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Railroad-Highway Crossing Safety Improvement Evaluation and Prioritization Tool

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16. Abstract

The expected crash frequency model of Illinois Department of Transportation's Bureau of Design and Environment needed improvement to incorporate track circuitry as well as pedestrian exposure at railroad-highway grade crossings to make the model more comprehensive. The researchers developed, calibrated, and validated three models to predict collision rates at public, at-grade railroad-highway crossings in Illinois' six-county northeast region for prioritizing railroad-highway crossings for safety improvements. The first model updated B-factors in the existing Illinois model, which was last validated with data from 1968. The second model modified B-factors to include circuitry types given the active maximum traffic control device at the crossing and added another factor (i.e., P-factor) to account for pedestrian daily traffic using the crossing. The third model added a P-factor to the existing US Department of Transportation's web accident prediction system model to account for daily pedestrian traffic. Using year 2018 validation data, the first model had an r^2 of 0.20 with reported collision rates. The second model had an r^2 of 0.58 with reported collision rates, while the existing BDE model had an r^2 of 0.17 with year 2018 reported collision rates. The third model had an r^2 of 0.70 with reported collision rates using 2018 validation data whereas the existing US Department of Transportation's web-based accident prediction system model had an r^2 of 0.50 using year 2018 validation data. The three models are presented in this report along with a digital tool using the second model for illustrative purposes.

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EXECUTIVE SUMMARY

This research project was conducted to evaluate the existing model and prioritization tool used by the state of Illinois for improving safety at railroad crossings. The research team conducted an extensive literature review to analyze the models and tools used by different states. The study found that many states used customized state-specific models, while some directly adopted the accident-prediction model proposed by the US Department of Transportation. The team conducted an online survey. The survey identified that expected crash frequency and hazard index models were the most commonly used models among states, while constant warning time was the most commonly used train-detection circuitry. However, the research team encountered several data issues while working with collision and inventory datasets from the Illinois Commerce Commission and Federal Railroad Administration, respectively.

The research team prepared two datasets from the available data. The first dataset contained a record of all 719 collisions that occurred in a six-county area within 17 years, while the second dataset was prepared for model development using datasets from 2014 to 2019. The team used the second dataset containing 8,478 records to evaluate the performance of the existing expected crash frequency (ECF) model used by Illinois Department of Transportation (IDOT). The research found that the existing ECF model parameters in IDOT's *Bureau of Design and Environment Manual* were calibrated and validated with pre-1968 datasets. The performance of the ECF model was underwhelming, particularly when predicting pedestrian crashes. The research team proposed three alternative ECF models and compared them to the performance of the IDOT Bureau of Design and Environment's existing ECF model.

The first proposed model updated the existing B-factors used in IDOT's ECF model using recent Illinois-specific collision data instead of national 1968-era data. The second proposed model modified B-factors to include circuitry types for crossings with active maximum control devices and included a separate P-factor to account for the presence of pedestrians. The third proposed model supplemented crash-prediction values produced by the Federal Railroad Administration's web accident-prediction system model with a P-factor to account for crossing pedestrians. The performance comparison revealed that the second proposed model outperformed the other models as well as the existing ECF model from IDOT's Bureau of Design and Environment.

The study concluded that states use different models and tools to improve safety at railroad crossings. However, the existing models and tools have limitations, and there is a need for better models that account for various factors such as pedestrian presence, circuitry types, and expected crash frequency. The proposed models need further testing and validation before they can be widely adopted. Additionally, the study highlighted data issues faced by the research team while working with collision and inventory datasets from the Illinois Commerce Commission and Federal Railroad Administration, respectively. The study recommended improving the documentation and communication of data to facilitate future research.

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LIST OF ABBREVIATIONS

AADT	Annual Average Daily Traffic
AFLS	Automatic Flashing Light Signal
AFLS&G	Automatic Flashing Light Signal and Gate
AFO	Audio Frequency Overlay
ALCAM	Australian Level Crossing Assessment Model
ALCRM	All-Level Crossings Risk Model
APS	Accessible Pedestrian Signal
APTA	American Public Transportation Association
ATCWS	Another Train Coming Warning System
BDE	Bureau of Design and Environment
BPR	Bureau of Public Roads
CPUC	California Public Utilities Commission
CPV	Crash Prediction Value
CWT	Constant Warning Time
D	Directional Split
DC	Direct Current
DMS	Dynamic Message Sign
DT	Decision Tree
EAF	Expected Accident Frequency
ECF	Expected Crash Frequency
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
HI	Hazard Index
ICC	Illinois Commerce Commission
IDOT	Illinois Department of Transportation
IGC	Intelligent Grade Crossing
ILOL	Illinois Operation Lifesaver
IRB	Institutional Review Board
ITS	Intelligent Transportation System
K	K-Factor
LRT	Light Rail Transit
LRV	Light Rail Vehicle
MD	Motion Detection
MUTCD	Manual of Uniform Traffic Control Devices
NCHRP	National Cooperative Highway Research Program
PEERS	Public Education and Enforcement Research Study
PHF	Peak Hour Factor
PROWAG	Proposed Right-of-Way Accessibility Guidelines
PTC	Positive Train Control
QC	Quality Control

RAAILC	Risk Assessment of Accident and Incident at Level Crossings
RHC	Railroad-Highway Crossing
RPC	Railroad-Pedestrian Crossing
ROW	Right-of-Way
SAP	State Action Plan
TCRP	Transit Cooperative Research Program
TRP	Technical Review Panel
USDOT	United States Department of Transportation
V2D	Vehicle-to-Consumer Device
V2I	Vehicle-to-Infrastructure
V2V	Vehicle-to-Vehicle
WBAPS	Web Accident Prediction System

CHAPTER 1: INTRODUCTION

The intersection of a highway and one or more railroad tracks at grade level is known as an at-grade railroad-highway crossing (RHC). Railroads and highway agencies install traffic control devices such as crossbuck signs, flashing lights, and/or highway gate arms to improve safety and provide adequate warning of an incoming train to vehicles and pedestrians approaching a grade crossing. RHC safety is a national priority, as safe and efficient operation of grade crossings are essential to providing safe highways for the public as well as for the safe transport of freight and passengers via the national railroad system network.

Many research studies are available on train-related accidents, but research related to pedestrian safety at railroad-highway (RH) grade crossings is limited. According to Lobb (2006), train-related accidents can be classified in three categories: (a) major railway disasters, (b) train and highway traffic collisions at RH grade crossings, and (c) train-pedestrian accidents. The number of vehicle-train accidents at RH grade crossings declined from 1995 to 2005, but another study indicates a relatively steady number of non-motorist deaths at highway-rail crossings from 2002 to 2012 (Metaxatos & Sriraj, 2013).

According to Elzohairy and Benekohal (2000), several methodologies for estimating the number of crashes at RH grade crossings have been developed by researchers and engineering professionals over the years. Various methods have been used to study the relationship between vehicle and train traffic, crash frequency, characteristics of grade crossings, and expected number of crashes. An important treatment for pedestrian safety is the use of automated pedestrian gates in combination with automated gate systems. Pedestrian behavior can vary greatly at RHCs. Circuitry types involved with RHC operations also can vary. Consequently, although various solutions, education, and enforcement initiatives have been put forward and implemented, the effectiveness of these methods for reducing such incidents is much less known (Metaxatos & Sriraj, 2013).

In the United States, states are responsible for assessing grade crossing risks and prioritizing grade crossings for improvement. Each state is required to conduct and maintain a survey of all highways to identify railroad crossings that may require separation, relocation, or protective devices and establish and implement a schedule of projects (USDOT, 2021). The state highway authority determines a specific warning device at a grade crossing with input from other sources. These devices are installed in accordance with the *Manual on Uniform Traffic Control Devices* (*MUTCD*) (USDOT, 2009).

Elzohairy and Benekohal (2000) assessed the Illinois Department of Transportation (IDOT) expected accident frequency (EAF) formula as one of the factors in prioritizing RHCs that need upgrades to warning devices. The study found that 21% of the examined inventory data had out-of-date entries and that the EAF formula was not sufficient in identifying the most dangerous crossings that need safety device upgrades. It is worth mentioning that the decision to use a particular pedestrian safety treatment at a RHC is usually based on decision trees, site assessment, and best practices (Thompson & Kennedy, 2016).

Pedestrians can show dangerous behavior at RH grade crossings. Even when new crossing treatments are used for pedestrian safety purposes, oftentimes it leads to new types of risky behavior. A study showed that automatic pedestrian gates at RHCs evoked a high level of consciousness from pedestrians (Metaxatos & Sriraj, 2013). On the other hand, another study found that the use of gate skirts reduced the total number of pedestrian violations while lowering the gates (78% reduction) but increased by 12% when the gates were lifted (Stephanie, Gabree, & daSilva, 2013). These studies show how pedestrians respond with respect to safety treatments used at RH grade crossings, but there is still uncertainty about which treatment will work better to improve pedestrian safety.

According to Khattak and Tung (2015), the severity of pedestrians' injuries can be potentially affected by a number of variables, which were grouped in five categories: (a) pedestrian characteristics: age, gender, alcohol/drug use, etc., (b) crash characteristics: crash circumstance, time of occurrence, etc., (c) crossing characteristics: warning devices, surface type, illumination, etc., (d) train characteristics: train speed, number of cars, cargo, etc., and (e) environment: precipitation, temperature, surrounding area type, etc. Moreover, an established safety improvement evaluation and prioritization of RHCs uses a US Department of Transportation (USDOT) model to estimate "final accident prediction" at the crossing (Ogden, 2007; Ogden & Chelsey, 2019).

The objective of this research is to evaluate pedestrian safety prediction factor values and circuitry upgrade prediction factor values, which can be incorporated into a modified Federal Railroad Administration (FRA) or IDOT model. Currently, safety models at RH grade crossings are based on number of trains, traffic volumes, and existing warning devices but do not consider circuitry upgrades or specific pedestrian safety treatments.

CHAPTER 2: LITERATURE REVIEW

REVIEW OF AT-GRADE RAILROAD-HIGHWAY CROSSING HAZARD-RANKING PRACTICES

Various state DOT practices for at-grade RHC hazard ranking and project prioritization are observed in this section. The hazard index technique and the collision-prediction formula technique are the most common approaches to grade-crossing hazard ranking. The hazard index calculates a value that ranks crossings in relative terms, with a higher index value indicating a more hazardous crossing, while the collision prediction formula is used to calculate the expected annual crash frequency (and the severity of crashes, for some models). While both methodologies provide the user with similar information (i.e., the most hazardous grade-crossing ranking as defined in the model), the collision prediction formulas can be extended to analyze the crash frequency or to provide input to economic analysis models.

Rutter et al. (2016) looked at state action plans (SAPs) for 10 states from the initial Rail Safety Improvement Act 2008 (RSIA08) requirements for potential best practices that states should consider adding to their SAP. Their report also summarizes the significant prioritization practices of the grade crossing project and describes the results of interviews with a number of additional states that are not included in the SAP RSIA08 requirement.

A study by Sperry, Naik, and Warner (2016) summarizes the current grade-crossing hazard-ranking practices by state. These are shown in Figure 1.

Formula/Method	Number of States	Percent of States
U.S. DOT Accident Prediction Model	19	38%
State-Specific Formula or Method	11	22%
None/No Formula Mentioned	11	22%
New Hampshire Hazard Index	5	10%
Multiple Formulas	2	4%
NCHRP 50 Accident Prediction Model	1	2%
Peabody-Dimmick Formula	1	2%
Total All States	**50**	**100%**

Figure 1. Screenshot. Grade-crossing hazard-ranking formulas.

Source: Sperry, Naik, & Warner (2016)

US Department of Transportation Accident Prediction Model

To facilitate an extensive grade-crossing project selection concept known as the Rail-Highway Crossing Resource Allocation Procedure, the USDOT Accident Prediction Model was developed in the mid-1970s (Farr, 1987). The objective of the resource allocation process was to help state DOTs and railroads in deciding the effective utilization of federal funds for the improvement of rail-highway grade crossings. To support hazard ranking for the selection of a project, 19 states use the USDOT Accident Prediction Model (Sperry, Naik, & Warner, 2016). The latest version of the USDOT Accident Prediction Model is explained in depth in USDOT (2014). This model is a multistage calculation that combines three separate calculations to produce a crash-prediction value (Ogden & Chelsey, 2019).

The main components of the USDOT Accident Prediction Model include (a) a mathematical formula that produces an initial estimate of the annual frequency of grade-crossing crashes, depending on the characteristics of the road, highway, and railway traffic at the crossing; (b) an adjustment to the preliminary estimate based on the accident history at the crossing; and (c) additional mathematical formulas to predict the likelihood of a crash that results in an injury or a fatality, given that a crash has occurred at the crossing (Sperry, Naik, & Warner, 2016).

$$a = K * EI * MT * DT * HP * MS * HL$$
$$B = \frac{T_0}{T_0+T}(a) + \frac{T_0}{T_0+T}(\text{N/T})$$
$$A = B * C$$

Where,
a = Initial Prediction, Collisions per Year at the Crossing
K = Formula Constant
EI = Factor for Exposure Index
MT = Factor for Number of Main Tracks
DT = Factor for Number of Daytime Trains
HP = Factor for Highway Paved
MS = Factor for Maximum Timetable Speed
HL = Factor for Number of Highway Lanes
B = Collisions per Year at the Crossing, Adjusted for Crash History
T_0 = Formula Weighting Factor = 1.0/(0.05+a)
T = Number of Years of Crash History
N= Number of Crashes in T Years at Crossing
A = Final Prediction, Collisions per Year at the Crossing
C = Normalizing Constant

Figure 2. Screenshot. Grade-crossing hazard-ranking formulas.

Source: USDOT (2014)

Crossing Type:	Passive	Flashing Lights	Gates
K:	0.0006938	0.0003351	0.0005745
EI:	$\left[\frac{(EI)+0.2}{0.2}\right]^{0.37}$	$\left[\frac{(EI)+0.2}{0.2}\right]^{0.4106}$	$\left[\frac{(EI)+0.2}{0.2}\right]^{0.2942}$
MT:	1.00	$e^{0.1917*MT}$	$e^{0.1512*MT}$
DT:	$\left[\frac{(DT)+0.2}{0.2}\right]^{0.1781}$	$\left[\frac{(DT)+0.2}{0.2}\right]^{0.1131}$	$\left[\frac{(DT)+0.2}{0.2}\right]^{0.1781}$
HP:	$e^{-0.5966*(PAVED-1)}$	1.00	1.00
MS:	$e^{0.0077*MS}$	1.00	1.00
HL:	1.00	$e^{0.1826*(LANES-1)}$	$e^{0.142*(LANES-1)}$
C (2014):	0.5086	0.3106	0.4846
C (2010):	0.6768	0.4605	0.6039
EI:	Exposure = AADT * Total Trains per Day		
DT:	Number of Daylight Thru Trains per Day at Crossing		
MT:	Number of Main Tracks at Crossing		
PAVED:	Dummy Variable = 1 if Highway Paved, 2 Otherwise		
MS:	Maximum Train Speed at Crossing		
LANES:	Number of Highway Lanes at Crossing		
C:	Normalizing Constants for May 2014 and October 2010		
Source: Federal Railroad Administration [2014]			

Figure 3. Screenshot. USDOT accident-prediction model factors.

