09	Main Street DG (45)	59TH ST	63RD ST	90230	92890	0.504	4-5 lanes	2.013	35	Minor Arterial	66-100	22000	4.1%	1	15	29.77	1	Complete 2 side	Closed
09	Main Street DG (45)	63RD ST	67TH ST	92890	95525	0.499	4-5 lanes	2.109	40	Minor Arterial	100	24000	4.5%	1	34	68.13		Complete 2 side	Closed
09	Main Street DG (45)	67TH ST	VALLEYVIEW DR	95525	97680	0.408	4-5 lanes	1.642	40	Minor Arterial	100	22000	3.0%		15	36.75		Complete 2 side	Closed
09	Main Street DG (45)	VALLEYVIEW DR	OLD MAIN ST	97680	98765	0.205	5 lanes	0.981	40	Minor Arterial	100+	22000	3.0%		2	9.73		Complete 2 side	Closed
10	Arlington Heights Road (7)	DEVON AVE	MARINO CT	10000	11750	0.331	4-6 lanes	1.656	35	Minor Arterial	120-130	17500	3.4%	1	9	27.15		Complete 1 side, Part	Closed
10	Prospect Avenue (62)	MARINO COURT/PIERCE	THORNDALE AVE	11750	13638	0.358	5-6 lanes	1.843	35	Minor Arterial	120-125	10500	3.7%	1		0.00		Complete 1 side	Closed
10	Prospect Avenue (62)	THORNDALE AVE	IL 19 (IRVING PARK RD)	13638	19907	1.187	4-6 lanes	5.643	40/35	Minor Arterial	100-168	15000	8.8%	1	20	16.84	1	Partial 2 sides	Mixed
11	Army Trail Road (8)	MUNGER RD	IL 59	30000	34100	0.777	2-5 lanes	2.107	40	Minor Arterial	83-130	7500	9.1%	1	19	24.47		None	Open
11	Army Trail Road (8)	IL 59	PETERSDORF RD	34100	38175	0.772	4-5 lanes	3.293	45/50	Minor Arterial	100-130	16500	9.8%	1	9	11.66		None	Open
11	Army Trail Road (8)	PETERSDORF RD	SMITH RD	38175	40775	0.492	4-5 lanes	2.107	45	Minor Arterial	100	16500	9.5%		11	22.34		None	Open
11	Army Trail Road (8)	SMITH RD	GERBER RD	40775	42735	0.371	4-6 lanes	1.713	45	Minor Arterial	100-113	18500	9.5%	1	5	13.47	1	Partial 1 side	Mixed
11	Army Trail Road (8)	GERBER RD	FAIR OAKS RD	42735	43950	0.230	5 lanes	1.163	45	Minor Arterial	100-105	21000	5.3%	1	8	34.77		Complete 2 side	Closed
11	Army Trail Road (8)	FAIR OAKS RD	SPRING VALLEY DR	43950	45040	0.206	5 lanes	1.031	45	Minor Arterial	100	22000	5.5%	1	3	14.53		Complete 2 side	Closed
11	Army Trail Road (8)	SPRING VALLEY DR	BAYSIDE	45040	46200	0.220	5 lanes	1.095	45	Minor Arterial	100	22000	8.0%	1	4	18.21		Complete 2 side	Closed
11	Army Trail Road (8)	BAYSIDE	WOODLAKE DR	46200	47485	0.243	5 lanes	1.240	45	Minor Arterial	100	22000	8.0%		1	4.11		Complete 2 side	Closed
11	Army Trail Road (8)	WOODLAKE DR	SANDPIPER	47485	48840	0.257	5 lanes	1.300	45	Minor Arterial	100	24000	7.3%		1	3.90		Complete 2 side	Closed
11	Army Trail Road (8)	SANDPIPER	COUNTY FARM RD	48840	50125	0.243	5 lanes	1.228	40	Minor Arterial	100	26000	7.3%	1	6	24.65		Complete 2 side	Closed
11	Army Trail Road (8)	COUNTY FARM RD	CLIPPER DR	50125	52015	0.358	5 lanes	1.801	40	Minor Arterial	100	26000	4.4%	1	6	16.76		Complete 2 side	Closed
11	Army Trail Road (8)	CLIPPER DR	KUHN RD	52015	53815	0.341	5-6 lanes	1.763	40	Minor Arterial	100-110	30000	4.5%	1	2	5.87		Complete 2 side	Closed
11	Army Trail Road (8)	KUHN RD	MERBACH DR	53815	55650	0.348	4-6 lanes	1.703	40	Minor Arterial	100-110	30000	4.5%	1	5	14.39		Complete 1 side, Part	Mixed
11	Army Trail Road (8)	MERBACH DR	BRIGHTON DR	55650	57990	0.443	4-5 lanes	1.983	40	Minor Arterial	100	32000	6.6%	1	6	13.54		Partial 2 sides	Mixed
11	Army Trail Road (8)	BRIGHTON DR	GARY AVE	57990	58775	0.149	5-7 lanes	0.880	40	Minor Arterial	83-100	32000	6.6%	1	3	20.18		Complete 2 side	Closed
11	Army Trail Road (8)	GARY AVE	KNOLLWOOD DR	58775	59795	0.193	5-7 lanes	1.043	40	Principal Arterial	100-130	37500	5.1%	1	7	36.24		Complete 2 side	Closed
11	Army Trail Road (8)	KNOLLWOOD DR	SPRINGFIELD DR	59795	60950	0.219	4-6 lanes	1.102	40	Principal Arterial	100-125	37500	5.9%	1	6	27.43		Complete 2 side	Closed
11	Army Trail Road (8)	SPRINGFIELD DR	BLOOMINGDALE CT SC	60950	62250	0.246	5-6 lanes	1.419	40	Principal Arterial	115	37500	5.6%	1	2	8.12		Complete 2 side	Closed
11	Army Trail Road (8)	BLOOMINGDALE CT SC	SCHMALE RD	62250	63590	0.254	5-6 lanes	1.348	40	Principal Arterial	115-125	37500	5.1%	1	5	19.70		Complete 2 side	Closed
11	Army Trail Road (8)	SCHMALE RD	MEADOWLARK	63590	65600	0.381	5-6 lanes	1.999	40	Principal Arterial	105-115	40000	9.6%	0	13	34.15		Complete 2 side	Closed
11	Army Trail Road (8)	MEADOWLARK	CARDINAL DR	65600	66255	0.124	5 lanes	0.619	40	Principal Arterial	105	44000	9.6%	1	5	40.31		Complete 2 side	Closed
11	Army Trail Road (8)	CARDINAL DR	ORIOLE LN	66255	67340	0.205	4-5 lanes	0.890	40	Principal Arterial	83-105	44000	9.5%	0	9	43.80		Complete 2 side	Closed
11	Army Trail Road (8)	ORIOLE LN	GLADSTONE DR	67340	68000	0.125	4-5 lanes	0.575	40	Principal Arterial	100	44000	9.5%	1	2	16.00		Complete 2 side	Closed
11	Army Trail Road (8)	GLADSTONE DR	BLOOMINGDALE RD	68000	69308	0.248	5-8 lanes	1.653	40	Principal Arterial	115-130	44000	6.9%	1	5	20.18		Complete 2 side	Closed
11	Army Trail Road (8)	BLOOMINGDALE RD	HOME DEPOT	69308	70370	0.201	7-8 lanes	1.429	40	Principal Arterial	115-125	47500	10.6%	1	7	34.80		Complete 2 side	Closed
11	Army Trail Road (8)	HOME DEPOT	WHITMAN BLVD	70370	71250	0.167	6-7 lanes	1.054	40	Principal Arterial	105-130	47500	9.7%	0	2	12.00		Complete 2 side	Closed
11	Army Trail Road (8)	WHITMAN BLVD	REGENCY DR	71250	72535	0.243	6-7 lanes	1.492	40	Principal Arterial	125-135	50000	9.7%	1	6	24.65		Complete 2 side	Closed
11	Army Trail Road (8)	REGENCY DR	GLEN ELLYN RD	72535	73735	0.227	6-7 lanes	1.506	40	Principal Arterial	115-145	50000	6.9%	1	4	17.60		Complete 2 side	Closed
11	Army Trail Road (8)	GLEN ELLYN RD	CREEKSIDE DR	73735	75422	0.320	6-8 lanes	2.170	45	Principal Arterial	120-130	50000	7.8%	1	10	31.30		Complete 2 side	Closed
11	Army Trail Road (8)	CREEKSIDE DR	WALTER DR	75422	76400	0.185	6-7 lanes	1.122	45	Principal Arterial	100-135	52500	8.6%	0	2	10.80		None	Mixed
11	Army Trail Road (8)	WALTER DR	MEADOW RD	76400	78425	0.384	6-7 lanes	2.316	45	Principal Arterial	100-135	52500	8.6%	1	2	5.21		None	Closed
11	Army Trail Road (8)	MEADOW RD	SWIFT RD	78425	79710	0.243	6-7 lanes	1.757	45	Principal Arterial	115-135	52500	11.6%	1	14	57.53		Complete 2 side	Closed
11	Army Trail Road (8)	SWIFT RD	IL 53	79710	82578	0.543	6-9 lanes	4.337	45	Principal Arterial	158-200	52000	10.3%	3	8	14.73		None	Closed
13	Winfield Road (81)	IL 38 (ROOSEVELT RD)	PURNELL RD	61600	67265	1.073	4-6 lanes	4.381	45	Minor Arterial	83-100	27500	7.3%	1	17	15.84		Complete 1 side	Closed
13	Winfield Road (81)	PURNELL RD	MACK RD	67265	67665	0.076	5 lanes	0.365	45	Minor Arterial	Variable	30000	7.3%	1	0	0.00		Complete 1 side	Closed
13	Winfield Road (81)	MACK RD	IL 56 (BUTTERFIELD RD)	67665	72140	0.848	4-7 lanes	3.958	45	Minor Arterial	83-130	32500	7.8%	1	2	2.36	1	Complete 1 side	Closed
13	Winfield Road (81)	IL 56 (BUTTERFIELD RD)	WARRENVILLE RD	72140	77105	0.940	4-6 lanes	3.812	40	Minor Arterial	73-140	30000	6.0%	1	24	25.52		Complete 2 side	Closed
13	Winfield Road (81)	WARRENVILLE RD	FERRY RD	77105	79225	0.402	4-6 lanes	2.533	40	Minor Arterial	120-150	28000	4.4%	2	6	14.94		Complete 2 side	Closed
13	Winfield Road (81)	FERRY RD	I-88 WB RAMPS	79225	80205	0.186	4-6 lanes	1.311	40	Minor Arterial	140	30000	3.4%	1	2	10.78		Complete 2 side	Closed
13	Winfield Road (81)	I-88 WB RAMPS	I-88 EB RAMPS	80205	81630	0.270	4-5 lanes	1.471	40	Minor Arterial	Variable	30000	3.9%	1	0	0.00	1	Complete 2 side	Closed
13	Winfield Road (81)	I-88 EB RAMPS	DIEHL RD	81630	82570	0.178	5-7 lanes	1.184	40	Minor Arterial	140	30000	5.6%	1	2	11.23		Complete 2 side	Closed
14	Eola Road (23)	IL 56 (BUTTERFIELD RD)	FERRY RD	80000	84848	0.918	4-5 lanes	4.230	45	Principal Arterial	100-150	22000	8.4%	2	6	6.53	1	Complete 2 side	Closed
14	Eola Road (23)	FERRY RD	I-88 BRIDGE N	84848	87202	0.446	4-5 lanes	2.003	45	Principal Arterial	100-160	24000	10.2%		3	6.73	1	Complete 2 side	Closed
14	Eola Road (23)	I-88 BRIDGE N	I-88 BRIDGE S	87202	87695	0.093	4 lanes	0.389	45	Principal Arterial	VAriable	26000	10.2%		0	0.00	1	Complete 2 side	Closed
14	Eola Road (23)	I-88 BRIDGE S	DIEHL RD	87695	88525	0.157	4-7 lanes	0.980	45	Principal Arterial	120-145	26000	10.2%	1	0	0.00		Complete 2 side	Closed
14	Eola Road (23)	DIEHL RD	MOLITOR RD	88525	90635	0.400	4-7 lanes	2.608	45	Principal Arterial	96-160	35000	6.9%	2	5	12.51	1	Complete 2 side	Closed
14	Eola Road (23)	MOLITOR RD	NORTH AURORA RD	90635	94600	0.751	4-6 lanes	3.980	45	Principal Arterial	96-116	38000	7.9%	2	7	9.32		Complete 2 side	Closed
14	Eola Road (23)	NORTH AURORA RD	BNSF BRIDGE N	94600	96700	0.398	4-7 lanes	2.399	45	Principal Arterial	115-250	48000	9.2%	1	5	12.57		Complete 1 side, Part	Closed
14	Eola Road (23)	BNSF BRIDGE N	BNSF BRIDGE S	96700	97135	0.082	4 lanes	0.339	45	Principal Arterial	NA	48000	9.2%	0	0	0.00	1	Complete 2 side	Closed
14	Eola Road (23)	BNSF BRIDGE S	LIBERTY ST	97135	100080	0.558	4-6 lanes	2.598	45	Principal Arterial	125-250	48000	9.2%	1	3	5.38		Complete 2 side	Closed
14	Eola Road (23)	LIBERTY ST	NEW YORK ST	100080	102745	0.505	4-6 lanes	2.539	45	Principal Arterial	120-140	42000	5.8%	1	14	27.74		Partial 2 side	Closed
15	Cass Avenue (13)	OAKLEY DR	39TH ST	74920	76445	0.289	5 lanes	1.450	35	Minor Arterial	83-110	20000	4.0%	0	2	6.92		Complete 2 side	Closed
15	Cass Avenue (13)	39TH ST	US 34 (OGDEN AVE)	76445	79060	0.495	5 lanes	2.421	35	Minor Arterial	100	20000	4.0%	1	41	82.78		Complete 2 side	Closed
15	Cass Avenue (15)	55TH ST	59TH ST	87052	89700	0.502	4-5 lanes	2.046	35	Minor Arterial	66-100	18000	4.3%	2	34	67.79		Complete 2 side	Closed
15	Cass Avenue (15)	59TH ST	63RD ST	89700	92350	0.502	4-5 lanes	2.139	35/40	Minor Arterial	83-100	20000	5.2%	1	31	61.77		Complete 2 side	Closed
15	Cass Avenue (15)	63RD ST	65TH ST	92350	93670	0.250	5 lanes	1.213	40	Minor Arterial	83-100	24000	5.6%	1	16	64.00		Complete 2 side	Closed

County Highway	Street Name*	From	To	FromStn	ToStn	Length (mi)	Design Xsec	Lane-Miles	Speed	Func Class	Right of Way	Average ADT on Segment	Latest Truck Percentages	Signals	Access	Access Density	Structures	Sidewalk	Drainage
15	Cass Avenue (15)	65TH ST	67TH ST	93670	95000	0.252	4-5 lanes	1.163	40	Minor Arterial	100	24000	4.4%	1	5	19.85		Complete 2 side	Closed
15	Cass Avenue (15)	67TH ST	71ST ST	95000	97820	0.534	5 lanes	2.659	40	Minor Arterial	100	24000	4.9%	0	9	16.85		Complete 2 side	Closed
15	Cass Avenue (15)	71ST ST	75TH ST	97820	100300	0.470	5 lanes	2.275	40	Minor Arterial	100	26000	4.9%	1	15	31.94		Complete 2 side	Closed
15	Cass Avenue (15)	75TH ST	PLAINFIELD RD	100300	101145	0.160	5 lanes	0.782	40	Minor Arterial	100	26000	4.7%	1		0.00		Complete 2 side	Closed
15	Cass Avenue (15)	PLAINFIELD RD	CONCORD PL	101145	103335	0.415	5 lanes	2.080	40	Minor Arterial	100	28000	4.2%	1	11	26.52		Complete 2 side	Closed
15	Cass Avenue (15)	CONCORD PL	I-55 N FRONTAGE	103335	105715	0.451	5 lanes	2.334	40	Minor Arterial	100-110	28000	3.4%	1	14	31.06		Complete 2 side	Closed
15	Cass Avenue (15)	I-55 N FRONTAGE RD	NORTHGATE RD	105715	110125	0.835	4-5 lanes	4.287	45	Minor Arterial	Variable	22000	4.3%	0	8	9.58	1	None	Open
15	Cass Avenue (15)	NORTHGATE	91ST	110125	111000	0.166	3-5 lanes	0.789	45	Minor Arterial	100-135	12500	4.3%	0	2	12.07	1	None	Open
15	Midwest Road (50)	IL 56 (BUTTERFIELD RD)	22ND ST	63430	65210	0.337	5-6 lanes	1.579	35	Minor Arterial	80-100	20000	6.4%	1	23	68.22		Complete 2 side	Closed
15	Midwest Road (50)	22ND ST	I-88/BAYBROOK	65210	66400	0.225	5-6 lanes	1.265	35	Minor Arterial	86-93	26000	5.7%	1	5	22.18	1	Complete 1 side	Closed
15	Midwest Road (50)	I-88/BAYBROOK	MOCKINGBIRD	66400	68610	0.419	4-5 lanes	1.759	35	Minor Arterial	86-100	18000	2.8%	0	4	9.56		Complete 1 side, Part	Closed
15	Midwest Road (50)	MOCKINGBIRD	31ST ST	68610	70555	0.368	4-5 lanes	1.587	35	Minor Arterial	80-90	18000	2.8%	1	2	5.43		Complete 1 side	Closed
15	Midwest Road (50)	31ST ST	35TH ST	70555	73080	0.478	4-5 lanes	2.146	35	Minor Arterial	80-90	22000	3.2%	1	4	8.36		Complete 1 side	Closed
15	Midwest Road (50)	35TH ST	OAKLEY DR	73080	74920	0.348	4-5 lanes	1.536	35	Minor Arterial	100	22000	3.2%	2	2	5.74		Complete 2 side	Closed
15	Summit Avenue (71)	IL 38 (ROOSEVELT RD)	14TH ST	60000	61300	0.246	4-5 lanes	1.032	35	Minor Arterial	80-90	18000	3.1%	2	23	93.42		Partial 1 side	Closed
15	Summit Avenue (71)	14TH ST	IL 56 (BUTTERFIELD RD)	61300	63430	0.403	4-5 lanes	1.733	35	Minor Arterial	80-90	18000	3.1%	1	29	71.89		Complete 1 side	Closed
17	Chicago Avenue (16)	JULIAN ST	CHARLES ST	50000	52165	0.410	4-5 lanes	1.712	30	Minor Arterial	83-100	16500	2.5%	1	10	24.39		Complete 1 side, Part	Closed
17	Chicago Avenue (16)	CHARLES AVE	OLESEN DR	52165	54900	0.518	4-5 lanes	2.318	40	Minor Arterial	80-110	20000	3.4%	1	19	36.68		Complete 1 side	Closed
17	Chicago Avenue (16)	OLESEN DR	NAPER BLVD	54900	57697	0.530	4-5 lanes	2.558	40	Minor Arterial	66-100	22000	2.8%	1	9	16.99		Complete 2 side	Closed
17	Maple Avenue (47)	NAPER BLVD	STEEPLE RUN DR	57697	59265	0.297	4-5 lanes	1.361	40	Minor Arterial	100	22000	3.0%	1	3	10.10		Complete 2 side	Closed
17	Maple Avenue (47)	STEEPLE RUN DR	COLLEGE RD/YACKLEY AVE	59265	62535	0.619	4-5 lanes	3.063	40	Minor Arterial	100-107	22000	4.8%	2	5	8.07		Complete 2 side	Closed
17	Maple Avenue (47)	COLLEGE RD/YACKLEY AVE	BURR OAK	62535	65115	0.489	4-5 lanes	2.292	40	Minor Arterial	100	24000	4.3%	1	2	4.09		Complete 1 side	Closed
17	Maple Avenue (47)	BURR OAK RD	IL 53	65115	67890	0.526	4-6 lanes	2.539	35	Minor Arterial	83-100	28000	3.4%	2	16	30.44	1	Complete 1 side	Closed
17	Maple Avenue (47)	IL 53	PRIMROSE AVE	67890	70617	0.516	4-6 lanes	2.635	35	Minor Arterial	80-113	28000	4.0%	1	43	83.26		Complete 1 side, Part	Closed
17	Maple Avenue (47)	PRIMROSE AVE	I-355 SB RAMPS	70617	72735	0.401	4-7 lanes	1.974	35	Minor Arterial	100-106	28000	4.5%	1	23	57.34	1	Partial 2 side	Closed
17	Maple Avenue (47)	I-355 SB RAMPS	I-355 NB RAMPS	72735	73110	0.071	8 lanes	0.588	35	Minor Arterial	NA	26000	NA	2	0	0.00	1	Complete 2 side	Closed
17	Maple Avenue (47)	I-355 NB RAMPS	WALNUT AVE	73110	74035	0.175	5-7 lanes	0.975	35	Minor Arterial	136-158	26000	7.0%	1	0	0.00		Complete 1 side	Closed
17	Maple Avenue (47)	WALNUT AVE	BELMONT RD	74035	78040	0.759	4-5 lanes	2.966	40	Minor Arterial	66-100	22000	4.6%	1	50	65.92		Partial 2 side	Closed
17	Maple Avenue (47)	BELMONT AVE	WOODWARD AVE	78040	79385	0.255	4-5 lanes	1.019	40	Minor Arterial	66-100	20000	3.9%	0	19	74.59		Partial 2 side	Closed
17	Maple Avenue (47)	WOODWARD AVE	DUNHAM RD	79385	83230	0.728	4-5 lanes	2.689	40	Minor Arterial	66-83	20000	3.9%	1	44	60.42		Partial 2 side	Closed
18	Hawthorne Lane (33)	POWIS RD	KRESS RD	47457	48775	0.250	2-3 lanes	0.614	45	Minor Arterial	83	8500	12.3%	0	7	28.04	0	Partial 1 side	Open
18	Kress Road (40)	HAWTHORNE LN	IL 38 (ROOSEVELT RD)	48775	56224	1.411	2-4 lanes	3.295	45	Minor Arterial	100-110/Var	8500	20.5%	1	11	7.80	1	None	Open
18	Munger Road (52)	N COUNTY LINE	STEARNS RD	10000	14667	0.884	4-5 lanes	4.308	45	Minor Arterial	120	10000	10.0%	1	7	7.92	0	None	Closed
18	Powis Road (60)	IL 64 (NORTH AVE)	HAWTHORNE LN	40000	47457	1.412	2-3 lanes	3.002	45	Minor Arterial	66-98	8500	15.2%	1	24	16.99	0	None	Open
20	Grand Avenue (31)	US 20 (LAKE ST)	OAKLAWN AVE	100000	103255	0.616	4-7 lanes	3.325	45	Minor Arterial	135-150	30000	5.7%	2	4	6.49	2	None	Closed
20	Grand Avenue (31)	OAKLAWN AVE	CHURCH RD	103255	104155	0.170	5-6 lanes	0.921	40	Minor Arterial	130/Var	26000	7.0%	1	0	0.00	0	None	Closed
20	Grand Avenue (31)	CHURCH RD	INDUSTRIAL DR	104155	106135	0.375	5 lanes	1.901	35	Minor Arterial	106-125	30000	8.4%	1	18	48.00	0	Complete 1 side	Closed
20	Grand Avenue (31)	INDUSTRIAL DR	YORK RD	106135	107955	0.345	5 lanes	1.738	35	Minor Arterial	73-104	30000	8.0%	1	16	46.42	0	Complete 1 side, Part	Closed
20	Grand Avenue (31)	YORK RD	CROWN RD	107955	109365	0.267	4-5 lanes	1.350	40	Minor Arterial	86-90	32000	8.5%	1	10	37.45	0	Complete 1 side, Part	Closed
20	Grand Avenue (31)	CROWN RD	COUNTY LINE RD	109365	113235	0.733	4-5 lanes	3.092	40	Minor Arterial	66 -73	32000	NA	1	7	9.55	1	Partial 2 side	Closed
21	Fabyan Parkway (24)	WEST COUNTY LINE	IL 38 (ROOSEVELT RD)	10000	18682	1.644	2-3 lanes	4.046	50	Minor Arterial	100-120	16500	9.0%	2	3	1.82	1	None	Open
21	Geneva Road (29)	IL 59	PRINCE CROSSING RD	30000	32675	0.507	4-5 lanes	2.171	35	Minor Arterial	93-104	16500	5.1%	2	23	45.40	0	Complete 2 side	Closed
21	Geneva Road (29)	PRINCE CROSSING RD	INDIAN KNOLL	32675	35335	0.504	4-5 lanes	2.088	35/45	Minor Arterial	80-110	19500	5.2%	0	10	19.85	0	Partial 2 side	Closed
21	Geneva Road (29)	INDIAN KNOLL	WINFIELD RD	35335	40283	0.937	4-5 lanes	3.746	45	Minor Arterial	73-100	19500	5.2%	1	2	2.13	1	None	Mixed
21	Geneva Road (29)	WINFIELD RD	COUNTY FARM RD	40283	42010	0.327	4-5 lanes	1.494	40	Minor Arterial	80/Var	25500	4.7%	1	12	36.69	0	Complete 2 side	Closed
21	Geneva Road (29)	COUNTY FARM RD	PLEASANT HILL RD	42010	46085	0.772	4-5 lanes	3.299	40	Minor Arterial	90-100	25500	4.7%	1	39	50.53	0	Complete 2 side	Closed
21	Geneva Road (29)	PLEASANT HILL RD	GARY AVE	46085	50065	0.754	4-5 lanes	3.157	40	Minor Arterial	83-100	28000	4.2%	1	19	25.21	0	Complete 2 side	Closed
21	Geneva Road (29)	GARY AVE	SCHMALE RD	50065	54065	0.758	4-6 lanes	3.900	40	Minor Arterial	90-110	25500	3.6%	3	25	33.00	0	Complete 1 side, Part	Closed
21	Geneva Road (29)	SCHMALE RD	PRESIDENT ST	54065	58095	0.763	4-5 lanes	3.351	40	Minor Arterial	90-100	25500	3.2%	1	18	23.58	1	Complete 1 side, Part	Closed
21	Geneva Road (29)	PRESIDENT ST	BLOOMINGDALE RD	58095	60770	0.507	4-5 lanes	2.146	35	Minor Arterial	84-96	25500	3.8%	1	26	51.32		Complete 1 side, Part	Closed
21	Geneva Road (29)	BLOOMINGDALE RD	WESTERN AVE	60770	63425	0.503	4-5 lanes	2.182	35	Minor Arterial	66-83	19500	4.8%	2	34	67.62		Complete 1 side, Part	Closed
21	Geneva Road (29)	WESTERN AVE	MAIN ST. GE	63425	65807	0.451	4-5 lanes	1.920	35	Minor Arterial	77-83	19500	4.4%	1	27	59.85		Complete 1 side, Part	Closed
22	Addison Road (6)	IL 19 (IRVING PARK RD)	POTTER ST	20000	21800	0.341	4-5 lanes	1.396	35	Minor Arterial	80	14500	5.1%	2	41	120.27		Complete 2 side	Closed
22	Addison Road (6)	POTTER ST	ELIZABETH DR	21800	24828	0.573	4-5 lanes	2.301	35	Minor Arterial	66-100	15500	3.2%	1	36	62.77		Complete 2 side	Closed
22	Addison Road (6)	ELIZABETH DR	BYRON AVE	24828	28545	0.704	4-5 lanes	2.967	45	Minor Arterial	100/Var	14500	4.7%	0	6	8.52	2	Complete 1 side, Part	Closed
22	Addison Road (6)	BYRON AVE	GREEN MEADOW	28545	30820	0.431	4-5 lanes	1.721	35	Minor Arterial	76-100	20000	7.7%	1	9	20.89	1	Partial 1 side	Closed
22	Addison Road (6)	GREEN MEADOW	US 20 (LAKE ST)	30820	32184	0.258	4-6 lanes	1.138	335	Minor Arterial	66-100	20000	7.7%	1	16	61.94		Complete 2 side	Closed
23	Gary Avenue (28)	NORTH COUNTY LINE	CENTRAL AVE	10000	12785	0.527	4-5 lanes	2.568		Minor Arterial	100-250	20000	13.0%	2	3	5.69	1	Partial 2 side	Closed
23	Gary Avenue (28)	CENTRAL AVE	US 20 (LAKE ST)	12785	16610	0.724	4-6 lanes	3.433	45	Minor Arterial	100	24000	6.8%	1	5	6.90		Partial 2 side	Closed
23	Gary Avenue (28)	US 20 (LAKE ST)	WEBSTER AVE	16610	17255	0.122	4-6 lanes	0.642	45	Minor Arterial	100/Var	38000	5.5%		4	32.74		Complete 1 side, Part	Closed
23	Gary Avenue (28)	WEBSTER AVE	FOSTER AVE	17255	18225	0.184	4-5 lanes	0.923	45	Minor Arterial	100	38000	5.5%	1	20	108.87		Complete 2 side	Closed
23	Gary Avenue (28)	FOSTER AVE	ARGYLE AVE	18225	19560	0.253	5 lanes	1.293	45	Minor Arterial	100	38000	5.5%	0	7	27.69		Complete 2 side	Closed
23	Gary Avenue (28)	ARGYLE AVE	LAWRENCE AVE	19560	20890	0.252	5 lanes	1.297	45	Minor Arterial	100	38000	5.5%	1	11	43.67		Complete 2 side	Closed
23	Gary Avenue (28)	LAWRENCE AVE	GLENWOOD	20890	22450	0.295	5 lanes	1.515	45	Minor Arterial	100	36000	7.5%	1	1	3.38		Complete 1 side, Part	Closed
23	Gary Avenue (28)	GLENWOOD	SCHICK RD	22450	23578	0.214	5-6 lanes	1.252	45	Minor Arterial	100	36000	7.9%	1	2	9.36		Complete 2 side	Closed