Source: USDOT (2014)

New Hampshire Hazard Index

The New Hampshire Hazard Index Formula is a commonly used method for grade-crossing hazard ranking. Currently, five states (Michigan, Massachusetts, Nevada, Louisiana, and Kansas) use the New Hampshire Hazard Index as the primary method for prioritizing grade crossings for improvements (Sperry, Naik, & Warner, 2016). It is the most basic form of the hazard index model type, consisting of an exposure index (AADT cross product and train volume) with an adjustment of the "protection factor" (PF) for the type of warning device provided at the crossing. Protection factors of 0.1 for automatic gates, 0.6 for flashing lights, and 1.0 only for signs were used in the original New Hampshire Hazard Index formula. These protection factors have been revised by certain states to include more refined levels of protection available at the crossing (Ogden & Chelsey, 2019).

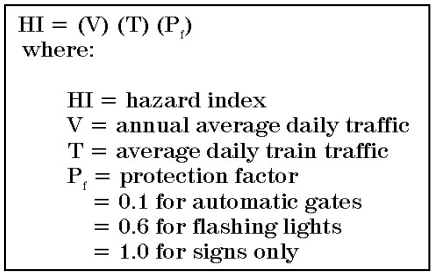


Figure 4. Screenshot. New Hampshire hazard index formula.

Source: Ogden & Chelsey (2019)

Several modifications of the New Hampshire Hazard Index are in use. Some states use various other values for PF, as follows: (a) 0.13 or 0.10 for automatic gates, (b) 0.33, 0.20, or 0.60 for flashing lights, (c) 0.67 for wigwags, (d) 0.50 for traffic signal preemption, and (e) 1.00 for crossbucks (Ogden, 2007).

Peabody-Dimmick Formula

Published in 1941, the Peabody-Dimmick Formula, developed by the US Bureau of Public Roads, was based on five years of accident data from 3,563 rural crossings in 29 states (Ogden, 2007). This formula is presently used in only one state (Georgia) for RHC hazard ranking (Sperry, Naik, & Warner, 2016). Calculations for the Peabody-Dimmick formula are based on a series of curves relating the various factors considered in the model, which include AADT, daily train volumes, the type of warning device at the crossing, and an adjustment factor (Sperry, Naik, & Warner, 2016). The Peabody-Dimmick formula is shown in Figure 5.

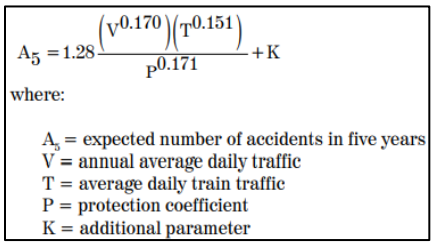


Figure 5. Screenshot. Peabody-Dimmick formula.

Source: Ogden (2007)

The protection coefficient (*P*), additional parameter (*K*), and A_5 can be determined from the set of curves in Figure 6.

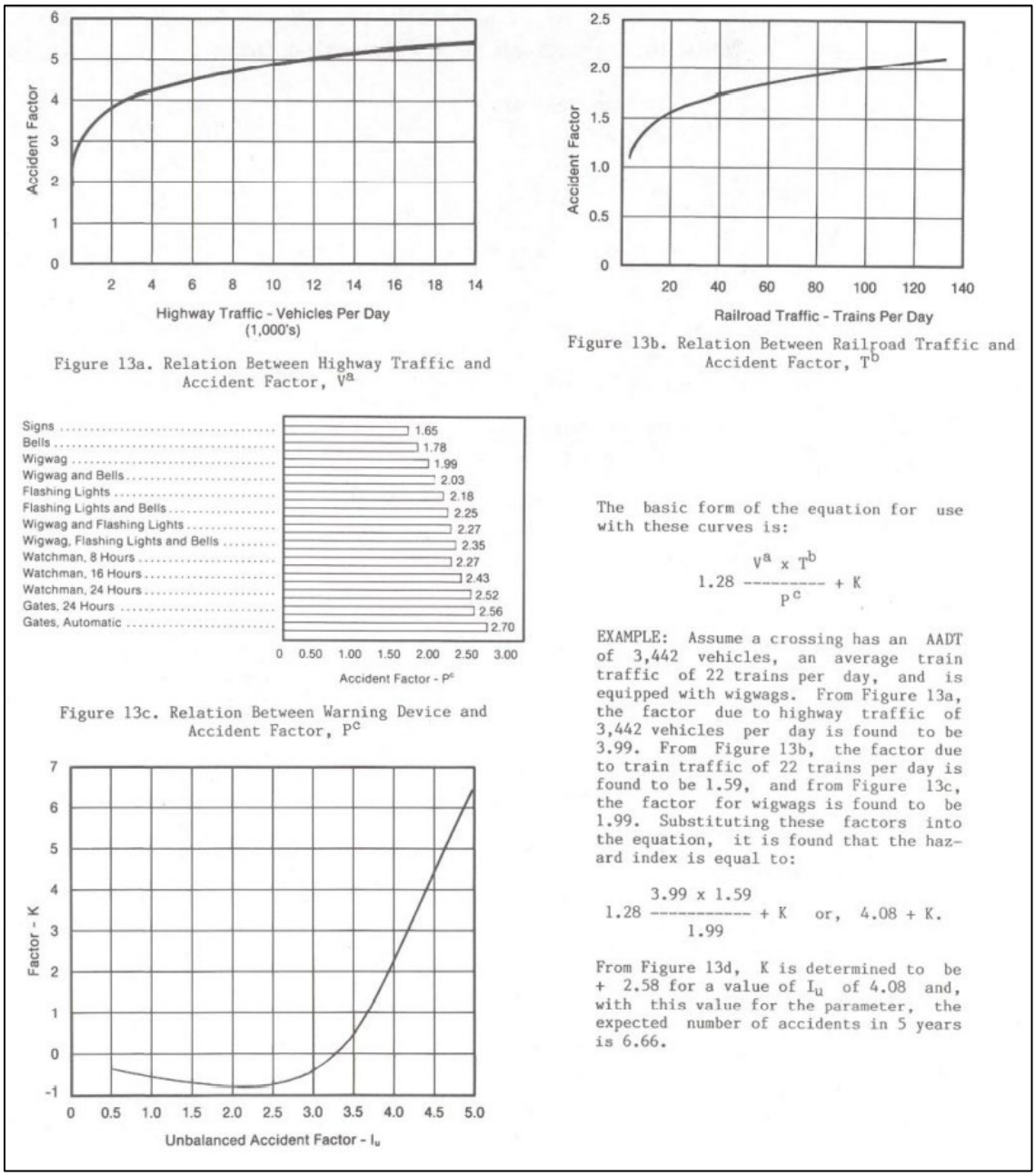


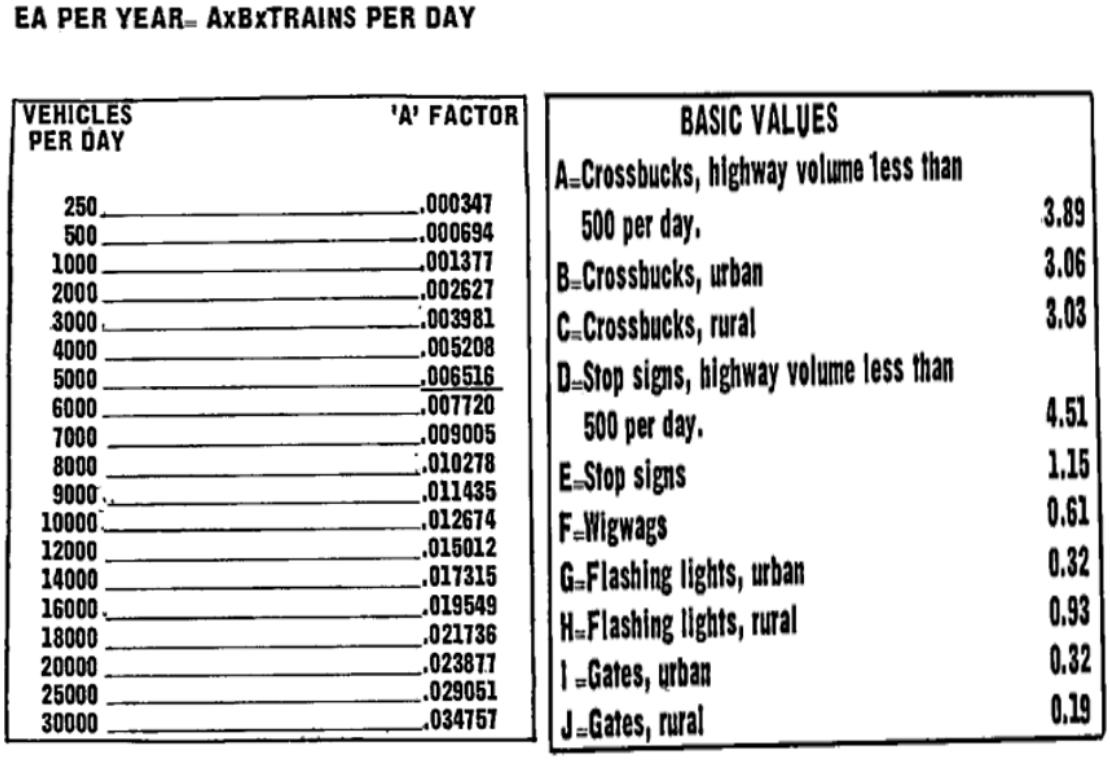
Figure 6. Screenshot. Peabody-Dimmick formula accident factors and protection coefficient curves.

Source: Ogden (2007)

NCHRP 50 Accident Prediction Model

NCHRP Report 50 examined factors affecting safety at highway-rail grade crossings (Schoppert & Hoyt, 1968). NCHRP 50 included the development of mathematical models for predicting train-vehicle collisions at grade crossings as well as non-train-related crashes in the vicinity of crossings (Schoppert

& Hoyt, 1968). The NCHRP 50 accident-prediction model is currently used by one state (Illinois) as the main tool for grade-crossing hazard ranking and is used by another state (Nebraska) in conjunction with another method (Sperry, Naik, & Warner, 2016). The simple, multiplicative NCHRP 50 model predicts the expected annual crash frequency at the crossing based on the annual average daily traffic (AADT), the train volume, and the type of warning device at the crossing (Sperry, Naik, & Warner, 2016; Ogden, 2007). The AADT takes part as a "traffic factor," *A*, in the prediction model, which increases with increasing AADT. The NCHRP 50 accident-prediction formula and its factors are shown in Figure 7. IDOT uses the formula for calculating expected crash frequency (ECF) and selection guidelines for warning devices (Illinois Department of Transportation, 2010).



EA PER YEAR= AxBxTRAINS PER DAY

VEHICLES PER DAY	'A' FACTOR
250	.000347
500	.000694
1000	.001377
2000	.002627
3000	.003981
4000	.005208
5000	.006516
6000	.007720
7000	.009005
8000	.010278
9000	.011435
10000	.012674
12000	.015012
14000	.017315
16000	.019549
18000	.021736
20000	.023877
25000	.029051
30000	.034757

BASIC VALUES	
A=Crossbucks, highway volume less than 500 per day.	3.89
B=Crossbucks, urban	3.06
C=Crossbucks, rural	3.03
D=Stop signs, highway volume less than 500 per day.	4.51
E=Stop signs	1.15
F=Wigwags	0.61
G=Flashing lights, urban	0.32
H=Flashing lights, rural	0.93
I =Gates, urban	0.32
J =Gates, rural	0.19

Figure 7. Screenshot. Formula for NCHRP 50 accident-prediction model.

Source: Schoppert & Hoyt (1968)

Illinois Hazard Index Formula

A study by Elzohairy and Benekohal (2000) led to the development of the Illinois Hazard Index Formula, which focused on recognizing various factors that influence the causes of an accident at RHCs in the state. The Illinois Hazard Index Formula is shown in Figure 8 (Abioye et al., 2020; Elzohairy & Benekohal, 2000):

$$IHI = 10^{-6} A^{2.59088} B^{0.09673} C^{0.40227} D^{0.59262} (15.59 N^{5.60977} + PF)$$

Figure 8. Equation. Illinois hazard index formula.

Source: Elzohairy & Benekohal (2000)

where,

A = ln (ADT × NTT); ADT is the average daily traffic; NTT is the number of total trains per day

B = Maximum timetable speed in mph

C = Number of main and other tracks

D = Number of highway lanes

N = Average number of crashes per year (generally, a 5-year period is considered)

PF = protection factor (68.97 for flashing lights, 86.39 for crossbucks, and 37.57 for gates)

RAILROAD AT-GRADE CROSSING TREATMENTS

Various treatments are used at RHCs to improve safety. This section reviews treatments that are used commonly at RH grade crossings as well as their effectiveness.

Pedestrian Treatments at Railroad-Highway Grade Crossings

Thompson and Kennedy (2016) concluded that pedestrian behavior near railroad tracks can be characterized as dangerous. Six criteria about the pedestrian crossing environment as well as the desired equipment and control for it were published (Korve et al., 2001): (a) pedestrian facilities and minimum pedestrian activity should be present or anticipated, (b) pedestrian treatments are needed where light rail transit (LRT) speeds are more than 35 mph, (c) where sight distance is limited on approach, (d) if the crossing is located in a school zone, (e) if the pedestrian activity is high in the area, and (f) if there is pedestrian rush or high pedestrian negligence in the area. These criteria are developed for LRT systems but may be used for assessing the need for commonly used pedestrian treatments at RHCs.

Passive Crossing Treatments

Passive traffic control devices are regulatory signs, warning signs, guide signs, and pavement markings. These devices provide the driver with alert signals, instructions, and necessary responses in some cases. The aim of such traffic control devices is to identify and direct attention to the site of the crossing to allow drivers and pedestrians to take sufficient action. The equipment may be used separately (at passive crossings) or in combination with active equipment.

Signs

MUTCD Part 8 sets out provisions relating to sign usage at crossings (USDOT, 2009). Some signs are in general use and other signs are specific to crossings. The crossbuck is required at every crossing, either separately or in combination with other devices. Crossbuck signs are used at passive crossings within a crossbuck assembly in combination with the use of a stop or yield sign. Most other regulatory signs are used in combination with active devices, such as “No Right (Left) Turn Across Tracks,” blank-out signs, “Do Not Stop On Tracks” signs, and the “Stop Here” series signs. Some signs are specifically used with LRT or street-running rail systems. At the highway-railroad crossing, if more than one track is present, the *MUTCD* requires the use of a crossbuck sign in combination with the Number of Tracks sign on each approach to the crossing. For pedestrian crossings, the “Look” sign

may be used to advise to pedestrians to expect a train or light rail vehicle coming from either train direction (USDOT, 2009).

Pavement Markings

Pavement markings are used in addition to regulatory signs and warning messages shown by crossing signs and signals. Pavement markings have limitations such as they may be covered by snow, may not be durable when exposed to heavy traffic, or may not be visible when the pavement surface is wet. A "Stop Line" marking approximately 8 feet upstream from the gate marked on the pavement surface is used as a passive crossing treatment at RHCs. The white pavement marking consisting of "X" and the letters "RR" is the advance warning sign used at RHCs (USDOT, 2009).

Active Crossing Treatments

Active traffic control devices give visual and audible advance notice of incoming trains. Active treatments at the RHC include flashing light signals, bells, and automatic gates. When the train passes over the detection circuit in the track, these devices are activated. These devices are normally used with the same signs and pavement markings used for passive control. The stop or yield signs are not used where active traffic control devices are present (Ogden & Chelsey, 2019).

Active crossing treatments also consist of train detection and device activation, which gives advance notice of the train before its arrival. These devices are operated by means of various train-detection circuitry. Various factors are considered in the design and installation of these train-detection systems such as current rail and ballast conditions, type of highway and rail traffic, other train-detection circuits that may be used on the same tracks, train-detection circuits used for other crossings nearby (overlapping), number of tracks at the crossing, warning time, and system credibility (Ogden, 2007). An FHWA report describes different circuitry systems that are being used today (Ogden, 2007). The systems are (a) DC track circuit, (b) three-track circuit system, (c) track circuits with timing sections, (d) AC/DC track circuit, (e) audio frequency overlay (AFO) track circuit, (f) motion-sensitive (MD) track circuit, bidirectional application, (g) motion-sensitive (MD) track circuit, unidirectional application, (h) constant warning time (CWT) track circuit, unidirectional application, and (i) constant warning time (CWT) track circuit, bidirectional application.

There are alternative detection technologies that do not require the use of railroad tracks to transmit the detection signal and can be mounted off the railroad property, which can further improve rail crossing safety (Reiff et al., 2000). Bowman (1987) conducted an evaluation at four locations where an approach sight restriction resulted in insufficiently safe stopping distance. For this purpose, the train-detection circuitry at each site was modified to provide train activation of each advance warning device approximately 10 seconds prior to activation of the at-grade warning system. The result of the analysis of the speed profile during the activated state indicated that the advance warning devices had a significant decrease in vehicle speed. The study mentions some modifications in the circuitry but does not mention the type of circuitry used in these RHCs.

Bowman and McCarthy (1986) conducted a study to determine the use and installation guidelines of the CWT track circuit. These circuitry systems measure the speed of the train, the distance from the crossing, the direction, and the estimated time of arrival of the train. The results showed that there

are no specific standards for the installation of the CWT track circuit by states or railroad companies. The main variables considered for CWT installations were switching operation, annual average daily maximum speed, and train speed variations. The limits on each of these variables or their combinations that explain installation are prejudiced and performed on a crossing-by-crossing basis (Bowman & McCarthy, 1986).

According to a survey of state DOTs and railroad companies/agencies (Korve, 1999), the most common types of train-detection circuitry for RHCs are motion-sensitive track circuit and CWT track circuits. AFO track circuits are mostly used for light rail vehicles. Figure 9 shows the types of train-detection systems and 29 survey responses from state DOTs, railroad companies/agencies, and light rail agencies (Korve, 1999). Out of 878 train-detection systems used by state DOTs, 343 (39.1%) were motion sensors and 253 (28.8%) were CWTs. Railroad companies confirmed that out of 780 train-detection systems, 158 (20.3%) were DC track circuit, 150 (19.2%) were motion sensors, and 263 (33.7%) were CWTs. The survey responses showed that most of the light rail agencies used AFO circuits (147 out of 156, i.e., 94.2%).

USE OF TRACK-BASED TRAIN DETECTION SYSTEMS

	State Departments of Transportation (12 responses)		Railroad Companies/ Agencies (12 responses)		Light Rail Transit Agencies (5 responses)	
Train Detection System	Total Number in Use	Percent	Total Number in Use	Percent	Total Number in Use	Percent
Island Only	45	5.1	7	0.9	0	0.0
Direct Current (DC) or Alternating Current (AC)	79	9.0	158	20.3	7	4.5
Alternating Current-Direct Current (AC-DC)	84	9.6	31	4.0	0	0.0
Audio Frequency Overlay	67	7.6	94	12.0	147	94.2
Motion Sensor	343	39.1	150	19.2	0	0.0
Constant Warning Time	253	28.8	263	33.7	0	0.0
Off-Track/Other	7	0.8	77	9.9	2	1.3
Total	878	100.0	780	100.0	156	100.0

Figure 9. Screenshot. Use of track-based train-detection systems.

Source: Korve (1999)

Warning Devices

MUTCD Part 8 (USDOT, 2009) and the *Highway-Rail Crossing Handbook, 3rd Edition* (Ogden & Chelsey, 2019) mention traffic control devices that should be implemented at RHCs as well as light rail transit (LRT) grade crossings unless otherwise mentioned. The handbook focuses on various active and passive device treatments for RHCs, including channelization, fencing, pedestrian gates, barriers, pavement markings, swing gates, gate skirts, dynamic envelope markings, signs, and signals, such as crossbucks, electronic warning signals, flashing light signals, audible signals, etc. According to USDOT (2008), factors that should be considered for warning device selection are (a) collision experience, if any at the crossing, as it involves pedestrians; (b) pedestrian volumes and peak flows, if any; (c) train speeds, numbers of trains, and railroad traffic patterns, if any; (d) sight distance that is available to

pedestrians approaching the crossing; and (e) skew angle, if any, of the crossing relative to the railroad tracks.

Sperry, Naik, and Warner (2016) completed a review of state-level practices in 39 states. The study reported the most common factors considered in the hazard ranking and evaluation process for at-grade RHCs. The study reviewed existing warning devices at crossings, train volume, highway traffic volume, and collision history at crossings. These factors were used by more than 90% of states.

It is unknown how effective any specific warning sign or device is in reducing the risk of a collision between a train and pedestrians. Khawani (2001) studied the effects of the installation of a train activated warning device used to warn pedestrians when two or more trains are approaching an RHC. The study investigated the best methods for site selection, signal design, and educational efforts related to the installation of the signal. The study observed that the signal installation reduced dangerous pedestrian behavior, as measured by the time between the pedestrian entering the tracks and the arrival/departure of the train. On the other hand, Gabree and daSilva (2014) conducted a study to track pedestrian violations at crossings before and after the installation of the Another Train Coming Warning System (ATCWS) from the available data and extreme weather during data collection. The study showed that there was no difference in the number of pedestrians violating the crossing before and after installation of ATCWS. While there is some evidence that certain individual safety devices improve pedestrian safety, no studies have been conducted on the effectiveness of certain combinations of devices to address the needs of specific types of pedestrian-rail grade crossings (Metaxatos & Sriraj, 2015).

Warning Signs, Fencing, and Landscaping

Warning signs, pavement markings, and guide signs are used as passive crossing treatments at RHCs. These signs and pavement markings must meet *MUTCD* standards. USDOT (2004) summarized strategies to improve safety at RHCs. Important strategies included were increasing educational outreach and enforcing laws to improve safety and reduce trespassing.

At all RHCs, non-motorist crossing safety should be considered. While collisions occur less often between trains and pedestrians than collisions between trains and motor vehicles, they are more severe. A 2007 study by the National Academies of Sciences, Engineering, and Medicine, which examined pedestrian and LRV collisions, cites “risky or inattentive behavior” as a factor in pedestrian collisions. The study considers factors collected by transit agency staff from the National Transit Database, as follows: (a) distractions such as phones and earphones, (b) not paying attention in transit malls (usually involving little or no injury), (c) intoxication, (d) trespassing, (e) rushing for trains or to cross intersections, and (f) neglecting audible and/or visual signs at railroad crossings.

Khattak and Luo (2011) evaluated four types of pedestrian and bicyclist gate violations at RH grade crossings in Nebraska: (a) passing under lowering gates, (b) passing around fully horizontal gates, (c) passing under raising gates, and (d) passing around fully horizontal gates between successive trains. The data from the video surveillance showed that children 8 years and younger were involved in 25% more violations than adult users, and violations increased with the presence of more people at the crossing.

Siques (2001) identified four factors to consider when installing pedestrian treatments and provided recommendations to create guidelines for pedestrian treatments at light rail facilities. The factors to be considered were (a) awareness of the crossing by the pedestrian, (b) the footpath across the track, (c) awareness of the pedestrian and the ability to see the approaching light rail vehicle, and (d) understanding by the pedestrian of the potential risks at grade crossings.

The effects of certain treatments on risky pedestrian behavior at light rail facilities were also examined by Siques (2002). The study assessed five types of treatments: (a) automatic pedestrian gates, (b) an active pedestrian warning device prototype, (c) an active "look both ways" sign prototype, (d) barrier channelization at a skewed crossing, and (e) "stop here" pavement marking. The study found that each type of treatment succeeded in reducing risky pedestrian behavior. The most effective method at reducing risky pedestrian behavior was pedestrian automatic gates. The research also concluded, however, that some methods may increase risky pedestrian behavior. For example, pedestrians in the presence of a gate in the down position were less likely to look both ways.

Irwin (2003) identified the improvements needed to reduce risky pedestrian behavior. This study was conducted in the Portland, Oregon, metropolitan area. This review resulted in prototype installation of pedestrian safety treatments at various crossing locations. These treatments consisted of channelization techniques, signs, detectable warnings, audio-visual warnings, swing gates, and automatic pedestrian gates. The study concluded that these crossing treatments increased pedestrian safety awareness.

Accessible Non-Motorist Signals

The Americans with Disabilities Act (ADA) provides individuals with disabilities with civil rights protections against discrimination. It offers equal opportunities in public housing, employment, transportation, state and local government services, and telecommunications for individuals with disabilities. The implementable accessibility guidelines, called the 2010 ADA Standards for Accessible Design, have been included in ADA Titles II and III. The 2010 ADA Standards of the Department of Justice include accessible routes. Several geometric features relevant to pedestrian facilities are articulated in the draft *Proposed Right-of-Way Accessibility Guidelines* (PROWAG) published by the United States Access Board. These standards are listed as follows (Ogden & Chelsey, 2019):

- Minimum widths and clearances
- Accessible routes and pedestrian pathways
- Curb ramps and ramps
- Detectable warning strips
- Protruding objects

Accessible pedestrian signals (APS) are devices that are used to convey information concerning pedestrian timing in formats such as verbal messages, audible tones, and/or vibrating surfaces to

users who are blind or have low vision (USDOT, 2009). APS can provide pedestrians with details about the presence and location of the push button; the onset of the walk interval; the direction of the crosswalk and the location of the destination curb; the clearance interval; geometry of the intersection through maps, diagrams, or speech; street names at the intersection in Braille, raised print or speech, and signalized intersections (Harkey & Barlow, 2007). Such elements are described in guidelines published by the US Architectural and Transportation Barriers Compliance Board (2011). At rail grade crossings, APS can help disabled pedestrians to make better judgments regarding the safe crossing of rail grade crossing tracks. Research on APS use in such environments, however, is limited.

Furthermore, Delmonte and Tong (2011) conducted an analysis in the United Kingdom to identify solutions for improving safety and accessibility for disabled pedestrians at level crossings. The study recommended 12 key solutions for describing key accessibility deficits at grade crossings. With input from focus groups, disabled pedestrians, business experts, and from site visits to grade crossings, these solutions were prepared after reviewing several dozen solutions.

Education, Outreach, and Enforcement

The USDOT developed model strategies to prevent railroad trespassing, vandalism, and the violation of highway-rail grade crossing warning devices under the Rail Safety Improvement Act of 2008 (P.L. No. 110-432). The strategies are categorized as follows: (a) expanding education outreach, (b) energizing enforcement, and (c) promoting improvements in engineering and sight distance. To help non-motorists safely navigate grade crossings, educational outreach incorporates public awareness programs. Consistent implementation of traffic safety laws by state or local police and sustained effort by the courts to impose fines on violators discourage and prevent non-motorists from making bad decisions at grade crossings (USDOT, 2010). Recently, Horton and DaSilva (2020) evaluated impacts of a program for law enforcement agencies to perform trespassing enforcement activities on railroad rights-of-way (ROW). The results showed a decrease in the number of trespassers along the ROW. A report by Jennings (2009) contains the compilation of state laws and regulations affecting at-grade RHCs. Also, engineering improvements such as new technology for warning devices, increasing visibility at railroad crossings, can prevent or decrease non-motorists' collisions at RH grade crossings (USDOT, 2010). Further, the *Guidebook on Pedestrian Crossings of Public Transit Rail Services* provides a broad variety of engineering treatments to improve pedestrian safety for light rail, streetcar rail, and commuter rail services (National Academies of Sciences, Engineering, and Medicine., 2015). In Illinois, Operation Lifesaver (ILOL) has been the organization responsible for educating railroad safety throughout the state since 1976. ILOL covers a broad range of areas such as railroad safety, education, and outreach. The program is supported by the Illinois Commerce Commission (ICC). ILOL sponsors civic presentations, early elementary and driver education curriculum activities, school bus driver training, industrial safety, law enforcement training, and media coverage for educating people.

According to ILOL and highway-rail crash statistics for 2019, Illinois had 122 collisions at highway-rail crossings between trains and motor vehicles or pedestrians. Twenty-one people were killed, with another 32 critically injured. Illinois has over 7,300 miles of track, with 7,576 public and 3,775 private highway-rail crossings. Illinois comes fourth for highway-rail grade crossing collisions.