County Highway	Street Name*	From	To	FromStn	ToStn	Length (mi)	Design Xsec	Lane-Miles	Speed	Func Class	Right of Way	Average ADT on Segment	Latest Truck Percentages	Signals	Access	Access Density	Structures	Sidewalk	Drainage
23	Gary Avenue (28)	SCHICK RD	STRATFORD SQ ENT #5	23578	24463	0.168	5-6 lanes	0.848	45	Minor Arterial	100-110	34000	5.7%	1	1	5.97		Complete 1 side	Closed
23	Gary Avenue (28)	STRATFORD SQ ENT #5	SCOTT DR	24463	26970	0.475	5-6 lanes	2.311	45	Minor Arterial	100-110	34000	6.3%	1	1	2.11		Complete 1 side, Part	Closed
23	Gary Avenue (28)	SCOTT DR	ARMY TRAIL RD	26970	28605	0.310	5-6 lanes	1.710	45	Minor Arterial	100-127	36000	8.4%	2	7	22.61		Partial 1 side	Closed
23	Gary Avenue (28)	ARMY TRAIL RD	STARK DR	28605	29760	0.219	5-6 lanes	0.956	45	Minor Arterial	100-110	34000	7.8%	2	3	13.71	2	Partial 2 sides	Closed
23	Gary Avenue (28)	STARK DR	LIES RD	29760	31685	0.365		1.779	45	Minor Arterial		27000	7.8%	1	1	2.74			
23	Gary Avenue (28)	LIES RD	ELK TRAIL	31685	34045	0.447		1.954	45	Minor Arterial		27000	8.0%	1	2	4.47			
23	Gary Avenue (28)	ELK TRAIL	FULLERTON AVE	34045	37035	0.566		2.500	45	Minor Arterial		27000	7.2%	1	1	1.77			
23	Gary Avenue (28)	FULLERTON AVE	THUNDERBIRD TR	37035	38895	0.352		1.897	45	Minor Arterial		27000	9.4%	1	3	8.52			
23	Gary Avenue (28)	THUNDERBIRD TR	KEHOE BLVD	38895	39530	0.120		0.642	45	Minor Arterial		27000	9.4%		0	0.00			
23	Gary Avenue (28)	KEHOE BLVD	IL 64 (NORTH AVE)	39530	41465	0.366		1.838	45	Minor Arterial		27000	9.4%	1	7	19.10			
23	Gary Avenue (28)	IL 64 (NORTH AVE)	ST CHARLES RD N	41465	43053	0.301	4-7 lanes	1.666	45	Minor Arterial	100-120	20000	5.1%	1	8	26.60		Partial 1 side	Closed
23	Gary Avenue (28)	ST. CHARLES RD N	ST. CHARLES RD S	43053	43650	0.113	5 lanes	0.560	45	Minor Arterial	100	22000	8.1%	1	2	17.69		Complete 1 side	Closed
23	Gary Avenue (28)	ST. CHARLES RD S	GENEVA RD	43650	47475	0.724	4-6 lanes	3.438	45	Minor Arterial	100	16500	8.4%	1	22	30.37		Partial 1 side	Closed
23	Gary Avenue (28)	GENEVA RD	JEWELL RD	47475	50685	0.608	2-6 lanes	2.085	35	Minor Arterial	90-100	15500	4.9%	2	33	54.28		Partial 2 sides	Closed
23	Naper Boulevard (54)	RIDGELAND RD	TOWER CROSSING SC	82665	83325	0.125	5 lanes	0.658	40	Minor Arterial	100	30000	3.8%	1	2	16.00		Complete 2 sides	Closed
23	Naper Boulevard (54)	TOWER CROSSING SC	US 34 (OGDEN AVE)	83325	83984	0.125	5-6 lanes	0.704	40	Minor Arterial	100	30000	4.6%	1	1	8.01		Complete 2 sides	Closed
23	Naperville Road (55)	IL 38 (ROOSEVELT RD)	ELM ST	60000	61355	0.257	4-5 lanes	0.955	35	Minor Arterial	66-86	28000	3.8%	2	25	97.42		Complete 2 sides	Closed
23	Naperville Road (55)	ELM ST	FARNHAM LN	61355	63300	0.368	4-5 lanes	1.438	35	Minor Arterial	66-80	28000	3.8%	1	30	81.44		Complete 2 sides	Closed
23	Naperville Road (55)	FARNHAM LN	LONGFELLOW DR	63300	65155	0.351	4-5 lanes	1.413	40	Minor Arterial	66-80	28000	3.3%	1	8	22.77		Complete 1 side, Part	Closed
23	Naperville Road (55)	LONGFELLOW DR	DANADA DR	65155	67250	0.397	4-5 lanes	1.638	40	Minor Arterial	80-96	30000	3.1%	1	5	12.60		Complete 2 sides	Closed
23	Naperville Road (55)	DANADA DR	BLANCHARD ST	67250	68125	0.166	5-6 lanes	0.841	40	Minor Arterial	90-100	30000	2.6%	1	4	24.14		Complete 2 sides	Closed
23	Naperville Road (55)	BLANCHARD ST	EAST-WEST LOOP RD	68125	69470	0.255	6 lanes	1.670	40	Minor Arterial	100	34000	2.7%	1	6	23.55		Complete 2 sides	Closed
23	Naperville Road (55)	EAST-WEST LOOP RD	DANADA SQ SC	69470	70355	0.168	6-7 lanes	1.215	40	Minor Arterial	110-120	30000	3.9%	1	5	29.83		Complete 2 sides	Closed
23	Naperville Road (55)	DANADA SQ SC	IL 56 (BUTTERFIELD RD)	70355	71150	0.151	8-9 lanes	1.131	40	Minor Arterial	106-110	30000	4.6%	1	1	6.64		Complete 1 side	Closed
23	Naperville Road (55)	IL 56 (BUTTERFIELD RD)	DANADA FOREST PRES DR	71150	75775	0.876	4-8 lanes	4.095	50	Minor Arterial	80-170	30000	4.6%	1	3	3.42		Partial 2 sides	Mixed
23	Naperville Road (55)	DANADA FOREST PRES DR	LUCENT DR N	75775	77765	0.377	4-6 lanes	2.156	45	Minor Arterial	80-124	30000	4.6%	1	4	10.61		Partial 2 sides	Mixed
23	Naperville Road (55)	LUCENT DR N	WARRENVILLE RD	77765	79100	0.253	6-8 lanes	1.852	40	Minor Arterial	124-150	30000	4.2%	1	2	7.91		Complete 1 side, Part	Closed
23	Naperville Road (55)	WARRENVILLE RD	I-88 N RAMPS	79100	79800	0.133	6-8 lanes	1.011	40	Minor Arterial	154/Var	30000	3.6%	1	2	15.09		None	Closed
23	Naperville Road (55)	I-88 N RAMPS	DIEHL RD	79800	81555	0.332	5-6 lanes	2.258	40	Minor Arterial	110/Var	35000	4.6%	1	2	6.02	1	None	Closed
23	Naperville Road (55)	DIEHL RD	RIDGELAND RD	81555	82665	0.210	5 lanes	1.147	40	Minor Arterial	104/Var	42000	4.6%	1	1	4.76		Complete 2 sides	Closed
24	Byron Avenue (12)	WALTER DR	MEDINAH RD	29240	30140	0.170	2 lanes	0.308	30	Major Collector	80	3000	3.2%	0	12	70.40		None	Open
24	Medinah Road (48)	ELGIN-O'HARE EBD RAMPS	CREST AVE	10000	11200	0.227	4-5 lanes	1.348	40	Minor Arterial	130-190	14000	4.3%	0	0	0.00		Partial 1 side	Closed
24	Medinah Road (48)	CREST AVE	THORNDALE AVE	11200	14100	0.549	4-5 lanes	2.203	40	Minor Arterial	83-130	14000	4.3%	1	14	25.49		Complete 1 side, Part	Closed
24	Medinah Road (48)	THORNDALE AVE	IL 19 (IRVING PARK RD)	14100	15775	0.317	4-5 lanes	1.290	30	Minor Arterial	66-83	16000	3.6%	1	21	66.20	1	Complete 1 side	Closed
24	Medinah Road (48)	IL 19 (IRVING PARK RD)	FOSTER AVE	15775	17960	0.414	3-5 lanes	1.526	35	Minor Arterial	83-97	14000	4.9%	0	10	24.16		Complete 1 side	Closed
24	Medinah Road (48)	FOSTER AVE	BROKER RD	17960	19890	0.366	2-3 lanes	0.826	35	Minor Arterial	83-90	12000	4.9%	0	12	32.83		Complete 1 side	Mixed
24	Medinah Road (48)	BROKER RD	US 20 (LAKE ST)	19890	24100	0.797	2-5 lanes	2.246	35	Minor Arterial	66-96	12000	3.2%	1	10	12.54	1	Complete 1 side	Mixed
24	Medinah Road (48)	US 20 (LAKE ST)	BYRON AVE	24100	29240	0.973	2-3 lanes	1.815	30	Minor Arterial	66	5500	3.3%	0	23	23.63		Partial 2 sides	Open
24	Walter Drive (76)	BYRON AVE	ARMY TRAIL RD	30140	32217	0.393	2 lanes	0.650	30	Major Collector	66-86	3000	3.1%	0	24	61.01		None	Open
25	Fairview Avenue (25)	38TH ST	US 34 (OGDEN AVE)	75750	79263	0.665	4-5 lanes	2.820	35	Minor Arterial	66-83	16000	2.6%	2	46	69.14		Partial 2 sides	Closed
25	Meyers Road (49)	IL 38 (ROOSEVELT RD)	14TH ST	60000	61335	0.253	5-6 lanes	1.189	30	Minor Arterial	76-90	22000	5.6%	1	19	75.15		Complete 2 sides	Closed
25	Meyers Road (49)	14TH ST	16TH ST	61335	62670	0.253	5 lanes	1.192	30	Minor Arterial	80-100	22000	8.9%	1	10	39.55		Complete 2 sides	Closed
25	Meyers Road (49)	16TH ST	22ND ST	62670	65325	0.503	4-5 lanes	2.338	35	Minor Arterial	83-115	22000	7.1%	2	21	41.76		Complete 1 side, Part	Closed
25	Meyers Road (49)	22ND ST	IL 56 (BUTTERFIELD RD)	65325	66430	0.209	5-6 lanes	1.279	35	Minor Arterial	78-90	22000	4.0%	1	2	9.56		Partial 1 side	Closed
25	Meyers Road (49)	IL 56 (BUTTERFIELD RD)	31ST ST	66430	70705	0.810	4-6 lanes	3.758	40	Minor Arterial	100-160/Var	18000	7.5%	1	21	25.94	1	Partial 2 sides	Closed
25	Meyers Road (49)	31ST ST	35TH ST	70705	73350	0.501	4-5 lanes	2.226	40	Minor Arterial	80-100	16000	5.3%	1	11	21.96		Complete 1 side	Closed
25	Meyers Road (49)	35TH ST	38TH ST	73350	75750	0.455	4-5 lanes	2.017	40	Minor Arterial	100	16000	3.4%	0	0	0.00		None	Closed
27	Highlake Road (35)	PRINCE CROSSING RD	WINFIELD CORP LIM	40000	47742	0.963	2-3 lanes	1.746	40	Major Collector	60-70	7000	4.4%	0	13	13.50		None	Open
27	Jewell Road (39)	COUNTY FARM RD	PLEASANT HILL RD	50000	52995	0.567	3 lanes	1.550	30	Major Collector	83-100	10000	1.8%	1	50	88.15		Complete 2 sides	Closed
27	Jewell Road (39)	PLEASANT HILL RD	GARY AVE	52995	57243	0.805	3 lanes	2.266	30	Major Collector	66-100	9000	3.3%	1	47	58.42		Complete 2 sides	Closed
27	Prince Crossing Road (61)	GENEVA RD	HIGHLAKE RD	37093.111	40000	0.551	2-3 lanes	1.164	35	Major Collector	83-100	7500	6.4%	0	29	52.67		None	Open
28	Villa Avenue (75)	US 20 (LAKE ST)	FULLERTON AVE	33600	37230	0.688	4-6 lanes	2.746	35	Minor Arterial	66-100	13500	4.1%	1	25	36.36		Partial 1 side	Closed
28	Villa Avenue (75)	FULLERTON AVE	IL 64 (NORTH AVE)	37230	42756	1.047	4-5 lanes	3.755	40	Minor Arterial	77-120	10500	4.7%	1	41	39.17		Partial 1 side	Closed
28	WoodDale Road (82)	DEVON AVE	THORNDALE AVE	10000	13165	0.599	4-5 lanes	2.677	40	Minor Arterial	83-100	14500	11.6%	2	18	30.03		Partial 2 side	Closed
28	WoodDale Road (82)	THORNDALE AVE	MITTEL DR	13165	15700	0.480	5 lanes	2.379	40	Minor Arterial	90-100	11500	5.8%	1	8	16.66		Partial 1 side	Closed
28	WoodDale Road (82)	MITTEL DR	FOSTER AVE	15700	17855	0.408	5 lanes	2.078	35	Minor Arterial	100	13500	7.8%	1	8	19.60		Complete 1 side	Closed
28	WoodDale Road (82)	FOSTER AVE	IL 19 (IRVING PARK RD)	17855	20765	0.551	5-6 lanes	2.856	35/30	Minor Arterial	100	14500	5.6%	2	36	65.32	1	Complete 2 side	Closed
28	WoodDale Road (82)	IL 19 (IRVING PARK RD)	MONTROSE	20765	23155	0.453	4-5 lanes	1.839	30	Minor Arterial	100	12000	4.2%	0	32	70.69		Complete 2 side	Closed
28	WoodDale Road (82)	MONTROSE AVE	ELIZABETH	23155	24815	0.314	2-3 lanes	0.681	30	Minor Arterial	90-100	12000	5.7%	1	10	31.81		Complete 1 side, Part	Open
28	WoodDale Road (82)	ELIZABETH	OAK MEADOWS	24815	27655	0.538	2-3 lanes	1.076	35	Minor Arterial	83-102	10500	2.8%	1	20	37.18		Partial 1 side	Open
28	WoodDale Road (82)	OAK MEADOWS	OAK ST	27655	31940	0.812	2-3 lanes	1.654	40	Minor Arterial	60-90	10500	2.5%	0	16	19.72			
28	WoodDale Road (82)	OAK ST	US 20 (LAKE ST)	31940	33600	0.316		1.507	40	Minor Arterial		10000	2.5%			0.00			
29	Greenbrook Boulevard (32)	COUNTY FARM RD	ARLINGTON RD	40985	44200	0.606	4-5 lanes	2.945	30	Minor Arterial	100-176	18000	4.6%	1	13	21.44		Complete 2 sides	Closed
29	Greenbrook Boulevard (32)	ARLINGTON RD	US 20 (LAKE ST)	44200	45983	0.338	4-5 lanes	1.644	30	Minor Arterial	100	18000	3.1%	1	6	17.78		Complete 2 sides	Closed
29	Stearns Road (69)	W COUNTY LINE	POWIS RD	10000	16440	1.220	4-5 lanes	5.506	45	Minor Arterial	80-120	18000	6.1%		3	2.46		Partial 1 side	Open

County Highway	Street Name*	From	To	FromStn	ToStn	Length (mi)	Design Xsec	Lane-Miles	Speed	Func Class	Right of Way	Average ADT on Segment	Latest Truck Percentages	Signals	Access	Access Density	Structures	Sidewalk	Drainage
29	Stearns Road (69)	POWIS RD	MUNGER RD	16440	20975	0.859	4-6 lanes	3.991	45	Minor Arterial	90-120	20500	9.1%	2	7	8.15	1	Partial 2 sides	Open
29	Stearns Road (69)	MUNGER RD	IL 59	20975	25265	0.812	4-6 lanes	3.943	45/35	Minor Arterial	100-120	21500	8.1%	1	8	9.86		Partial 2 sides	Mixed
29	Stearns Road (69)	IL 59	SYCAMORE	25265	29175	0.741	3-5 lanes	2.613	35	Minor Arterial	90-100	18000	4.3%	1	40	53.95		Complete 2 sides	Closed
29	Stearns Road (69)	SYCAMORE	BARTLETT RD	29175	31645	0.468	3-5 lanes	1.796	35	Minor Arterial	90	18000	4.0%	1	16	34.20		Complete 2 sides	Closed
31	87th Street (5)	WILL COUNTY LINE	WOODWARD AVE	74790	75504	0.134	6 lanes	0.899	40	Minor Arterial	115-140	26000	4.9%	1	2	14.87		Complete 2 sides	Closed
31	87th Street (5)	WOODWARD AVE	LEMONT RD	75504	80000	0.852	5 lanes	3.752	40	Minor Arterial	100-110	18000	5.8%	1	29	34.03		Complete 1 side, Part	Closed
31	Plainfield Road (58)	LEMONT RD	FAIRMOUNT AVE	80000	83425	0.649	3-5 lanes	2.318	40	Minor Arterial	73-120	18000	4.8%	1	24	37.00		Complete 2 sides	Closed
31	Plainfield Road (58)	FAIRMOUNT AVE	MANNING AVE	83425	87200	0.715	3-5 lanes	2.363	40	Minor Arterial	66-100	18000	4.0%	1	20	27.97		Complete 2 sides	Closed
31	Plainfield Road (58)	MANNING AVE	CASS AVE	87200	91690	0.850	4-5 lanes	3.578	40	Minor Arterial	83-100	18000	3.0%	2*	34	39.98		Complete 2 sides	Closed
31	Plainfield Road (58)	CASS AVE	75TH ST	91690	93715	0.384	4-5 lanes	1.574	40	Minor Arterial	100	19500	3.6%	1	12	31.29		Complete 2 sides	Closed
31	Plainfield Road (58)	75TH ST	CLARENDON HILLS RD	93715	97600	0.736	4-5 lanes	2.953	40	Minor Arterial	66-100	22000	5.1%	1	32	43.49		Complete 2 sides	Closed
31	Plainfield Road (58)	CLARENDON HILLS RD	HIGH RD	97600	99110	0.286	4-5 lanes	1.229	40	Minor Arterial	100	20000	4.9%	1	24	83.92		Complete 2 sides	Closed
31	Plainfield Road (58)	HIGH RD	IL 83	99110	100560	0.275	4-5 lanes	1.193	40	Minor Arterial	83-133	22000	4.9%	1	16	58.26		Complete 2 sides	Closed
31	Plainfield Road (58)	IL 83	MADISON ST	100560	103475	0.552	5-7 lanes	2.922	35	Minor Arterial	100-130	23500	5.1%	1	20	36.23		Partial 2 sides	Closed
31	Plainfield Road (58)	MADISON ST	GARFIELD ST	103475	106460	0.565	5 lanes	2.908	40	Minor Arterial	100	24000	4.4%	1	3	5.31		Complete 2 sides	Closed
31	Plainfield Road (58)	GARFIELD ST	COUNTY LINE RD	106460	109307	0.539	4-5 lanes	2.420	40	Minor Arterial	100-120	22000	5.6%	1	13	24.11		Complete 2 sides	Closed
32	Mill Street (51)	FERRY RD/WARRENVILLE RD	SHUMAN BLVD	80000	83580	0.678	4-6 lanes	3.455	40	Minor Arterial	100-130	13000	3.2%	1	2	2.95	1	Partial 2 sides	Closed
32	Mill Street (51)	SHUMAN BLVD	DIEHL RD	83580	84345	0.145	5-6 lanes	0.800	40	Minor Arterial	100	13000	3.2%	1		0.00		Complete 1 side	Closed
32	Mill Street (51)	DIEHL RD	BAUER RD	84345	86823	0.469	4-6 lanes	2.374	40	Minor Arterial	100-125	20000	4.8%	1	4	8.52		Complete 1 side	Closed
32	Mill Street (51)	BAUER RD	US 34 (OGDEN AVE)	86823	89992	0.600	4-6 lanes	2.518	35	Minor Arterial	66-90	18000	4.2%	1	16	26.66		Complete 2 sides	Closed
32	Warrenville Road (77)	RIVER RD	WINFIELD RD	40000	41185	0.224	3-5 lanes	1.007	35	Minor Arterial	71-90	13500	2.6%	1	6	26.73	1	Complete 1 side, Part	Closed
32	Warrenville Road (77)	WINFIELD RD	MILL ST	41185	44500	0.628	4-7 lanes	3.479	35/40	Minor Arterial	100-160	13500	2.8%	1	18	28.67		Complete 1 side, Part	Closed
33	75th Street (4)	US 34 (OGDEN AVE)	IL 59	30000	35205	0.986	4-5 lanes	4.608	50	Principal Arterial	200	18000	4.3%	1	4	4.06		Complete 1 side	Mixed
33	75th Street (4)	IL 59	FORT HILL DRIVE	35205	37850	0.501	5-7 lanes	3.421	50	Principal Arterial	200	36000	7.9%	2	9	17.97		Complete 2 sides	Mixed
33	75th Street (4)	FORT HILL DRIVE	BOOK RD	37850	40510	0.504	4-5 lanes	2.217	50	Principal Arterial	200	38000	3.9%	1	1	1.98		Complete 1 side	Open
33	75th Street (4)	BOOK RD	PLAINFIELD-NAPERVILLE RD	40510	45770	0.996	4-5 lanes	4.347	50	Principal Arterial	200	38000	4.1%	1	6	6.02	1	Partial 1 side	Open
33	75th Street (4)	PLAINFIELD-NAPERVILLE RD	GARTNER RD	45770	48335	0.486	4-6 lanes	2.597	50	Principal Arterial	200	42000	8.4%	1	7	14.41		Complete 2 sides	Open
33	75th Street (4)	GARTNER RD	MODAFF RD	48335	51105	0.525	4-5 lanes	2.271	50	Principal Arterial	200	44000	8.4%	1		0.00	1	Complete 1 side	Open
33	75th Street (4)	MODAFF RD	OLYMPUS DR	51105	53425	0.439	4-5 lanes	2.024	45	Principal Arterial	200	44000	5.6%	1		0.00	1	Complete 1 side	Open
33	75th Street (4)	OLYMPUS DR	WASHINGTON ST	53425	55980	0.488	4-9 lanes	3.107	45	Principal Arterial	200	42000	4.8%	1	2	4.10	2	Complete 1 side	Mixed
33	75th Street (4)	WASHINGTON ST	OXFORD LN	55980	57595	0.302	4-9 lanes	1.955	45	Principal Arterial	200	42000	5.4%		8	26.48	1	Complete 1 side, Part	Mixed
33	75th Street (4)	OXFORD LN	NAPER BLVD	57595	60015	0.458	4-5 lanes	1.967	45	Principal Arterial	200	42000	5.4%	1	16	34.91		NA	Open
33	75th Street (4)	NAPER BLVD	WEHRLI RD	60015	63145	0.593	4-6 lanes	2.744	50	Principal Arterial	200	40000	5.1%	1	14	23.62		Complete 1 side	Open
33	75th Street (4)	WEHRLI RD	RANCHVIEW DR	63145	65567	0.459	4-5 lanes	2.017	50	Principal Arterial	200	36000	4.7%	1	4	8.72		Partial 1 side	Open
33	75th Street (4)	RANCHVIEW DR	GREENE RD	65567	71110	1.050	4-5 lanes	4.634	50	Principal Arterial	200	36000	4.1%	1	8	7.62	1	Partial 1 side	Open
33	75th Street (4)	GREENE RD	W BR DUPAGE BRIDGE	71110	72433	0.251	4-5 lanes	1.105	50	Principal Arterial	200	36000	6.9%		1	3.99		NA	Open
33	75th Street (4)	W BR DUPAGE BRIDGE	E BR DUPAGE BRIDGE	72433	72550	0.022	4-5 lanes	0.119	50	Principal Arterial	200	36000	6.9%			0.00	1	NA	Closed
33	75th Street (4)	E BR DUPAGE BRIDGE	IL 53	72550	73990	0.273	4-5 lanes	1.180	50	Principal Arterial	200	36000	6.9%	1	3	11.00		NA	Mixed
33	75th Street (4)	IL 53	WOODRIDGE DR	73990	77190	0.606	4-6 lanes	2.805	45	Principal Arterial	200	36000	4.5%	1	3	4.95		NA	Closed
33	75th Street (4)	WOODRIDGE DR	JANES AVE	77190	80315	0.592	4-7 lanes	2.925	45	Principal Arterial	200	36000	4.5%	1	5	8.45		Complete 2 sides	Closed
33	75th Street (4)	JANES AVE	I-355 SB RAMPS	80315	81605	0.244	7-9 lanes	2.003	40	Principal Arterial	200	46000	4.8%	1	7	28.65		Complete 2 sides	Closed
33	75th Street (4)	I-355 SB RAMPS	I-355 NB RAMPS	81605	82015	0.078	9 lanes	0.784	40	Principal Arterial	200	46000	4.2%	1		0.00	1	Complete 2 sides	Closed
33	75th Street (4)	I-355 NB RAMPS	WOODWARD AVE	82015	82960	0.179	9 lanes	1.696	40	Principal Arterial	200	42000	5.2%	1	2	11.17		Complete 2 sides	Closed
33	75th Street (4)	WOODWARD AVE	DUNHAM	82960	86645	0.698	7-9 lanes	5.603	40	Principal Arterial	200	40000	4.4%	1	13	18.63		Complete 2 sides	Closed
33	75th Street (4)	DUNHAM RD	LEMONT RD	86645	87975	0.252	6-9 lanes	1.973	40	Principal Arterial	200	36000	5.5%	1	4	15.88		Complete 2 sides	Closed
33	75th Street (4)	LEMONT RD	LYMAN AVE	87975	90610	0.499	5-9 lanes	3.301	40	Principal Arterial	200	33500	5.8%	1	14	28.05		Complete 2 sides	Mixed
33	75th Street (4)	LYMAN AVE	FAIRMONT AVE	90610	91515	0.171	5 lanes	0.848	45	Principal Arterial	200	33500	5.1%	1	1	5.83		Complete 2 sides	Open
33	75th Street (4)	FAIRMONT AVE	FAIRVIEW AVE	91515	93275	0.333	4-5 lanes	1.606	45	Principal Arterial	200	36000	7.2%	1	7	21.00		Complete 2 sides	Mixed
33	75th Street (4)	FAIRVIEW AVE	EXNER RD/WILLIAMS ST	93275	95930	0.503	4-5 lanes	2.167	45	Principal Arterial	200	31500	4.6%	1	3	5.97		Complete 2 sides	Mixed
33	75th Street (4)	EXNER RD/WILLIAMS ST	ADAMS ST	95930	97435	0.285	4-6 lanes	1.311	45	Principal Arterial	200	31500	4.0%	1	6	21.05		Complete 2 sides	Closed
33	75th Street (4)	ADAMS ST	CASS AVE	97435	98580	0.217	6-9 lanes	1.120	45	Principal Arterial	200	31500	5.0%	1	6	27.67		Complete 2 sides	Closed
33	75th Street (4)	CASS AVE	PLAINFIELD RD	98580	100420	0.348	6-9 lanes	1.773	45	Principal Arterial	200	24000	5.1%	1	10	28.70		Complete 2 sides	Closed
33	75th Street (4)	PLAINFIELD RD	CLARENDON HILLS RD	100420	103875	0.654	4-6 lanes	2.961	45	Principal Arterial	200	18500	4.0%	1	18	27.51		Complete 2 sides	Mixed
33	75th Street (4)	CLARENDON HILLS RD	IL 83	103875	106545	0.506	4-6 lanes	2.271	45	Principal Arterial	200	18500	4.3%	1	20	39.55		Complete 2 sides	Mixed
34	31st Street (1)	HIGHLAND AVE	HIGHLAND PKWY	80000	81415	0.268	5-7 lanes	1.831	40	Minor Arterial	100	22000	4.0%	2	4	14.93	1	Complete 1 side	Closed
34	31st Street (1)	HIGHLAND PKWY	MEYERS RD	81415	85315	0.739	4-5 lanes	3.832	40/45	Minor Arterial	100	19500	4.0%	2	14	18.95		Partial 2 sides	Closed
34	31st Street (1)	MEYERS RD	MIDWEST RD	85315	90625	1.006	4-5 lanes	4.443	45	Minor Arterial	80-100	24000	3.9%	1	12	11.93	1	Complete 1 side	Closed
34	31st Street (1)	MIDWEST RD	CONCORD PL	90625	92080	0.276	4-5 lanes	1.304	45	Minor Arterial	90-100	26000	3.6%	1	1	3.63		Complete 1 side	Mixed
34	31st Street (1)	CONCORD PL	REGENT DR	92080	94185	0.399	4-5 lanes	1.904	45	Minor Arterial	100-140	28500	3.6%	1	1	2.51		Complete 1 side	Open
34	31st Street (1)	REGENT DR	IL 83 SB RAMPS	94185	95055	0.165	4-6 lanes	0.920	45	Minor Arterial	Variable	28500	3.6%	1	0	0.00	0	Complete 1 side	Open
34	31st Street (1)	IL 83 SB RAMPS	IL 83 NB RAMPS	95055	95370	0.060	6 lanes	0.259	45	Minor Arterial	Variable	28000	4.0%	1	0	0.00	2	Complete 1 side	Closed
34	31st Street (1)	IL 83 NB RAMPS	JORIE BLVD	95370	96920	0.294	5-6 lanes	1.832	45	Minor Arterial	145-230	30000	4.0%	1	0	0.00		Complete 1 side	Closed
34	31st Street (1)	JORIE BLVD	SPRING RD	96920	97810	0.169	4-5 lanes	0.834	45	Minor Arterial	80-130	26000	2.8%		2	11.87		Complete 1 side	Closed
34	31st Street (1)	SPRING RD	OB POLO CLUB RD	97810	99900	0.396	4-5 lanes	1.756	45	Minor Arterial	96-124	26000	2.8%		5	12.63	1	Complete 1 side	Closed
34	31st Street (1)	OB POLO CLUB RD	YORK RD	99900	102405	0.474	4-5 lanes	2.215	45	Minor Arterial	80-100	26000	2.8%	1	7	14.75		Complete 1 side	Closed

County Highway	Street Name*	From	To	FromStn	ToStn	Length (mi)	Design Xsec	Lane-Miles	Speed	Func Class	Right of Way	Average ADT on Segment	Latest Truck Percentages	Signals	Access	Access Density	Structures	Sidewalk	Drainage
34	31st Street (1)	YORK RD	COUNTY LINE	102405	105000	0.491	4-5 lanes	2.147	45	Minor Arterial	104-130	21000	3.4%		15	30.52		Partial 1 side	Closed
35	55th Street (2)	DUNHAM RD	MAIN ST. DG	83230	85885	0.503	4 lanes	1.777	35	Minor Arterial	66-130	14000	4.9%	1	30	59.66		Complete 2 sides	Closed
35	55th Street (2)	MAIN ST. DG	FAIRVIEW AVE	85885	89865	0.754	4 lanes	2.673	35	Minor Arterial	66-75	16500	5.4%	1	41	54.39		Complete 2 sides	Closed
35	55th Street (2)	FAIRVIEW AVE	WILLIAMS ST	89865	92500	0.499	4 lanes	1.750	35	Minor Arterial	83	16500	4.4%		51	102.19		Complete 1 side, Part	Closed
35	55th Street (2)	WILLIAMS ST	CASS AVE	92500	95145	0.501	4-5 lanes	1.804	35	Minor Arterial	66-83	16500	4.4%	1	46	91.83		Complete 2 side	Closed
35	55th Street (2)	CASS AVE	CLARENDON HILLS RD	95145	100435	1.002	4-5 lanes	3.628	35	Minor Arterial	66-83	21000	4.7%	1	65	64.88		Complete 2 sides	Closed
35	55th Street (2)	CLARENDON HILLS RD	HOLMES AVE	100435	101770	0.253	5 lanes	1.148	35	Minor Arterial	73-124	23000	6.8%	1	10	39.55		Complete 2 sides	Closed
35	55th Street (2)	HOLMES AVE	IL 83 WEST RAMPS	101770	102705	0.177	5 lanes	0.860	35	Minor Arterial	124-148	29000	6.9%	1	1	5.65		Complete 1 side	Closed
35	55th Street (2)	IL 83 WEST RAMPS	IL 83 EAST RAMPS	102705	102918	0.040	5 lanes	0.186	35	Minor Arterial	Variable	29000	6.4%	1	1	24.79	1	Complete 1 side	Closed
35	55th Street (2)	IL 83 EAST RAMPS	MADISON ST	102918	105710	0.529	4-6 lanes	2.420	35	Minor Arterial	83-160	27500	6.4%	1	21	39.71		Complete 1 side	Closed
35	55th Street (2)	MADISON ST	GRANT ST	105710	106950	0.235	5 lanes	1.079	35	Minor Arterial	66	23000	5.8%	1	2	8.52		Complete 2 sides	Closed
35	55th Street (2)	GRANT ST	GARFIELD AVE	106950	108350	0.265	4-5 lanes	1.116	35	Minor Arterial	66-116	22000	4.5%	1	8	30.17		Complete 1 side, Part	Closed
35	55th Street (2)	GARFIELD AVE	COUNTY LINE RD	108350	110985	0.499	4-5 lanes	1.995	35	Minor Arterial	100	22000	5.8%	1	27	54.10		NA	Closed
36	Schmale Road (67)	ARMY TRAIL RD	LIES RD	30000	33710	0.703	4-5 lanes	3.563	35	Minor Arterial	100-126	26500	9.7%	3	9	12.81		Complete 2 sides	Closed
36	Schmale Road (67)	LIES RD	FULLERTON AVE	33710	38020	0.816	5-6 lanes	4.271	35	Minor Arterial	66-123	25500	6.5%	1	30	36.75		Complete 2 sides	Closed
36	Schmale Road (67)	FULLERTON AVE	IL 64 (NORTH AVE)	38020	43415	1.022	5-6 lanes	5.169	40	Minor Arterial	100-123	24500	9.3%	1	23	22.51		Partial 2 sides	Closed
36	Schmale Road (67)	IL 64 (NORTH AVE)	ST. CHARLES RD	43415	45125	0.324	5-6 lanes	1.617	35	Minor Arterial	100-137	23500	5.6%	1	9	27.79	1	Partial 2 sides	Closed
36	Schmale Road (67)	ST. CHARLES RD	GUNDERSON	45125	46210	0.205	5 lanes	1.018	35	Minor Arterial	100	23500	5.5%	1	11	53.53		Complete 2 sides	Closed
36	Schmale Road (67)	GUNDERSON	THORNHILL	46210	47405	0.226	5 lanes	1.155	35	Minor Arterial	100	22500	5.5%	1	5	22.09		Complete 2 sides	Closed
36	Schmale Road (67)	THORNHILL	GENEVA RD	47405	48926	0.288	5-6 lanes	1.472	35	Minor Arterial	83-100	22000	5.5%	2	13	45.13		Complete 2 sides	Closed
38	63rd Street (3)	HOBSON RD	I-355 SB RAMPS	74605	75130	0.099	5 lanes	0.507	40	Minor Arterial	Variable	30000	4.0%	1	1	10.06		None	Closed
38	63rd Street (3)	I-355 SB RAMPS	I-355 NB RAMP	75130	75665	0.101	6 lanes	0.659	40	Minor Arterial	Variable	30000	4.0%	1	2	19.74	1	Partial 2 sides	Closed
38	63rd Street (3)	I-355 NB RAMPS	LEONARD	75665	76860	0.226	4-5 lanes	1.142	40	Minor Arterial	100-114	28000	4.7%	1	6	26.51		Partial 2 sides	Closed
38	63rd Street (3)	LEONARD	BELMONT RD	76860	77845	0.187	5 lanes	0.989	40	Minor Arterial	100	30000	4.1%	1	7	37.52		Complete 2 sides	Closed
38	63rd Street (3)	BELMONT AVE	WOODWARD AVE	77845	79175	0.252	5-6 lanes	1.485	40	Minor Arterial	83-103	33500	7.3%	1	14	55.58		Complete 2 sides	Closed
38	63rd Street (3)	WOODWARD AVE	DUNHAM RD	79175	82900	0.705	4-5 lanes	3.334	40	Minor Arterial	100	28000	4.8%	1	23	32.60		Complete 2 sides	Closed
38	63rd Street (3)	DUNHAM RD	MAIN ST. DG	82900	85520	0.496	4-5 lanes	2.137	40	Minor Arterial	100	27000	3.9%	1	22	44.34		Complete 2 sides	Closed
38	63rd Street (3)	MAIN ST. DG	FAIRVIEW AVE	85520	89505	0.755	4-5 lanes	3.179	40	Minor Arterial	83-100	27000	4.9%	1	47	62.27		Complete 2 sides	Closed
38	63rd Street (3)	FAIRVIEW AVE	WILLIAMS ST	89505	92150	0.501	4-5 lanes	2.108	40	Minor Arterial	100	25500	3.5%	1	11	21.96	2	Complete 1 side, Part	Mixed
38	63rd Street (3)	WILLIAMS ST	CASS AVE	92150	94800	0.502	4-5 lanes	2.148	40	Minor Arterial	100	27000	3.7%	2	28	55.79		Complete 2 sides	Mixed
38	63rd Street (3)	CASS AVE	CLARENDON HILLS RD	94800	100100	1.004	4-5 lanes	4.260	40	Minor Arterial	100	25500	4.3%	2	44	43.83	1	Partial 2 sides	Mixed
38	63rd Street (3)	CLARENDON HILLS RD	HINSDALE COMMONS	100100	101790	0.320	5-6 lanes	1.753	40	Minor Arterial	100-142	28500	NA	1	6	18.75		Complete 2 sides	Closed
38	63rd Street (3)	HINSDALE COMMONS	IL 83	101790	102430	0.121	6-7 lanes	0.862	40	Minor Arterial	142-152	30000	NA	1	0	0.00	1	Complete 1 side	Closed
38	63rd Street (3)	IL 83	MADISON ST	102430	105378	0.558	3-6 lanes	2.341	35	Minor Arterial	100-160	12000	6.8%	1	14	25.07		Complete 1 side	Closed
40	College Road (17)	MAPLE AVE	ABBEYWOOD DR	89583	93305	0.705	2-5 lanes	2.381	40	Minor Arterial	83-100	19000	4.5%	2	7	9.93		Complete 1 side, Part	Open
40	College Road (17)	ABBEYWOOD DR	GREEN TRAILS DR	93305	95620	0.438	2-5 lanes	1.453	40	Minor Arterial	80	13500	6.7%	1	3	6.84		Partial 2 sides	Mixed
40	College Road (17)	GREEN TRAILS DR	SUN VALLEY RD	95620	98065	0.463	2-5 lanes	1.305	40	Minor Arterial	80-100	13500	5.7%	0	4	8.64		Complete 1 side, Part	Mixed
40	College Road (17)	SUN VALLEY RD	HOBSON RD	98065	99945	0.356	4-5 lanes	1.139	40	Minor Arterial	83-100	12500	5.0%	1	1	2.81		Partial 2 sides	Mixed
40	Wehrli Road (79)	HOBSON RD	75TH ST	99945	102330	0.452	4-5 lanes	1.918	40	Minor Arterial	83-100	12500	4.3%	1	11	24.35		Partial 2 sides	Closed
40	Yackley Avenue (84)	WARRENVILLE RD	US 34 (OGDEN AVE)	80000	83135	0.594	4-5 lanes	2.302	40	Minor Arterial	100	15500	4.0%	1	42	70.74	1	Complete 2 sides	Closed
40	Yackley Avenue (84)	US 34 (OGDEN AVE)	BURLINGTON AVE	83135	84550	0.268	5 lanes	1.235	40	Minor Arterial	100	19500	3.3%	0	18	67.17		Complete 2 sides	Closed
40	Yackley Avenue (84)	BURLINGTON AVE	OHIO ST	84550	86260	0.324	5 lanes	1.600	40	Minor Arterial	Variable	19500	3.3%	1	2	6.18	1	Complete 1 side	Closed
40	Yackley Avenue (84)	OHIO ST	MAPLE AVE	86260	89583	0.629	4-5 lanes	3.018	40	Minor Arterial	100	19500	3.4%	1	6	9.53		Complete 2 sides	Closed
43	County Farm Road (18)	NORTH COUNTY LINE	ONTARIOVILLE RD	10000	10800	0.152	5-6 lanes	0.881	35	Principal Arterial	110-172	19500	5.9%	1	0	0.00	1	Complete 1 side	Closed
43	County Farm Road (18)	ONTARIOVILLE RD	STEARNS RD	10800	15535	0.897	4-6 lanes	4.303	35/40	Principal Arterial	73-110	21500	5.2%	1	10	11.15		Partial 2 sides	Closed
43	County Farm Road (18)	STEARNS RD	SCHICK RD	15535	23690	1.545	4-5 lanes	7.239	40	Principal Arterial	66-208	26500	5.3%	1	22	14.24	2	Partial 2 sides	Closed
43	County Farm Road (18)	SCHICK RD	ARMY TRAIL RD	23690	27770	0.773	4-6 lanes	3.905	40	Principal Arterial	100	27500	6.9%	2	14	18.12	1	Complete 2 sides	Closed
43	County Farm Road (18)	ARMY TRAIL RD	KELLY DR	27770	28720	0.180	5-6 lanes	0.979	40	Principal Arterial	100	26500	3.6%	1	5	27.79		Complete 2 sides	Closed
43	County Farm Road (18)	KELLY DR	WOODHILL DR	28720	30220	0.284	5 lanes	1.450	40	Principal Arterial	100	26500	3.6%		2	7.04		Complete 2 sides	Closed
43	County Farm Road (18)	WOODHILL DR	LIES RD	30220	31650	0.271	5 lanes	1.411	40	Principal Arterial	100	27500	3.6%	1	1	3.69		Complete 2 sides	Closed
43	County Farm Road (18)	LIES RD	BIRCHBARK TR	31650	34335	0.509	4-5 lanes	2.202	40	Principal Arterial	100	24500	3.1%	1	2	3.93		Complete 2 sides	Closed
43	County Farm Road (18)	BIRCHBARK TR	IL 64 (NORTH AVE)	34335	39755	1.027	4-5 lanes	4.637	40	Principal Arterial	83-150	23500	3.0%	1	11	10.72		Partial 2 sides	Closed
43	County Farm Road (18)	IL 64 (NORTH AVE)	ST. CHARLES RD	39755	40830	0.204	5 lanes	1.014	45	Principal Arterial	83-93	25500	4.9%	1	7	34.38		None	Closed
43	County Farm Road (18)	ST. CHARLES RD	HAWTHORNE LN	40830	42300	0.278	5 lanes	1.407	45	Principal Arterial	100-116	26500	6.6%	0	6	21.55		None	Closed
43	County Farm Road (18)	HAWTHORNE LN	GENEVA RD	42300	46925	0.876	4-5 lanes	3.905	40	Principal Arterial	66-115	27500	6.6%	1	21	23.97	1	Partial 2 sides	Closed
43	County Farm Road (18)	GENEVA RD	JEWELL RD	46925	52275	1.013	4-5 lanes	4.265	40	Principal Arterial	66-115	25500	3.4%	1	38	37.50		Partial 2 sides	Closed
43	County Farm Road (18)	JEWELL RD	NORTH COMPLEX DR	52275	54445	0.411	4-5 lanes	1.981	40	Principal Arterial	73-110	21500	4.0%	1	9	21.90	1	Complete 2 sides	Closed
43	County Farm Road (18)	NORTH COMPLEX DR	COUNTY COMPLEX MAIN DR	54445	55250	0.152	5-6 lanes	0.805	35	Principal Arterial	110	33500	4.7%	1	1	6.56		Complete 2 sides	Closed
43	County Farm Road (18)	COUNTY COMPLEX MAIN DR	MANCHESTER RD	55250	56005	0.143	5-6 lanes	0.742	35	Principal Arterial	110	34500	5.3%	1	1	6.99		Complete 2 sides	Closed
43	County Farm Road (18)	MANCHESTER RD	WILLIAMS ST	56005	57665	0.314	5-6 lanes	1.543	35	Principal Arterial	66-120	34500	5.1%	1	12	38.17		Complete 1 side, Part	Closed
43	County Farm Road (18)	WILLIAMS ST	IL 38 (ROOSEVELT RD)	57665	58337	0.127	5-6 lanes	0.716	35	Principal Arterial	86-103	34500	5.1%	1	2	15.71		Complete 2 sides	Closed
50	Schick Road (66)	COUNTY FARM RD	MALLARD LN	50000	55955	1.128	4-6 lanes	5.523	45	Minor Arterial	100-132	22500	3.6%	1	8	7.09		Partial 2 sides	Mixed
50	Schick Road (66)	MALLARD LN	GARY AVE	55955	58086	0.404	5-6 lanes	2.074	45	Minor Arterial	100-110	24500	3.6%	2	6	14.87		Complete 1 side, Part	Mixed
51	Herrick Road (34)	IL 56 (BUTTERFIELD RD)	GALUSHA	70000	74380	0.830	2-4 lanes	1.978	40	Minor Arterial	66-100	10500	5.9%	1	12	14.47		None	Mixed
51	Herrick Road (34)	GALUSHA	WARRENVILLE RD	74380	77140	0.523	2-3 lanes	1.463	40	Minor Arterial	66-83	10500	5.9%	1	5	9.57		Partial 1 side	Mixed