FRA and ICC began the Public Education and Enforcement Research Study (PEERS). The purpose of this study was to promote safety at RHCs by reducing incidents, injuries, and fatalities with the help of new technologies and methodologies. The study also measured changes in the behavior of the highway user before and after the enforcement of traffic safety laws (Sposato, Bien-Aime, & Chaudhary, 2006). The results showed a reduction in crossing violations and the largest reduction in the most risky type of violation. Pedestrians were the main focus of this initiative, but the study also considered vehicle traffic. The analysis showed that the program succeeded in decreasing highway user violations at highway-rail grade crossings by 31% overall and the riskiest of all violations (i.e., crossing when gates are completely lowered) was decreased by 71%.

In Auckland, New Zealand, a review of suburban railway crossings (Lobb, Harré, & Terry, 2003) investigated educational and environmental measures to eliminate illegal and dangerous crossings. The measures included the repair and treatment of corridor fences, educational talks given to staff at nearby factories and students at nearby schools, the distribution of leaflets on the safety risks of crossings, and new warning signs indicating the illegality and danger of crossings.

In addition, Lobb, Harre, and Suddendorf (2001) explored the effects of (a) a public awareness campaign, (b) education, (c) continuous punishment and intermittent reinforcement, and (d) intermittent punishment and intermittent reinforcement in a review of interventions at a school in Auckland. For three of the four measures, the study observed a statistically significant reduction in dangerous crossings. No substantial reduction in dangerous crossings from the public awareness campaign was identified in the report. Another study by Savage (2006) found that increasing the amount of educational activities would reduce the number of collisions, but the effect of these activities on the number of deaths could not be quantified accurately.

Engineering Standards and Guidelines

FHWA's *Highway-Rail Crossing Handbook* (Ogden & Chelsey, 2019) provides guidance about pedestrian railroad crossings. The *MUTCD* (USDOT, 2009), and the Code of Federal Regulations 49 (USDOT, 2002) provide additional guidance. Different requirements apply to light rail tracks at grade crossings, which also have no gates or warning systems. Another study by Ogden and Chelsey (2019) describes pedestrian crossing treatments and offers guidelines for flashing light signals, "second train coming" signals, dynamic envelope markings, automatic pedestrian gates, swing gates, barriers to bedstead (maze), channelization of Z-crossing, and combined pedestrian treatments.

An FHWA study (Nabors et al., 2008) addresses at-grade and grade-separated crossings, stating that if grade-separated crossings are situated at an inconvenient spot, irrespective of the safety conditions, then pedestrians would opt to cross at grade. For an active pedestrian warning system, the guide suggests warning times. In particular, the report notes that "railroads should provide a warning period of at least 20 seconds, with the active equipment (bells, flashing lights, barricades, etc.) completely deployed five seconds before the transit vehicle arrives." This shows that pedestrians need at least 15 seconds to complete the crossing of the railroad and that "longer crossings may necessitate additional warning time built into the train-detection system."

The report also states that the type of surface material used at the railroad crossing must be constructed in compliance with ADA guidelines on accessibility, in addition to the time limit. Including conventional gate/flasher/bell assemblies, passive and active alerts, fending, and grade-separated crossings, the study describes possible infrastructure treatments. The guide also suggests that supervision, education, and enforcement will play a role in minimizing incidents of people walking or trespassing on the tracks. In addition, the report includes an environmental assessment, including the frequency of rail service and the use of surrounding land, to locate areas in greater need of safety interventions.

In California, CalTrain determined at the state level that there was no national or state-recognized requirement for the design of a pedestrian crossing warning system for railway installations. CalTrain developed its own design specifications and started implementing them in 1999 (Caltrain, 2007). These standard practices recommend the use of active warning devices similar to those at vehicular crossings: a crossing gate arm, signal equipment modified from that of at-grade RHCs, and a crossing configuration that channels non-motorist users. This document also discusses the design criteria applied for pedestrian crossings concerning warning time, warning devices, center fence, safety buffer zones, warning assemblies, and gate recovery, as well as pedestrian crossings at stations, at stations and roadway, and crossings between roadway crossings (Caltrain, 2007).

Also, in California, the *Highway-Rail Grade Crossings Recommended Design Practices and Standard Manual* (SCRRA, 2009) is a detailed single document that combines existing and relevant standards for RHCs and pedestrian-rail grade crossing design and approved design practices. Areas of interest for pedestrian-rail grade crossings include pedestrian grade separations, 10-minute walk rule (proximity to schools, hospitals, and other high-density locations), ADA issues, refuge areas, type and configuration of the warning devices, channeling, and number of tracks. The manual concludes that pedestrian treatments are successful with correct channelization and signage, and sidewalks on either side of the tracks and/or across the track area, with regard to pedestrian rail grade crossings. In addition, pavement striping continued across the track portion of the roadway has good visibility and is also effective. It is also important to enhance pedestrian treatments for riders running to catch trains near stations. Finally, the manual includes a decision tree to assess designs and necessary warning treatments for pedestrian-rail grade crossings.

The American Public Transportation Association (APTA) provides guidelines for the selection, implementation, and operation of highway-rail-transit grade-crossing warning systems for rail transit systems and includes minimum standards for at-grade RHC warning devices, highway traffic signs, and other highway traffic control devices (APTA, 2017). Also, for pedestrians at rail grade crossings, specific guidelines are provided as follows:

- Alternative warning times for special conditions such as near-side stops may be allowed. Under these conditions, the train operator shall be able to stop the train before entering the intersection until it has been verified that the warning system is active and, if it is equipped, the gates are in a fully horizontal position and that the intersection is clear of road and/or pedestrian traffic.

- Where near-side stops are adjacent to interconnected traffic signal-controlled intersections, accommodation must be provided to ensure adequate pedestrian and vehicle clearance intervals.

- Preemption may be used for the clearing of highway vehicles and pedestrians from the track during the time the crossing warning system is activated before the rail transit vehicle enters the crossing.

Another comprehensive design standard for pedestrian-rail crossings in California was published by the California Public Utilities Commission (CPUC, 2008). The design considerations include recommendations such as swing gates, pedestrian gates, detectable warnings, flashing light signals, signs, crossing surfaces, different channelization designs, and other treatments. These signs must comply with the state *MUTCD*. This report also refers to the Transportation Research Board's Transit Cooperative Research Program (TCRP) Report 69 Section 3.8.3 (Korve et al., 2001), which gives a decision tree as a tool for determining suitable pedestrian treatments at RHCs and pedestrian crossings (shown in Figure 10).

For both road and pedestrian grade crossings, the Australian Level Crossing Assessment Model (ALCAM) uses a risk-assessment approach. The model is an evaluation tool, which is used to identify key potential risks at level crossings and to help prioritize rail at-grade crossings based on their comparative safety risk (Spicer, 2007). ALCAM uses a score algorithm that considers the physical characteristics of each level crossing, as well as consideration of related common human behaviors, to provide a "Likelihood Factor" score for each level crossing. This score is then multiplied by the Exposure score and finally multiplied by the Consequence score for the ALCAM Risk Score. The ALCAM model is intended to be used for both active and passive grade crossings, while the RAAILC (Risk Assessment of Accident and Incident at Level Crossings) model can only be used for predicting collisions at passive level crossings. The Rail Safety and Standards Board (2007) in the United Kingdom classified ALCAM as a single weighted factor and RAAILC as a statistically driven approach (Little, 2007). During his study, Little (2007) identified the following four operating models, which consider the number of pedestrians using the crossing:

- Automatic Level Crossing Risk Model

- All-Level Crossings Risk Model (ALCRM)

- Australian Level Crossing Assessment Model (ALCAM)

- Risk Assessment and Investment Appraisal

Newer approaches based on simulation techniques such as Petri nets are still under development (Ishak, Yue, & Somenahalli, 2010).

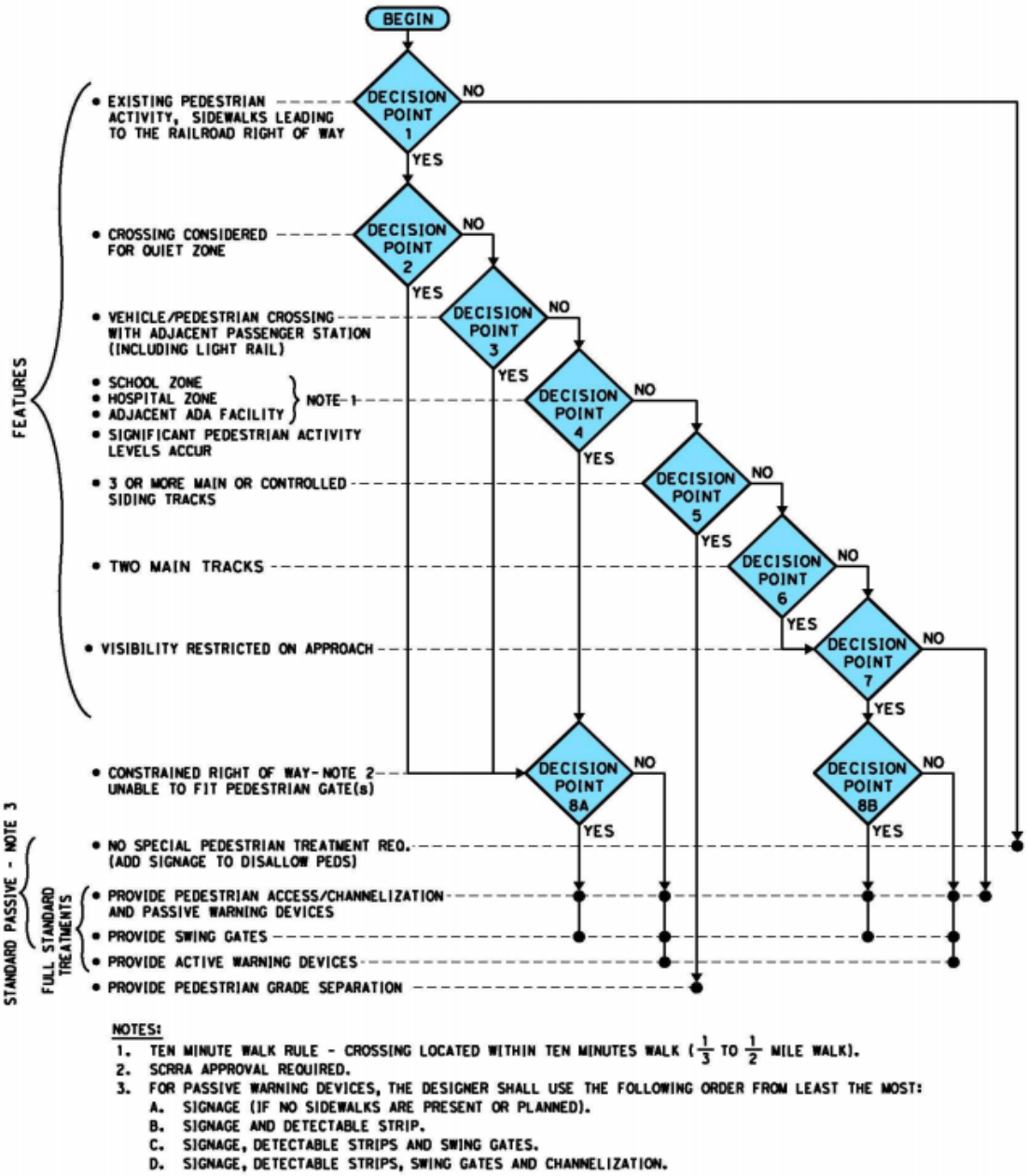


Figure 10. Screenshot. Pedestrian control decision tree.

Source: Korve et al. (2001)

Intelligent Grade Crossings

In the not-so-distant future, new advancements in the field of cooperative intelligent transportation systems (ITS) may lead to applications that could have a dramatic impact on safety for non-motorized users at grade crossings. Vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I), and vehicle-to-consumer devices (V2D) are being developed to deliver increased safety mobility benefits. Pedestrians and non-motorized users will generally be able to receive personalized advance warnings from approaching trains at rail grade crossings in time to avoid injuries and fatalities.

Osipitan (2017) recommends intelligent grade crossings (IGCs) over grade separation because of the high cost of construction. This study also concludes that IGC technology can be combined with a detection system, dynamic message signs, and a railroad wayside system, which can mitigate the high risk of crashes.

Another cross-cutting study by USDOT (2001) showed that ITS technologies can help improve safety and mobility at RHCs.

A driving simulator study by Larue et al. (2015) assessed the effectiveness of three emerging ITS technologies that railroad is considering to implement in Australia: a visual in-vehicle ITS, an audio in-vehicle ITS, and on-road flashing beacons intervention. The results of this study showed that a driver's behavior changed with the three ITS interventions at passive crossings. The visual and audio ITS improved a driver's behavior when a train was approaching.

Cost Considerations

A United Kingdom study suggested that the numbers obtained from the calculation of costs and benefits when considering whether a safety improvement should be made do not include, but can be used to inform, the decision-making process (U.K. Department for Transport, 2006). That was because, even if the cost of improvements significantly exceeds the benefit, decision-makers will consider other factors, including the tolerability of risk to the most exposed user and any safety benefits that may arise from improved safety, before making a final decision. The Transportation Research Board (2001) summarized demonstration project costs for "second train coming" warning signs, which were as follows: (a) $15,000 for the "second train coming" sign; (b) $80,000 for the sign installation, including track circuit improvement and camera equipment; (c) $35,000 for project management and engineering; and (d) $70,000 for project evaluation.

Roop et al. (2007) studied and evaluated two low-cost alternatives for traditional active grade crossing warning systems, which were based on radar technology and acoustic train horn detection. Results found that both systems were successful in detecting trains but had a large number of false positive detections, which can be reduced by future research in the field.

Moreover, Hellman and Ngamdung (2010) carried out a technology assessment of low-cost active warning devices for use at passive RHCs and found that many advanced right-of-way (ROW) and off-road prototype systems have undergone comprehensive testing in North America, Europe, and Australia. However, several technical, economic, and institutional challenges must be overcome before these techniques are considered to be adopted by railroads and government regulatory agencies. In addition, the study reported that in recent years regulatory agencies have become highly sophisticated in their knowledge of nonconventional train detection and warning technologies. This is represented in the increasing use of performance-based regulations, which offer more flexibility for railroads and railroad suppliers to demonstrate safety.

In the end, safety is not just a cost-benefit analysis of the system. There are various factors to be considered for improving the safety of at-grade RHCs and railroad pedestrian crossings (RPCs).

CONCLUSIONS

Government authorities and railroad companies have installed many warning systems for non-motorized users at RHCs. These systems include warning signs, pavement markings, detectable warnings, channelization, automatic pedestrian gates, and second-train-coming electronic warning signs. Different ECF or HI formulas are used to select warning devices at RH grade crossings. But these models do not include pedestrian exposure effects and crossing circuitry upgrades, which are needed at these crossings. There are very few studies about pedestrian exposure effects and train-detection circuitry types used at railroad crossings. Many criteria are used to select warning devices at railroad crossings. However, none of the studies focus on the train-detection circuitry upgrades required at railroad crossings.

CHAPTER 3: SURVEY OF STATES

INTRODUCTION

With an objective of eliciting information regarding state practices to improve safety at railroad crossings in different states, the research team launched a nationwide online survey. This survey was designed to extract information regarding the different tools used by states to evaluate safety performance and to determine further improvements at railroad-highway at-grade crossings and railroad-pedestrian at-grade crossings. Officials from every state DOT along with experts from other non-DOT organizations (i.e., academia, private industry, and nonprofit organizations) engaged in this survey.

This chapter summarizes the survey findings. The survey protocol is discussed and highlights of preliminary statistics are presented. The discussion is divided into two sections following the two major parts of the survey. The first part is concerned with pedestrian safety treatments at railroad-pedestrian crossings. The second part gathers information regarding train-detection circuitry at RHCs and RPCs. The survey had a third part where a few general questions were asked. The general questions are mainly about the respondents' professional and contact information. Due to confidentiality issues, the results from the third part of the survey are not presented.

SURVEY PROTOCOL

The research team developed a survey questionnaire based on the literature review. The survey questionnaire was revised to include comments from the project's Technical Review Panel (TRP) and was submitted for approval to the University of Illinois Chicago's Institutional Review Board, which was granted on June 7, 2021.

The research team obtained some state DOT contact names from the project's TRP and other names on the state DOT's website and emailed those contacts an invitation to participate in the survey. Once the invitation was accepted, the research team emailed the questionnaire to the respondents and asked the responsible person in their organization to complete it. The research team designed a survey questionnaire using Qualtrics, an online survey platform. The structure and content of the online survey is in Appendix A.

PRELIMINARIES

The survey was disseminated to representatives of all 50 US state DOTs and experts from outside DOTs. As for state DOTs, invitations were sent to 85 representatives through email. Out of these 85, the research team received 39 responses. This makes the response rate—which is defined as the number of responses, including incomplete ones, divided by the number of invitations sent—from the state DOT representatives 44%. Out of these 39 state DOT representatives who responded to the survey invitation, 10 fully completed the survey. Therefore, the survey of the state representatives had a completion rate—which is defined as the number of fully completed surveys divided by the number of responses—of 26%. As for experts outside DOTs, the research team reached out to 56

individuals and received responses from 18. The response rate of this survey is 32%. Out of non-DOT respondents, the number of fully completed surveys is 2, which makes the completion rate 3.6%. Considering both DOT representatives and non-DOT experts together, the overall survey response rate is 39.3% and the completion rate is 17.2%. Table 1 shows the distribution of survey recipients as well as response rate and completion rate.

Table 1. Survey Responses Summary

	Recipients[1]	Responded[2]	Response rate[3]	Completed[4]	Completion rate[5]	States responded[6]	Total state response[7]
DOT officials	89	39	44%	23	26%	24	32
Non-DOT experts	56	18	32%	2	3.6%	12	

[1] Number of people formally invited to complete the survey.

[2] Number of recipients who opened the survey and answered at least one question.

[3] Percentage of recipients who opened and answered at least one question among all recipients.

[4] Number of recipients who answered all questions in the survey.

[5] Percentage of recipients who answered all questions among all recipients.

[6] Number of different states the respondents are from.

[7] Number of states from whom responses were received.

Table 1 shows that among the 39 responses from DOT officials, 24 are from individual states. As for non-DOT experts, 12 individual state responses are from 18 responses, meaning multiple responses can come from the same state. Figure 11 shows the number of responses from each of the 50 states from both DOT officials and non-DOT experts. Only one response was received for most of the states. A few states have multiple responses overlapping between both DOTs and non-DOT experts. Figure 12 illustrates the state response map where states are highlighted based on responses that were received.

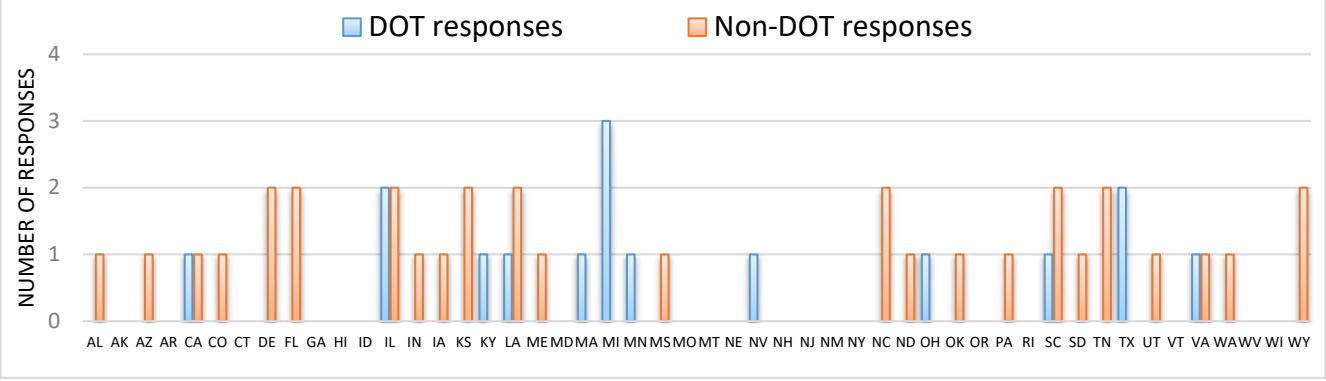


Figure 11. Bar chart. Number of survey responses by state.

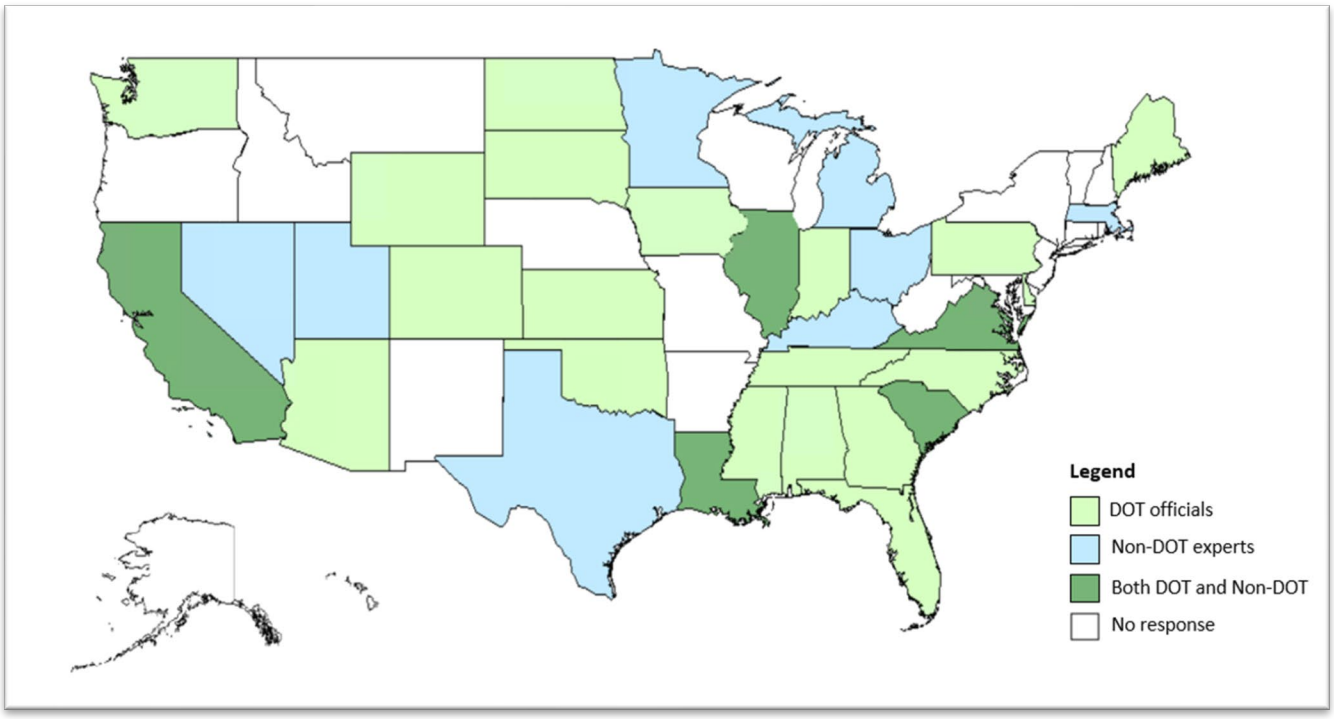


Figure 12. Map. States responded to online survey.

Although there were 18 responses from non-DOT experts, only two respondents completed the survey. Among the remaining 16 responses, one response was approximately 90% completed. The remainder did not provide any meaningful information other than a few introductory questions. Due to very limited data available from the non-DOT expert surveys, DOT and non-DOT expert surveys are not presented separately. Instead, the three meaningful responses from non-DOT experts are combined with the DOT responses; the combined result is presented throughout this section. Two states have meaningful responses from both DOT and non-DOT experts. The response comparison between these two states is presented at the end of the section.

PART 1: PEDESTRIAN SAFETY TREATMENTS AT RPCS

Questions in this part pertain to states' approaches to prioritizing safety improvement projects for at-grade railroad-pedestrian crossings (RPCs). An inquiry is made about the models that each state may use for their RPC safety improvements, criteria used in RPC safety improvements, safety treatments, funding-related issues, and responsibilities of different entities. The organization of this section is based on the issues that were inquired about in the first part of the survey.

Model Used for RPC Safety Improvement

In the survey, respondents were asked about the model used for their state's RPC safety improvement prioritizations. Three models were given as specific choices: expected crash frequency (ECF), (2) hazard index (HI), and (3) decision tree (DT). Among the respondents, nine positive responses were recorded for ECF, nine for HI, and no responses for DT. The rest either responded

negatively to all three models or did not respond. This summary is presented in Figure 13. Two states responded that they use both ECF and HI models.

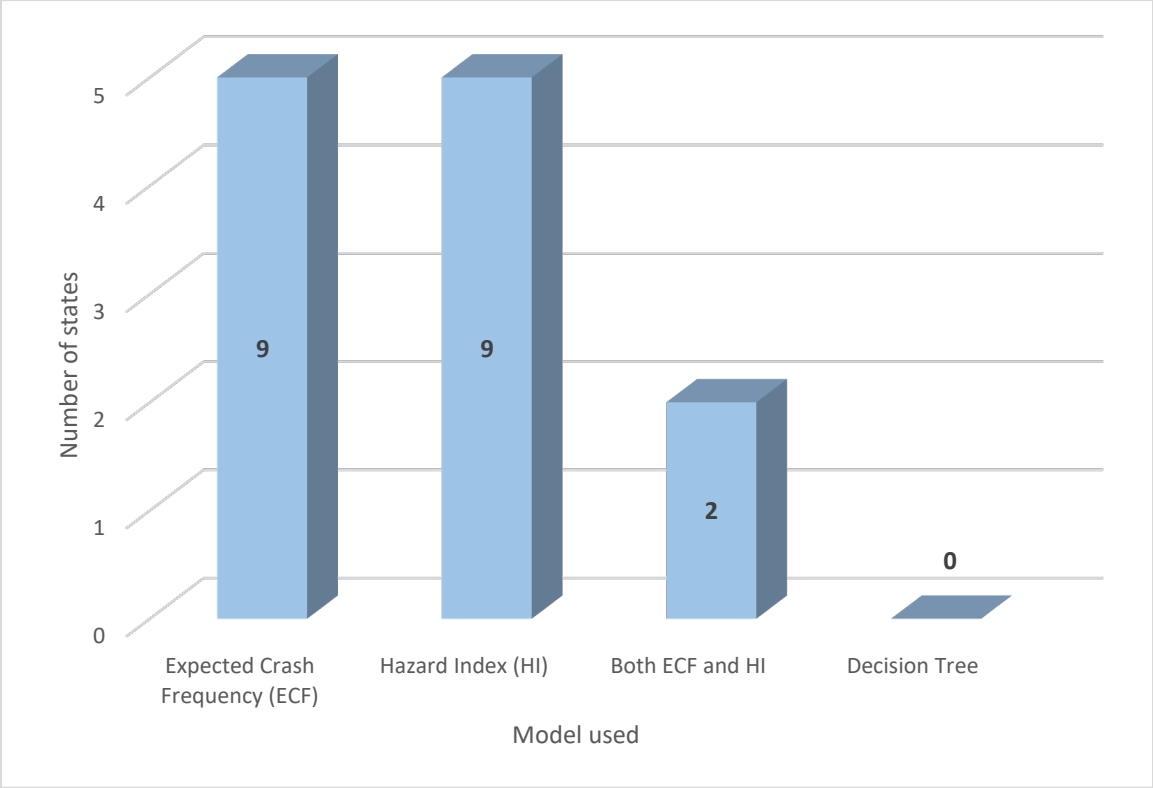


Figure 13. Bar chart. Number of model usages by states.

If a particular state reported that they use an ECF model, a follow-up question asked about the specifics of the model. Four options were given if they use an ECF model type: 1) USDOT Accident Prediction Model/Web Accident Prediction System (WBAPS), 2) National Cooperative Highway Research Program (NCHRP) 50 Accident Prediction Model, 3) Peabody-Dimmick Formula, and 4) state-specific model/formula. Two responses were received for USDOT's WBAPS model. The other models did not receive any responses. In a similar vein, states were asked about the type of HI model that they may be using. Among 9 states that use the HI formula, two use their state-specific hazard index, one uses "FRA APS," and the others did not specify the model type.

After identifying the model types, the survey was designed to extract information regarding the attributes/factors utilized in each of the models. These factors were categorized into three classes: (1) pedestrian-related factors, (2) train-related factors, and (3) environmental factors. As shown in Figure 14, nine factors were given as options. Among them, "pedestrian signage/markings," "pedestrian volume," "sidewalk/footpath surface," "pedestrian automatic gates," and "pedestrian crossing gate skirts" are reported to be used in both ECF and HI models. Figure 14 also shows some factors that are used exclusively in each model.