County Highway	Street Name*	From	To	FromStn	ToStn	Length (mi)	Design Xsec	Lane-Miles	Speed	Func Class	Right of Way	Average ADT on Segment	Latest Truck Percentages	Signals	Access	Access Density	Structures	Sidewalk	Drainage
52	Cross Street (20)	WARRENVILLE RD	US 34 (OGDEN AVE)	80000	80863	0.163	3 lanes	0.491	30	Major Collector	66	7000	3.6%	1	5	30.59		Partial 1 side	Closed
53	Diehl Road (22)	RAYMOND DR	DAVIS PKWY/AMC DR	40000	45345	1.012	4-6 lanes	4.767	40	Minor Arterial	95-160	27500	3.5%	2	1	0.99	2	Partial 2 side	Closed
53	Diehl Road (22)	DAVIS PKWY/AMC DR	WINFIELD RD	45345	46782	0.272	4-7 lanes	1.611	40	Minor Arterial	120	32500	3.5%	1	1	3.67		Complete 2 side	Closed
53	Diehl Road (22)	WINFIELD RD	MILL ST	46782	50224	0.652	4-7 lanes	3.718	40	Minor Arterial	120	27500	3.1%	2	6	9.20		Partial 2 side	Closed
54	Swift Road (73)	COLLINS AVE	IL 64 (NORTH AVE)	42000	47925	1.122	3-4 lanes	3.620	35	Minor Arterial	66-83	12500	2.8%	2	53	47.23	1	Partial 2 side	Closed
54	Swift Road (73)	IL 64 (NORTH AVE)	ST. CHARLES RD	47925	53470	1.050	2-4 lanes	2.243	40	Minor Arterial	66-73	8500	7.4%	1	26	24.76		Partial 1 side	Mixed
56	Woodward Avenue (83)	75TH ST	83RD ST	100000	105306	1.005	4-6 lanes	4.695	35	Minor Arterial	100	12500	6.7%	1	22	21.89		Complete 2 sides	Closed
56	Woodward Avenue (83)	83RD ST	87TH ST	105306	108636	0.631	4-6 lanes	3.041	40	Minor Arterial	83-120	12500	2.6%	1	7	11.10		Complete 1 side, Part	Closed
59	Freedom Drive (88)	WARRENVILLE RD	I-88	79100	80998	0.359		2.659		Minor Arterial	Variable	15500	4.0%	2	3	8.35	1	Complete 1 side	Closed

** North Thorndale and South Thorndale, County highways 60 and 61 are yet to be fully inventoried*

APPENDIX B-2

LIST OF DEFICIENT INTERSECTIONS

Current Arterial Network Deficiencies
(by Level of Service)

DuPage County Intersection Deficiencies

					Deficient Movements					
	Road	Intersecting Street	Jurisdiction	Fee District	NB	SB	EB	WB	Programmed or Planned Improvement	Practicable Improvement?
1	31st Street	IL 83 SB Ramps	DCDOT	6			F	F	X	YES
2	55th Street	Cass Avenue	DCDOT	9	E	F				No
3	63rd Street	Cass Avenue	DCDOT	9	F			F		YES
4	63rd Street	Belmont Road	DCDOT	8			F	F		YES
5	75th Street	Cass Avenue	DCDOT	9	F	E				NO
6	75th Street	Janes Avenue	DCDOT	8			E	F		YES
7	75th Street	Lemont Road	DCDOT	9	F	F				NO
8	75th Street	Plainfield Road	DCDOT	9		F	F			NO
9	75th Street	Plainfield-Naperville Road	DCDOT	7	F	F		F		YES
10	75th Street	Woodward Avenue	DCDOT	8, 9		F	F			NO
11	Army Trail Road	Bloomingdale Road	DCDOT	2	F	E				NO
12	Army Trail Road	Gary Avenue	DCDOT	2	F	F		F		YES
13	Army Trail Road	Knollwood	DCDOT	2			E	F		YES
14	Army Trail Road	Schmale Road	DCDOT	2	F		F			YES
15	Army Trail Road	Swift Road	DCDOT	2	F		E			NO
16	Bloomingdale Road	Schick Road	DCDOT	2	F	F				
17	Cass Avenue	Plainfield Road	DCDOT	9			E	E		YES
18	Eola Road	North Aurora Road	DCDOT	7	F	F	F	F		YES
19	Gary Avenue	Schick Road	DCDOT	2	F		F			YES
20	Grand Avenue	York St	DCDOT	3			E	F	X	YES
21	Highland Avenue	31st Street	DCDOT	6		F		F		NO
22	IL 56/Butterfield Road	Highland Avenue	DCDOT	6	F	F				NO
23	Naperville Road	Diehl Road	DCDOT	8	F	F	E		X	YES
24	Naperville Road	Warrenville Road	DCDOT	8	F	E	E			NO
25	Winfield Road	Ferry Road	DCDOT	7		F	F	F		YES

Current Arterial Network Deficiencies
(by Level of Service)

	Peer Agency Deficient Intersections				Deficient Movements					
	Road	Intersecting Street	Jurisdiction	Fee District	NB	SB	EB	WB	Programmed or Planned Improvement	Practicable Improvement?
1	22nd Street	Spring Road	IDOT	6			F	E		YES
2	22nd Street	York Road	IDOT	6	F	F	F	E		YES
3	E New York Street	Eola Road	MUNI	7		E	F	F		
4	IL 19/Irving Park Road	York Road	IDOT	3	F	F	F			NA
5	IL 38/Roosevelt Road	Naperville Road	IDOT	5	F		F		X	YES
6	IL 38/Roosevelt Road	Park Blvd	IDOT	5			F	F		YES
7	IL 38/Roosevelt Road	Summit Avenue	IDOT	6	E		F			YES
8	IL 53	75th Street	IDOT	8		E	F	E		YES
9	IL 53	Army Trail Road	IDOT	2,3	F	E				
10	IL 53	Hobson Road	IDOT	8			F	E		YES
11	IL 53	IL 56/Butterfield Road	IDOT	5	E	F			X	YES
12	IL 53	Maple Avenue	IDOT	8		F	F	F		YES
13	IL 56/Butterfield Road	Finley Road	IDOT	6	E			F		YES
14	IL 56/Butterfield Road	Meyers Road	IDOT	6	F	F		F		YES
15	IL 56/Butterfield Road	Park Blvd	IDOT	5		F	E			YES
16	IL 59	75th Street	IDOT	7	F	E		E		YES
17	IL 59	Diehl Road	IDOT	7	E		E	E		NO
18	IL 59	E New York Street	IDOT	7		F	F			NO
19	IL 59	IL 56/Butterfield Road	IDOT	4	E	F				YES
20	IL 59	North Aurora Road	IDOT	7		F	F			NO
21	IL 59	US 34/Ogden Avenue	IDOT	7	F	F	F	F		NO
22	IL 59	EB I-88 Ramps	IDOT	7	F	F				NO
23	IL 64/North Avenue	Addison Road	IDOT	3, 6	E		E	F		YES
24	IL 64/North Avenue	Bloomingdale Road	IDOT	2, 5		F	E			YES
25	IL 64/North Avenue	IL 53/Rohlwing Road	IDOT	2, 3, 5, 6		F	F	E		YES
26	IL 64/North Avenue	Villa Avenue	IDOT	3, 6		F		F		YES
27	IL 83	22nd Street	IDOT	6		F	F	F		NO
28	IL 83	75th Street	IDOT	9	E	F	E			YES
29	IL 83	IL 64/North Avenue	IDOT	3, 6	F	E	F	F		NO
30	IL 83	St. Charles Road	IDOT	6	E	E	F	F		YES
31	Naper Blvd	Hobson Road	MUNI	8	F		E			YES
32	US 20/Lake Street	Barrington Road	IDOT	NA	F		F			NO
33	US 20/Lake Street	Gary Avenue	IDOT	2		E		F	X	YES
34	US 20/Lake Street	IL 53/Rohlwing Road	IDOT	2,3		E	F			YES
35	US 34/Ogden Avenue	Aurora Avenue	IDOT	7	F	F	F	F		YES
36	US 34/Ogden Avenue	Eola Road	IDOT	7	E	F				YES
37	US 34/Ogden Avenue	Finley/Belmont Road	IDOT	8	E	F	E		X	YES
38	US 34/Ogden Avenue	Main Street, DG	IDOT	9	F	F	F	F		YES
39	US 34/Ogden Avenue	Naper Boulevard	IDOT	8	F	F	F			YES
40	US 34/Ogden Avenue	North Aurora Road	IDOT	7	E	F	E			YES
41	US 34/Ogden Avenue	Rickert Drive	IDOT	7	F			F		YES
42	US 34/Ogden Avenue	Washington Street	IDOT	7, 8		F		E		YES
43	US 34/Ogden Avenue	York Road	IDOT	9	F	E	E			YES
44	Main Street, Downers Grove	BNSF RR	MUNI	9	F	F				NO
45	Cass Avenue	BNSF RR	MUNI	9	F	F				NO
46	Eola Road	E New York Street	MUNI	7		E	F	F		YES
47	Washington Street	Benton to Aurora Ave	MUNI	7	F	F				NO

DuPage County highway

APPENDIX C-1

TRAFFIC MODEL TECHNICAL MEMO

Table of Contents

Figures

Tables

Appendices

Appendix A – List of Truck Prohibited Routes

Appendix B – List of network link attributes

Appendix C – "2015-2025-2040 Land Use Assumptions" report

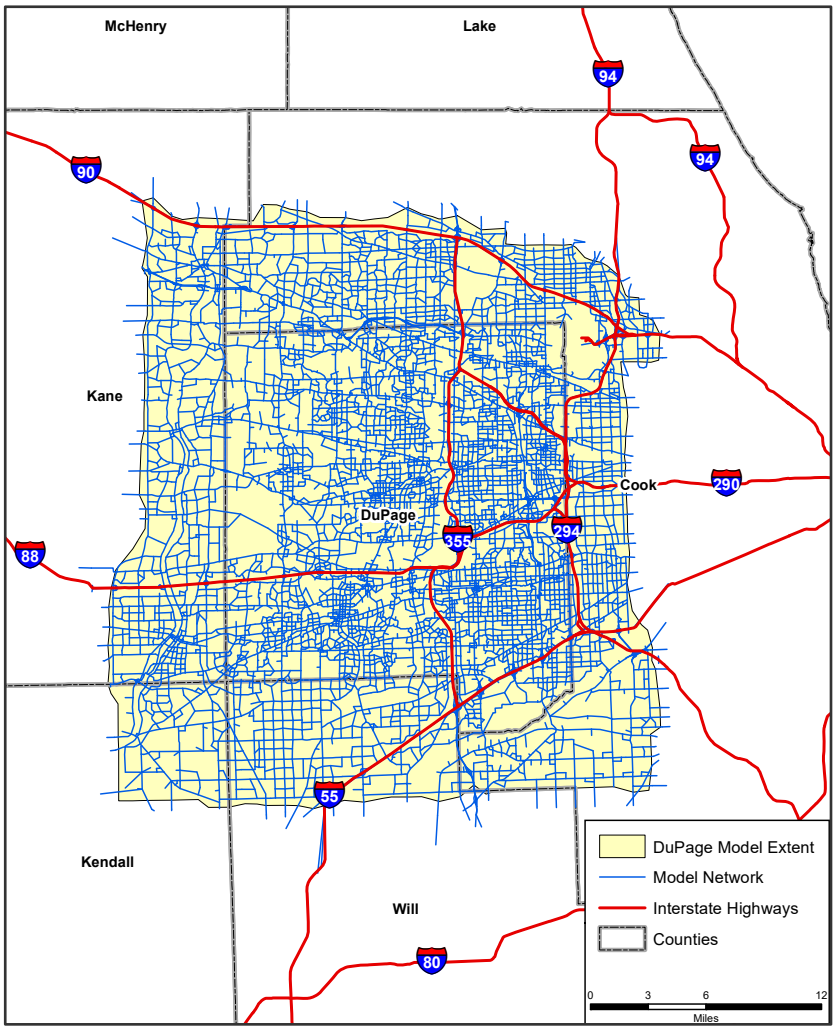
Part 1 – Introduction

The purpose of this technical memorandum is to describe how the DuPage County travel demand model was developed by CDM Smith. This model was used to test various future year transportation scenarios in DuPage County. The outputs from this travel demand model were used in the 2018 DuPage County Long Range Transportation Plan.

1.1 Model Purpose and Development Approach

The current DuPage County travel demand model ("2018 model") was developed by updating the 2008 model, using the TransCAD software. The model update was completed collaboratively by DuPage County and CDM Smith staff. The model was calibrated and validated to Year 2015 traffic counts from IDOT and DuPage CDM Smith also developed two future-year models for 2025 and 2040. The geographic area covered by the travel demand model is shown in Figure 1.

Figure 1 – DuPage County Model Area



The DuPage County 2018 Model contains both passenger car and truck models. The updated model introduced two new trip purposes (Home-Based School and Home-Based Shopping) and the trip rates were based on new survey data. The model also includes a validated PM peak period, and an intersection delay component. Finally, the model contains an automated TransCAD GISDK batch program module with a Graphical User Interface (GUI). This GUI allows the user to easily run batches of scenarios. Regional trips from the CMAP model were integrated with the DuPage Travel Demand Model using subarea matrix processing. The model update efforts have yielded predictive travel demand models for study years 2015, 2025 and 2040 that will be used for planning purposes within the county.

Figure 2 shows that DuPage County and the entire DuPage model extent lies within the CMAP travel model study boundaries. A customized model was developed for DuPage County with the intent of supplementing, not replacing the regional MPO model. Each DuPage model component serves the overall goal of using DuPage County detail and scale to obtain a locally consistent traffic validation. The overall model approach is to replicate local DuPage County traffic, both daily and PM, improve the existing model by making model improvements in a step-wise fashion, and find and use the most recent data. The following specific enhancements were made in support of the model philosophy:

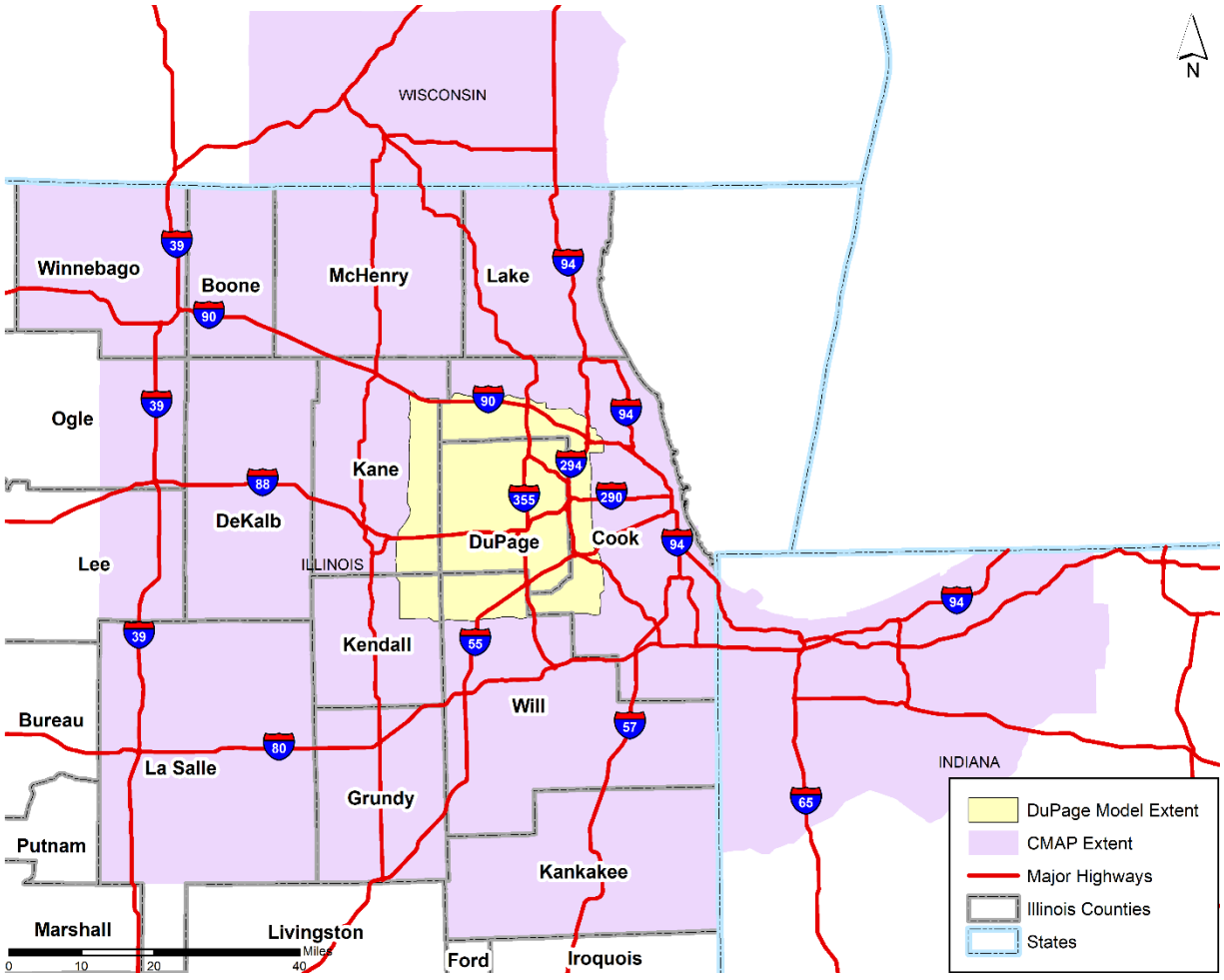
Private real estate data was used in place of the traditional employment information in the zones. This data was also be used in an innovative fashion to include vacancy rates by real estate category.

The Traffic Analysis Zone (TAZ) system for DuPage County is constructed with a very fine level of detail, reflecting county-level, not regional-level, land use. The buffer layer is built using a "telescoping" zone size evolution, with the finest detail within DuPage County.

The highway network for DuPage County is constructed with a level of detail corresponding to the TAZ layer. County roads are well-represented; toll and interstate roadways, ramps, and interchanges are conflated to reflect accurate geometrics to assist analysis in DuPage County. Centroid connectors are constructed using digital aerial data to reflect accurate access/egress at each TAZ.

The CMAP travel model trip tables which reflect a wealth of time of day, trip purpose, vehicle type, and external traffic flow information, are integrated using a matrix subarea processing approach to ensure that the Chicago metropolitan area traffic is included in the DuPage effort.

Figure 2 – DuPage versus CMAP Model Areas



1.2 Memo Outline

This memo contains the following sections:

1.	Section 1.3	Traffic Analysis Zones (TAZs)
2.	Section 1.4	Highway Network
3.	Section 1.5	Passenger Car Trip Generation, *including socioeconomic forecasts*
4.	Section 1.6	Passenger Car Trip Distribution
5.	Section 1.7	Truck Traffic Model
6.	Section 1.8	External Trip Model
7.	Section 1.9	O'Hare Airport Model
8.	Section 1.10	PM Peak-Hour Model
9.	Section 1.11	Traffic Assignment Methodology
10.	Section 1.12	Base-Year Model Calibration and Validation

1.3 Traffic Analysis Zone System

Table 1 lists the number of zones by type contained in the current DuPage County model. It contains 2,012 zones, which consists of: 1,351 are internal Traffic Analysis Zones (TAZs), including the Metra and O'Hare special-uses zones, 539 "buffer" TAZs, and 122 external zones. Figure 3 shows the TAZ system for the DuPage County model. The internal zones are shown in green, and cover the entirety of DuPage County. The "buffer" zones surround the perimeter of DuPage County, and are shown in yellow. The purpose of the "buffer" zones is to allow vehicles in adjacent counties to reroute in response to transportation projects or congestion within DuPage County.[1] Some TAZ boundaries from the 2008 model were updated for the current model. The types of zonal changes were: zone addition, zone splitting, or zone blending. There was an emphasis on adding zones where development has taken place in recent years. For example, an important recent development is the opening of the IL 390; new zones were created adjacent to that route. The following subsections describe changes made to specific categories of TAZs: Internal, Buffer, Metra Stations and O'Hare Airport.

[1] If an external zone were located directly on the DuPage County boundary, the vehicles originating from or destined to that external zone would be forced to utilize the internal link to which the external zone connects. For example, if the I-88 west external station were located at the western DuPage County boundary, then all vehicles to/from that external station would be forced to use the adjacent I-88 links. The buffer zonal area allows vehicles to route around I-88 in response to traffic congestion.

Table 1 – Number of Zones by Type

TAZ Type Number	TAZ Description	Number of TAZs
1	Internal DuPage TAZ	1,171
2	Buffer TAZ	539
3	Metra Station TAZ	48
5	O'Hare Area TAZ	12
11	Downtown TAZ	120
99	External Zones	122
	TOTAL	**2,012**

Figure 3 – DuPage County Model TAZ System

1.3.1 Changes to DuPage County Internal TAZs

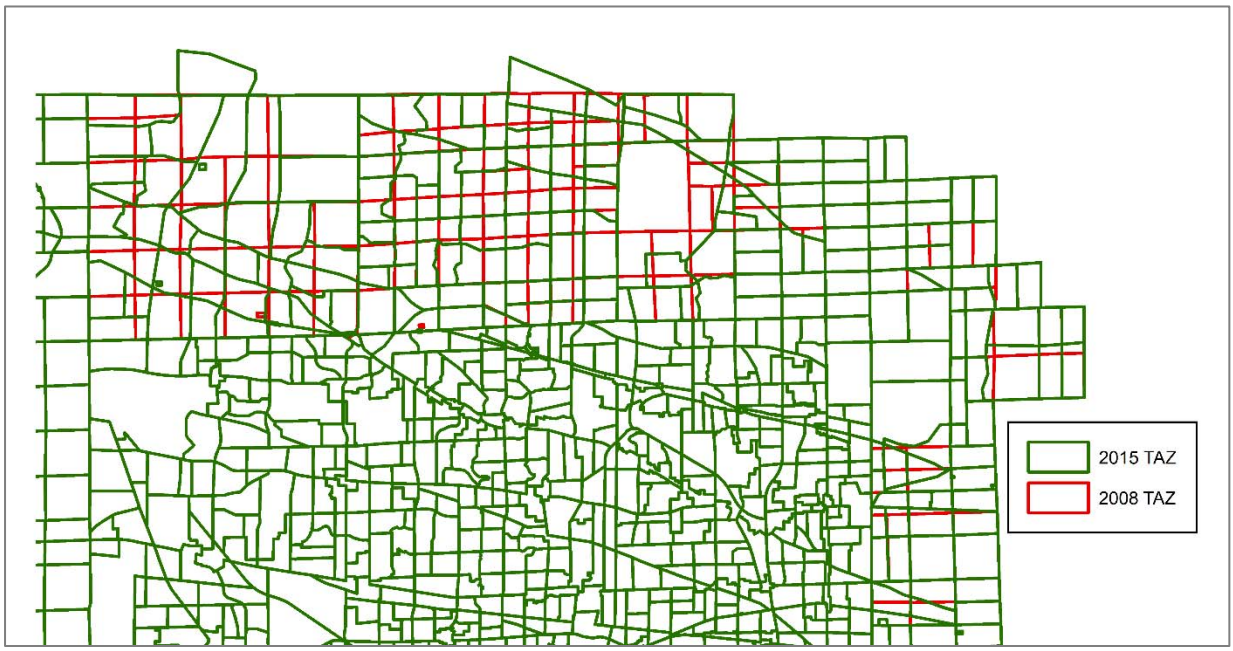
TAZs inside DuPage County were revised if: (1) strong growth in number of households or employment recently occurred within the TAZ, (2) planned land use indicated that an additional zone was needed, or (3) the old TAZ boundaries resulted in deficient traffic model network loading patterns.

1.3.2 Changes to Buffer Area TAZs

For areas surrounding DuPage, major effort included zone additions either to extend the modeling area or to subdivide existing TAZs to attain more accuracy. Some of the key edits were to subdivide larger four to six square mile buffer zones that straddle one or more strategic arterials, and to subdivide large zones in Cook County where new transportation facilities have

been added since the last Model update (IL 390). A total of 15 zones were added to the TAZ as the result of the editing effort (Figure 1-4).

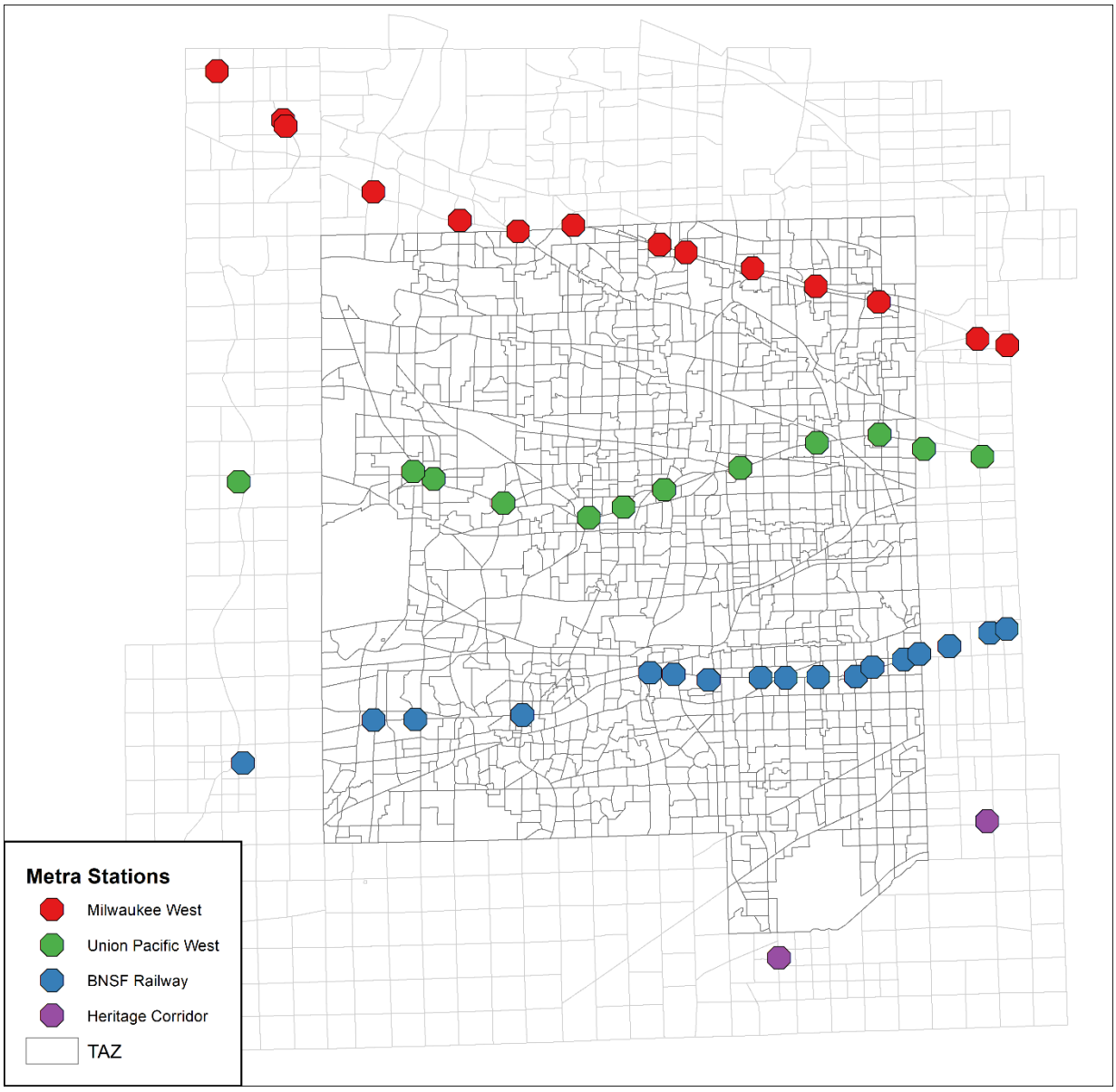
Figure 4 – New versus old Buffer Area TAZs



1.3.3 Metra Transit Station TAZs

The DuPage model contains 48 TAZs which represent a Metra Rail transit station and its associated parking lot. Figure 5 contains a map showing the location of these 48 TAZs. In the trip generation step, these TAZs are treated as a special trip attraction.

Figure 5 – Metra Transit Station TAZs



1.3.4 O'Hare International Airport TAZs

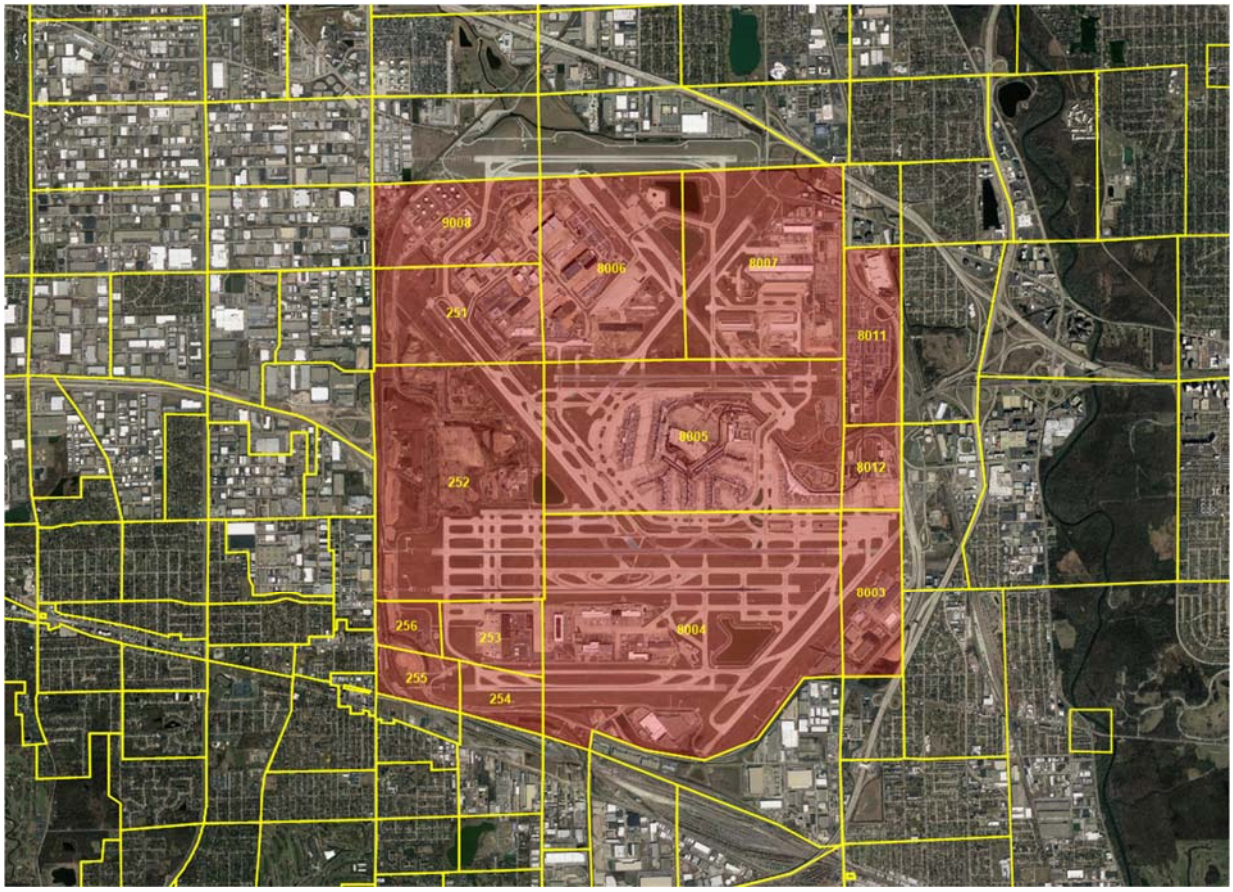
The O'Hare airport zone boundaries were updated to reflect the different activities that occur at discrete locations within in the O'Hare Airport property, and thus the different trip characteristics occurring within each area. These activities and zone delineations include: passenger terminal, parking facilities, cargo areas, and the northwest hangar area. Passengers and workers use different routes to access O'Hare. Most passengers, visitors, and greeters use the I-190 spur that enters O'Hare from the east. Workers, on the other hand, may enter from the north (airline employees), or the west/south (freight forwarding employees), or other routes. Several zones were also reconfigured to reflect the newly-completed IL-390, and the proposed airport configuration to accommodate a future Western Access to O'Hare.

Figure 6 shows the nine TAZs comprising O'Hare Airport. Aerial imagery was used to pinpoint activities such as hangars, rental car facilities and terminal. The allocation of the jobs to the main terminal, northwest hanger, east, south, and southeast cargo areas was based on the percentage of O'Hare employee parking spaces available in each of these O'Hare activity areas. The 2015 runway reconfiguration did not alter the essence of the access and egress patterns at O'Hare. Please note that Section 1.9 contains a description of the model steps unique to the O'Hare Airport zones.

O'Hare International Airport (ORD) is an important part of the DuPage traffic model for the following reasons:

- Part of the airport property is located in DuPage County;
- The activities that take place in the O'Hare area are diverse in nature encompassing terminal, air cargo, hangars, airline crew facilities, and parking. Additionally, many of these activities, such as cargo and parking do not take place at a single location at O'Hare;
- Irving Park Road, an east-west arterial in the south portion of the O'Hare area is an important conduit into and out of DuPage;
- Potential western access can be evaluated as part of one or more future scenarios.
- O'Hare Airport received extensive re-allocation of the employment-related forecasts during the DuPage County Model update.

Figure 6 – O'Hare Airport TAZ System



1.3.5 TAZ Numbering

Table 2 lists the TAZ numbers associated with various geographic areas or special land uses (Metra stations and O'Hare airport). The numbering of TAZs for the same geographic area or land use were grouped into ranges of thousands. These groupings allowed for easier identification of the TAZ's location. Each TAZ numbering range also contained unused numbers to allow for new TAZs to be inserted into each range without disrupting the overall numbering system.

Table 2 – TAZ Numbering Ranges

Numbering Range	Zones Included
1 - 1999	DuPage Internal Zones
2001 - 2099	Metra Zones (DuPage Only)
2101 - 2199	Metra Zones (Buffer Regions)
3001 - 3099	Kane County
4001 - 4099	Kendall County
6001 - 6099	South Cook
7001 - 7099	West Cook
8001 - 8099	O'Hare
9001 - 9199	Northwest Cook

1.3.6 Key TAZ Attributes

Table 3 lists all of the TAZ attributes contained in the DuPage County model. These attributes are used by the GISDK model "batch process" to allow current year socioeconomic (SE) assumptions to be referenced in the trip generation, trip distribution and traffic assignment steps.

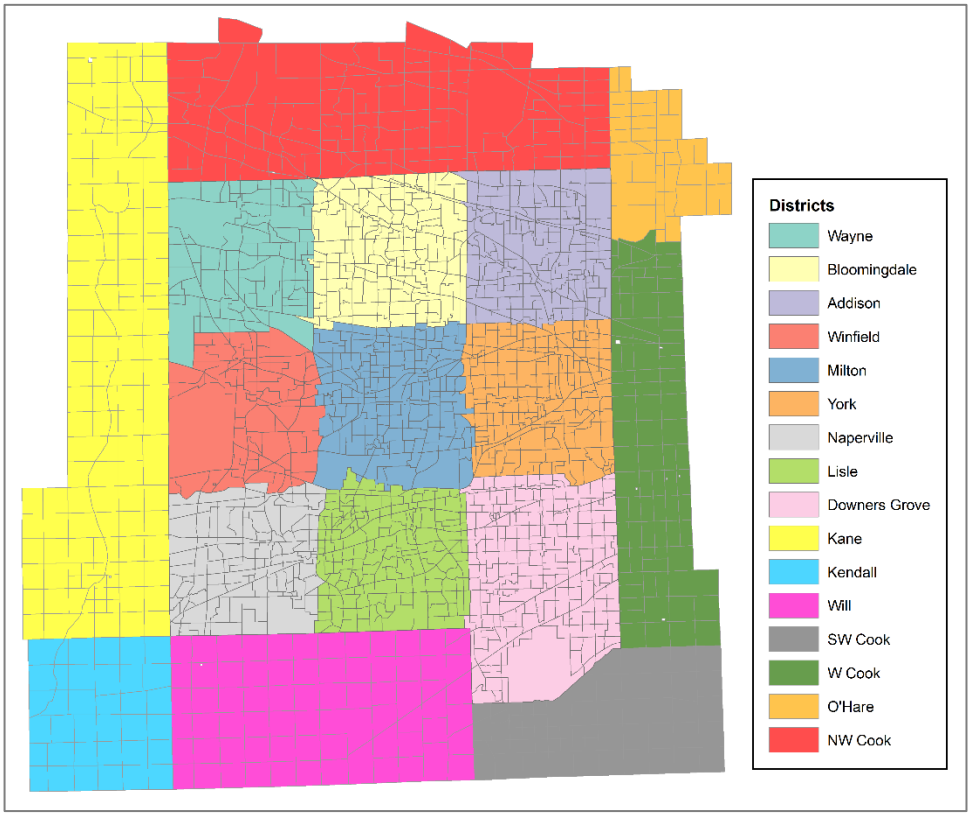
Table 3 – TAZ Attributes List

Name	Description
ID	Formal TransCAD ID and Final TAZ ID
Area	Area in Square Miles
TAZ_Number	Unique identifier for each TAZ
TAZ_Area_Type	1 - DuPage TAZ (incl. Downtown)
	2 - Metra Stations
	3 - Buffer TAZ
	4 - External TAZ
TAZTYPE	1 - Internal DuPage TAZ (w/o Downtown)
	2 - Buffer
	3 - Metra Station TAZ
	4 - Downtown TAZ
	5 - External TAZ
Area_Type	1 - Urban
	2 - Suburban
	3 - Rural
	4 - Metra
	5 - O'Hare
Terminal_Time_PC	Terminal Time for Passenger Cars
Terminal_Time_CV	Terminal Time for Trucks
COUNTY	District ID
DUP_TWP	DuPage Township ID
DESCRIP01	Description of the TAZ Profile
MUNI	Municipal Name where TAZ resides

1.3.7 DuPage Super-Zones

For reporting purposes, the DuPage Traffic Model TAZs were aggregated into Super-Zones to allow the model inputs and outputs to be easily summarized. The model outputs contained in this memo and the LRTP Report have been summarized according to these Super-Zones. Within DuPage County, the super-zones follow the nine township boundaries. The buffer area is composed of seven super-zones that respectively cover Kane, Kendall, and Will Counties, Northwest Cook, West Cook and Southwest Cook, and the O'Hare area. Figure 7 shows the DuPage County Traffic Model super-zone boundaries.

Figure 7 – DuPage County Model Super-Zones



1.4 Highway Network

The DuPage County highway network was originally developed in the 1990s (using TModel software) and has been continually improved and refined up to the present time. To develop the highway network for the 2020 DuPage Model, CDM Smith updated and refined the highway network from the 2008 DuPage Model. The highway network of the 2020 DuPage County Travel Demand Model is shown in Figure 8. The network follows a similar pattern to the TAZ structure in that the network is more detailed within DuPage County, and is less detailed in the buffer areas. The highway network within DuPage County is more-detailed (reflects more roadways) than the CMAP model. Figure 9 compares the roadway networks of the DuPage and CMAP models. From a visually inspection, the DuPage County network is clearly denser than the CMAP network. CDM Smith and DuPage County staff made extensive updates to the 2008 highway network including:

- **Traffic Counts:** Traffic Counts coded onto the link attributes were updated from 2008 to 2015. The traffic counts included: 2015 Average Annual Daily Traffic (AADT) counts, 2015 average daily truck counts, and 2015 PM peak counts where available. These coded traffic counts were used for calibration and validation purposes. Segments chosen for inclusion in the DuPage 2018 Travel Demand Model generally accounted for all roadways classified as Minor Arterial or better. Additionally, the study team incorporated collector roads that were judged to be regionally significant in accommodating the travel demand throughout the model area.
- **Link Adjustments:** Adjusting roadway links and adding centroid connectors where TAZ boundaries were split or adjusted. TAZ along IL-390 and I-90 were split. Centroid connectors were added to connect these TAZ centroids to the roadway network.
- **Link Capacity**: Reviewed daily capacities on all links, and developed link capacities for the new PM peak-hour model.
- **Link distances and speeds:** Link distances and speeds are key variables in the highway network, as they dictate the free-flow travel time and roadway capacity of the links. CDM Smith employed the Geographic Information System (GIS) capabilities within the TransCAD software to identify, code, and check these key link variables.
- **Truck Prohibited Routes**: Identified truck prohibited segments. See Appendix A for a complete list of roadway segments from which trucks are prohibited.
- **Volume-Delay Functions:** Investigated volume delay functions and impacts on congested speed.
- **Quality Checking:** Performed general checks on directionality, connectivity and geometry of links.

Appendix B contains a list of all link attributes. The key Link Attributes are: length, roadway name, functional classification, number of lanes and hourly capacity; or Observed data, which includes Average Annual Daily Traffic (AADT) and Heavy Commercial Vehicle count.

Figure 8 – DuPage County 2020 Model Highway Network

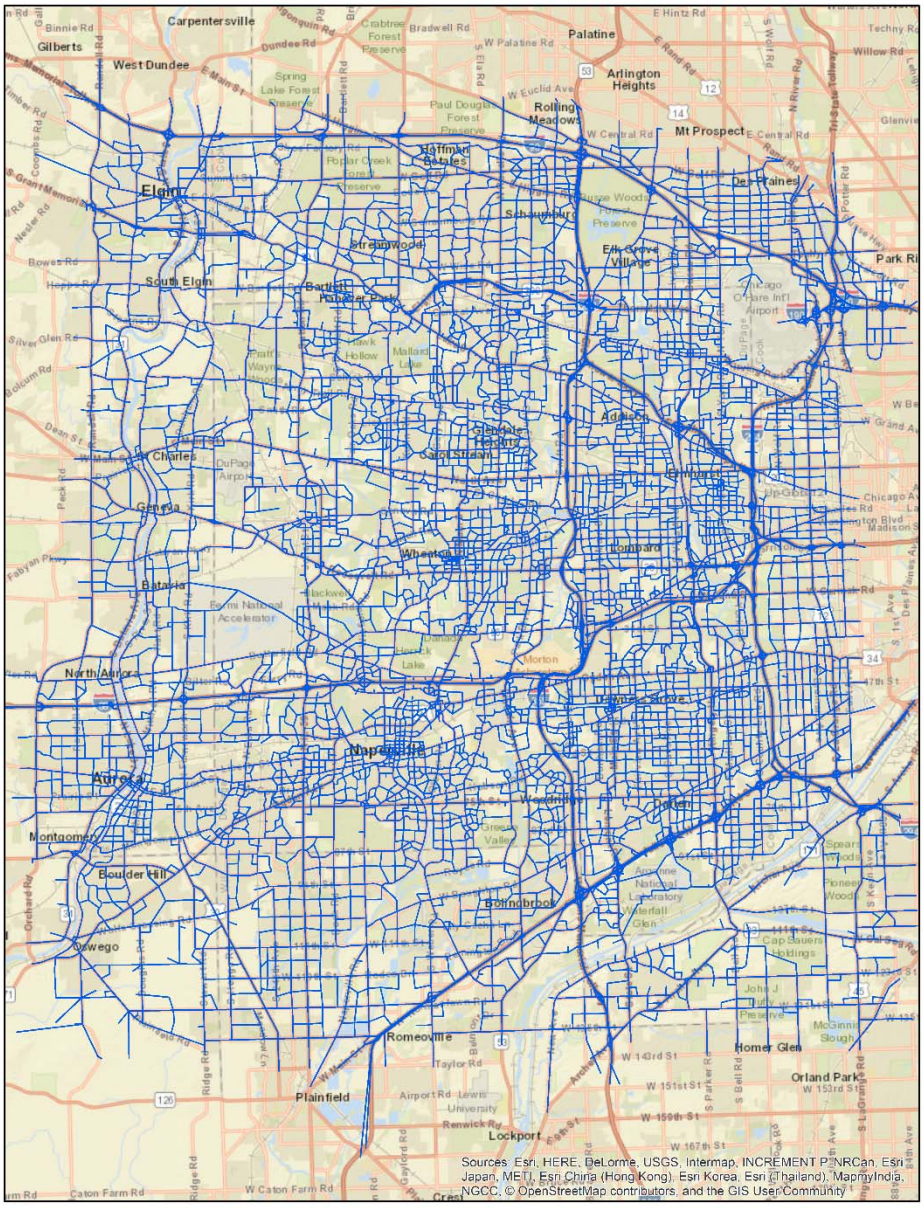
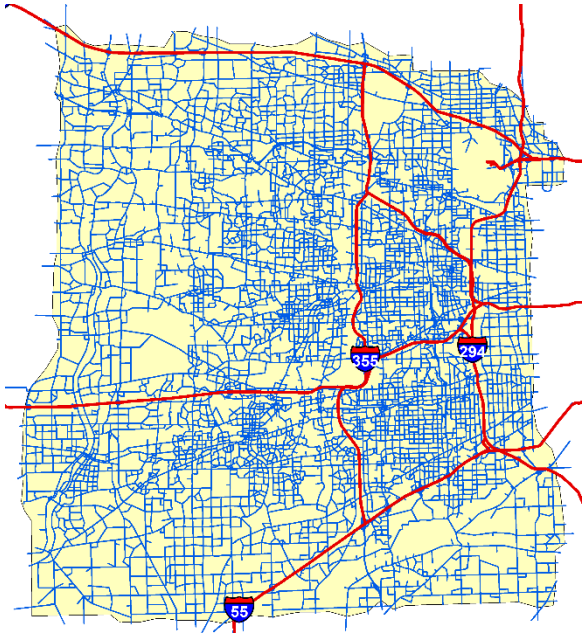
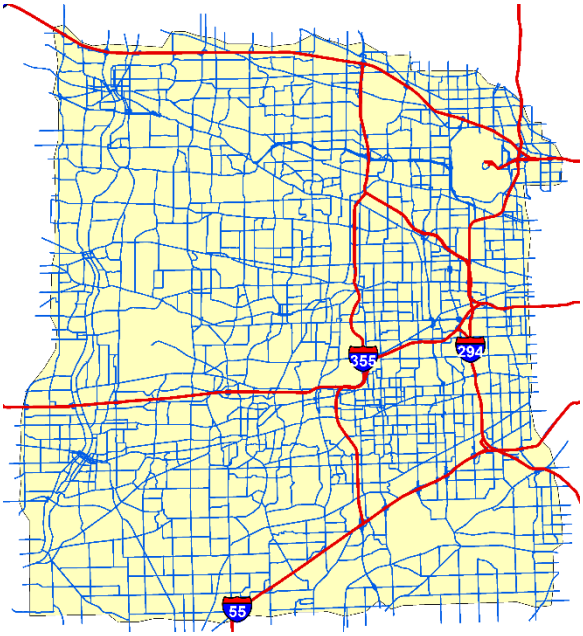


Figure 9 – DuPage County and CMAP Model Networks



DuPage County Model



CMAP Model

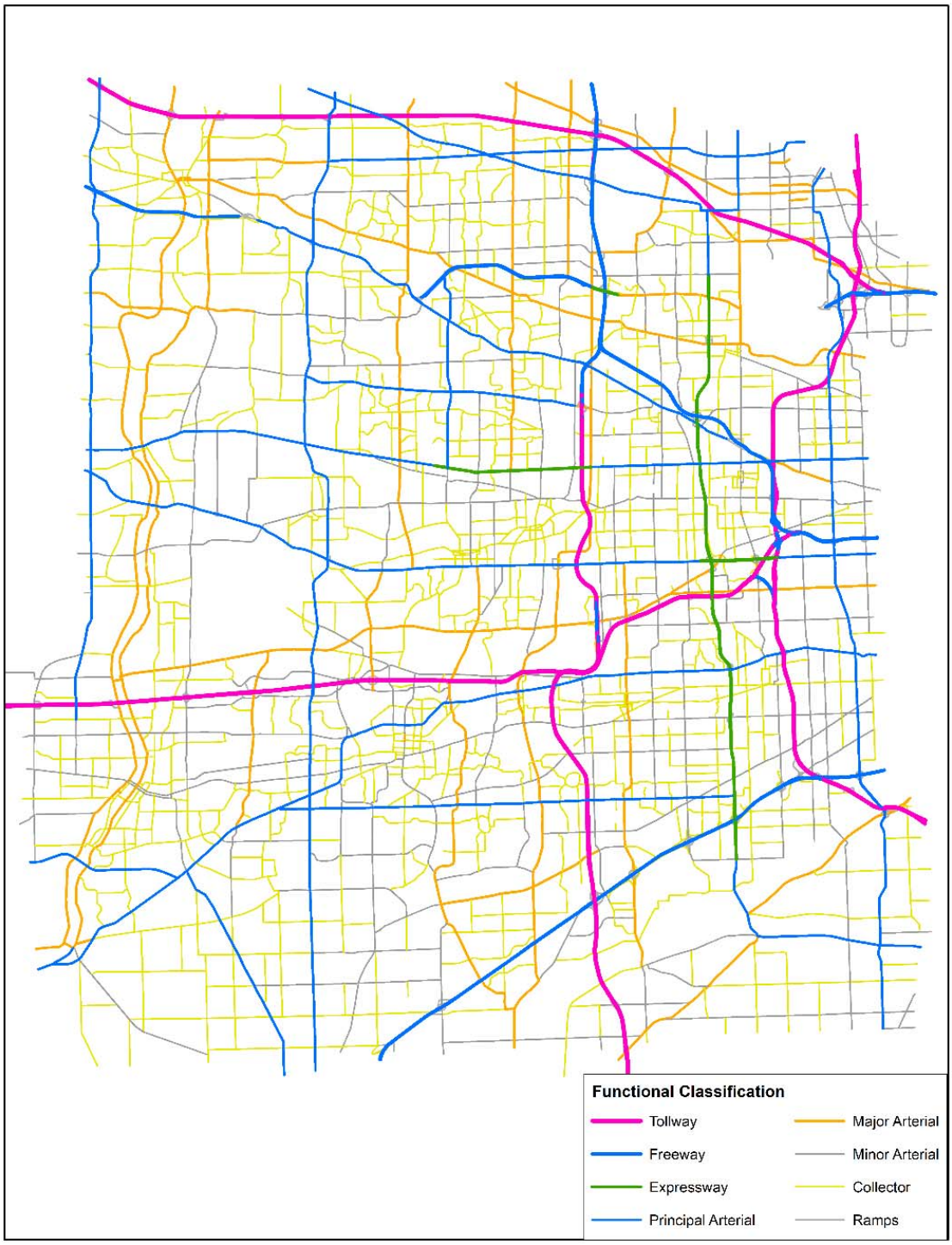
1.4.1 Functional Classification

Figure 10 shows the DuPage County Traffic Model network by functional classification. Functional classifications for the DuPage County Traffic Model consist of fifteen categories plus the centroid connectors. The DuPage County model generally contains all roadways classified as a Minor Arterial or higher classification. Table 4 presents the 16 functional classifications and the capacity and speed associated with each classification. The daily model uses the "off peak" speeds, while the PM peak-hour model uses the "peak" speeds.

Table 4 – Highway Network Functional Classes and Coding Guidelines

Functional Class	Functional Class Name	Description	Capacity (PCPLPH)	Speed	
				Off Peak	Peak
10	Tollway	Illinois Tollway routes	2000	60-70	55-65
11	Freeway	Freeway routes	2000	60-70	55-65
12	CD-Freeway to Arterial	Collector-Distributor Road on Freeway to Arterial roadway	900	45-60	40-55
13	Ramp Freeway to Freeway	Freeway-to-Freeway Ramp	1400	40-55	35-50
15	Ramp- Freeway to Net	Freeway-to-Arterial Ramp	1200	30-50	25-45
16	Ramp - Tollway to Net	Illinois Tollway-to-Arterial Ramp	1200	35-45	30-40
17	Ramp - Arterial	Arterial-to-Arterial Ramp	1200	30-40	25-35
18	Ramp - Other	Other ramp connection	1200	35	30
19	Frontage Road	Frontage Road	720	40-45	35-40
20	Expressway	Expressway	1800	45-60	40-55
30	Principal Arterial	Principal Arterial	1200	35-55	30-50
40	Major Arterial	Major Arterial	1000	30-55	25-50
50	Minor Arterial	Minor Arterial	850	30-55	25-50
60	Collector	Collector	850	25-55	20-50
70	Community Collector	Community Collector	600	25-35	20-30
90	Centroid Connector	Centroid Connector	3000	25	20

Figure 10 – Model Highway Network by Functional Class



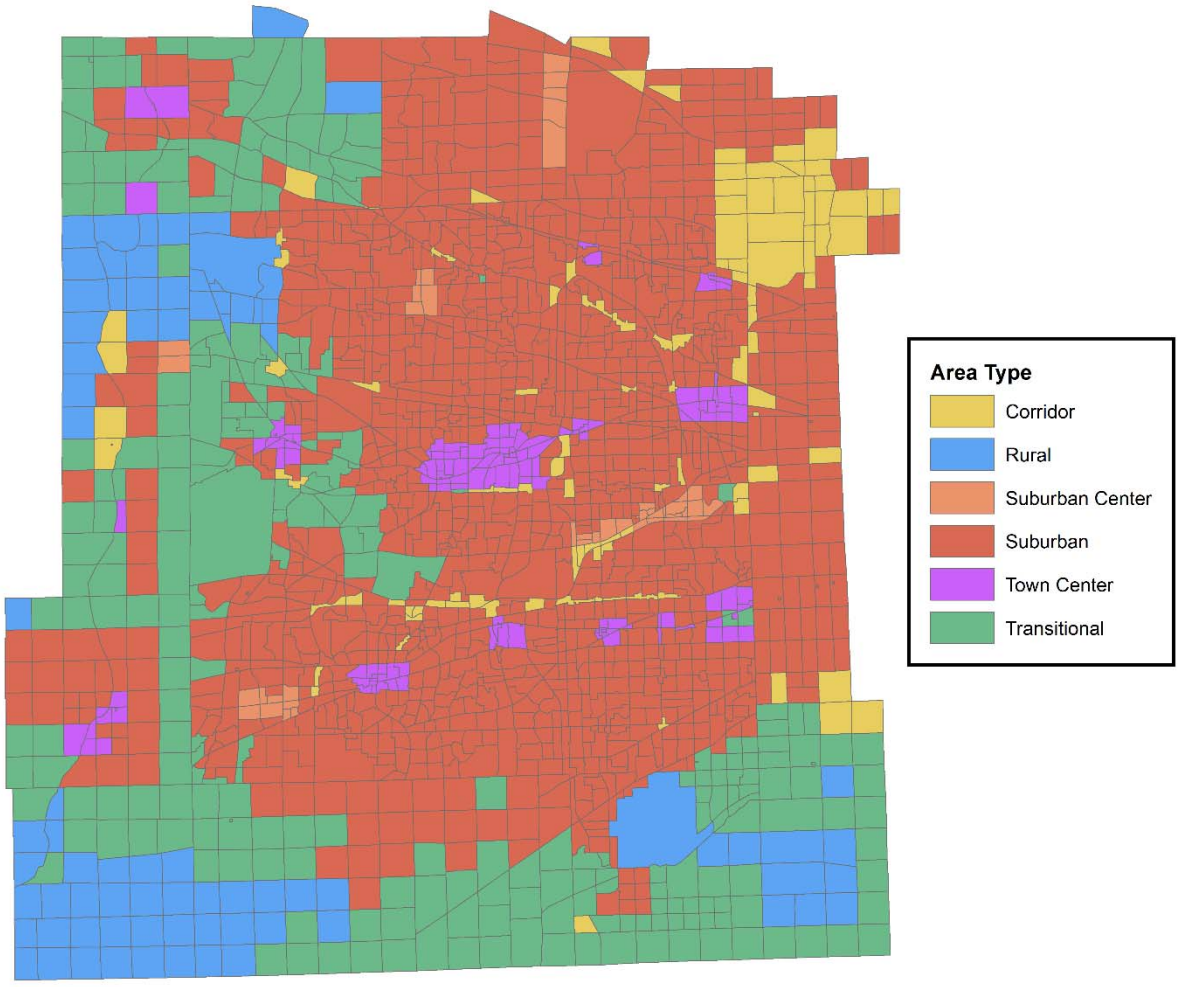
1.4.2 Link Area Type

Each link in the network is assigned to one of six "area types." The link area type dictates which volume-delay function the link will follow. Each "Area Type" also has a different volume/capacity ratio, which are shown in Table 5. The rural links have lower V/C Ratio targets whereas the urban links have higher V/C Ratio targets. Figure 11 shows the link "Area Types" by TAZ. Links within a given TAZ will follows the volume-delay function and target V/C ratio that corresponds to the TAZ's area type.

Table 5 – Volume-Capacity Ratios by Link Area Type

Area Type	V/C Ratio: During Off-Peak Period	Target V/C Ratio: Peak Period	# of Links*
Corridor	0.45	0.80	2,472
Rural	0.25	0.50	444
Suburban Center	0.50	0.90	245
Suburban	0.35	0.70	6,975
Town Center	0.55	0.90	1,148
Transitional	0.30	0.60	1,601
Total			**12,885**

Figure 11 – Link Area Types by TAZ location



1.5 Passenger Car Trip Generation

A majority of the trips in the DuPage model consists of internal passenger car trips. This section and the next section concern the internal passenger car model development (Sections 1.5 and 1.6), while the succeeding three sections (Section 1.7, 1.8 and 1.9) are concerned with the truck trips, the external trips and the O'Hare Airport trips respectively.

The first step in the four-step travel demand model development process is trip generation. Household trip generation includes procedures to estimate the travel demand associated with specific socioeconomic (SE) characteristics and land use activities. The goal of trip generation is to estimate the total number of trips by trip purpose that are produced by and attracted to each

zone. This section describes the trip generation process used to develop the DuPage County Model, and consists of four subsections: (1) SE forecasts, (2) trip productions, (3) trip attractions, (4) Balancing of Zonal Trip Productions and Attractions, and (5) Validation of Production-Attraction Models.

The trip generation step relies on TAZ-level SE data as inputs, and is used to calculate trip productions and attractions by trip purpose for each TAZ. The DuPage County Model's trip generation rates are based on a 2006 study conducted by the Chicago Metropolitan Agency for Planning (CMAP), the Illinois Department of Transportation (IDOT), the Northwestern Indiana Regional Planning Commission, and the Indiana Department of Transportation (InDOT). The primary objective of the 2006 study was to refine the Chicago regional travel demand forecast models. Data for this 2006 study was obtained through the Travel Tracker Survey, which entailed the collection of activity and travel information for all household members (regardless of age) during a randomly assigned 24-hour or 48-hour period. In 2008, CDM Smith processed this survey data to estimate weekday motorized person-trips suitable for application in a gravity-based DuPage County travel demand model. The survey data resulted in cross-classification trip rates that are reasonably similar to the values established by other MPOs.

1.5.1 TAZ Level Socioeconomic Data

SE data was estimated for each of the 1,293 internal TAZs. The full SE forecasts for DuPage County can be found in the document "2015-2025-2040 Land Use Assumptions," which is included as in Appendix C to this memorandum. DuPage County population/household SE data obtained from 2010 and 2015 U.S. Census datasets and from DuPage County land use data. The County of DuPage purchased additional data (for the DuPage County TAZs) from a private source, which included: employment, square footage of commercial land uses and number of housing units. This data was developed by TAZ for the base year (2015) and for both future years (2025 and 2040).

For the buffer TAZs, CMAP SE forecasts (published in the third quarter of 2015) were used. The CMAP data was used in the buffer TAZs for both the base-year model (2015) and the future-year models (2025 and 2040).

The SE forecasts for the DuPage and buffer TAZs identify the geographic locations where future growth is predicted to occur (and consequently where traffic demand is likely to increase most significantly). Table 6 shows the total number of residential units that are forecast for DuPage County and the buffer zone areas. Table 7 lists the total commercial square footage forecasts in DuPage County and the "buffer" areas.

As Table 6 shows, the number of residential units in DuPage County is forecast to increase by almost 12,000, or 3 percent, between 2015 and 2025. Between 2025 and 2040, DuPage County residential growth will continue at slower pace, with just over 9,500 residences forecast. The commercial activities will grow at a substantial rate, adding over 22,000 square feet, an increase

of 3.2 percent, between 2015 and 2025. After 2025, the growth of square footage will slightly slow with the addition of about 19,000, a 2.5 percent increase. In case of buffer zones, the growth is similar to DuPage County between 2015 and 2025. After 2025, the buffer zones will grow at higher rate.

Table 7 shows the total square footage of commercial real estate in DuPage County and in the "buffer" area by model year. Within DuPage County, commercial space is forecasted to increase by 5.5 percent between 2015 and 2025, which is an increase of nearly 22 million square feet in that 10-year span. Over the same period, commercial square footage is expected to increase by 5.1 percent in the "buffer" area, and increase of more than 24 million square feet. In the succeeding period, 2025 to 2040, growth is forecast to occur at a slower rate. In DuPage County, commercial square footage is expected to increase by 4.5 percent.

Table 6 – DuPage and Buffer Area—Number of Residential Units by Forecast Year

Forecast Year	DuPage County	Buffer TAZs
2015	374,279	399,595
2025	386,198	412,745
2040	395,709	431,610
2015-2025	11,919	13,150
Absolute and Percentage Increase	3.2%	3.3%
2025-2040	9,511	18,865
Absolute and Percentage Increase	2.5%	4.6%
2015-2040	21,430	32,015
Absolute and Percentage Increase	5.7%	8.0%

Table 7 – DuPage and Buffer Area—Commercial Space by Forecast Year
(in thousands of square feet)

Forecast Year	DuPage County	Buffer TAZs
2015	400,725,000	479,508,000
2025	422,687,000	503,856,000
2040	441,548,000	541,568,000
2015-2025 Growth	21,962,000	24,348,000
	5.5%	5.1%
2025-2040 Growth	18,861,000	37,712,000
	4.5%	7.5%
2015-2040 Growth	40,823,000	62,060,000
	10.2%	12.9%

1.5.2 Trip Production

Trip production is performed by deriving the number of trips from an individual zone by the socioeconomic characteristics of that zone (e.g. population, employment, income level). Fundamental to the trip generation model is an understanding of trip purpose. People travel for a multitude of reasons – work, shopping, recreation, school, doctor, post office, dropping off or picking up passengers and other. Since each distinct reason for trip making cannot be included in the trip generation model, a small set of major trip purposes are established and used in the travel model. For the DuPage County Traffic Model five trip purposes were defined:

- Home Based Work (HBW)
- Non-Home Base (NHB)
- Home Based Shopping (HBSHP)
- Home Based School (HBSCH) – In the CMAP Travel Tracker Survey, the activity "travel to school" pertains only to students in twelfth grade or lower
- Home Based Other (HBO)

The procedure used to calculate trip productions for the DuPage County Traffic Model is a disaggregate cross-classification technique. Cross-classification offers the advantage that trip rates can be applied as a series of non-linear relationships. It has been shown that the number of trips generated by a household does not behave in a purely linear manner. For example, a three-person household does not make three times as many shopping trips as a one-person household. The second advantage that cross-classification provides is that it reduces the error associated with using zonal averages for household income and size. Cross-classification analysis is based on this fundamental assumption that trip generation rates are neither continuous nor linear in nature, and that the defined categories of independent variables are stable across the sample and through time.

Trip production rates are typically stratified by at least two relevant variables: a household size and a wealth attribute. For the DuPage County model, trip production rates were calculated for three variables:

- Dwelling Type: Two types: Single Family Home or Multi-Family Dwellings.
- Household size: Four sizes: 1, 2, 3 or 4+ persons.
- Income level: Three levels: less than $50,000, $50,000 to $99,000, and greater than $99,000

Table 8 and Table 9 show the trip rates, for each trip purpose, for this cross-classification scheme Table 8 shows the trip rates among Single Family Dwelling Units. Within this table there are 12 cross-classification categories corresponding to all combinations of the four household sizes and three income levels. Then the table contains five columns corresponding to the five trip purposes.