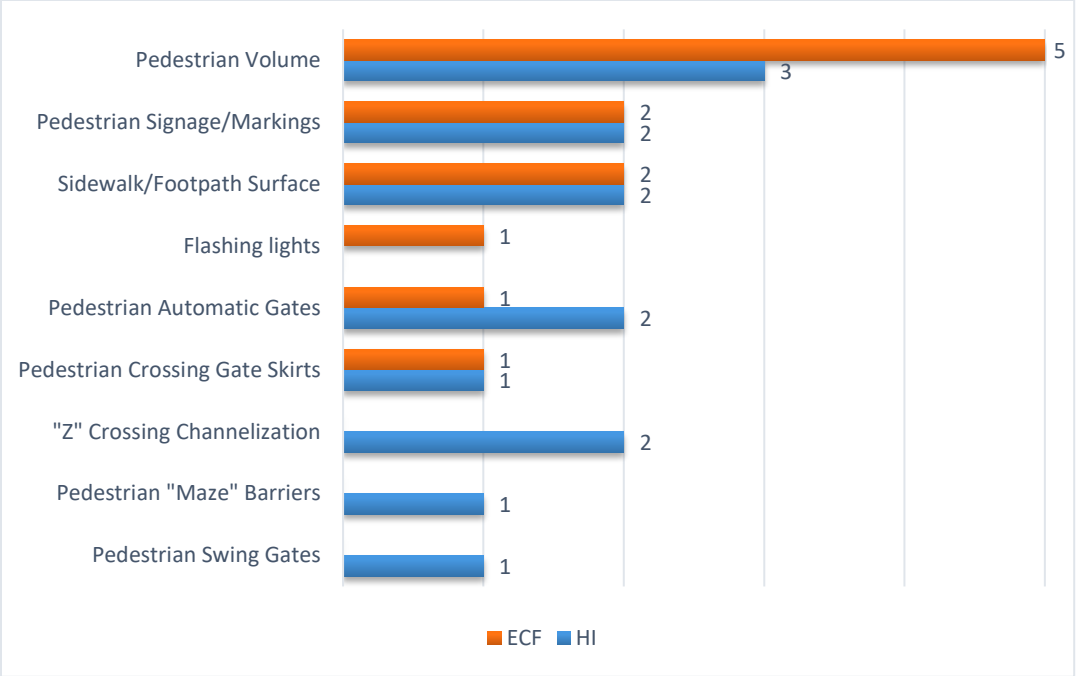


Figure 14. Bar chart. Pedestrian factors used in ECF and HI models.

Seven options were provided for train-related factors. As shown in Figure 15, four factors are found to be used in both ECF and HI models. These factors are “train volume,” “train speed,” “flashing light signals,” and “number of tracks.” All seven factors are reported to be used in either ECF or HI models. In Figure 16, environmental factors and their usages are reported. As shown, among the six factors provided as choices, five are used in both ECF and HI models. One factor, “crash severity,” is only used in the HI model.

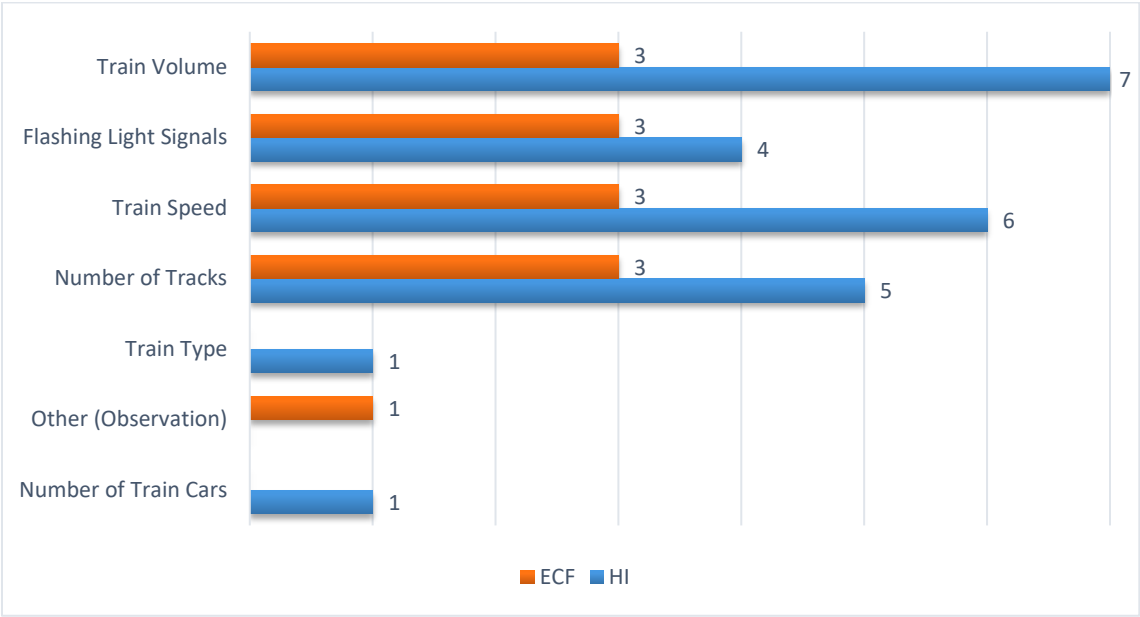


Figure 15. Bar chart. Train-related factors used in ECF and HI models.

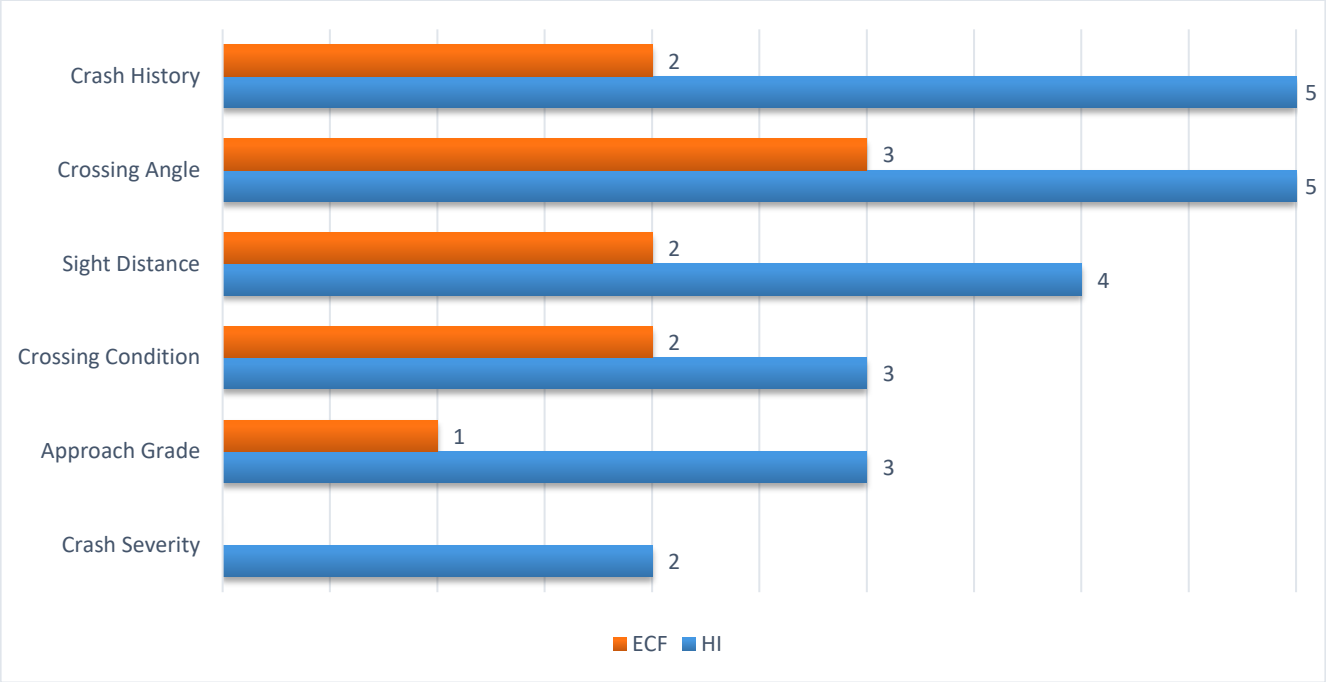
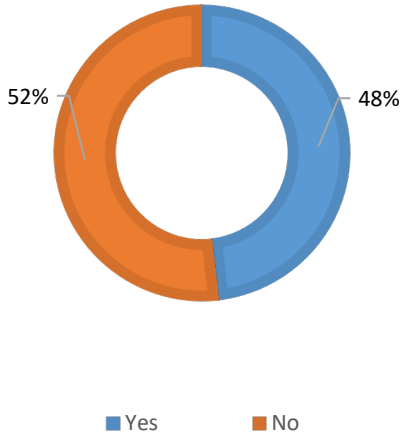


Figure 16. Bar chart. Environmental factors used in ECF and HI models.

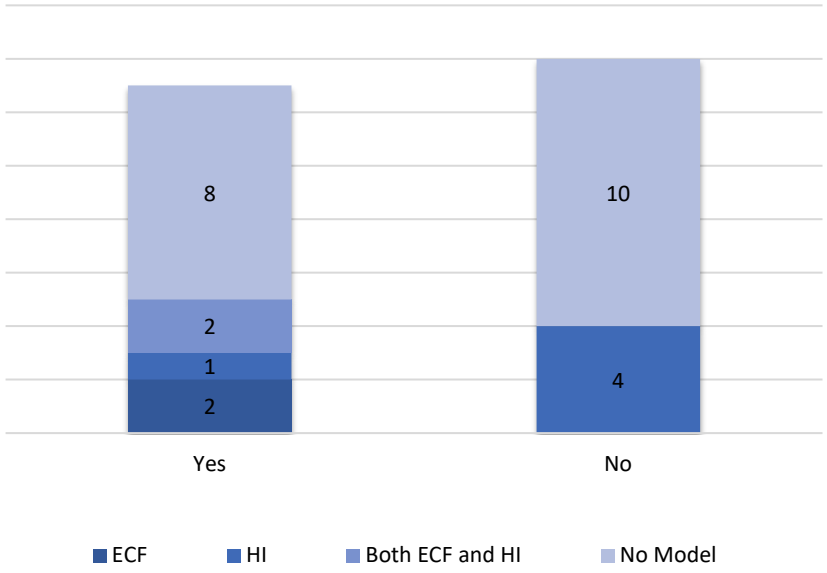
States were asked whether they use their model to identify high priority crossings regardless of the model used. Among states who use the ECF model, four mentioned that they use the ECF model to determine high priority crossings. One responded that they do not use the ECF model to identify the crossing as high priority, and the remaining states using the ECF model did not respond to this question. As for the threshold for this determination, a few criteria mentioned by the states are comparative ranking, top 25% of the list, specific cutoff values of ECF, etc. On the other hand, three states reported that they use the HI formula to identify the priority crossing within the state. As a threshold, they use the hazard index value. Among other states using the HI model, three responded negatively, i.e., they do not use their HI model for identifying high priority crossings.

RPC Safety Improvement Criteria

States were asked whether they use any criteria to determine railroad-pedestrian crossing (RPC) safety improvement prioritization such as in the Section 130 Program. Of 27 responses recorded for this question, 13 responded positively and 14 were negative. Figure 17(a) shows the percentage of positive and negative responses. Usages of different models (e.g., ECF and HI) overlap with usages of Section 130 program criteria. This overlapping distribution is presented in the bar chart shown in Figure 17(b). As shown in Figure 17(b), 10 states use neither RPC safety improvement criteria nor any model. On the other hand, 5 states use both RPC safety improvement criteria and one or both ECF and HI models.



A. Percentage of positive and negative responses



B. Overlap distribution of RPC safety improvement criteria usages and different model usages

Figure 17. Percentage and distribution. Usage of RPC safety improvement criteria.

As shown in Figure 18, states were provided with six options to identify the safety-specific criteria used for RPC safety improvement. Among them, FRA crash history was marked the highest by eight respondents. All six options are referred to by at least one state. Besides these options, some states mentioned that they use their state-level crash history records, hazard ranking, and field observations as RPC safety criteria.

As a separate question, states were asked to identify the additional criteria besides safety-related ones that they use for RPC safety improvement. As presented in Figure 19, states used several non-safety criteria. Among them, “associated work with nearby crossing” is cited as the most used criteria besides the safety criteria. Additionally, “upgrade from crossbuck/automatic flashing light signal (AFLS) to automatic flashing light signal and gates (AFLS&G)” and “location geometry,” such as angle, footpath geometry, buildings, trees, crops, and embankments, were also cited by eight respondents. Further, factors related to nearby crossings such as signal upgrades were also mentioned by some respondents. In addition, one state mentioned their criteria varies depending on the crossing site.

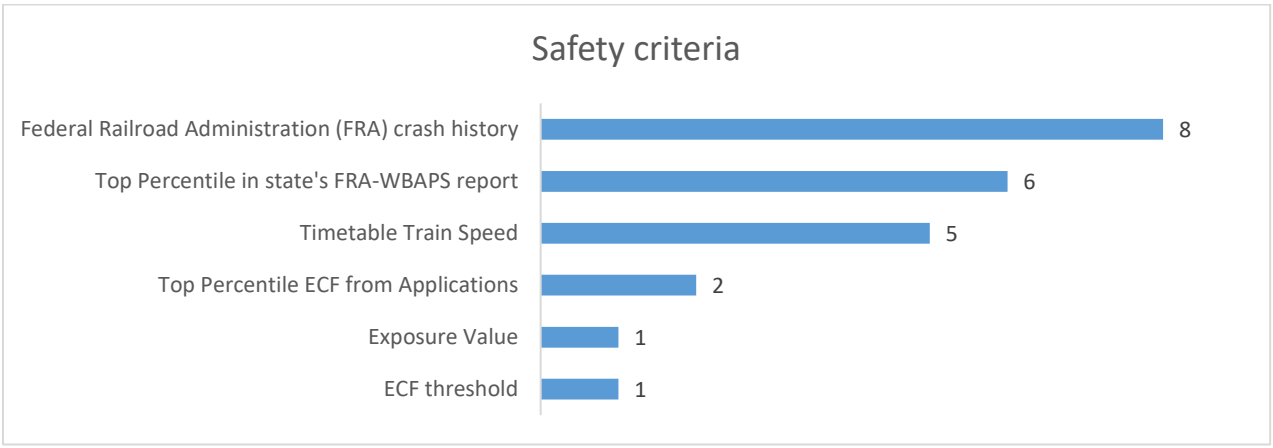


Figure 18. Bar chart. Frequency of use of safety criteria for RPC safety improvement.