Thus, the table contains 60 unique trip rates. Similarly, Table 9 shows the same cross-classification of trip rates for Multi-Family Dwellings. All trip rates are shown in daily person trips per household

Table 8 -- Auto Trip Generation Rates –Single Family Dwelling Units

Household Size	Household Income	All Purposes	HBW	HBSHP	HBSCH	H-O	NHB
1	<$50k	3.214	0.257	0.504	0	1.181	1.272
	$50k-$99k	3.313	0.483	0.373	0.005	1.063	1.389
	>$99k	3.4	0.443	0.327	0.01	1.058	1.562
2	<$50k	5.93	0.427	0.995	0.05	2.31	2.148
	$50k-$99k	6.444	0.87	0.815	0.05	2.387	2.322
	>$99k	6.259	0.98	0.718	0.023	2.24	2.298
3	<$50k	6.784	0.937	1.004	0.143	2.931	1.769
	$50k-$99k	8.615	1.276	0.951	0.534	3.018	2.836
	>$99k	9.335	1.34	0.807	0.56	3.387	3.241
4+	<$50k	11.104	1.04	1.112	0.808	4.82	3.324
	$50k-$99k	13.443	1.398	1.22	1.087	5.719	4.019
	>$99k	13.52	1.198	1.076	1.122	5.985	4.139

Table 9 – Auto Trip Generation Rates – Multi Family Dwelling Units

Household Size	Household Income	All Purposes	HBW	HBSHP	HBSCH	H-O	NHB
1	<$50k	2.119	0.206	0.3	0.009	0.713	0.891
	$50k-$99k	2.962	0.446	0.286	0	0.984	1.246
	>$99k	2.468	0.32	0.348	0.025	0.697	1.078
2	<$50k	3.96	0.434	0.604	0.111	1.449	1.362
	$50k-$99k	5	0.625	0.573	0.072	1.831	1.899
	>$99k	4.148	0.73	0.42	0.034	1.482	1.482
3	<$50k	4.832	0.482	0.713	0.234	2.093	1.31
	$50k-$99k	7.549	1.122	1.04	0.394	2.588	2.405
	>$99k	5.792	0.776	0.595	0.274	1.961	2.186
4	<$50k	7.249	0.761	0.591	0.43	2.888	2.579
	$50k-$99k	9.998	0.851	0.803	0.73	4.208	3.406
	>$99k	10.077	1.005	1.167	0.73	4.208	2.967

1.5.3 Trip Attraction

Trip attractions are the complement of trip productions. Trip attraction rates are derived from household travel survey data using a process referred to as "aggregate cross-classification." Cross-Classification procedures measure the changes in the number of trips based on the land use. In this case, the number of trips is dependent on the "type of ending place" to which a person traveled (such as a school or retail establishment). Attractions are typically a function of socioeconomic activity – number of households, number of employees by type, or school enrollment numbers, but the attraction rates may also be land-use based, such as square feet of retail space, acres of open space or parks, or gross floor area of a manufacturing plant.

Table 10 contains the trip attraction rates used in the DuPage County Model. There are 60 unique trip attraction rates: 12 "end place" type and 5 trip purposes. Trip attraction rates have been developed for two main categories of socioeconomic variables: household-based and real estate-based. There are three household-based trip attraction ends: Single-family, multi-family and group dwelling units. Household-based trip ends are calculated based on the number of dwelling units within a given TAZ. There are also nine categories of real estate-based trip ends. Trip attraction rates for these categories are expressed per thousand square feet (TSF) of available space within each real estate category. The square footage data by real estate category was obtained through a private real estate data source. The real estate categories operate as a surrogate for employment, which is the typical travel demand attribute used in trip generation attraction equations. Trip attractions are calculated separately for each of the five trip purposes.

For example, if a TAZ has 100 multi-family units, 100 Home-Based Work trips would be attracted to that TAZs. If that same TAZ also had 100 thousand square feet of downtown retail space, then 51.9 (100*.519) Home-Based Work trips would also be attracted to the TAZ. Trip attractions have to be calculated for all 60 unique attraction categories, and the number of trip attractions are summed by trip purpose.

Table 10 – Trip Attraction Rates

Attraction Type	Trip End Place Variable	Home-Base Work	Home Based Shopping	Home Based School	Home Based Other	Non-Home Base
Household-Based ***(trips per housing unit)***	Single-family units	1.000	1.000	1.000	1.000	1.000
	Multi-family units	1.000	1.000	1.000	1.000	1.000
	Group Quarters	1.000	1.000	1.000	1.000	1.000
Real-Estate-Based ***(trips per 1,000 square feet)***	Retail	0.519	1.580	0.900	2.678	0.993
	Downtown Retail	0.650	2.619	0.900	3.351	1.242
	Office/R&D	0.962	0.900	0.900	4.957	1.837
	Industrial	0.510	0.900	0.900	2.632	0.976
	Warehouse	0.127	0.900	0.900	0.658	0.244
	Schools	0.375	0.900	2.700	1.933	0.716
	Transp./Comm./utilities	0.510	0.900	0.900	2.632	0.976
	Public/Municipal	0.662	0.900	0.900	3.412	1.265
	Colleges/Convention	0.662	0.900	0.720	3.412	1.265

1.5.4. Balancing of Zonal Trip Productions and Attractions

Trip productions and trip attractions are calculated separately, and the two trip totals will not match. The totals must match, as each trip produced (origin) must have an attraction (destination). Therefore, after the trip productions and attractions are calculated, the number of trip attractions will be adjusted (up or down) to match the number of trip productions. This adjustment is done separately for each of the five trip purposes. The following should be noted about the balancing within each trip purpose:

- Home-Based Shopping (HBSHP) trips: the home-based shop trip attraction rate is typically tied to retail employment alone. However, for the 2020 DuPage model update, HBSHP has separate trip attraction factors for both regular retail locations and downtown retail locations.

- Home-Based School (HBSCH) trip attractions pertain only to students in twelfth grade or lower.

- Home-Based Other (HBO): This category includes trips made for eating a meal, personal business, driving a child to school or an activity, recreational/social activities and other unstated reasons. Due to the variety of destinations to which this trip purpose may be attracted, it is reasonable to assume that HBO trips are attracted to all land uses. As shown in Table 8 and Table 9, there are relatively high HBO trip attraction factors for all land-use types.

- Non-Home Based (NHB): There are NHB trip attraction factors for all 12 land-use types. However, the highest coefficient is associated with Office/R&D.

1.5.5. Validation of Production-Attraction Models

After calculating and adjusting the zonal trip productions and attractions, these values must be checked for reasonableness.

Trip production rates were developed from the 2007 CMAP Travel Tracker Survey. The CMAP surveys did not provide direct estimates of zonal trip ends. Consequently, model-estimated trip ends cannot be compared against observed trip-ends. Instead, model-estimated trip ends must be compared against industry standards, such as the 2017 National Household Travel Survey. This document provides average values and typical deviation ranges for average trips per household and average trips per person.

The average daily household trip rate is calculated by dividing the total number of trips produced in trip generation by the total number of households. Previous National Household Travel Survey results have shown that there has been a decrease in daily household trip rate in recent years. In the 1970s and early 1980s, household trip rates ranged from 6.34 to 7.69 trips per household per day. By the 1990s these trip rates had peaked above 10.00 trips per day. Since 2000s, the daily household trip rate had begun decreasing, such that by 2015, the average household trip rates ranged from 8.5 to 9.6 trips per day.

The average daily person trip rate is calculated by dividing the total number of trips produced in trip generation by the total number of persons living in households in 2015. Typical per capita trip rates were obtained from 2017 National Household Travel Survey. As with the daily household trip rate, there has been a decrease in the daily person trip rate over the past years. In the 1970s and early 1980s the rate ranged from 2.92 to 3.76. It peaked in mid 1990s to 4.3 and since than daily person trip rate was in slight decline to a range of 3.33 to 3.82 in 2015.

Table 11 contains the average trips per household and per person, as calculated from the socioeconomic data and the CMAP trip generation rates. The right-hand column also shows the typical range of trips contained in the 2017 National Household Travel Survey. This table shows that the number of trips estimated for the DuPage model are more conservative (lower) than the typical range for overall trips produced at the household and per person levels, as well as for the home-based work (HBW) trip purpose. However, trips are within range for the home-based other (HBO), and non-home based (NHB) trip purposes.

Another set of statistics, by which to check the reasonableness of trip productions, is the proportion of trips produced by trip purpose. Table 12 contains the five trip purposes utilized in the DuPage model, the percentage of trips by trip purpose in the DuPage model, versus the proportions observed through the CMAP 2006 travel tracker survey. There is some variation in the HBW and HBO trip purposes, but the other three purposes have identical proportions.

a travel demand model. Similarly, Table 13 compares the proportion of trips produced by trip purpose in the DuPage Model versus the typical ranges published in the 2017 National Household

Travel Survey. Please note that the Home-Based School and Home-Based Shopping trip purposes have been included as part of the home-based other (HBO) for this comparison. This comparison indicates that the DuPage Model contains a typical proportion of NHB trips (33 percent), a lower than typical proportion of HBW trips (11 percent), and a higher typical proportion of HBO trips (55 percent).

Table 11 – Trip Generation Validation, Part 1

Average Daily Trip Rates	DuPage Model Estimated Trips	Typical Range[2]
Productions Per Household	7.1	8.5 to 9.6
Productions Per Person	2.6	3.3 to 3.8
Home-based Work (HBW) Productions Per Household	0.8	1.7 to 2.3
Home-Based Other (HBO) Productions Per Household	3.9	3.5 to 4.8
Non-Home Based (NHB) Productions Per Household	2.4	1.7 to 2.9

Table 12 – Trip Generation Validation, Part 2

Trip Purpose	DuPage County Model *Number of Trip Productions by Purpose*	DuPage County Mode *Percentage of Trip Productions by Purpose*	CMAP Travel Tracker 2006 Survey *(Observed Percentages by Trip Purpose)*
Home-Based Work	596,839	11%	15%
Home-Based School	261,340	5%	4%
Home-Based Shopping	572,879	11%	11%
Home-Based Other	2,095,288	40%	37%
Non-Home Based	1,766,886	33%	33%
All Purposes	**5,293,232**	**100%**	**100%**

Table 13 – Trip Generation Validation, Part 3

Trip Purpose	Productions	Productions, as percent of total	Typical Range
Home-Based Work	596,839	11%	16 to 17%
Home-Based Other	2,929,507	55%	49 to 52%
Non-Home Based	1,766,886	33%	32 to 33%

[2] Source: Summary of Travel Trends - 2017 National Household Travel Survey

1.6 Passenger Car Trip Distribution

Trip Distribution is the second step of the traditional four-step travel demand model development process, which was the process used for the DuPage County Model. In this step, zonal trips (estimated in the Trip Generation step) are distributed geographically using a gravity model-based procedure. The basic theory underlying the gravity model is that the number of trips between two zones is directly proportional to: (1) the number of trips produced at the production zone and (2) the number of trips attracted to the attraction zone. The number of trips is also inversely proportional to the impedance between the two zones. The impedance, often referred to as the "friction factor," represents the spatial separation between two zones. As the spatial separation between two zones increases, the attractiveness to travel between these zones decreases. Gravity models are calibrated to observed data (household survey data) using mathematical functions. For the DuPage Model, the following gamma function was used:

$$F_{i,j} = a \cdot t_{i,j}^{b} \cdot e^{c(t_{i,j})}$$

where:

$t_{i,j}$ = the travel impedance between zone i and zone j. In the DuPage Model, auto travel time is used to represent $t_{i,j}$, which is the typical practice.

e = the base of the natural logarithm (2.71828)

a, b and c = Calibrated coefficients.

The trip distribution matrices, for each of the five DuPage Model auto trip purposes, were developed using a doubly constrained gravity model. This means that if the estimated trip distribution matrix is summed horizontally and vertically, the row sum for a particular zone matches the observed zonal trip productions and the column sum for that same zone will match the observed zonal trip attractions.

The following three subsections describe how the trip distribution step was executed. The first section describes the "time skims," which is the total time to travel from each zone to every other zone in the model. As described in the second section, the total travel time between zones includes a "terminal time" at each end of the trip, in addition to the roadway travel time. There are also trips that travel only within the origin zone, known as "intrazonal trips." The third section describes how these travel times were calculated.

1.6.1 Time Skims

To run the gravity models, a shortest path time matrix was produced. Due to the routes on which truck were prohibited, an auto only and an all vehicle skim were produced. The travel time for

each link in the model is computed from the link length (in miles) and the link speed (in miles per hour). TransCAD then computes the minimum time path between each pair of zones, and produces a matrix containing the travel times between all zone pairs. These travel times were based on the free-flow speed and distance only; no volume delay was included in the trip distribution travel time matrix.

1.6.2 Terminal Times

To fully reflect the travel time between zones, the terminal times were incorporated into the shortest travel time matrix. Terminal times reflect additional time spent parking, walking, or other pre-driving activity at both the origin and destination of the trip. Each trip contains two terminal times: one at the origin and one at the destination. The terminal time assumed on each end of the trip, depends on the type of zone in which the trip originates or terminates. The assumed terminal times for each zonal area type are shown in Table 14.

Table 14 – Terminal Times

Area Type	# of Minutes
Rural	1
Town/Suburban	2
Urban	3

The terminal time computation is produced by assigning an area type from the zone layer for each origin and destination, then a terminal time lookup table shown above was used to add the appropriate time on the appropriate pair, and then finding the total time for each matrix O-D pair.

1.6.3 Intrazonal times

Some trips will have both their origin and destination within the same zone. For this reason, intrazonal travel times must be calculated for each zone. CDM Smith utilized the "nearest neighbor technique" to calculate the intrazonal travel times. This method assumes that the travel time within a zone is equal to one-half the average travel time to the adjacent zones. For the DuPage Model, the five nearest neighboring zones were used as the basis for calculating intrazonal times. TransCAD calculated the average travel times from a zone to the five nearest zones (based on the lowest travel times); half of this average time constituted the intrazonal travel time for that zone.

1.6.4 Gamma Coefficients

Calibrating the DuPage gravity model consisted of finding the appropriate gamma function coefficient values to replicate observed trip length frequency distributions. Table 15 contains the gamma function coefficient values for each trip purpose determined through the calibration process. The next section shows the trip length frequency distributions for the calibrated DuPage Model.

Table 15 – Gamma Coefficients for Household Trip Distribution[3]

Trip Purpose	*a*	*b*	*c*
Home Based Work	219,000	-1.250	-0.013
Non-Home Based	219,113	-1.380	-0.013
Home Based Shopping	219,113	-1.332	-0.010
Home Based School	219,113	-1.332	-0.010
Home Based Other	139,173	-1.000	-0.094

1.6.5 Trip Length Frequency Distribution

Trip distribution is the most important step in the travel demand process because it establishes how different trip purposes are sensitive to time and distance. This information needs to be estimated correctly so that during the traffic assignment step, the model fits observed conditions (in terms of observed traffic volumes on links, travel times on links and trip lengths). The doubly-constrained gravity models, for each trip purpose, were set to ten balancing iterations. The trip length frequency distributions, as estimated by the model, are shown in Figure 12 and Figure 13. The first graph shows the trip lengths in terms of time (minutes), while the second graph shows the trip lengths in terms of distances (miles). The trip length distributions are shown separately by trip purpose. The graphs show that Home-Based Other (HBO) trips have the shortest average trip length (as indicated by the sharp peak at the beginning of the curve). By contrast, Home Based School (HBSCH) trips have the flattest trip length distribution, and the longest average trip length.

[3] NCHRP 365

Figure 12 – Trip Length Distribution [minutes]

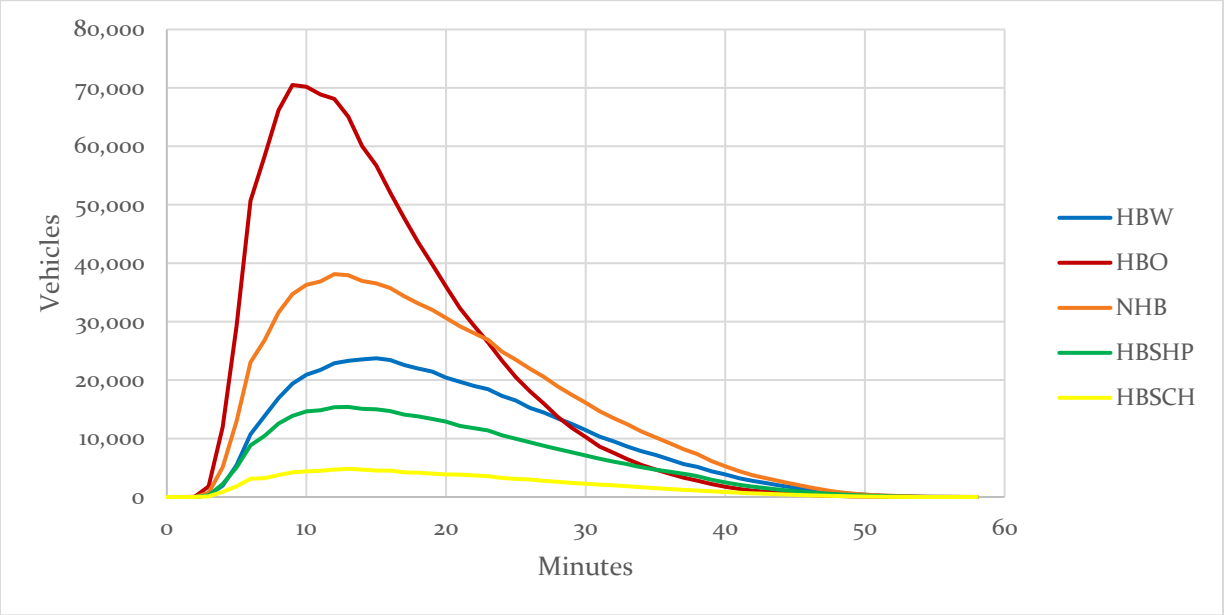


Figure 13 – Trip Length Distribution [miles]

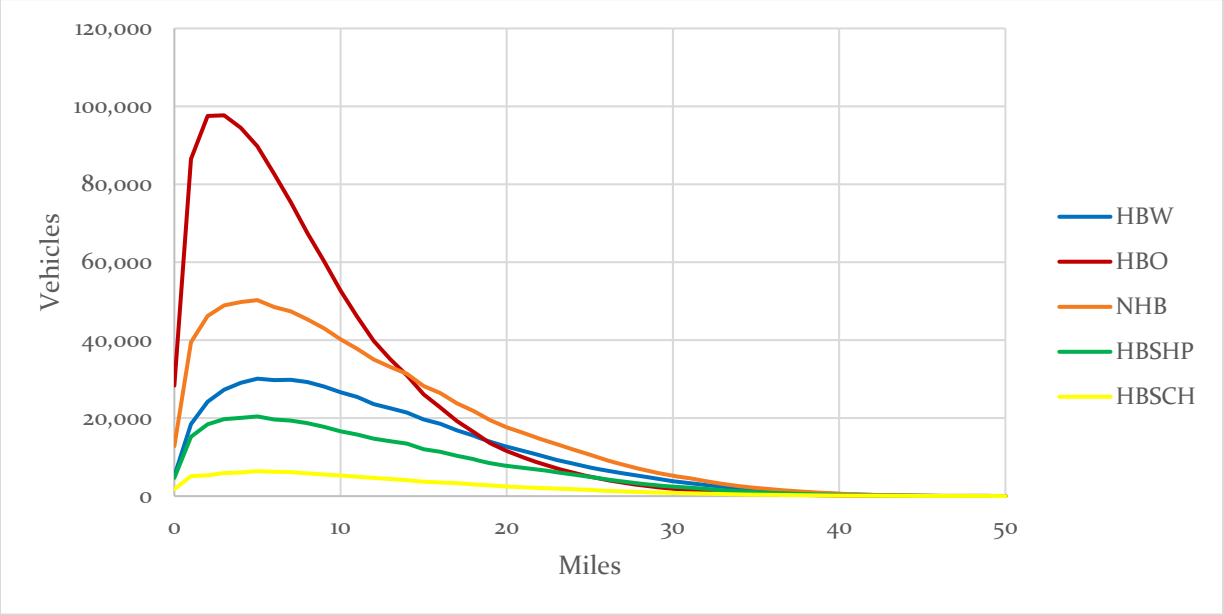


Table 16 shows the average trip length distance (in miles) by trip purpose, as estimated by the DuPage passenger car model. The average trip length distribution is summarized in table below.

Table 16 – Average Trip Length Distribution [miles]

Trip Purpose	Model	Typical Range*
Home-Based Work (HBW)	12.63	11.9 - 12.4
Home-Based Other (HBO)	8.5	6.5 - 7.3
Non-Home-Based (NHB)	11.8	11.4 - 11.8

* *Summary of Travel Trends - 2017 National Household Travel Survey*

1.6.6 Transformation of P-A Tables to O-D Trip Tables

After distribution, the resulting P-A tables require two transformations to obtain the vehicle trip tables used in the traffic assignment step. The first transformation is transforming the Production-Attraction matrices to Origin-Destination trip tables. The second transformation is converting the trip table from person-trips to vehicle-trips.

In TransCAD software, there is straightforward method to transform productions-attractions to origins-destinations, which is based on information about when trips depart and return. This procedure was used for the DuPage County daily (24-hour) travel demand model. Separate daily person-trip matrices were produced for each of the five trip purposes.

These five daily O-D trip tables were then converted from person-trips to vehicle (passenger car) trip matrices. Table 17 shows the vehicle occupancy rates assumed in the DuPage County Traffic Model, which are based on the CMAP Travel Tracker Survey. Each cell of the person-trip matrices was divided by the vehicle occupancy rate. This division was done separately for the matrix for each trip purpose…, corresponding to the trip purpose of the matrix.

Table 17 – Auto Occupancy Factors

TRIP PURPOSE	Vehicle Occupancy (persons per vehicle)
Home-Based Work (HBW)	1.07
Home-Based Shopping (HBSHP)	1.57
Home-Based School (HBSCH)	2.29
Home-Based Other (HBO)	1.82
Non-Home-Based (NHB)	1.55

1.7 Truck Traffic Model

The DuPage County travel demand model has separate sets of trip tables for passenger cars and trucks. Furthermore, the model has separate sets of trip tables for light versus heavy trucks. Light trucks are defined as single-unit trucks, whereas heavy trucks are defined as combination trucks consisting of a power-unit (tractor) and one or more trailers.[4] Trucks and passenger cars are modeled separately to improve the accuracy and usefulness of the traffic forecasts. The benefits of separate passenger car and truck trip tables include:

1. Truck traffic can comprise 2 to 20 percent of overall traffic depending on the roadway functional classification. By having separate truck trip tables, routes with high truck volumes or percentages can be identified.
2. The forecasts of truck trips are estimated directly from the socioeconomic data, rather than using cruder "rule of thumb" estimation methods.
3. Allows for more precise scenario testing, as planned land use changes will be reflected in truck traffic forecasts. For example, to test a proposed industrial area, the increased employment in that zone would be reflected in the socioeconomic forecasts. In turn, this increased employment would be reflected in the truck traffic to/from that zone (through the trip generation, trip distribution and traffic assignment steps).
4. Provides DuPage County with truck model that has been validated against county-wide truck traffic counts.

1.7.1 Truck Model Development Steps and Assumptions

The truck component of the DuPage model was developed in a similar manner to the passenger car component. The following are some of the key activities and assumptions in the truck component of the DuPage Model:

- Internal Truck Trips: Internal trucks trips (those traveling within DuPage County and the buffer zones) were estimated from TAZ-level socioeconomic data, using traditional trip generation methods. The number of truck productions were set equal to the number of truck attractions. The truck trip generation step is described in greater detail in the next section (Section 1.7.2). Internal trucks trips were then distributed using a gravity model.
- External truck trips: Like the passenger car external trips, external truck trips were estimated from a CMAP subarea matrix. These external trips were then added to the overall truck trip tables. The development of the external model is described in Section 1.8.
- The truck trips are generated in "truck vehicles," as opposed to person-trips. Essentially, it is assumed that all trucks will have a vehicle occupancy of one person per truck.

[4] The light truck class does not include personal household vehicles such as Sports Utility Vehicles (SUVs), vans, Jeeps, or personal pick-up trucks (even if registered with "B" Plates); these vehicles are included in the passenger car trip generation process. The CMAP and DuPage County models use the same definitions of heavy trucks.

Therefore, trucks trips (from the trip generation step) do not need to be converted from person-trips to vehicle-trips.

- Roadway Network: Several roadways or roadway segments in the model area are truck prohibited. The list of prohibited roadway segments are contained in Table 42. This list was developed with input from DuPage County planners. During traffic assignment, truck trips may only use roadway links on which they are not prohibited.
- During the traffic assignment step, truck trips are pre-loaded onto the DuPage County travel model network.
- Observed 2015 truck traffic counts have been used to calibrate and validate the truck model.
- Future year truck models were prepared using the same truck trip generation rates, trip distribution curves, and assignment type, as were used to develop the 2015 truck model.

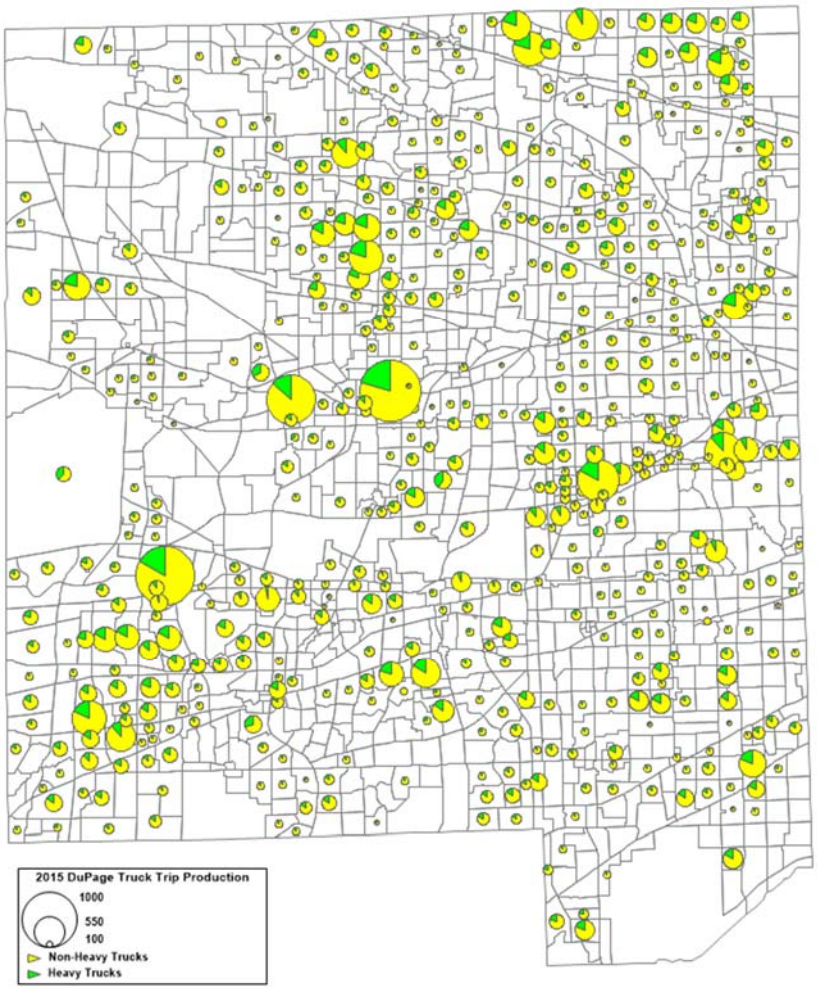
1.7.2 Truck Trip Generation

The same private real estate data that was used to estimate passenger car trip productions and attractions was also used for the truck model. Table 18 shows the truck trip production/ attraction rates used in the truck trip generation step. Please note that the trip production rates and trip attraction rates are the same within each land-use and truck-size category. Figure 14 shows the geographic location and magnitude of zonal truck trip productions. The size of each pie indicates the magnitude of the productions. Within each pie, the yellow area indicates the proportion of light trucks and the great area indicates the proportion of heavy trucks.

Table 18 – Truck Trip Generation Rates (Productions and Attractions)

Attraction Type	Trip End Place Variable	Light Trucks	Heavy Trucks
Household-Based	Single-family units	0.20	0.04
	Multi-family units	0.20	0.04
	Group Quarters	0.38	0.08
Employment-Based	Retail	0.68	0.09
	Downtown Retail	0.68	0.09
	Office/R&D	0.32	0.01
	Industrial	0.70	0.18
	Warehouse	0.70	0.18
	Schools	0.05	0.00
	Transp./Comm./utilities	0.70	0.09
	Public/Municipal	0.22	0.00
	Colleges/Convention	0.21	0.14

Figure 14 – 2015 Truck Trip Productions by the Two Truck Types



1.7.3 Truck Assignment & Validation

Table 19 shows the number of truck trips within the base-year 2015 DuPage truck model. There are nearly 462 thousand truck trips in total. Light trucks account for 68 percent of truck trips, and heavy trucks account for the remaining 32 percent. Seventy percent of all truck trips in the model originate within DuPage County with the remaining 30 percent originating or terminating within the buffer zones.

Table 19 – Total Truck Origins – DuPage County vs. "Buffer" Zones

Truck Type	DuPage	Buffer	Total	Percent of DuPage	Percent of Buffer	Percent of Total
Light Trucks	279,739	34,303	314,042	84%	27%	23%
Heavy Trucks	53,169	94,334	147,503	16%	73%	77%
Total	**322,907**	**128,638**	**461,545**	**100%**	**100%**	**100%**

The truck model traffic assignment results were tested against observed 2015 truck traffic counts. Traffic volume screen-lines were established, and the performance of the model versus observed traffic counts were compared at each count location and across all screen-lines. The locations of the truck traffic volume counts used to calibrate the DuPage Model are shown in Figure 15. The results of truck model to observed truck traffic by township are shown in Table 20. Once the truck model was calibrated to the traffic counts, within accepted tolerances, the resulting truck trip tables were stored in the model.

Table 20 – Truck Model Results by Township

Township	Number of Count Links	Truck Count Volume	Model Traffic Volumes	Difference	Percent Difference
Addison	9	15,206	14,391	-815	-5%
Bloomingdale	10	18,546	18,103	-444	-2%
Wayne	17	19,415	18,368	-1,048	-5%
York	30	58,760	47,828	-10,932	-19%
Milton	20	35,132	34,295	-837	-2%
Winfield	12	15,597	17,486	1,889	12%
Downers Grove	25	37,971	29,855	-8,117	-21%
Lisle	21	26,340	28,641	2,301	9%
Naperville	18	30,730	27,196	-3,533	-11%
Total	**162**	**257,698**	**236,162**	**-21,536**	**-8%**

Figure 15 – Location of Truck Counts

1.8 External Trip Model

An external trip has one (either the Origin or Destination) or both ends that is external to the model area; that is: outside of the geographic boundaries of the model. For the DuPage Model, these are trips where one or both ends of the trip are located outside of DuPage County itself and outside of the "buffer" zones that surround DuPage County. These trips may be: External-External trips (where both ends of the trip are external to the DuPage model area), or they may be External-Internal or Internal-External trips (where one end of the trip is external to the DuPage model area, either the origin or the destination).

Fortunately, DuPage County is part of the extensive eight-county CMAP travel model. Furthermore, DuPage County is bounded on all sides by other counties that are also part of the CMAP model. This allow travel patterns from the CMAP model to reflect the external trips in the DuPage model. In other words, the CMAP trip tables indicate traffic (by trip purpose) that flow into, out of or through DuPage County. The CMAP model also has several features in common with the DuPage model, allowing the CMAP model data to be readily imported into the DuPage model, including:

- An eight-period time of day model to allow the estimation of external trips on a PM peak-hour level as well as on daily level.
- Separate truck and auto components.
- An eight-period time of day model, including a regional, PM peak hour trip table.
- Three model years that are consistent with the DuPage Model years: 2015, 2025, and 2040.

In TransCAD, the subarea processing tool was used to "collapse" the CMAP model's passenger car and truck trips at the outer boundaries of the buffer area of the DuPage County Traffic Model. Through this process, trips that cross the outer boundary of the DuPage model have one or both end of the trip that terminate at an external zone in the DuPage model.

Table 21**Error! Reference source not found.** presents a summary of the number of internal and external vehicle trips in the DuPage County Traffic Model. Trips in the first row are internal trips that were estimated through the trip generation process. Trips in the second row are external trips, and were obtained through the process described above using the CMAP model. The table shows that approximately one-quarter of passenger car trips are external to DuPage County, and nearly two-thirds of heavy truck trips are external (by contrast, only about one-tenth of light truck trips are external).

Table 21 – Estimated DuPage Model Trips after Integration

	Passenger Cars	Light Trucks	Heavy Trucks
Internal Trips: DuPage County + Buffer Area	3,058,921	279,739	53,169
External Trips: From CMAP Sub Area	1,080,031	34,303	94,334
Total DuPage Model Trips	4,138,952	314,042	147,503

1.9 O'Hare Airport Model

O'Hare International Airport is an important destination for air passengers and airport employees who live in DuPage County. For that reason, special attention was devoted to developing an O'Hare airport sub model. The O'Hare Airport property straddles both DuPage and Cook counties, but the airport's influence area reaches into several other counties.

1.9.1 Airport Trips

Airport trips were estimated using traffic counts, air operation data, and passenger traffic data, as outlined in the DuPage County's "Technical Memo on O'Hare Airport and Ground Transport Modeling". Based on the memo, the airport trips were identified as either O'Hare Airport Passengers or O'Hare Airport Employees. Furthermore, 2025 and 2040 model applications test the proposed Western Access to O'Hare Airport. Therefore, it was important to prepare both a TAZ system and trip tables that accommodate the proposed improvements to O'Hare airport. Figure 6 shows the TAZ system for O'Hare airport. Passengers and workers use different entrances to access O'Hare Airport. Most passengers, visitors, and greeters use I-190 that enters O'Hare from the east. Mannheim Road and Bessie Coleman Drive provide support for car rentals and airport parking. For employees, the main entrance to the airport is located, along airport's northern boundary, along Touhy Avenue (IL 72) and Mt. Prospect Road. The southern entrance, located off Irving Park Road, provide access to airfield Postal and cargo operation services. The TAZ structure has sufficient detail to capture these movements, as well as provide a basis for testing O'Hare Western Access, in the 2015 model.

1.9.2 Air Passenger Trips

DuPage County is an important origin and destination for both air passengers and airport employees. Survey data collected during previous model development was based at the home locations of air passengers. The data included air passengers who originated from home, work or hotel. This data was updated with the new information provided by DuPage County in the O'Hare

Airport Technical Memo. Based on the Memo, in 2015 there were around 77 million passengers arriving to or departing from O'Hare airport, and they were served by 186 terminal gates.

In June 2017 DuPage County conducted traffic counts at the airport. The daily vehicle count was 168,100 vehicles. At the same time there were on average of 246,100 daily passengers, 2,480 daily passenger and cargo flights per day, and 186 terminal gates. Using this observed data, the following vehicle rates were estimated: 0.683 vehicles generated per passenger daily, 67.8 vehicles generated per operation daily, and 904 vehicles generated per gate daily. Table 22 shows the number of vehicle trips to/from the Airport, estimated by applying 2015 vehicle rates to the 2015 observed data.

Table 22 – Generated Traffic Based on 2015/2017 Observed Data

	Daily Flight Operations	Daily Passengers	Terminal Gates
Airport Data	2,378	210,822	186
Vehicle Rates	67.8	0.683	904
Generated Traffic	161,166	144,003	168,100
Model Estimate	184,600		
2017 Observed Traffic	168,100		

The same methodology was used to estimate the future-year vehicle trips to/from O'Hare Airport. DuPage County obtained FAA future airport operation assumptions for future years. In 2025 and 2040, the average daily operations were estimated to be 2,615 and 3,410 respectively. Similarly, the number of operational terminal gates, as forecasted in the Chicago Department of Aviation Terminal Area Plan, are 200 in 2025 and 235 in 2040. Table 23 contains the 2025 and 2040 daily O'Hare Airport traffic estimates, based on the forecasted daily flight operations and terminal gates.

Table 23 – O'Hare Airport: Future year traffic estimates

	2025		2040	
	Daily Flight Operations	Terminal Gates	Daily Flight Operations	Terminal Gates
Estimated Data	2,430	200	3,222	235
Vehicle Rates	67.8	904	67.8	904
Generated Traffic	164,720	180,753	218,389	212,384
Model Estimate	**197,700**		**217,200**	

1.9.3 Airport Employees Trips

DuPage County is also an important destination for airport employees. To estimate the number of employee trips, traffic counts were used in combination with trips developed for the previous Model. Based on the location of the traffic counters, it is estimated that 29 percent of total airport trips are generated by employees. In 2025 and 2040, it is estimated that the percentage of employee trips will decrease to 20 percent of all vehicle trips to/from O'Hare Airport.

1.10 PM Peak Hour Model Development

In addition to the daily DuPage Model, CDM Smith also developed a one-hour PM peak-hour model. This latter model was developed for a number of reasons, including:

- The ability to account for the effects of congestion is essential for air quality modeling purposes,
- Supporting project-level analysis of both transit and highway improvement projects.
- Route choices that result from traffic congestion, accidents or construction. Short duration incidents/activities cannot readily be evaluated using an all-day travel model.
- DuPage County staff have expressed a desire to establish a validated PM peak hour for use in traffic and signal-timing planning.

The PM peak-hour trip tables were derived from the daily production attraction matrices. The daily matrices were multiplied by a set of directional percentages to obtain the one-hour matrices, which were then converted into origin-destination trip tables. Table 24 lists the conversion factors for each hour and trip purpose. The directional percentages were obtained from the 2007 CMAP Travel Tracker Survey. The 5:00 PM row contains the factors used to develop the DuPage PM Peak-Hour model.

Table 24 – Daily to Hourly Trip Table Conversion Factors

	HBW		HBSCH		HBSHO		HBO		NHB	
HOUR	**Departure**	**Return**	**Departure**	**Return**	**Departure**	**Return**	**Departure**	**Return**	**Departure**	**Return**
12:00 AM	0.0393	0.4188	0	0	0	0.0568	0.0166	0.255	0.0438	0.0438
1:00 AM	0.0262	0.3403	0	0	0	0	0.0055	0.0942	0.025	0.025
2:00 AM	0.0262	0.1701	0	0	0	0.0189	0	0.0665	0.0063	0.0063
3:00 AM	0.4188	0.0785	0	0	0	0	0.0554	0.0166	0.0188	0.0188
4:00 AM	1.047	0.0523	0	0	0.1135	0.0189	0.1829	0.0111	0.0313	0.0313
5:00 AM	4.345	0.1047	0.0527	0	0.2081	0.0378	0.7927	0.0942	0.2004	0.2004
6:00 AM	10.352	0.1963	4.428	0	0.7189	0.0378	2.2339	0.3492	0.6356	0.6356
7:00 AM	14.4745	0.4581	25.883	0.0527	1.4567	0.3594	5.1608	1.1475	1.9286	1.9286
8:00 AM	8.6507	0.301	16.9215	0.0527	1.8729	0.8324	5.5654	1.8071	2.7145	2.7145
9:00 AM	3.1802	0.301	2.6357	0.1054	3.3106	1.835	3.9468	1.5909	2.9399	2.9399
10:00 AM	1.6621	0.3926	0.7907	0.5799	4.6727	4.0863	3.0377	1.6962	3.6913	3.6913
11:00 AM	1.0732	1.1386	1.2652	3.0047	3.4431	5.4862	3.0765	2.4113	4.7151	4.7151
12:00 PM	1.492	1.4003	1.107	1.7923	2.8944	4.2754	2.6663	2.5	5.2536	5.2536
1:00 PM	1.6097	1.3611	0.2109	1.2652	2.8377	4.597	2.4002	2.1729	4.2298	4.2298
2:00 PM	1.3218	2.6698	0.2636	8.6452	2.7998	5.8078	2.7051	3.3038	4.5335	4.5335
3:00 PM	1.0993	6.6353	0.2109	13.8113	3.0458	5.6754	2.8271	4.041	4.6681	4.6681
4:00 PM	0.8899	8.9517	0.5271	4.5335	2.5918	6.9429	3.4257	4.357	4.0294	4.0294
5:00 PM	0.6805	9.5799	0.8434	4.1118	2.6863	5.6754	4.2905	4.5953	3.7163	3.7163
6:00 PM	0.6675	4.0178	0.738	2.2667	2.8755	5.1267	4.9667	4.5011	2.6049	2.6049
7:00 PM	0.2356	1.8715	0.0527	0.9489	1.7783	4.7673	2.1729	3.9579	1.8378	1.8378
8:00 PM	0.1701	1.5836	0.0527	0.7907	0.7756	3.5376	0.7816	4.5898	1.2868	1.2868
9:00 PM	0.3664	1.5443	0	1.4233	0.2838	1.7026	0.4989	3.6696	0.598	0.598
10:00 PM	0.301	1.204	0	0.5271	0.0757	0.4351	0.1164	1.1863	0.1847	0.1847
11:00 PM	0.0785	1.0208	0	0.1054	0.0378	0.2081	0.0554	0.6042	0.1064	0.1064

1.11 Traffic Assignment Methodology

The fourth step of traditional travel demand model development is traffic assignment.[5] The DuPage County Traffic Model approach used the following methods to assign the daily and PM peak hourly trips:

1. Assign Truck Trips and Save for Preload to Auto Daily Assignment – Trucks to be assigned using an All-or-Nothing (AON) assignment with time as the input for path building. The daily truck trips come directly from the distribution step. The PM truck trips are estimated using the CMAP directional percentages for heavy truck.
2. Use the BPR Method Equilibrium Assignment –The traffic assignment utilized the BPR (Bureau of Public Roads) function. It is an equilibrium assignment that relates link travel times as a function of the volume/capacity ratio according to the equation:

$$T = t_0\left(1 + \alpha\left(\frac{V}{C}\right)^{\beta}\right)$$

Where:

T	-	congested link travel time
T_0	-	link free-flow travel time
V	-	link volume
C	-	link capacity
α, β	-	coefficient based on area type and functional class

[5] Please note that "mode choice" is the third step in travel demand model development. However, the DuPage Model has only a vehicle mode (and does not include transit, bike or pedestrian modes). Therefore, there is no mode choice step in the DuPage Model.

1.12 Base-Year Model Calibration and Validation

Model calibration is the process of adjusting model constants and parameters in order to improve how well the model replicates observed traffic counts, trip lengths and travel patterns. CDM Smith utilized Federal model calibration guidelines, and comprehensive calibration efforts were performed using available observed data. The Model Validation and Reasonableness Checking Manual – 2nd Edition (Validation Manual) developed by the Federal Highway Administration (FHWA) is used as a standard reference for validation of the DuPage model. The overall 2015 base-year DuPage County model included several sub-models, which were calibrated and validated collectively:

- Passenger Car traffic model with trip components from:
  - DuPage three-step model for internal trips
  - Chicago Metropolitan Agency for Planning (CMAP) regional trip table extracted from "GoTo 2040" model for external trips, and
  - Special generator trip tables developed for O'Hare Airport and the Metra stations
- Truck traffic model

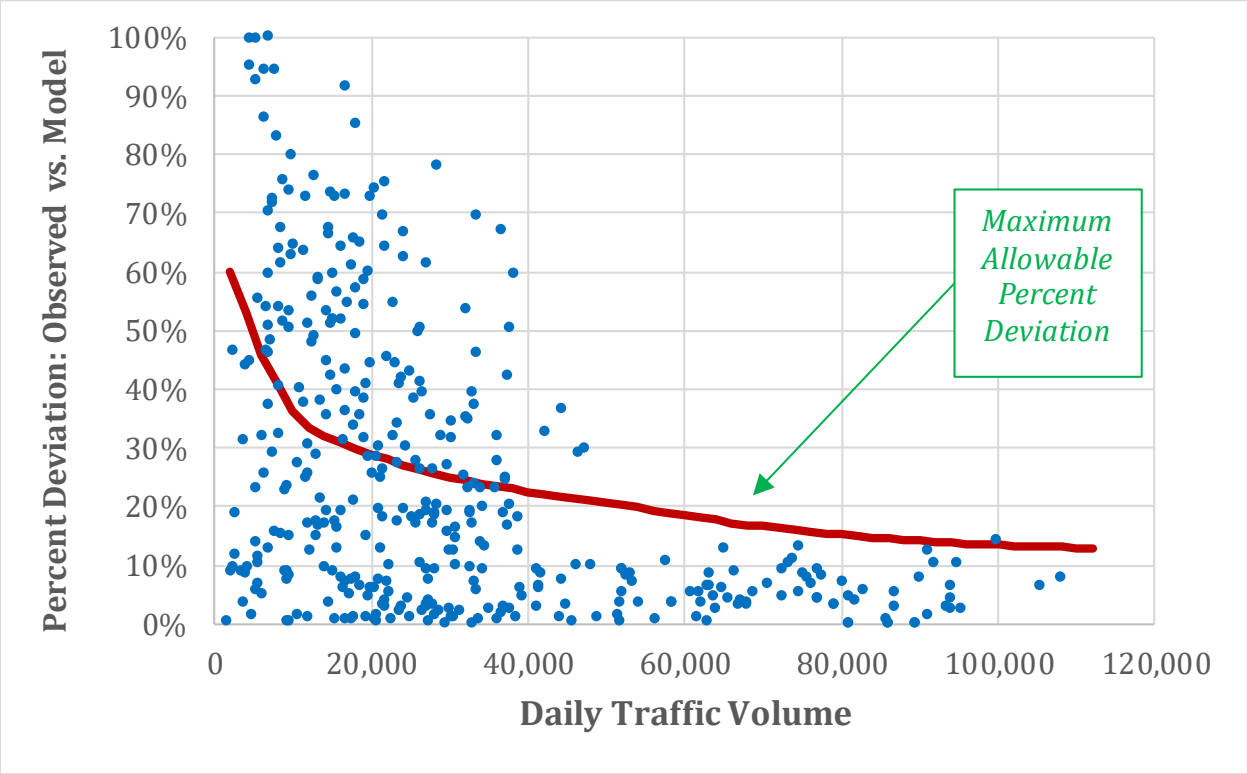
The traffic assignment results of the 2015 base model were compared to the 2015 observed traffic counts in order to validate the model output. The following sections summarize the comparisons made between observed data and model estimates.

To prepare the future year models, the same trip generation/distribution steps were followed, but instead using the future year SE data. Then the base year trip table adjustments are applied to the future year trip tables to reflect the "calibration effect." In other works, the numerical changes between the uncalibrated and calibrated base-year are added to the uncalibrated future-year trip tables.

1.12.1 Percent Error Graph

Figure 16 contains a graph with two elements: (1) Each dot represents a comparison between an observed traffic count and the model estimated traffic volume. The location of the dot is based on the percent difference between the observed and modeled volumes on the y-axis, and the traffic count volume level on the x-axis. (2) The graph contains a solid line that represents maximum desirable deviation between the counts and model estimated volume. The maximum deviation curve is based on the concept that higher volume links should contain a lower level of error than lower volume links. For example, links with daily traffic of 100 or 200 vehicles may appear in a travel model with error of greater than 50 percent. However, on the links with daily traffic volumes of 80,000 vehicles, the error should be less than 15 percent. Based upon this approach, the majority of model calibration links fall below the maximum desirable deviation line.

Figure 16 – Percent Deviation for Total Vehicle Calibration Links



1.12.2 Traffic Count Comparison by Functional Class

Table 25 contains a comparison between the observed and modeled traffic volumes, depending on the roadway classification on which the traffic count was obtained. Among all functional classifications, the average count vs. model-estimated volume deviation was 9 percent. The variability between observed and modeled volumes is highest in the lower volume links (under 2,000 vehicles per day) decreasing as the links volume range increases. For example, Minor Arterials had the largest deviation (at 21 percent), while Freeways had the smallest deviation (at negative 1 percent). This table also includes the Root Mean Square Error (RMSE) calculation. The RMSE measures the difference between model volumes and observed traffic counts and shows where the variability of the traffic counts is most. If the model fit were perfect, the RMSE would be zero. The overall RMSE for all functional classification categories is 26 percent.

Table 25 – Traffic Count by Functional Class with Percent Root Mean Square Error

FCLASS ID	Functional Class	Number of Count Links	Observed Traffic Volumes (AADT)	Model Traffic Volumes	Difference	Percent Difference	RMSE
10	Tollway	35	2,498,920	2,551,245	52,325	2%	7%
11	Freeway	23	1,410,670	1,390,224	-20,446	-1%	7%
20	Expressway	12	508,600	526,040	17,440	3%	17%
30	Principal Arterial	42	1,484,490	1,661,327	176,837	12%	24%
40	Major Arterial	42	1,101,580	1,297,959	196,379	18%	32%
50	Minor Arterial	93	1,659,589	2,004,902	345,313	21%	42%
60	Collector	17	136,625	143,729	7,104	5%	52%
Total	Total	264	8,800,474	9,575,426	774,952	9%	26%

1.12.3 Traffic Count Comparison by Township

Table 26 contains a comparison of observed and modeled traffic volumes disaggregated into the nine DuPage County Townships. Most townships had an error in the 9 to 15 percent range. The overall error for DuPage County was 11 percent.

Table 26 – Traffic Count Comparison by Township

Township ID	Township	Number of Count Links	Observed Traffic Volumes (AADT)	Model Traffic Volumes	Difference	Percent Difference
56	Addison	18	626,615	722,396	95,781	15%
57	Bloomingdale	22	714,880	784,723	69,843	10%
58	Wayne	15	284,095	325,799	41,704	15%
70	York	40	1,358,550	1,489,737	131,187	10%
71	Milton	25	694,990	788,709	93,719	13%
72	Winfield	11	193,380	274,206	80,826	42%
82	Downers Grove	24	690,885	666,103	-24,782	-4%
83	Lisle	30	1,128,580	1,259,075	130,495	12%
84	Naperville	19	533,910	582,626	48,716	9%
Total		204	6,225,885	6,893,372	667,487	11%

1.12.4 Traffic Count Comparison by Volume Group

Table 27 contains a comparison of observed and modeled traffic volumes summarized into volume groups. This table shows that the model generally under-assigned traffic on low volume roadways (volumes of 0 to 8,000 vehicles per day). However, the calibration was tight on higher volume roadways, on which traffic assignment errors ranged from just 2 to 5 percent. The difference, between observed and modeled traffic volumes, was 3 percent for the entire model.

Table 27 – Traffic Count Comparison by Volume Class with Percent Root Mean Square Error

Link Volume Group	Number of Count Links	Observed Traffic Volumes (AADT)	Model Traffic Volumes	Difference	Percent Difference	RMSE
0 - 8,000	41	246,490	179,920	-66,570	-27%	60
8,001 - 22,000	136	2,119,140	2,224,672	105,532	5%	47
22,001 - 40,000	115	3,504,643	3,658,626	153,983	4%	33
40,001 - 64,000	39	1,952,555	1,995,961	43,406	2%	14
64,000 +	55	4,028,210	4,104,843	76,633	2%	10
Total	386	11,851,038	12,164,022	312,984	3%	26

1.12.5 Traffic Count Comparison by Screenline

Table 28 contains a comparison of observed and modeled traffic volumes summarized into 28 screenlines. Figure 17 shows the locations of the screenlines. Each screenline is each composed of three to eleven count locations.[6] The screenline results demonstrate that the 2015 DuPage travel demand model is performing well in replicating both north-south movements and east-west movements throughout the county.

[6] Numerically, the screenline numbers go up to 30, as screenlines 27 and 29 are omitted from this exhibit.

Figure 17 – Screenline Locations for Traffic Volume Calibration

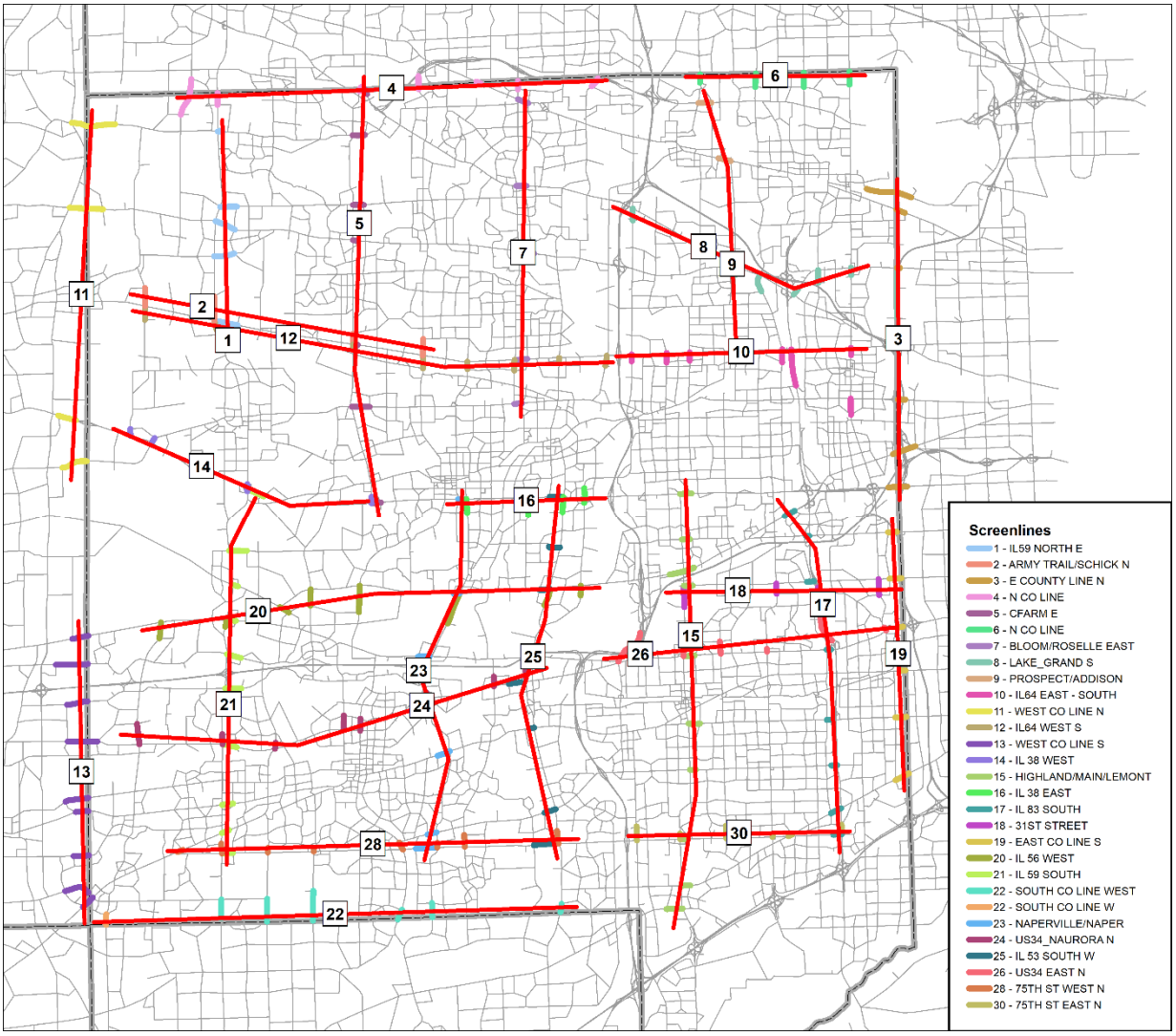


Table 28 – Traffic Counts and Model Volumes by Screenline

Screenline	Number of Count Links	Observed Traffic Volumes (AADT)	Model Traffic Volumes	Difference	Percent Difference
1 - IL59 NORTH E	5	88,000	94,513	6,513	7%
2 - ARMY TRAIL/SCHICK N	8	149,830	183,727	33,897	23%
3 - E COUNTY LINE N	11	248,660	281,882	33,222	13%
4 - N CO LINE	8	146,005	144,620	-1,385	-1%
5 - CFARM E	7	214,210	251,648	37,438	17%
6 - N CO LINE	3	52,995	56,289	3,294	6%
7 - BLOOM/ROSELLE EAST	5	188,830	208,254	19,424	10%
8 - LAKE_GRAND S	8	126,020	162,495	36,475	29%
9 - PROSPECT/ADDISON	4	160,800	200,519	39,719	25%
10 - IL64 EAST - SOUTH	7	147,430	185,390	37,960	26%
11 - WEST CO LINE N	5	104,880	134,199	29,319	28%
12 - IL64 WEST S	8	152,870	199,193	46,323	30%
13 - WEST CO LINE S	9	142,450	176,940	34,490	24%
14 - IL 38 WEST	4	78,625	98,487	19,862	25%
15 - HIGHLAND/MAIN/LEMONT	11	279,345	281,359	2,014	1%
16 - IL 38 EAST	10	196,655	253,450	56,795	29%
17 - IL 83 SOUTH	9	275,300	276,910	1,610	1%
18 - 31ST STREET	5	111,350	143,054	31,704	28%
19 - EAST CO LINE S	6	143,850	136,705	-7,145	-5%
20 - IL 56 WEST	8	165,120	214,376	49,256	30%
21 - IL 59 SOUTH	10	181,270	231,034	49,764	27%
22 - SOUTH CO LINE W	7	172,300	202,927	30,627	18%
23 - NAPERVILLE/NAPER	8	221,515	249,678	28,163	13%
24 - US34_NAURORA N	7	191,070	194,263	3,193	2%
25 - IL 53 SOUTH W	8	231,350	264,554	33,204	14%
26 - US34 EAST N	7	172,150	220,995	48,845	28%
27 - 75TH ST WEST N	8	240,750	282,161	41,411	17%
28 - 75TH ST EAST N	6	159,800	127,206	-32,594	-20%
Total	202	4,743,430	5,456,830	713,400	15%

1.13 Model Traffic Assignment Statistics

1.13.1 Number of Vehicle Trips by Vehicle Type

Table 29 – Number of Network-wide Trips by Year and Vehicle Type

	2015	2040
Total Autos	4,741,601	5,290,768
Total Trucks	461,545	529,539
Total All	5,203,146	5,820,308

1.13.2 Number of Trips by Truck Type

Table 30 – Number of Trips by Truck Type

Truck Type	2015	2040
Non-Heavy Trucks	279,739	320,833
Heavy Trucks	53,169	58,200
M-Truck External	34,303	40,135
H-Truck External	94,334	110,371
Total Trucks	461,545	529,539

1.13.3 Number of Trips by Internal versus External

Table 31 – Number of Trips by Internal versus External

	2015			2040		
	Autos	**Trucks**	**Total**	**Autos**	**Trucks**	**Total**
Internal- Internal	3,176,472	332,907	3,509,379	3,459,567	379,033	3,838,600
External- Internal	516,252	27,687	543,939	604,014	32,394	636,408
Internal - External	511,820	26,854	538,673	598,829	31,419	630,248
External - External	537,058	74,097	611,155	628,358	86,693	715,051
Total	4,741,601	461,545	5,203,146	5,290,768	529,539	5,820,308

1.13.4 Number of Trips by Trip Purpose

Table 32 – Number of Trips by Trip Purpose—2015 vs. 2040

	2015	2040
HBW	557,793	593,114
HBSCH	114,122	119,394
HBSHP	364,891	389,889
HBO	1,151,257	1,220,893
NHB	870,857	1,003,600
O'Hare	198,761	232,550
Metra Trips	33,725	34,601
PC External	1,450,195	1,696,728
Total Autos	4,741,601	5,290,768

1.14 Model Statistics by DuPage County Quadrant

Should we show model statistics for the "buffer" areas by County?

1.14.1 Vehicle Miles Traveled

Table 33 – Daily Vehicle Miles Traveled by Model Quadrant and Year

Quadrant	2015	2040
1 - NE	7,177,396	8,054,410
2 - SE	11,012,530	12,078,494
3 - SW	5,186,422	5,735,893
4 - NW	3,748,189	4,240,372
Total	**27,124,537**	**30,109,169**

Table 34 – Daily Vehicle Miles Traveled by Model Quadrant and Year

Quadrant	2015	2040
1 - NE	599,059	660,617
2 - SE	937,348	1,003,543
3 - SW	430,856	471,207
4 - NW	308,717	347,932
Total	**2,277,994**	**2,485,339**

1.14.2 Vehicle Hours Traveled

Table 35 – Daily Vehicle Hours Traveled by Model Quadrant and Year

	All VHT		Congested VHT		Percent Congested VHT	
Quadrant	**2015**	**2040**	**2015**	**2040**	**2015**	**2040**
1 – NE	190,858	210,836	36,859	41,644	19%	20%
2 - SE	271,926	311,417	46,852	64,778	17%	21%
3 - SW	135,420	158,165	20,049	29,890	15%	19%
4 - NW	100,241	117,452	9,043	14,205	9%	12%
Total	**698,446**	**797,870**	**112,803**	**150,517**	**16%**	**19%**

Table 36 – PM Peak Hour Vehicle Hours Traveled

	All VHT		Congested VHT		Percent Congested VHT	
Quadrant	**2015**	**2040**	**2015**	**2040**	**2015**	**2040**
1 - NE	19,074	20,007	4,543	4,436	24%	22%
2 - SE	28,271	31,349	6,571	8,106	23%	26%
3 - SW	13,743	16,027	2,913	4,075	21%	25%
4 - NW	9,741	11,409	1,185	1,733	12%	15%
Total	**70,829**	**78,793**	**15,212**	**18,350**	**21%**	**23%**

1.14.3 Average Operating Speeds

Table 37 – Average Operating Speeds—Daily

Quadrant	2015	2040 Base
1 - NE	31.4	33.0
2 - SE	33.2	32.0
3 - SW	31.4	29.4
4 - NW	31.7	30.5
DuPage County Average	**32.1**	**31.5**

Table 38 – Average Operating Speeds—PM Peak Hour

Quadrant	2015	2040 Base
1 - NE	31.4	33.0
2 - SE	33.2	32.0
3 - SW	31.4	29.4
4 - NW	31.7	30.5
DuPage County Average	**32.1**	**31.5**

1.14.4 Percentage of Travel by Jurisdiction

Table 39 – Percent of Daily VMT by Route Jurisdiction

	VMT		Percent VMT	
Jurisdiction	**2015**	**2040 Base**	**2015**	**2040 Base**
IDOT	10,321,264	11,428,681	38%	38%
ISTHA	6,104,028	7,015,906	23%	23%
DCDOT	5,733,562	6,120,278	21%	20%
MUNI	12,361	13,077	0%	0%
LOCAL	4,951,626	5,528,079	18%	18%
Total	**27,122,841**	**30,106,021**	**100%**	**100%**

1.14.5 Percentage of Travel by Roadway Functional Classification

Table 40 – Percent of Travel by Roadway Functional Classification

Functional Classification	2015	2040 Base	2015	2040 Base
10 - TOLLWAY	5,537,273	6,138,860	21%	21%
11 - FREEWAY	3,375,309	3,447,109	13%	12%
20 - EXPRESSWAY	1,677,251	2,109,510	6%	7%
30 - PRINCIPAL ART	4,704,567	5,296,717	18%	18%
40 - MAJOR ART	3,461,914	3,416,620	13%	12%
50 - MINOR ART	5,352,334	5,917,061	20%	20%
60 - COLLECTOR	2,154,316	2,476,037	8%	9%
70 - COMM COLLECTOR	229,729	265,795	1%	1%
Total	26,492,694	29,067,710	100%	100%

1.14.6 Average Daily Volume by Roadway Jurisdiction

Divide VMT by the link length. See "Average Volume Per Mile" table.

Table 41 – Average Daily Volume by Roadway Jurisdiction

Jurisdiction	2015	2040
IDOT	41,300	43,200
ISTHA	56,100	53,800
DCDOT	25,900	27,500
MUNI	2,000	2,100
LOCAL	8,300	9,200

1.15 Conclusion

The DuPage County Travel Demand Model will aid in the analysis of future highway needs in DuPage County. Activities for which traffic models are traditionally applied include, but are not limited to, roadway improvement analysis and new route alternative analysis. The model update efforts have yielded a predictive model with study years 2025 and 2040 that will be used for planning within the county.

APPENDIX A – Truck Prohibited Routes

Truck Prohibited Road Segments – During this development period, a set of roadways were deemed to be off-limits to truck. These roads are presented in Table 42.

Table 42 – Truck Prohibited Road Segments

Roadway	From	To
Rose Ln	Lake St/US-20	Spaulding Rd
35th St	Meyers Rd	Cass Ave
63rd St	IL 83	Madison St
Abbeywood Dr	College Rd	Naper Blvd
Adams St	US 34/Ogden Ave	Spring Rd
Army Trail Rd	Munger Rd	IL 59
Batavia Rd	Continental Dr	Warrenville Rd
Benedictine Pkwy	Maple Ave	Abbeywood Dr
Bridge St	Wesley St	Manchester Rd
Burlington Ave	Yackley Ave	IL-53
Hinsdale Ave	Stought St	Indian Dr
Cass Ave	55th St	W Chicago Ave
Church Rd	W 3rd Ave	IL 19/Irving Park Rd
Fairoaks Rd	Army Trail Rd	Birchbark Tr
Foster Ave	Edgewood Av	IL-83
Green Trails Dr	College Rd	New Albany Rd
Greenbrook Blvd	County Farm Rd	Lake St/US-20
Grove Ave	IL-83	Church Rd
Hill Ave	Finley Rd	Acorn Ave
Hobson Rd	Belmont Rd	Wolfe Dr
Jewell Rd	County Farm Rd	Gary Ave
Lee Ave	Prairie Ave	US 34/Ogden Ave
Mack Rd	IL 59	Williams Rd
Madison St	US 34/Ogden Ave	Spring Rd
Madison St	55th St	I-55 Frontage
Main St	Short St	IL-53
MacArthur Dr	IL 56/Butterfield Rd	22nd St
Medinah Rd	IL 19/Irving Park Rd	Army Trail Rd
Prospect Ave	Hinsdale Ave	W Chicago Ave
River Rd	Ferry Rd	Warrenville Rd
S River Rd	Oswego Rd	US 34/Ogden Ave

Short St	Main St	Ohio St
Smith Rd	IL 59	Army Trail Rd
Spring Rd	Oakbrook Rd	York Rd
Swift Rd	IL 64/North Ave	Dickens Rd
Walker Ave	Hinsdale Ave	55th St
Warrenville Rd	IL 56/Butterfield Rd	Batavia Rd
Williams St	75th St	Plainfield Rd
Winfield Rd	IL 38/Roosevelt Rd	Highlake Rd
Wood Dale Rd	IL 19/Irving Park Rd	Lake St/US-20
York Rd	Grand Ave	E Green St

APPENDIX B – Link Attributes

Table 43 contains all of the link attributes coded onto links in the DuPage County model. There are 69 unique link attributions. For attributes that have a limited number of choices, they have been listed in the third column of the table. For example, there are five possible Counties in which the links may be located.