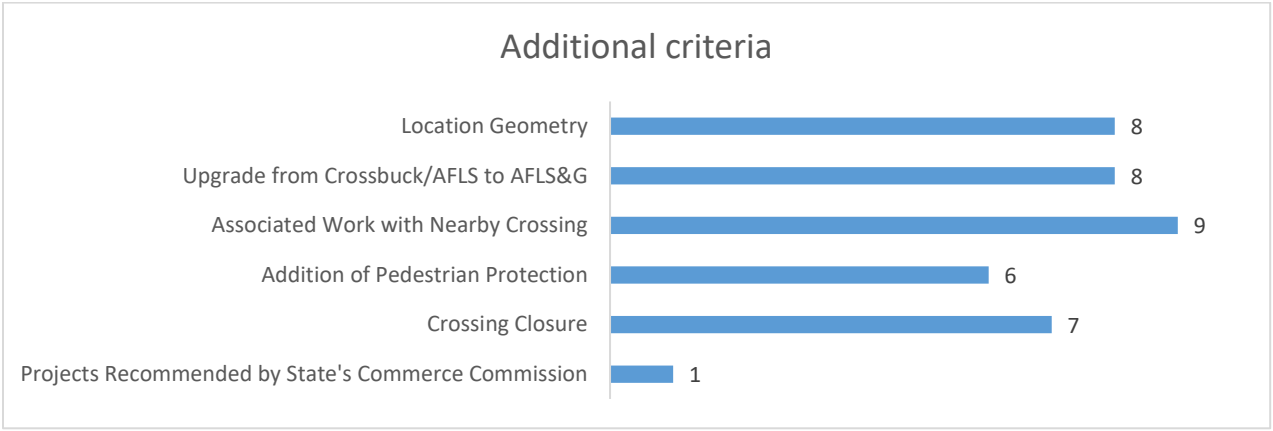


Figure 19. Bar chart. Frequency of use of additional criteria for RPC safety improvement.

RPC Safety Treatments

As mentioned in the literature review, safety treatments at RPC can be categorized into two types: active and passive. The majority of the states that responded reported that they take both active and passive safety treatments. The respondents were provided with six options for active treatments and eight options for passive treatments. Almost all respondents indicated they use more than one treatment, regardless of active or passive. The distribution of active treatments is presented in Figure 20. The first six options were provided to the respondents. “Automatic pedestrian gates” is cited by

12 respondents, making it the most used active treatments. All six options were cited, and additionally one treatment “detectable warnings” was indicated by one state. Further clarifications were not available.

The bar chart presented in Figure 21 shows the distribution of passive safety treatments usually adopted by states. Comparing the number of citations in Figure 21 with the citations in Figure 20, it can be observed that the passive safety treatments are more frequent than the active ones (80 compared to 48). Among the passive treatments, “passive signage” was cited by the most respondents. Moreover, all eight options were cited multiple times.

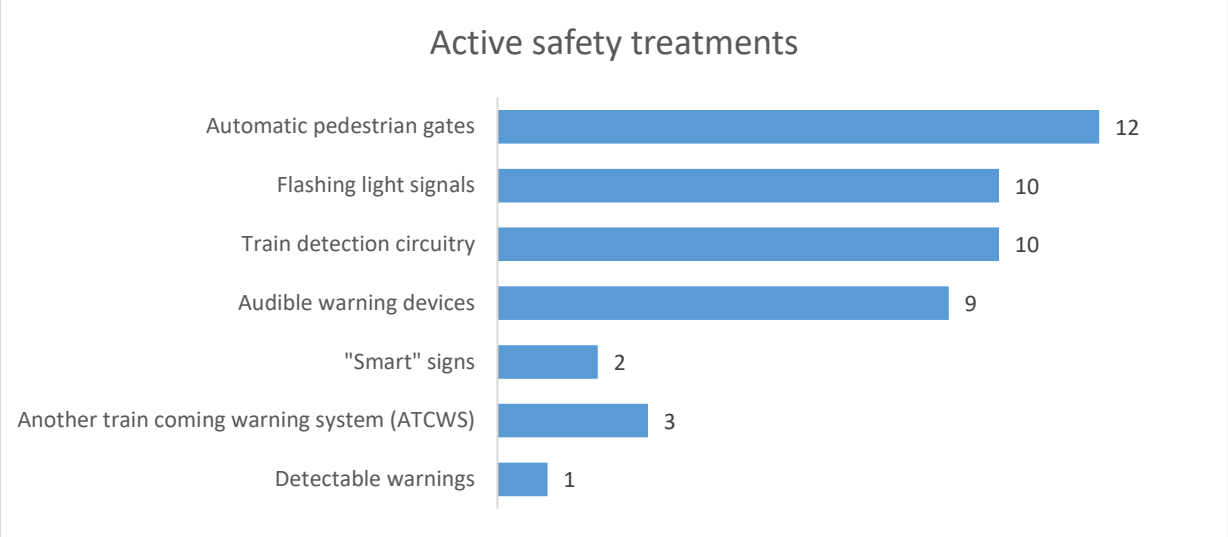


Figure 20. Bar chart. Frequency of usage of active safety treatments.

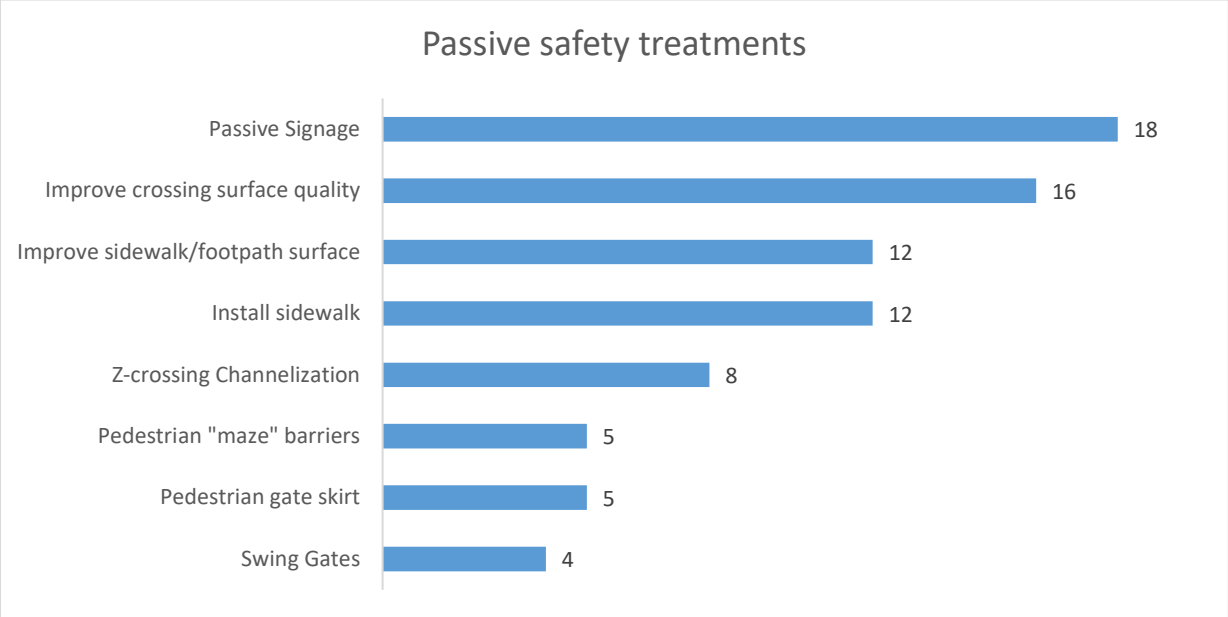


Figure 21. Bar chart. Frequency of usage of passive safety treatments.

Funding Sources and Issues

The survey also inquired about sources and issues related to funding for RPC safety treatments. As indicated by respondents, RPC safety treatments are primarily federally funded. There are other funding sources that were indicated, as shown in Figure 22. Figure 22 shows that 17 respondents mentioned that their RPC safety treatments are federally funded. In addition, 14 respondents said they receive funds from local jurisdictions as well. All respondents indicated multiple funding sources.

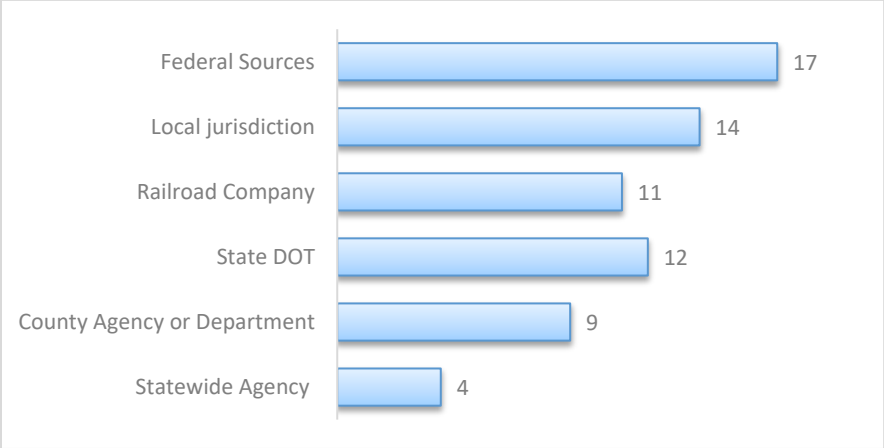


Figure 22. Bar chart. Funding sources for safety treatments.

The follow-up question on funding sources was about issues that a state usually faces in securing a funding source for RPC safety treatments. “Lack of dedicated pedestrian safety infrastructure funds” is mentioned by the majority of respondents. Other issues came up in the survey, which are presented in Figure 23.

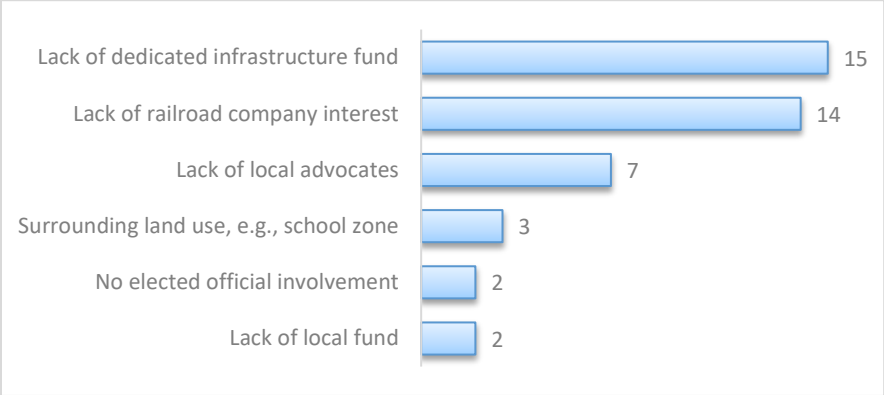


Figure 23. Bar chart. Issues with securing funding for safety treatments.

Installation and Maintenance Responsibility

The final two questions in the first part of the survey inquired about the entities within the state who are responsible for the installation and maintenance of RPC safety treatments. As shown in Figure 24, the “railroad company” was cited the highest number of times as the responsible entity for both

installation and maintenance of RPC safety treatments. Local jurisdictions were also cited by 16 respondents as the responsible entity for the installation and maintenance of RPC safety treatments.

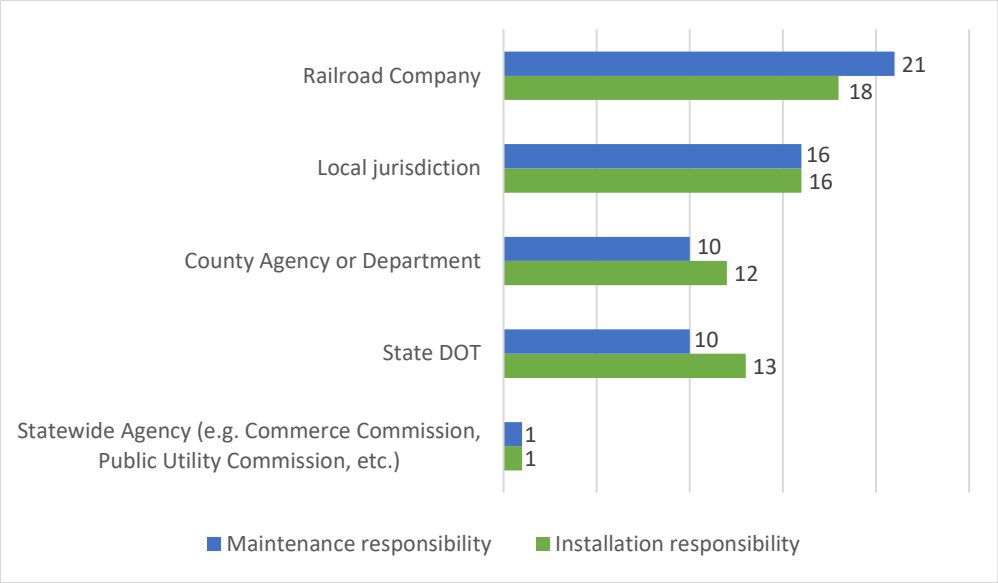


Figure 24. Bar chart. Responsibility of RPC safety treatments installation and maintenance.

PART 2: TRAIN-DETECTION CIRCUITRY AT RHC AND RPC

The questions in this part pertain to the state's approach to upgrading train-detection circuitry at both at-grade railroad-highway crossings (RHCs) and railroad-pedestrian crossings (RPCs). First, an inquiry on specific circuitries at RHCs that are considered in the upgrade process in a state is made. A variety of responses were recorded. Among them, constant warning time (CWT) was found to be the most cited one. Motion detection (MD) and positive train control (PTC) were also cited six and five times, respectively. One respondent indicated that they did not use any circuitry in their upgrade process. No further details were provided.