Table 43 – Link Attributes List

Field_Name	Field Description	Link Attribute Choices
ID	Unique identifier	-
Dir	Direction	-
Length	Link length in miles	-
NAME/ROUTE	Roadway name	-
COUNTY	County Name	COOK
		DUPAGE
		KANE
		KENDALL
		WILL
CNTY_ID	County Identification Number	County ID
TOWNSHIP	Township Name	Addison
		Aurora
		Barrington
		Batavia
		Bloomingdale
		Chicago-Cook
		Chicago-DuPage
		Downers Grove
		Dundee
		DuPage
		Elgin
		Elk Grove
		Geneva
		Hanover
		Homer
		Lemont
		Leyden
		Lisle
		Lockport
		Lyons
		Maine
		Milton

		Naperville
		Norwood Park
		Oswego
		Palatine
		Palos
		Plainfield
		Proviso
		Schaumburg
		St Charles
		Sugar Grove
		Wayne
		Wheatland
		Winfield
		York
TWP	Township ID Number	Township ID
JURIS	Roadway Agency Jurisdiction	COOK COUNTY
		DCDOT
		IDOT
		ISTHA
		KCDOT
		LOCAL
		MUNI
		ZONE
WSA_FCLASS	Functional Classification ID	-
CLASS_NAME	Functional Classification Name	10- Tollway
		11- Freeway
		11- Collector/Distributor Freeway to Freeway
		12- Collector/Distributor Freeway to Arterial
		13- Ramp - Freeway to Freeway
		15- Ramp - Freeway to Network
		15- Ramp - Expressway to Network
		16- Ramp - Tollway to Network
		17- Ramp Arterial
		18- Ramp Other
		19- Frontage Road
		20- Expressway
		30- Principal Arterial
		40- Major Arterial
		50- Minor Arterial
		60- Collector
		70- Community Collector
		90- Centroid Connector

		90- External Centroid Connector
		91- Train Station Connector
Lanes_AB/BA	Directional Number of lanes	-
LANE CAP	Lane capacity per hour per lane	-
DIR CAP	Total directional capacity	-
DAY CAP	Daily capacity	-
DailyCap_AB/BA	Directional Daily capacity	-
PMCap_AB/BA	Directional PM capacity	-
DYSpeed_AB/BA	Directional Daily free flow speed	-
PMSpeed_AB/BA	Directional PM free flow speed	-
GC_AB/BA	Directional Green to Cycle ratio	-
CYCLE_AB/BA	Directional Length of the Signal Cycle	-
RED_AB/BA	Directional Length of the Red Signal	-
TOLL_RATE	Toll Rates	-
TOLLWAY_VOT	Additional travel time for the tollway routes	-
SCREEN	Screenline	-
ADT15_AB/BA	Directional 2015 Daily Counts	-
PM Pk Count_AB/BA	Directional PM Peak Counts	-
ADT2W_TRK_PERC_15	Directional Daily Truck Percentage	-
PM2W_TRK_PERC_15	Directional PM Peak Truck Percentage	-
AREA_TYPE	Area Type	Corridor
		Downtown
		External
		Rural
		Sub Center
		Suburban
		Town Center
		Transitional
NO_TRK	Trucks Prohibited	-
ALPHA	Alpha Value for VDF	-
BETA	Beta Value for VDF	-
TURN_PEN	Turn Penalty 1=active and 0=inactive	-
RR_PEN	Rail Road Penalty 1=active and 0=inactive	-
TRUCKS_COUNT	Total Truck Counts	-
AADT_COUNT	Total Counts	-
DY_Model_NHT_AB/BA	Directional DY Non-Heavy Truck Model Volume	-
DY_Model_HT_AB/BA	Directional DY Heavy Truck Model Volume	-

DY_Model_Truck_AB/BA	Directional DY Total Truck Model Volume	-
DY_Model_Truck_PCE_AB/BA	Directional DY Total Truck Model Volume in PCE	-
DY_Model_NHT	DY Non-Heavy Truck Model Volume	-
DY_Model_HT	DY Heavy Truck Model Volume	-
DY_Model_Total_Trucks	DY Total Truck Model Volume	-
DY_Model_Autos_AB/BA	Directional DY Passenger Car Model Volume	-
DY_Model_Total_Autos	DY Passenger Car Model Volume	-
DY_MODEL	Daily Model	-
DY_COUNTS	Daily Counts	-
PM_MODEL	PM Peak Model	-
PM_COUNTS	PM Peak Counts	-
DYTime_Min_AB/BA	Directional Daily Congested Time	-
PMTime_Min_AB/BA	Directional PM Peak Congested Time	-
PM_Model_NHT_AB/BA	Directional PM Peak Non-Heavy Truck Model Volume	-
PM_Model_HT_AB/BA	Directional PM Peak Heavy Truck Model Volume	-
PM_Model_Truck_AB/BA	Directional PM Peak Total Truck Model Volume	-
PM_Model_Total_Trucks	PM Peak Total Truck Model Volume	-
PM_Model_Truck_PCE_AB/BA	Directional PM Peak Total Truck Model Volume in PCE	-
PM_Model_Autos_AB/BA	Directional PM Peak Passenger Car Model Volume	-
PM_Model_Total_Autos	PM Peak Passenger Car Model Volume	-
Map_DY_Model_Total_Vehicles_AB/BA	Directional Daily Total Vehicles	-
Map_DY_Model_Total_Vehicles	DY Total Vehicles	-
Map_PM_Model_Total_Vehicles_AB/BA	Directional PM Peak Total Vehicles	-
Map_PM_Model_Total_Vehicles	PM Peak Total Vehicles	-
MODEL_PM_VC_AB/BA	Directional PM Peak V/C Ratio	-
MODEL_PM_VC	Max PM Peak V/C Ratio	-
MODEL_PM_Speed_AB/BA	Directional PM Peak Congested Speed	-
MODEL_PM_Speed	Min PM Peak Congested Speed	-
MODEL_PM_CTime_AB/BA	Directional PM Peak Congested Time	-
MODEL_PM_CTime	Max PM Peak Congested Time	-

APPENDIX C-2

OPERATING AND CONTRACTUAL EXPENDITURE SUMMARY

Operations Expenditures

DuPage County Operations costs include personnel, utility, fleet, commodities and materials, and facility. Additionally, debt service on bonds is included as an operating cost. Costs were derived from DOT-Finance reports on LGT and MFT expenditures over prior 5-7 years. Contractual costs are those related to equipment repair, tools, parts, and other annual services needed for facilities, fleet services.

		PROGRAM YEAR																			
OPERATION	CB DISTRICT	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	TOTAL
Personnel Services	ALL	$10.9	$11.1	$11.4	$11.7	$12.0	$12.3	$12.6	$12.9	$13.2	$13.5	$13.9	$14.3	$14.7	$15.1	$15.5	$15.9	$16.3	$16.7	$17.1	$17.5	$278.6
Commodities	ALL	$3.1	$3.1	$3.1	$3.1	$3.2	$3.2	$3.2	$3.2	$3.2	$3.3	$3.3	$3.3	$3.3	$3.3	$3.4	$3.4	$3.4	$3.4	$3.4	$3.5	$65.4
Contractual	ALL	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$1.1	$22.0
Capital - Operational	ALL	$2.1	$2.1	$2.1	$2.1	$2.2	$2.2	$2.2	$2.2	$2.2	$2.3	$2.3	$2.3	$2.3	$2.3	$2.4	$2.4	$2.4	$2.4	$2.4	$2.5	$45.4
Debt Service	ALL	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$1.0	$0.0	$0.0	$0.0	$0.0	$0.0	$15.0
Transportation (MFT) Revenue Bonds	ALL	$9.1	$0.0																			$9.1
Transfers Out	ALL																					
OPERATING EXPENSES	**ALL**	**$27.3**	**$18.4**	**$18.7**	**$19.1**	**$19.4**	**$19.8**	**$20.1**	**$20.4**	**$20.8**	**$21.1**	**$21.6**	**$22.0**	**$22.4**	**$22.9**	**$23.3**	**$22.8**	**$23.2**	**$23.6**	**$24.1**	**$24.5**	**$435.55**
5 YEAR TOTALS				***$103.0***					***$102.2***					***$112.2***					***$118.2***			

Capital Maintenance Expenditure Projections by Category	
Item	**FY21-40 TOTAL**
Bridge Repair	$ 6,600,000
Drainage Maint/Repair	$ 7,850,000
Landscape Maintenance	$ 3,852,000
Major Culvert Replacement	$ 7,000,000
Pavement Maintenance	$ 205,000,000
Pavement Marking	$ 10,991,000
Pavement Preservation	$ 916,000
Retaining Wall Repair/Replace	$ 3,586,000
Sidewalk Install, Repair & ADA	$ 11,650,000
Stormsewer Lining	$ 2,970,000
Traffic Sig/Lighting Maint	$ 35,000,000
Traffic Sig/Lighting Maint - Century Hills	$ 460,000
Traffic Signal Repair & Replace	$ 34,750,000
Wetland Maintenance	$ 390,000
TOTALS	$ 331,015,000

Contractual Service Expenditure Projections by Category

Item	FY21-40 TOTAL
Appraisal Services	$ 1,000,000
Bridge Inspection	$ 1,000,000
Construction Inspection	$ 10,250,000
Design Engineering	$ 4,800,000
Environmental Screening	$ 2,235,000
Geotechnical Services	$ 291,000
ITS Network Support	$ 1,140,000
LRTP/CRIP	$ 2,020,000
Traffic Count and Data Management Services	$ 3,000,000
Material Testing	$ 1,085,000
Mowing Agreements	$ 6,760,000
Pavement Management	$ 1,088,000
Planning and Feasibility Studies	$ 750,000
Regional Operations Support	$ 570,000
Signal Coordination/Timing	$ 975,000
Structural Engineering	$ 4,264,000
Surveying Services	$ 830,000
Title Services	$ 286,000
Traffic Signal Design	$ 5,380,000
Underground Util Locating Srv	$ 4,380,000
Wetland Monitoring/Inspect	$ 79,000
TOTALS	$ 52,183,000

APPENDIX C-3

FY2021-2025

PROGRAMMED PROJECT LIST

(DUPAGE COUNTY PROJECTS ONLY)

DuPage County Programmed Projects

10/1/2021

Map_ID	Agency	Project/Roadway	From	To	Type	SubType 1	Activity 1	IFD	IF ELIGIBLE?	Completion Year	Estimated Cost (in scheduled year)
1	DuPage County	140 Building	DuPage County Campus		Facility	Capital Facility	Reconstruct/Replace	5	No	2021-2025	$ 28,750,000
2	DuPage County	31st Street	Meyers Rd	York Rd	System Enhancement	Intersection	Channelize	6	Partial	2021-2025	$ 7,158,100
3	DuPage County	55th Street	Dunham Road	Clarendon Hills Road	System Enhancement	Intersection	Channelize	9	No	2021-2025	$ 1,055,000
4	DuPage County	63rd Street	at Main Street, DG		State of Good Repair/Safety	Traffic Signal	Modernize	9	No	2021-2025	$ 662,000
5	DuPage County	63rd Street	at Springside Ave		System Enhancement	Traffic Signal	Install	9	No	2021-2025	$ 7,000
6	DuPage County	63rd Street	Suffield Ct	Americana Dr	System Enhancement	Traffic Sig System	Modernize	9	No	2021-2025	$ 2,100,000
7	DuPage County	75th Street	at Naper Blvd		State of Good Repair/Safety	Intersection	Channelize	8	No	2021-2025	$ 234,200
8	DuPage County	75th Street	Lyman Avenue	Exner Road/Williams Street	System Enhancement	Highway/Corridor	Channelize	9	No	2021-2025	$ 656,200
9	DuPage County	75th Street	Millbrook	Greene Road	System Enhancement	Intersection	Channelize	7, 8	Yes	2021-2025	$ 4,823,000
10	DuPage County	87th Street (Boughton Road)	at Woodward Ave		System Enhancement	Intersection	Channelize	9	Yes	2021-2025	$ 5,256,000
11	DuPage County	Army Trail Road	at West Branch DuPage River		State of Good Repair/Safety	Bridge & Culvert	Reconstruct/Replace	1	No	2021-2025	$ 7,490,000
12	DuPage County	at Kearney Road Dam			State of Good Repair/Safety	Drainage & Detention	Reconstruct/Replace	9	No	2021-2025	$ 550,000
13	DuPage County	Bloomingdale Road	at Geneva Road		System Enhancement	Intersection	Channelize	5	Yes	2021-2025	$ 790,000
14	DuPage County	Bloomingdale Road	over CC&P Railroad		State of Good Repair/Safety	Bridge & Culvert	Reconstruct/Replace	2	No	2021-2025	$ 6,240,000
15	DuPage County	Campus Ring Road North	DuPage County Campus		State of Good Repair/Safety	Pavement	Reconstruct/Replace	5	No	2021-2025	$ 1,500,000
**	DuPage County	Central Signal System Phases I-IV	Various Locations		System Enhancement	Traffic Sig System	Coordinate	1-9	Yes	2021-2025	$ 17,780,000
17	DuPage County	County Farm Road	at St. Charles Road		System Enhancement	Intersection	Channelize	4	Yes	2021-2025	$ 1,000,000
18	DuPage County	Fabyan Parkway	Roosevelt Rd (IL 38)	Kane Co Line	State of Good Repair/Safety	Highway/Corridor	Add Lanes	4	Yes	2021-2025	$ 19,000,000
19	DuPage County	Fabyan Parkway	Roosevelt Rd (IL 38)	Kane Co Line	State of Good Repair/Safety	Lighting	Install	4	No	2021-2025	$ 137,000
20	DuPage County	Ferry Road Bike Trail	Eola Road	Raymond Drive	State of Good Repair/Safety	Bike Path/Trail	Reconstruct/Replace	7	No	2021-2025	$ 600,000
21	DuPage County	Gary Avenue	Army Trail Road	Great Western Trail	Mobility	Bike Path/Trail	Construct	2	No	2021-2025	$ 684,700
22	DuPage County	Gas Station/Fuel Tanks and Pumps	DuPage County Campus		Facility	Capital Facility	Reconstruct/Replace	5	No	2021-2025	$ 1,000,000
23	DuPage County	Geneva Road	at West Branch DuPage River		State of Good Repair/Safety	Bridge & Culvert	Reconstruct/Replace	4	No	2021-2025	$ 4,490,000
24	DuPage County	Grand Avenue	at York Road		State of Good Repair/Safety	Highway/Corridor	Improve	3	No	2021-2025	$ 4,574,000
25	DuPage County	Great Western Trail Extension	IPP Elgin Branch	Sassafras	Mobility	Bike Path/Trail	Construct	4	No	2021-2025	$ 70,000
26	DuPage County	Highlake Road	at Sunset Blvd		System Enhancement	Rail Crossing	Improve	4	Yes	2021-2025	$ 1,906,000
27	DuPage County	Hobson Road	Woodridge Drive	Janes Avenue	Mobility	Sidewalk	Construct	8	No	2021-2025	$ 1,471,000
28	DuPage County	I-88 "Reagan Memorial" Tollway	over Illinois Prairie Path		Mobility	Bike Path/Trail	Align/Re-align	7	No	2021-2025	$ 130,000
29	IDOT/DuPage County	IL 38 (Roosevelt Road)	at Naperville Rd		System Enhancement	Intersection	Channelize	5	Partial	2021-2025	$ 7,750,000
30	DuPage County	IL 38/Roosevelt Road	over IL 53		System Enhancement	Bridge & Culvert	Modernize	5	No	2021-2025	$ 200,000
31	DuPage County	Kress Road	IL 38/Roosevelt Road	Hawthorne Lane	State of Good Repair/Safety	Highway/Corridor	Resurface	5	No	2021-2025	$ 2,442,000
32	DuPage County	Lemont Road	83rd Street	87th Street	System Enhancement	Intersection	Channelize	9	Yes	2021-2025	$ 6,717,000
33	DuPage County	Main Street, DG	at 59th St		System Enhancement	Intersection	Channelize	9	Yes	2021-2025	$ 1,265,000

Map_ID	Agency	Project/Roadway	From	To	Type	SubType 1	Activity 1	IFD	IF ELIGIBLE?	Completion Year	Estimated Cost (in scheduled year)
34	DuPage County	Naperville Rd	N of Diehl Rd	Ogden Ave/US 34	System Enhancement	Highway/Corridor	Channelize	8	Yes	2021-2025	$ 5,253,000
35	DuPage County	Parking Lots	DuPage County Campus		State of Good Repair/Safety	Pavement	Resurface	5	No	2021-2025	$ 500,000
**	DuPage County	Traffic Signal ITS/UPS Modernization	Various Locations		System Enhancement	Traffic Signal	Modernize	1-9	No	2021-2025	$ 1,580,000
37	DuPage County	Walter Road/Byron Ave	Medinah Road	Army Trail Road	State of Good Repair/Safety	Drainage & Detention	Modernize	2	No	2021-2025	$ 600,000
38	DuPage County	St. Charles Road	at East Branch DuPage River		State of Good Repair/Safety	Bridge & Culvert	Repair/Rehab	5	No	2021-2025	$ 268,000
39	DuPage County	Warrenville Road	at East Branch DuPage River		State of Good Repair/Safety	Bridge & Culvert	Reconstruct/Replace	8	No	2021-2025	$ 5,200,000
40	DuPage County	Yellow Freight	Off Campus Facility		Facility	Capital Facility	Reconstruct/Replace	4	No	2021-2025	$ 6,325,000
41	DuPage County	York Road	Devon Avenue	Gateway Drive	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	3	Partial	2021-2025	$ 16,000,000
										TOTAL	**$ 174,214,200**

** Indicates Projects with multiple known locations too numerous to map

Other Agency Committed or Programmed Projects

The following projects are previously committed, are already included in adopted plans, and have received at least some funding commitment.
All of these projects are included in the Base Model Scenario.

Expressway and Arterial Projects in DuPage County											
Agency	Location	Road Type	Roadway	From	To	Type	SubType	Activity 1	Activity 2	Completion Year	Impact Fee Eligibility
Aurora	DuPage County	Arterial	75th Street	at Commons Drive		System Enhancement	Intersection	Construct	Traffic Signal Installation	2021-2025	YES
Aurora	DuPage County	Arterial	Commons Drive	US 34	Thatcher	System Expansion	Highway	Construct	Alignment	2021-2025	
IDOT	DuPage County	Arterial	IL 38 (Roosevelt Road)	Winfield Rd	Westhaven	System Enhancement	Intersection	Widen	Traffic Signal Modernization	2021-2025	YES
IDOT	DuPage County	Arterial	IL 53	Butterfield Rd (IL 56)	Park Blvd	System Expansion	Highway	Widen/Resurface		2021-2025	
IDOT	DuPage County	Arterial	IL 56 (Butterfield Road)	W of IL 53	W of I-355	System Expansion	Highway	Widen/Resurface		2021-2025	
IDOT	DuPage County	Arterial	IL 56/Butterfield Road & 22nd Street	IL 59	Cicero Ave	System Enhancement	Intersection	Signal Coordination	Traffic Signal Modernization	2021-2025	
IDOT	DuPage County	Arterial	IL 59	at Stearns Road		System Enhancement	Intersection	Widen	Traffic Signal Modernization	2021-2025	
IDOT	DuPage County	Arterial	IL 59	at Army Trail Road		System Enhancement	Intersection	Channelize		2021-2025	YES
IDOT	DuPage County	Arterial	IL 59	at James Ave & Joliet Street		System Enhancement	Intersection	Improve	Traffic Signal Modernization		
IDOT	DuPage County	Arterial	IL 59	at Garys Mill Road		System Enhancement	Intersection	Improve	Traffic Signal		
IDOT	DuPage County	Arterial	IL 64 (North Avenue)	Smith/Kautz Road	Cicero Ave	System Enhancement	Intersection	Signal Coordination	Traffic Signal Modernization		
IDOT	DuPage County	Arterial	IL 83	at Plainfield Rd		System Enhancement	Intersection	Widen	Traffic Signal Modernization	2021-2025	
IDOT	DuPage County	Arterial	Irving Park Road (IL 19)	Eicklemann Drive (Itasca)	Rush St	Operational Efficency and Safety	Corridor			2021-2025	
Municipal	DuPage County/Kane County	Arterial	Kautz Road	Swenson Ave	N of IL 38/Roosevelt Road	State of Good Repair	Corridor	Reconstruct	Truck Route	2021-2025	
Naperville	DuPage County	Arterial	North Aurora Road	at CN RR		System Expansion	Corridor	Bridge	Widen	2021-2025	
Naperville	DuPage County	Arterial	North Aurora Road	Frontenac Road	Fairway Drive	System Expansion	Corridor	Widen		2021-2025	
IDOT/DuPage County	DuPage County	Arterial	US 20 (Lake Street)	at Gary Ave		System Enhancement	Intersection	Widen	Traffic Signal Modernization	2026-2030	
IDOT	DuPage County	Arterial	US 34/Ogden Ave.	Rickert Drive	Feldott Lane	System Enhancement	Intersection	Channelize	Traffic Signal Modernization		
Oak Brook	DuPage County	Arterial	York Road	at Harger Road		System Enhancement	Intersection	Channelize	Traffic Signal Installation	2021-2025	
IDOT	Cook County/DuPage County	Expressway	I-55 Stevenson Express Toll Lanes	W of Lemont Road	I-90/I-94 Dan Ryan	System Expansion	Highway	Construct		2026-2030	
Tollway	Cook County/DuPage County	Expressway	I-294 Central Tri-State	at E County Line Road		System Expansion	Interchange	Construct		2021-2025	
Tollway	Cook County/DuPage County	Arterial	E County Line Road	I-294 Ramps	IL 64/North Avenue	System Enhancement	Highway	Widen/Resurface	Alignment	2021-2025	
Tollway/Cook County	Cook County	Expressway	IL 64 (North Avenue)	Lake St (US 20)/County Line Rd		System Expansion	Interchange	Construct		2021-2025	
Tollway	DuPage County	Expressway	Elgin-O'Hare Expressway (IL 390) Elgin-O'Hare Expressway (IL 490)	IL 83	IL 490/York Road I-90	System Expansion	Highway	Construct		2021-2025	YES
Tollway	DuPage County Cook County	Expressway	I-490	I-90	I-294	System Expansion	Highway	Construct			
Tollway	Cook County	Expressway	I-294, Central Tri-State	95th St	Balmoral Ave	System Expansion	Highway	Construct		2021-2025	
Tollway	DuPage County	Expressway	I-88 On Ramp	York Road	I-88/I-294	System Expansion	Interchange	Add Lanes	Bridge	2021-2025	

APPENDIX C-4

FY2026-2040

PLANNED PROJECT LIST

(DUPAGE COUNTY PROJECTS ONLY)

Map_ID	Agency	Roadway	From	To	Type	Subtype 1	Activity 1	IFD	IF Eligibile[1]	Year Grouping	Constrained $$
101	DuPage County	31st Street	Highland Ave	Meyers Road	Mobility	Bike Path/Trail	Construct	6	No	2026-2030	$ 2,933,000
102	DuPage County	55th Street	County Line Road	E of IL 83	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	9	No	2036-2040	$ 15,290,000
103	DuPage County	63rd St./Hobson Rd.	I-355 Ramp	Prentice Drive	State of Good Repair/Safety	Intersection	Channelize	8	Yes	2036-2040	$ 1,700,000
104	DuPage County	63rd Street	Dunham	Main St, Downers Grove	State of Good Repair/Safety	Highway/Corridor	Channelize	9	Yes	2036-2040	$ 1,300,000
105	DuPage County	63rd Street	E of Cass Avenue	Clarendon Hills Road	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	9	No	2026-2030	$ 8,960,000
106	DuPage County	63rd Street	Fairmount Rd		State of Good Repair/Safety	Intersection	Channelize	9	Yes	2036-2040	$ 500,000
108	DuPage County	63rd Street	at Cass Ave		System Enhancement	Intersection	Add Lanes	9	Yes	2026-2030	$ 3,200,000
109	DuPage County	75th St.	Commons Dr.	IL 59	System Enhancement	Intersection	Channelize	7	Yes	2026-2030	$ 2,100,000
110	DuPage County	75th Street	E of Plainfield Road	IL 83	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	9	No	2036-2040	$ 9,520,000
111	DuPage County	75th Street	IL 59	W of Washington St	System Expansion	Highway/Corridor	Add Lanes	7	Yes	2031-2035	$ 33,800,000
112	DuPage County	75th Street	W of Naper Blvd	Janes Ave	System Expansion	Highway/Corridor	Add Lanes	8	Yes	2036-2040	$ 34,900,000
113	DuPage County	Addison Road	at Byron Ave		State of Good Repair/Safety	Intersection	Channelize	3	Yes	2026-2030	$ 500,000
114	DuPage County	Army Trail Road	at County Farm Rd		System Enhancement	Intersection	Improve	1	Yes	2031-2035	$ 5,400,000
115	DuPage County	Army Trail Road	W of Gary Ave	Gladstone Ct	System Expansion	Highway/Corridor	Widen/Resurface	2	Yes	2036-2040	$ 16,600,000
116	DuPage County	Army Trail Road	at Munger Road		System Enhancement	Intersection	Reconstruct/Replace	1	Yes	2026-2030	$ 1,300,000
118	DuPage County	Bloomingdale Road	at Schick Road		System Enhancement	Intersection	Channelize	2	Yes	2036-2040	$ 4,100,000
119	DuPage County	Cass Avenue	I-55 Frontage	91st Street	State of Good Repair/Safety	Highway/Corridor	Improve	9	Yes	2026-2030	$ 2,000,000
120	DuPage County	College Road	Maple Avenue	Hobson Road	System Enhancement	Highway/Corridor	Channelize	8	Yes	2031-2035	$ 4,500,000
121	DuPage County	County Farm Road	at Geneva Rd		System Enhancement	Intersection	Add Lanes	4	Yes	2026-2030	$ 1,400,000
122	DuPage County	County Farm Road	At Stearns Road		System Enhancement	Intersection	Add Lanes	1	Yes	2026-2030	$ 5,400,000
123	DuPage/ Hanover Park	County Farm Road	Stearns Road	Ontarioville Rd	State of Good Repair/Safety	Highway/Corridor	Channelize	1	Yes	2026-2030	$ 5,000,000
124	DuPage County	County Farm Road	at Klein Creek		State of Good Repair/Safety	Bridge & Culvert	Reconstruct/Replace	4	No	2036-2040	$ 8,400,000
125	DuPage County	County Farm Road	at West Branch DuPage River		State of Good Repair/Safety	Bridge & Culvert	Reconstruct/Replace	1	No	2026-2030	$ 6,890,000
126	DuPage County	East Branch DuPage River Trail	Great Western Trail	IL 38/Roosevelt Road	Mobility	Bike Path/Trail	Construct	5	No	2026-2030	$ 17,400,000
127	DuPage County	East Branch DuPage River Trail	IL 38/Roosevelt Road	IL 56/Butterfield Road	Mobility	Bike Path/Trail	Construct	5	No	2031-2035	$ 12,810,000
128	DuPage County	Eola Road	New York St	North Aurora Rd	System Expansion	Highway/Corridor	Add Lanes	7	Yes	2031-2035	$ 36,200,000
129	DuPage County	Eola Road	North Aurora Rd	Ferry Road	System Expansion	Highway/Corridor	Add Lanes	7	Yes	2026-2030	$ 49,000,000

Map_ID	Agency	Roadway	From	To	Type	Subtype 1	Activity 1	IFD	IF Eligibile[1]	Year Grouping	Constrained $$
130	DuPage County	Gary Ave	at Schick Rd		System Enhancement	Intersection	Widen/Resurface	2	No	2026-2030	$ 8,300,000
131	DuPage County	Geneva Road	E of County Farm Road	Delano St	State of Good Repair/Safety	Highway/Corridor	Channelize	5	Yes	2026-2030	$ 1,600,000
133	DuPage County	Hobson Road	E of IL 53	W of I-355	State of Good Repair/Safety	Highway/Corridor	Channelize	8	Yes	2026-2030	$ 2,200,000
134	DuPage County	Hobson Road	Greene Road	Double Eagle Dr	System Enhancement	Highway/Corridor	Channelize	8	Yes	2026-2030	$ 8,100,000
135	DuPage County	Main Street DG	55th Street	63rd Street	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	9	No	2036-2040	$ 10,920,000
136	DuPage County	Main Street, DG/Lemont Road	Norfolk	Valley View	State of Good Repair/Safety	Highway/Corridor	Channelize	9	Yes	2036-2040	$ 600,000
137	DuPage County	Maple Avenue	at Belmont Road		System Enhancement	Intersection	Channelize	8	Yes	2026-2030	$ 1,400,000
138	DuPage County	Maple Avenue	at Naper Blvd		System Enhancement	Intersection	Channelize	8	Yes	2026-2030	$ 1,500,000
139	DuPage County	Maple Avenue	E of Belmont	E of Lee St	State of Good Repair/Safety	Highway/Corridor	Channelize	9	Yes	2031-2035	$ 1,800,000
140	DuPage County	Maple Avenue	east of Naper Blvd.	College Rd./Yackley Ave.	System Enhancement	Highway/Corridor	Widen/Resurface	8	Yes	2036-2040	$ 9,700,000
141	DuPage County	Maple Avenue	Walnut Ave	Dunham Road	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	8,9	Yes	2031-2035	$ 16,320,000
142	DuPage County	Medinah Road	at MDW/NIRC RR		State of Good Repair/Safety	Rail Crossing	Reconstruct/Replace	2	No	2036-2040	$ 1,000,000
143	DuPage County	Medinah Road	US 20/Lake Street	IL 19/Irving Park Road	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	2	No	2036-2040	$ 18,020,000
144	DuPage County	Meyers Road/Central DuPage Trail	31st Street	IL 56/Butterfield Road	Mobility	Bridge & Culvert	Widen/Resurface	6	No	2036-2040	$ 3,710,000
145	DuPage County	Mill Street	N of I-88	Shuman Blvd	Mobility	Bridge & Culvert	Widen/Resurface	7	No	2036-2040	$ 1,560,000
**	DuPage County	MultiUse Path Conversion	Various		Mobility	Bike Path/Trail	Construct	1-9	No	2026-2030	$ 2,200,000
**	DuPage County	MultiUse Path Conversion	Various		Mobility	Bike Path/Trail	Construct	1-9	No	2031-2035	$ 2,430,000
**	DuPage County	MultiUse Path Conversion	Various		Mobility	Bike Path/Trail	Construct	1-9	No	2036-2040	$ 2,680,000
149	DuPage County	Naperville Rd.	Danada Dr.	Loop Rd.	System Enhancement	Highway/Corridor	Widen/Resurface	5	Yes	2031-2035	$ 8,300,000
150	DuPage County	Powis Road	S of IL 64/North Avenue	Kress Road	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	1	No	2031-2035	$ 14,050,000
**	DuPage County	Prairie Path Enhancements	Various		System Enhancement	Bike Path/Trail	Construct	1,4,5,6,7	No	2026-2030	$ 696,000
**	DuPage County	Prairie Path Enhancements	Various		System Enhancement	Bike Path/Trail	Construct	1,4,5,6,7	No	2031-2035	$ 769,000
**	DuPage County	Prairie Path Enhancements	Various		System Enhancement	Bike Path/Trail	Construct	1,4,5,6,7	No	2036-2040	$ 849,000

Map_ID	Agency	Roadway	From	To	Type	Subtype 1	Activity 1	IFD	IF Eligibile[1]	Year Grouping	Constrained $$
155	DuPage County	Salt Dome Replacement	at 140 N County Farm road		Facility	Capital Facility	Reconstruct/Replace	5	No	2036-2040	$ 1,789,000
**	DuPage County	Sidewalk and Bikepath Gap Completion	Various		Mobility	Sidewalk	Construct	1-9	No	2026-2030	$ 5,710,000
**	DuPage County	Sidewalk and Bikepath Gap Completion	Various		Mobility	Sidewalk	Construct	1-9	No	2031-2035	$ 6,310,000
**	DuPage County	Sidewalk and Bikepath Gap Completion	Various		Mobility	Sidewalk	Construct	1-9	No	2036-2040	$ 6,960,000
159	DuPage County	St. Charles Road	County Farm Road	Bloomingdale Road	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	1,2,5	No	2031-2035	$ 34,620,000
160	DuPage County	St. Charles Road	at East Branch DuPage River		State of Good Repair/Safety	Bridge & Culvert	Reconstruct/Replace	5	No	2036-2040	$ 8,400,000
161	DuPage County	Stearns Road	DuPage/Kane County Border	Bartlett Road	System Enhancement	Highway/Corridor	Add Lanes	1	Yes	2036-2040	$ 17,400,000
162	DuPage County	Stearns Road Trail	Phillip State Park	IL 59	Mobility	Bike Path/Trail	Construct	1	No	2026-2030	$ 3,754,000
**	DuPage County	Traffic Monitoring Systems - Various	Various		System Enhancement	Traffic Sig System	Modernize	1-9	No	2026-2030	$ 3,000,000
164	IDOT/ DuPage County	US 34 (Ogden Ave)	at Finley Rd/Belmont Rd/Cross St		System Enhancement	Intersection	Channelize	8	Yes	2026-2030	$ 7,600,000
166	DuPage County	Volunteer Bridge	over UPW RR		State of Good Repair/Safety	Bridge & Culvert	Repair/Rehab	5	No	2026-2030	$ 900,000
167	DuPage County	Warrenville Road	Ivanhoe	Authority Drive	Mobility	Sidewalk	Construct	8	No	2036-2040	$ 827,000
168	DuPage County	Wooddale Road	Driscoll	S of Mark St	State of Good Repair/Safety	Highway/Corridor	Channelize	3	Yes	2036-2040	$ 1,000,000
169	DuPage County	WoodDale Road	Montrose Avenue	N of US 20/Lake Street	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	3	No	2026-2030	$ 21,060,000
170	DuPage County	Yackley Ave	at Middleton Rd		State of Good Repair/Safety	Intersection	Channelize	8	Yes	2036-2040	$ 400,000
171	DuPage County	Yackley Ave.	at Ogden Avenue		System Enhancement	Intersection	Widen/Resurface	8	Yes	2026-2030	$ 3,100,000
172	DuPage County	Yackley Ave.	over BNSF RR		State of Good Repair/Safety	Bridge & Culvert	Reconstruct/Replace	8	No	2036-2040	$ 5,000,000
174	DuPage County	York Road	31st Street	N of US 34/Ogden Avenue	State of Good Repair/Safety	Highway/Corridor	Reconstruct/Replace	6	No	2031-2035	$ 11,380,000
											$ 723,231,200

APPENDIX C-5

PROGRAMMED AND PLANNED PROJECT LIST

OTHER AGENCIES

Other Identified Long Range System Needs

The following projects are future needs as identified through the DuPage County DOT long range modeling process. Some locations may have planned improvements but at the time of analysis, these projects were not programmed. The projects are limited geographically to DuPage County only.

Agency	Roadway	From	To	Type	SubType	Activity 1	Activity 2	Completion Year	Potential DuPage Participation	Potential Impact Fee Eligible
Aurora	Bilter Road	DuPage Blvd	E of Farnsworth	System Expansion	Highway	Add Lanes	Alignment	2026-2040		
Itasca	Bloomingdale Road	IL 19	IL 53	State of Good Repair, Safety & Mobility	Corridor	Reconstruct/Widen	Pedestrian	2026-2040		
Naperville	Book Road	Rickert Dr	87th Street	System Expansion	Highway	Add Lanes		2026-2040	YES	YES
Aurora	Commons Dr.	Mc Coy Dr.	US 34/Ogden Ave.	System Enhancement	Intersection			2026-2030		
Aurora/Naperville	Commons Drive	at BNSF RR		System Expansion	Highway/Bridge	New Bridge		2026-2040		
Aurora/Naperville	Commons Drive	North Aurora Road	Campus Drive	System Expansion	Highway	Add Lanes	Intersection	2026-2040		
Bensenville	County Line Rd.	E Green St.	E 3rd Ave.	System Enhancement	Intersection	Channelize	Signal Modernization	2026-2040	YES	
Tollway	I-294	Complete interchange at 31st Street and 22nd Street		System Expansion	Interchange	New Interchange		2026-2040	YES	
IDOT	I-55	at Lemont Road		Operational Efficiency & Safety	Interchange	Align Ramps		2026-2040	YES	YES
Tollway	I-88 EB Off Ramp	to SB I-355		System Expansion	Interchange	Add Lanes		2026-2040		
Tollway	I-88 WB Off Ramp	at Technology Dr or Fairfield		System Expansion	Interchange	Add Lanes	Alignment	2026-2040		YES
IDOT	IL 38 (Roosevelt Road)	Park Blvd	W of I-355	System Enhancement	Highway	Widen	Channelize	2026-2040		
IDOT	IL 38 (Roosevelt Road)	West of Finley Rd	W of Summit Ave	System Expansion	Highway	Add Lanes	Intersection	2026-2040	YES	
Tollway	IL 390 Extension	US20/Lake Street	County Farm Road	System Enhancement	Corridor	New Alignment	Interchange	2026-2040	YES	YES
IDOT	IL 53	IL 38 (Roosevelt Road)	IL 56 (Butterfield Rd)	System Expansion	Highway	Add Lanes	Drainage	2026-2040		
IDOT	IL 53	Park Blvd	I-88	System Expansion	Highway	Add Lanes	Intersection	2026-2040		YES
IDOT	IL 53	at Maple Ave		System Enhancement	Intersection	Intersection Improvement	Signal Modernization	2026-2040	YES	
IDOT	IL 53	IL 64/North Avenue	N of IL 38/Roosevelt Road	System Expansion	Highway	Add Lanes		2026-2040		
IDOT	IL 56/Butterfield Road	W of IL 59	E of Farnsworth	System Expansion	Highway	Add Lanes	Intersection	2026-2040	YES	
IDOT	IL 56/Butterfield Road	Loop Rd.	IL 53	System Expansion	Highway	Add Lanes	Intersection	2026-2040	YES	
Elmhurst	IL 56/Butterfield Road	at York Road		System Expansion	Intersection	Intersection Improvement	Signal Modernization	2026-2040		
IDOT	IL 59	IL 38/Roosevelt Road	Ferry Road	System Expansion	Highway	Add Lanes	Intersection	2026-2040	YES	YES
IDOT	IL 83	63rd Street	I-55 Frontage Rd.	System Expansion	Highway	Add Lanes	Intersection	2026-2040	YES	YES
IDOT	IL 83	N of 31st St	N of 55th St	System Expansion	Highway	Add Lanes	Interchange	2026-2040		
IDOT	IL-53	IL 38/Roosevelt Road	IL 64/North Ave.	System Expansion	Highway	Add Lanes	Intersection	2026-2040		
Aurora	Liberty Street	Eola Road	Commerce St	System Expansion	Highway	Add Lanes	Rail Crossing	2026-2040	YES	YES
Downers Grove	Maple Avenue/Fairview Avenue	at BNSF RR		Operational Efficiency & Safety	Highway	Grade Separate		2026-2040		
Aurora	Montgomery Rd	at Meadowbrook Drive/White Eagle Drive	at S Commons Dr	System Enhancement	Intersection	Intersection Improvement	Add Signals	2026-2040		

Agency	Roadway	From	To	Type	SubType	Activity 1	Activity 2	Completion Year	Potential DuPage Participation	Potential Impact Fee Eligible
West Chicago/DuPage County	Powis Road	North Avenue (IL 64)	Smith Road and at Railroad	Operational Efficiency and Safety	Corridor	Channelization	Alignment	2026-2040		
Naperville	Rickert Dr.	Book Rd.	75th St.	Operational Efficiency & Safety	Highway	Channelize	Signal Modernization	2026-2040	YES	YES
Roselle	Rodenburg Road	Village Limits	Travis Parkway	System Enhancement	Corridor	Bikeway		2026-2040		
Villa Park	St. Charles	Addison Rd.	Meyers/Westmore Rd	System Enhancement	Intersection	Channelize	Signal Modernization	2026-2040		
DuPage County/Hanover Park	Stearns Road	Bartlett Road	Newport Blvd	System Enhancement	Highway	Reconstruct and Widen	Alignment	2026-2040	YES	YES
IDOT	US 20 (Lake Street)	County Farm Road	Shales Parkway	System Expansion	Corridor	New Alignment	Add Lanes	2026-2040		
IDOT	US 20 (Lake Street)	IL 390	Rosedale	System Expansion	Highway	Add Lanes	Intersection	2026-2040		
IDOT	US 34 (Ogden Ave)	Iroquois Ave	Fender Rd	System Enhancement	Intersection	Channelization	Alignment	2026-2040	YES	
IDOT	US 34 (Ogden Ave)	N Aurora Road	Aurora Avenue	System Enhancement	Intersection	Channelization	Bridge	2026-2040		
IDOT	US 34/Ogden Ave.	US 30	75th St.	System Expansion	Highway	Add Lanes	Intersection	2026-2040	YES	YES
Elmhurst	York Rd.	Church St.	IL 56 (Butterfield Rd)	System Enhancement	Highway	Channelize	Intersection	2026-2040		

APPENDIX D-1

PUBLIC HEARING NOTICE

DOCUMENTS

APPENDIX D-2

PUBLIC HEARING PRESENTATION

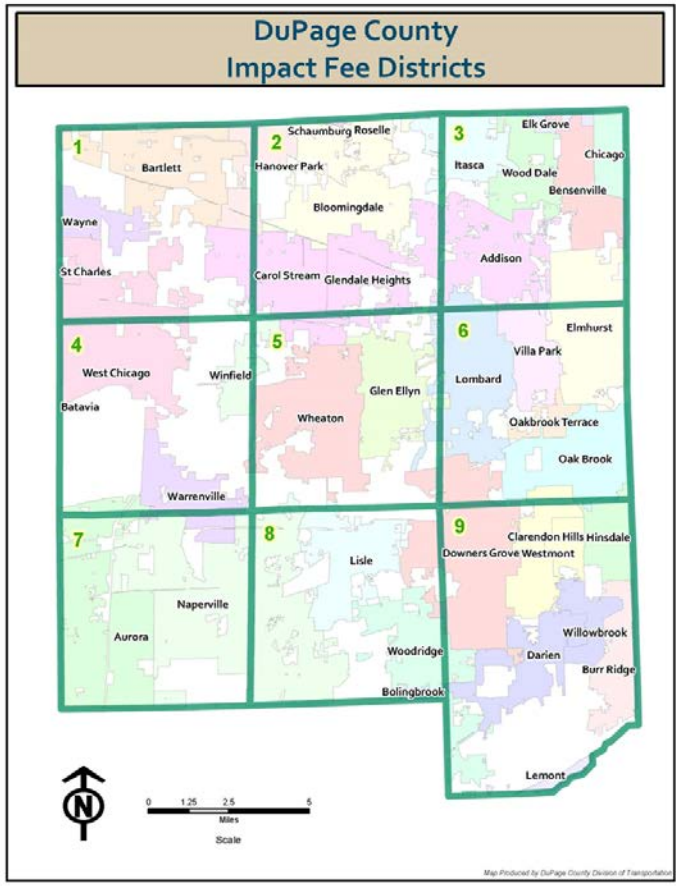
DUPAGECOUNTY

Comprehensive Road Improvement Plan Public Hearing

December 9, 2021

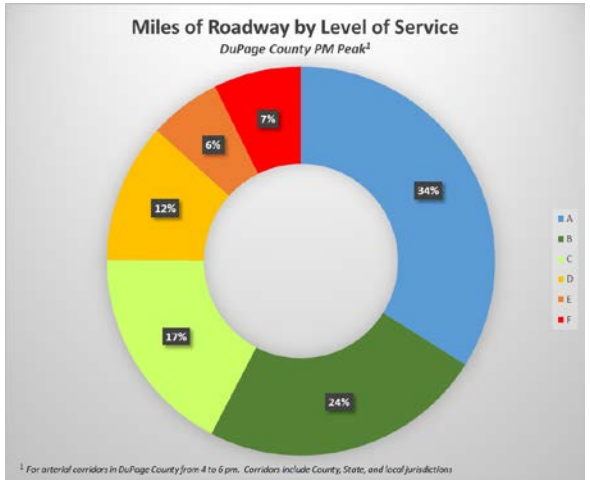
Background

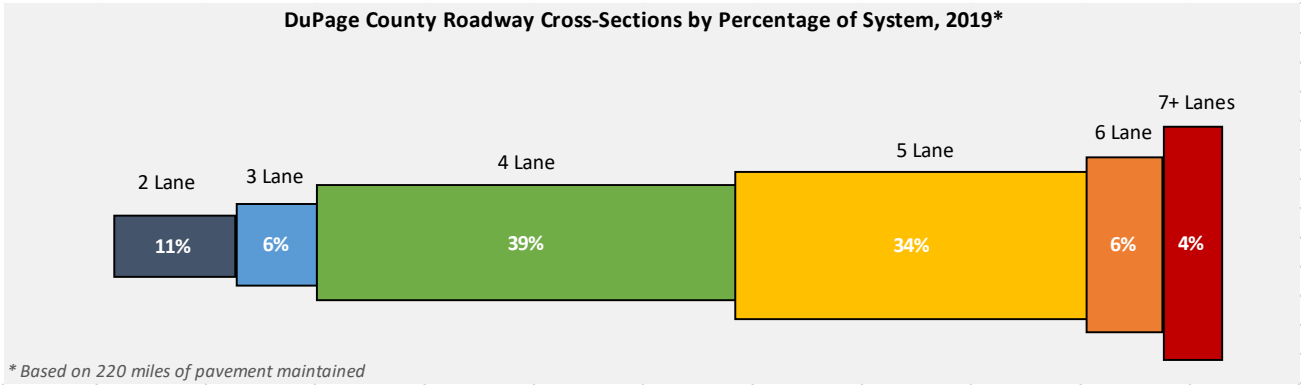
- Impact Fee Law 605 ILCS 5/5-901 requires:
  - Reasonable land use assumptions
  - Description of all roads, streets in service areas
  - Existing Deficiencies
  - Commitment to Cure Existing Deficiencies
  - Reasonable estimate of costs to cure and to build
  - Identify funds available to finance road improvements
  - Schedule setting forth estimated dates for commencing construction of projects in Plan
  - Agreements for share of expenses if fees will be spent on other jurisdiction roadways

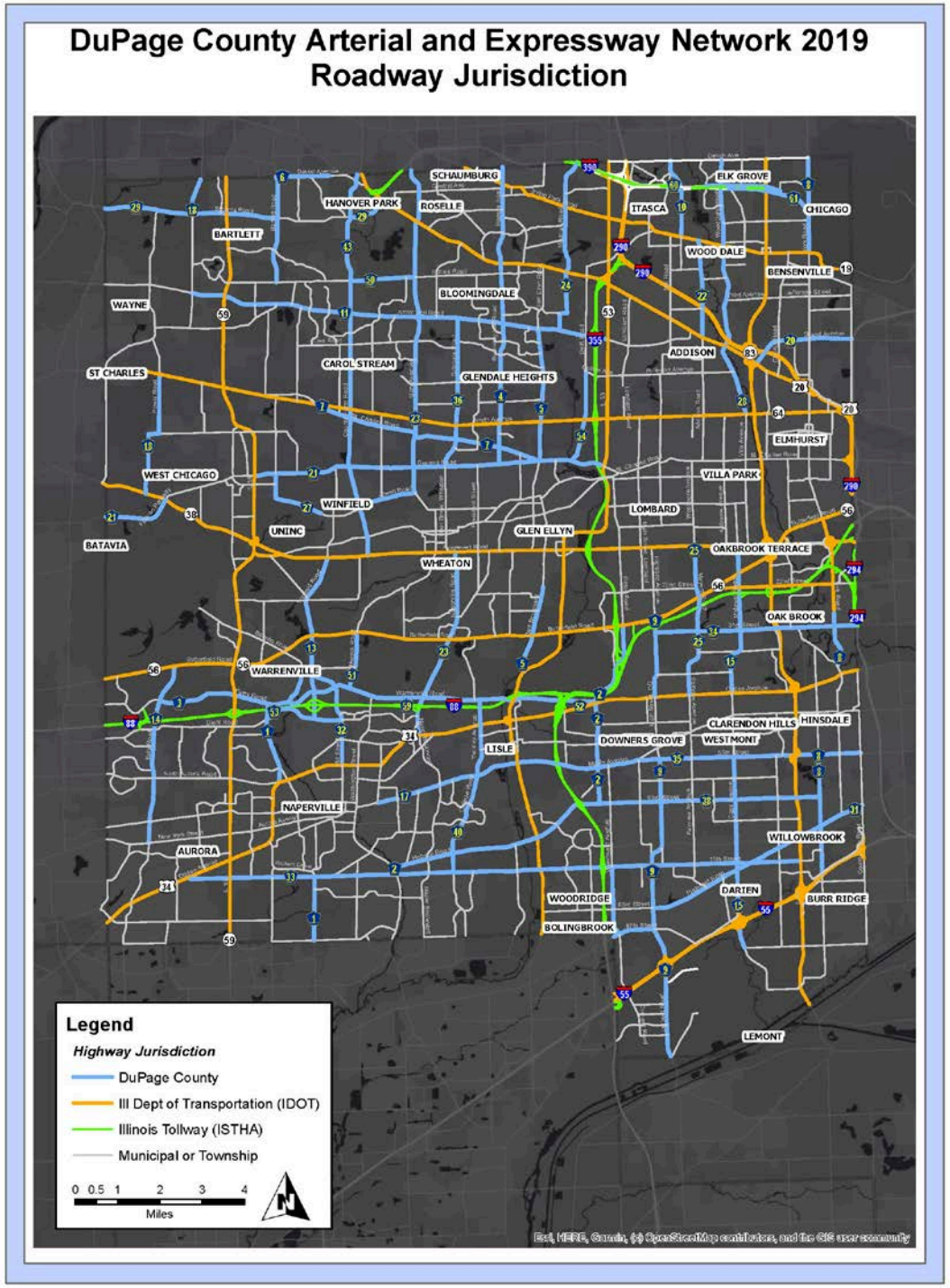


Existing System

- Existing System includes:
  - 43 Numbered routes
  - 83 Named highway sections
  - 220 Centerline miles of road
  - 970 Lane-miles of pavement
  - 324 Signalized intersections



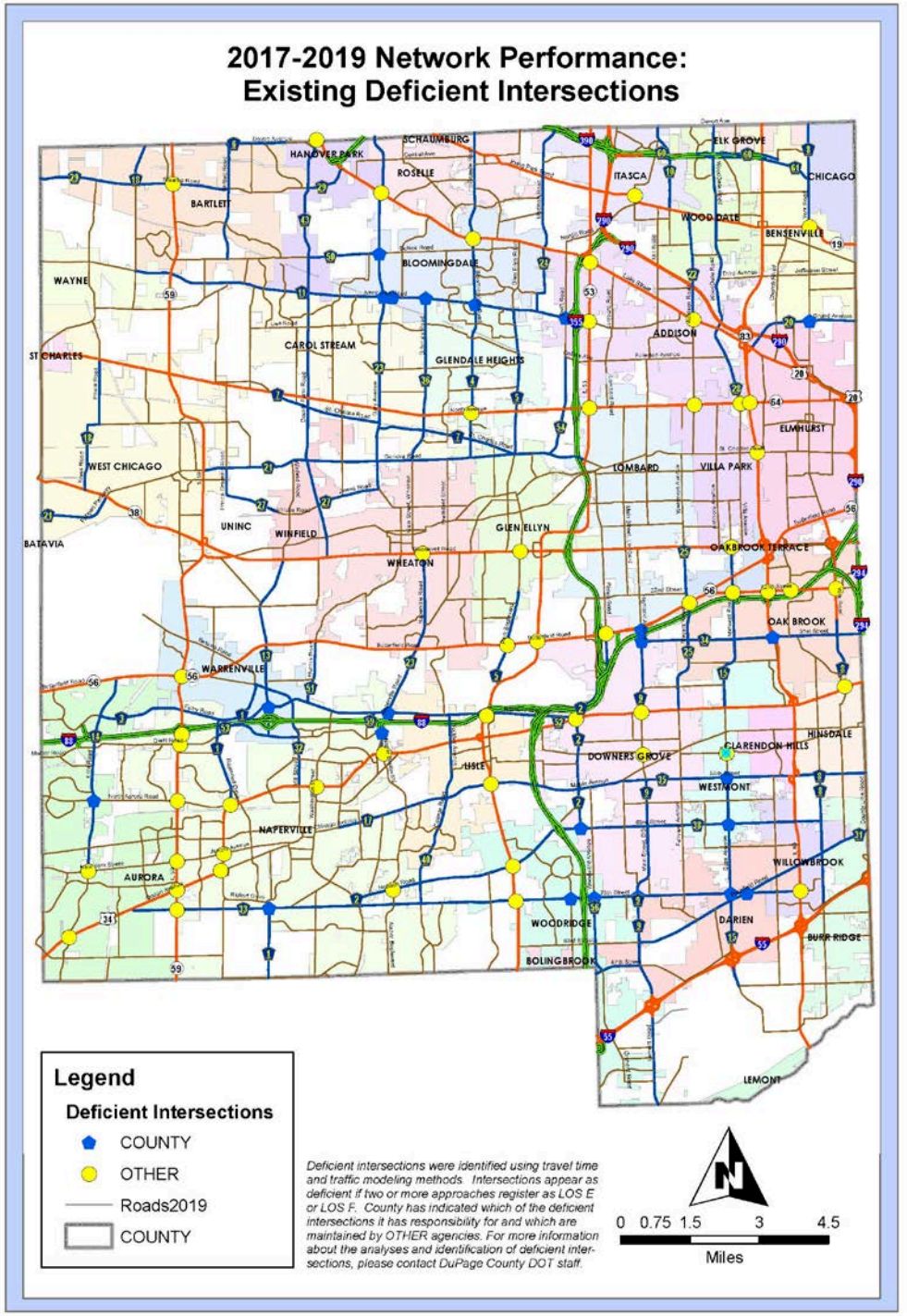




DUPAGECOUNTY

Commitment to Cure Existing Deficiencies

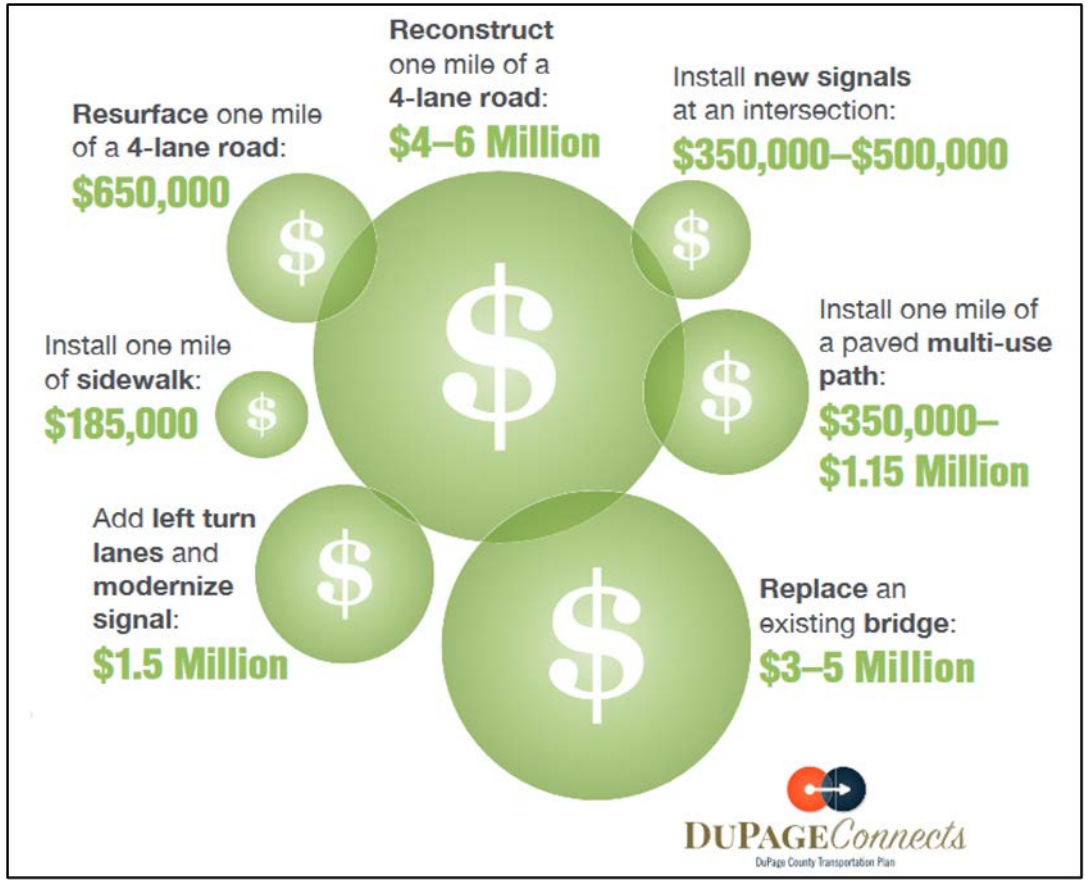
- Obligation:
  - State of Good Repair
  - Safety
- Responsible Use of Funds
  - Find most efficient solutions
- CRIP documents:
  - Location of the Deficiencies
  - Practicability of Mitigation
  - Where project is currently programmed or planned (Appendix B-2)



DUPAGECOUNTY

Costs to Cure Deficiencies

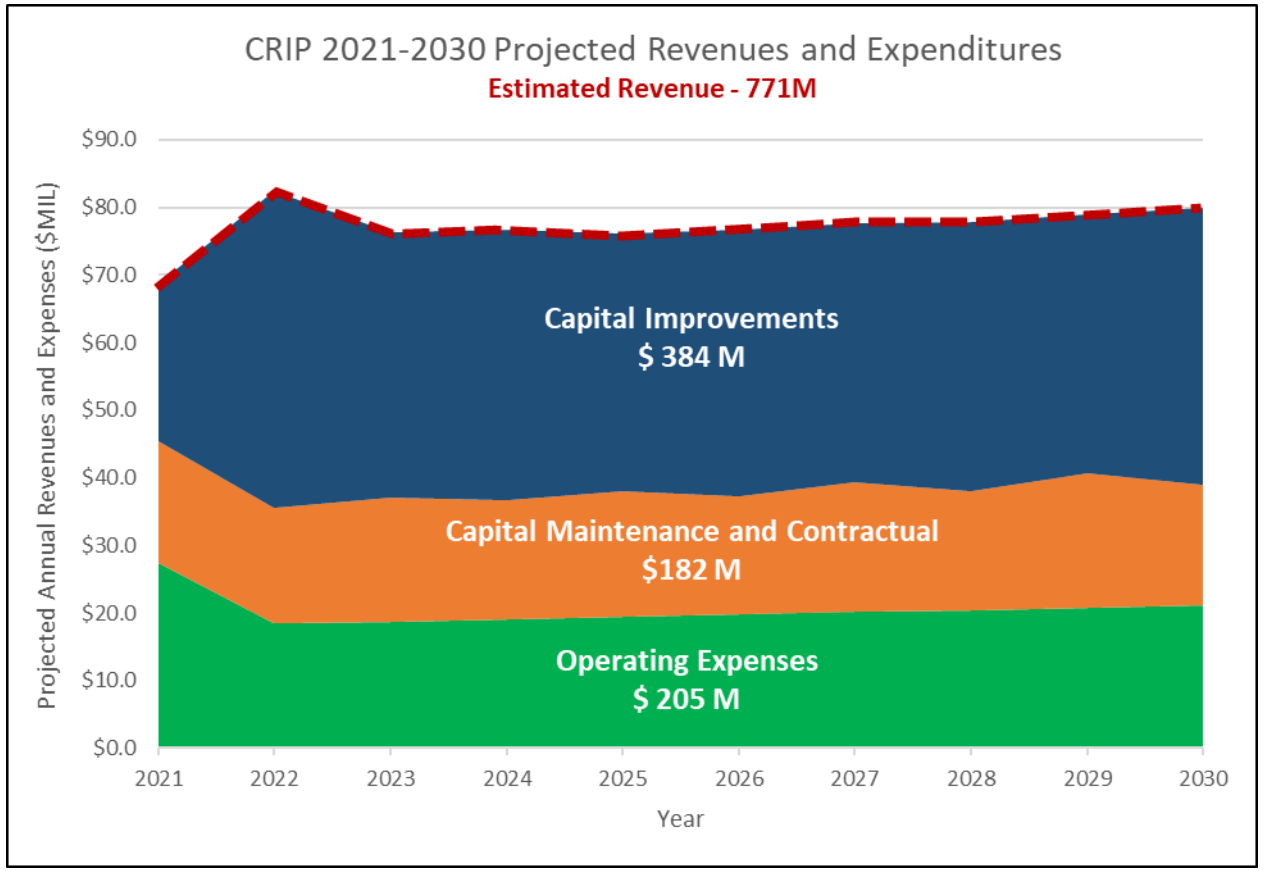
- Costs determined through the LRTP
- Based on recent history / bid documents
- Costs shown in CRIP Section 5
- Cost estimates:
  - Include engineering costs ~30% of project
  - Land acquisition
  - Contingencies
  - Current costs inflated to midpoint of future five year group



Funding Availability

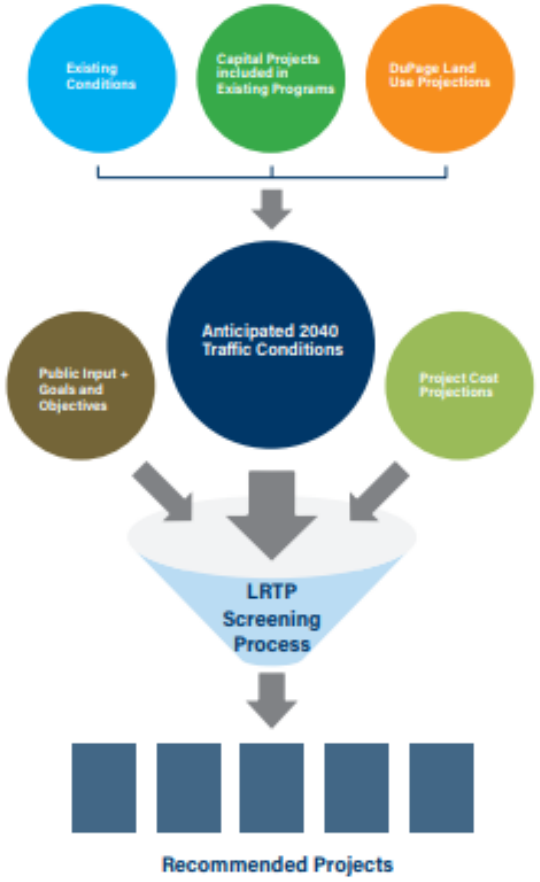
- Funding has been established and estimated
- Revenue Streams
  - Local Gas Tax
  - State Motor Fuel Tax
  - Permit Fees
  - Fed & State Grants
  - Charges for Services

  } 85%
- Impact Fees ~ 13M by 2030, 23M by 2040
- Use of Impact Fees



Future Project Identification/Schedule

- Co-related with LRTP Process
- Uses the following:
  - Land Use projections
  - Local, State and Tollway 5 year CIP
  - County 5 year program
- Outcome
- Schedule
  - Determined by CIP
  - Complementary to LRTP
  - Degree of need
  - Cost



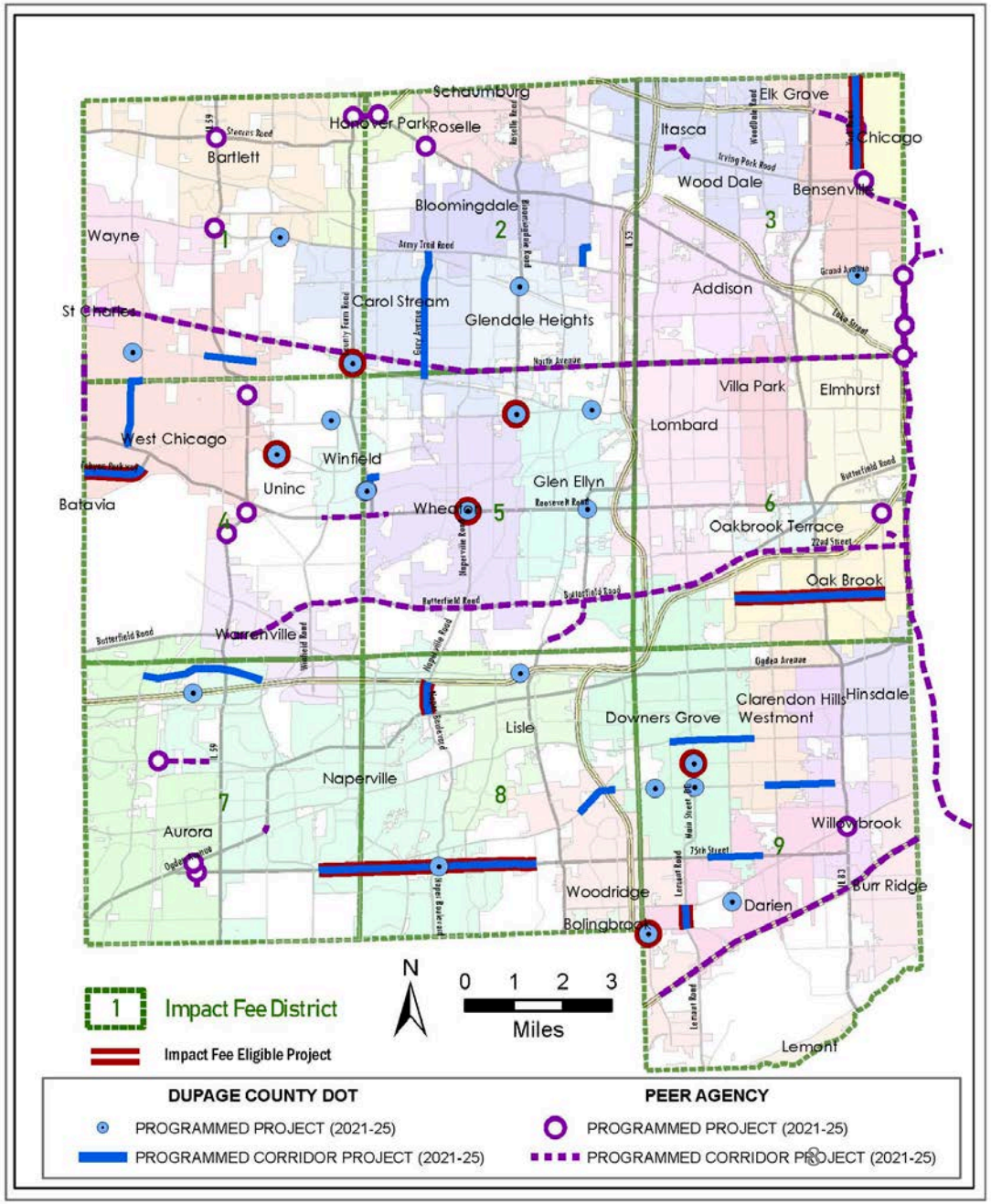
CRIP 2021-25

2021-2025 “PROGRAMMED IMPROVEMENTS”

- Projects
  - State and Tollway
  - County
    - 41 projects / $174 Million
    - 13 Projects of >$94 Million Fee Eligible
    - 4 Projects under Other Juris Eligible
  - Fee Districts
    - Project Eligibility in each of 9 districts

DUPAGECOUNTY

DuPage County Comprehensive Road Improvement Plan:
DuPage County and Peer Agency 2021-2025 Programmed Projects with Impact Fee Eligibility



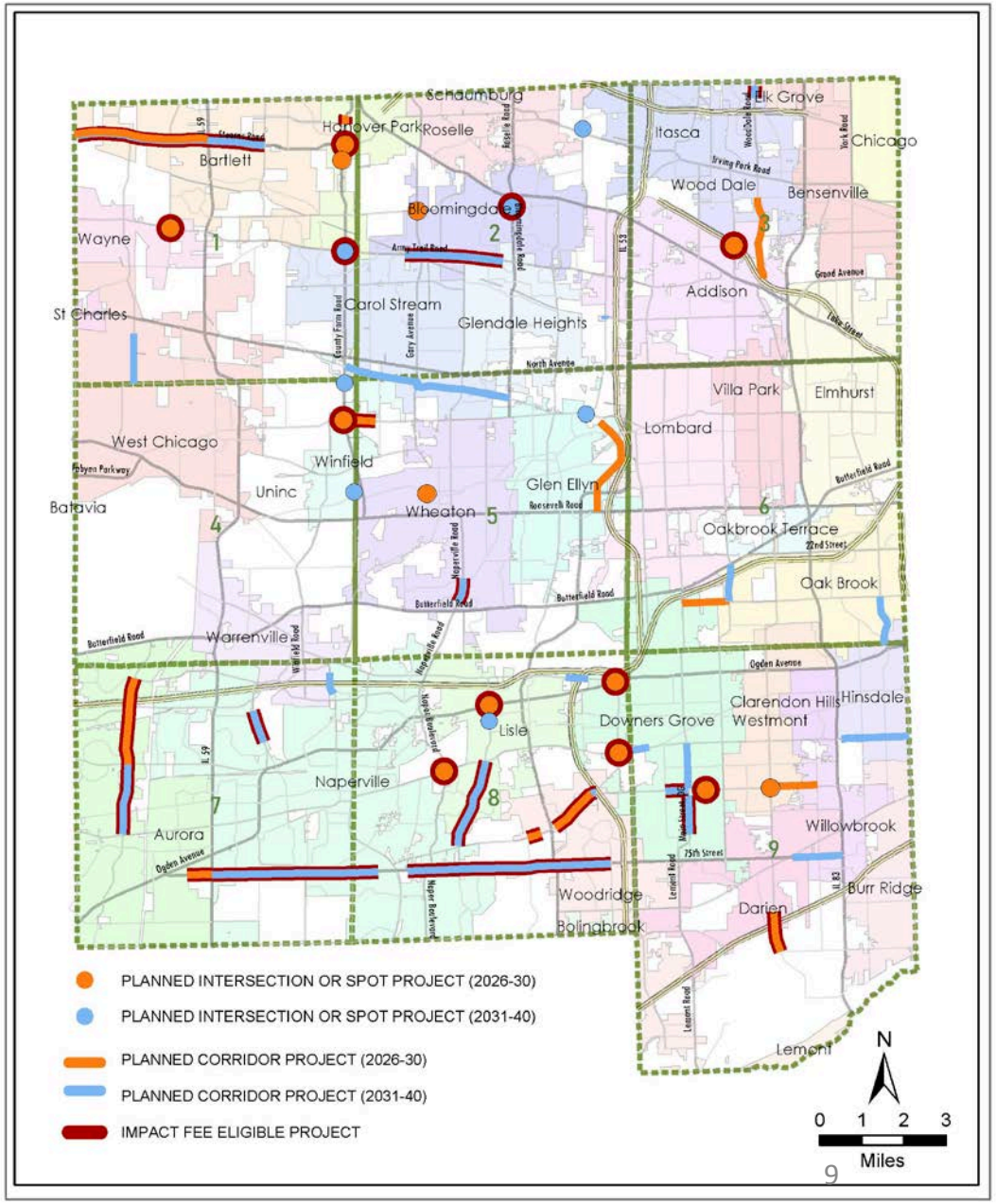
CRIP 2026-40

2026-2040 “PLANNED IMPROVEMENTS”

- Projects
  - County 26-30
    - 28 projects / $192 Million
    - 16 projects of >$95 Million Fee Eligible
  - County 31-40
    - 40 projects / $372 Million
    - 18 projects > $195 Million Fee Eligible
  - Other Projects (Appendix C-5)
    - 11 Other Agency projects fee eligible
  - State and Tollway

DUPAGECOUNTY

DuPage County Comprehensive Road Improvement Plan:
DuPage County 2026 - 2040 Planned Projects with Impact Fee Eligibility



CRIP SCHEDULE

Public Hearing	**TODAY**
Public Comment (DUE)	**12/31/21**
IFAC Meets (within 30 days of Public Hearing)	**1/4/22**
Transportation Committee (30 – 60 days)	**2/15/22**
County Board	**2/22/22**

Comments and Contacts

Written Comments Should be Addressed To:

Mr. Christopher Snyder, PE
County Engineer/Director of Transportation
DuPage County Division of Transportation
421 N County Farm Road
Wheaton, IL 60187

Or

Impact Fee Administrator
DuPage County Division of Transportation
impactfees@dupageco.org

APPENDIX D-3

PUBLIC HEARING COMMENTS