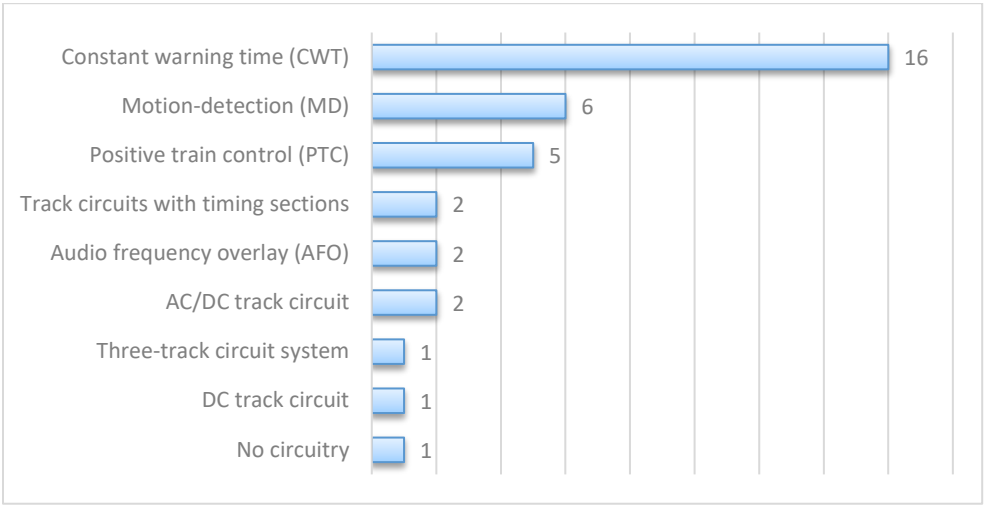


Figure 25. Bar chart. Specific train-detection circuitries at RHCs.

Determination of Circuitry Upgrade Needs

Regarding circuitry updates, a follow-up question was posed to respondents to find out the responsible entity who determines the need for train-detection circuitry at RHCs and RPCs. Figure 26 shows that a variety of entities are responsible for this determination task. It is possible that multiple entities perform this task within a state. Among all responses, railroad companies were cited by most respondents as the responsible entity to determine the need for circuitry upgrades. State DOT was also cited by 17 respondents.

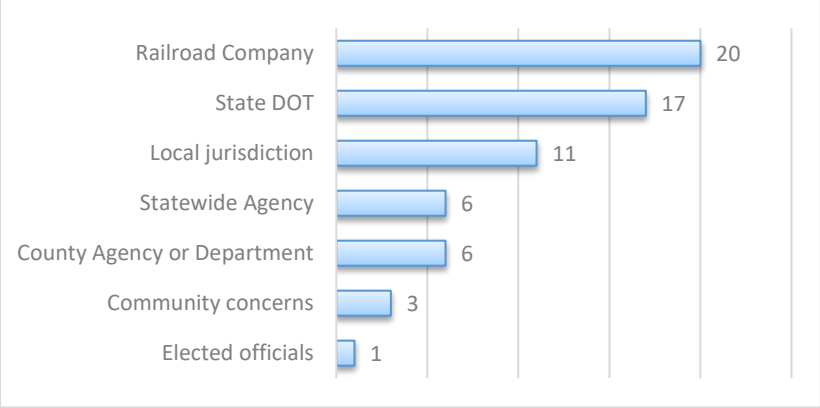


Figure 26. Bar chart. Entity who determines the need for train-detection circuitry upgrades.

To determine whether a crossing requires any train-detection circuitry upgrades, the responsible entity may use a specialized procedure or specific criteria, or a simple rule of thumb. Regardless of this determination process, it relies on some attributes related to the crossing environment. The respondents were asked about such attributes. The respondents identified the qualitative or quantitative procedure, criteria, or rule of thumb that their state usually uses to determine the specific train-detection circuitry upgrade. As shown in Figure 27, "train frequency" is the highest cited criteria used by the states. Exposure, train speed, and collision history were also cited by many respondents.

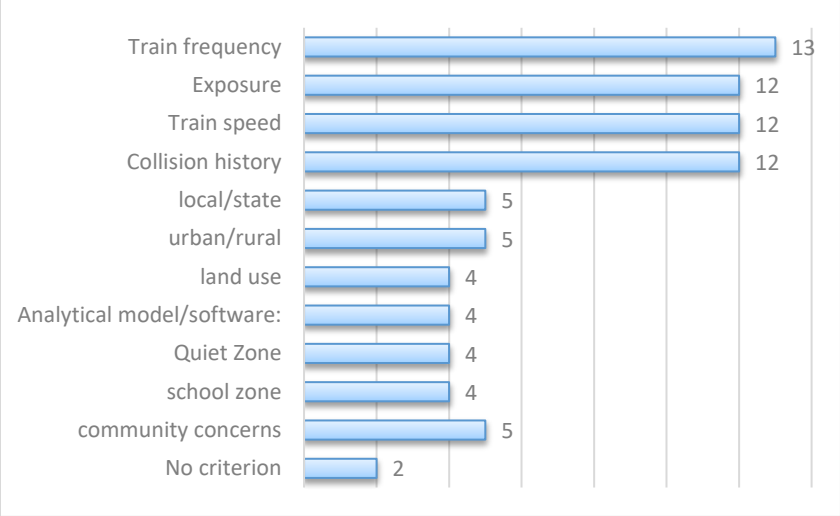


Figure 27. Bar chart. Attributes to determine the need for detection circuitry upgrades.

Funding

When asked about the entities who fund the installation of RHC and RPC train-detection circuitry, most respondents mentioned that funding mainly comes from federal sources. As shown in Figure 28, some other sources of funding are available to states such as railroad companies and state DOTs.

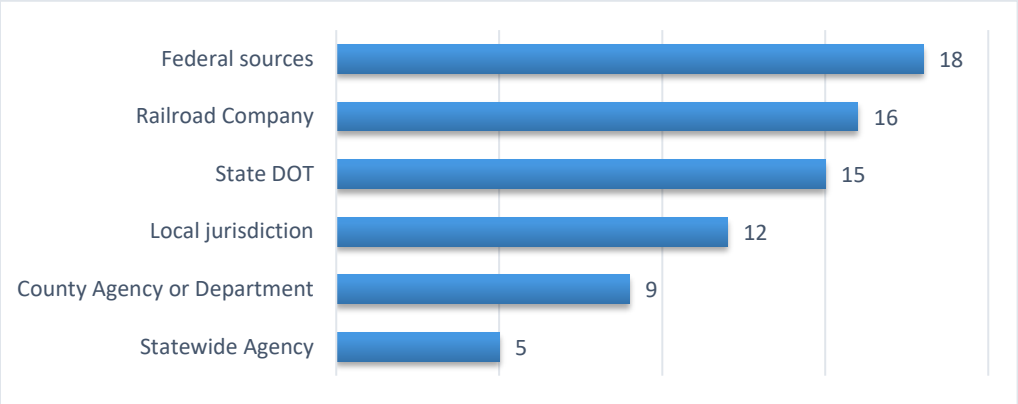


Figure 28. Bar chart. Funding source for the installation of RPC and RHC circuitry.

Installation and Maintenance of the Circuitry System

Installation of a train-detection circuitry system at a crossing and its regular maintenance are two important tasks. Every state must have at least one or multiple entities who are responsible for these two tasks. In the survey, respondents were asked about the responsible entities of these two tasks. As presented in Figure 29, railroad companies were cited by 21 respondents as the responsible entity for both circuitry installation and maintenance.

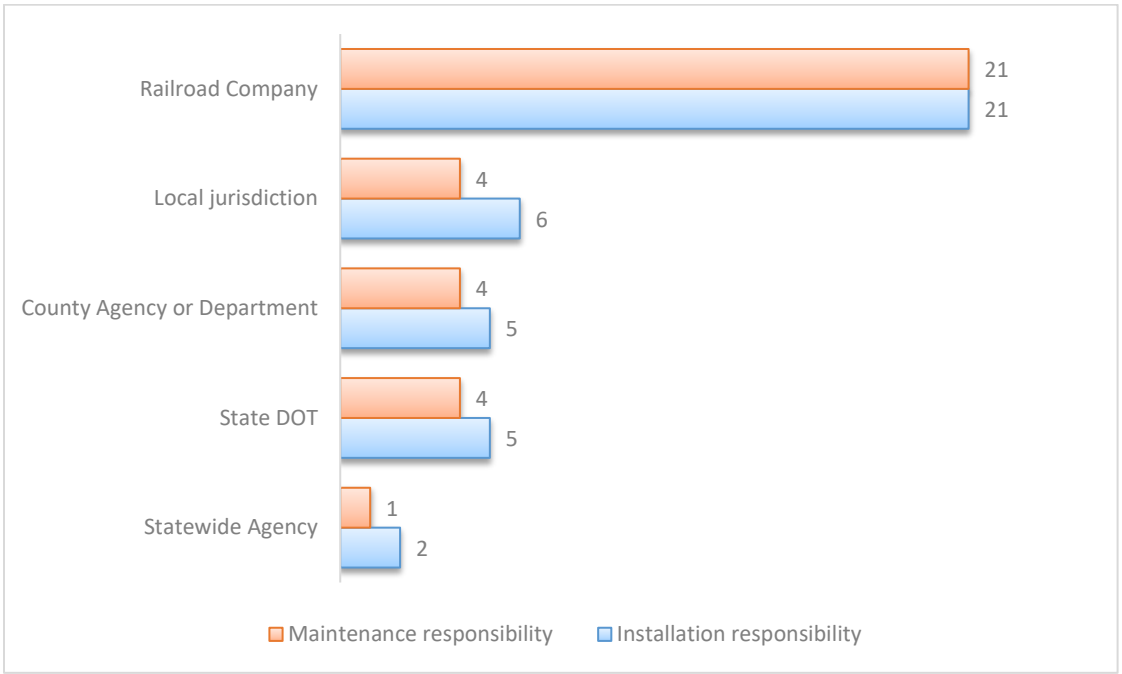


Figure 29. Bar chart. Installation and maintenance responsibility of the circuitry system.

CONFLICTING RESULTS FROM DOTS AND NON-DOT EXPERTS

As previously mentioned, two states provided meaningful survey responses from both DOT officials and non-DOT experts. For these two states, some conflicting findings from the two surveys are worth mentioning.

In the first state, two noteworthy conflicts were identified. In the first conflict, non-DOT experts identified state DOT as a funding source for RPC safety treatments whereas DOT officials did not identify state DOT as a funding source. On the other hand, DOT officials identified local jurisdiction and county departments as two funding sources, but non-DOT experts did not acknowledge them. In the second conflict, the entity with the responsibility of installation and maintenance of RPC safety treatments was also identified differently by the two groups of respondents. According to non-DOT experts, this responsibility falls onto the local jurisdiction. DOT officials identified the railroad company as the responsible authority.

In the second state, when asked about whether any criteria are used to determine RPC safety improvement prioritization such as in the Section 130 Program, DOT officials said that they use quite a few criteria, such as FRA crash history, top percentile ECF from applications, and top percentile in the state's FRA WBAPS report. On the other hand, the non-DOT expert response said that the state DOT does not use any such criteria.

There was other conflicting information available in the survey responses between the two groups. They are mainly when they are asked about identifying criteria for different models or treatments. These conflicts may result from a lack of proper communication between DOT officials and non-DOT experts.

CHAPTER 4: DATA PREPARATION/DEVELOP CROSSING INVENTORY

INTRODUCTION

The research team initially worked with two types of datasets involving RHCs in Illinois. One is the collision dataset, and the second is the inventory dataset. The collision dataset corresponds to the collision record where each data point (row or record) corresponds to one collision. For this project, the research team used collision data from 2005 to 2020 provided by ICC. The research team obtained the collision datasets in three spreadsheets: 1) 2005–2009 dataset, 2) 2010–2019 dataset, and 3) 2020 dataset.

As for the inventory data, crossing inventories from the FRA website are extracted as instructed by the TRP. The FRA historical data from 2000 to 2021 were downloaded. These data are divided into seven separate datasets by FRA. Nine years of inventory data, covering 2000 to 2009, are accumulated together in one spreadsheet. From 2010 to 2021, the inventory data are accumulated for every two years. All seven datasets were extracted from the FRA website.

While working with the two datasets, the research team faced a number of issues involving the data from both FRA and ICC. Although resolving the data issues was particularly important for this project to progress at its normal pace, the research team found the tasks quite challenging due to lack of proper documentation and communication. Nevertheless, the team reached out to all responsible custodians of these data to resolve various issues to an extent allowed by the project timeline and available resources.

This chapter is organized as follows. The chapter begins by discussing the abovementioned data issues. The research team tried to be as detailed as possible so that any future efforts can save significant time and resources while retracing the intricate details of data reporting, organization, and description. Next, this chapter describes data preparation combining both the collision and inventory datasets.

Eventually, many datasets were appropriately merged to form two working databases. One database was a preliminary one to quickly assess relationships involving collision rates, Illinois ECFs, circuitry types, and pedestrian behavior and scope data. The database consisted of a limited number of records but encompassed the six northeast Illinois counties (i.e., Cook, DuPage, Kane, Lake, McHenry, and Will Counties). The first working database was very limited because many variable values to calculate Illinois ECFs were lacking.

The second working database greatly expanded the first one by merging datasets so that ECFs were calculated for all six-county public at-grade RHCs and organized records by crossing ID instead of by collision. The second database was more detailed and included most public at-grade RHCs in the six northeastern Illinois counties for the years 2014 through 2019 with collision histories from 2004 through 2019 (i.e., 8,478 records). The second working database was used in model development, calibration, and validation. Finally, this chapter presents summary statistics of working databases.

DATA ISSUES

The data issues are organized in three subsections. First, general issues associated with the existence of two different types of updates and their inconsistencies, which the research team considers as one of the major deficiencies in the current practice of data reporting and recording, are described. In the two following subsections, data issues related to two specific data types are discussed.

Inventory Data Update versus Actual Physical Update

In the case of crossing circuitry and gate updates, there are usually two types of updates: 1) a data update, the time when a modification is made in the inventory data, and 2) an actual physical update, the actual time of infrastructure update made on the site. It is important to know when the actual physical update was made in the HRC site to properly capture the impact of that physical update. However, based on the current data recording and reporting practices, there is no way to confirm when the actual physical update is made on a site.

Although this issue is not documented anywhere, upon close investigation of the published datasets, the research team discovered this issue and tried to find a solution by contacting FRA. This issue is acknowledged by FRA, but it could not give a clear solution to resolve it. As informed by FRA, a railroad or a state can update an inventory record as many times as they would like, for any update to any field. However, they have to follow two regulations:

1. A railroad must make an update within three months from any change in a crossing surface, a change in warning devices, and a sale/change in ownership/closure.

2. Each inventory record (for open at-grade crossings, not including closed or grade-separated crossings) must be updated at least once every three years by the railroad, so any other changes must be made when those subsequent updates are made to the inventory record.

Note that the above two regulations are provided by FRA upon request from the research team. According to the above two regulations, one should be able to find inventory records for a crossing every three years at the longest interval. However, the research team found that this rule is not strictly followed, and the issue will be described in more detail in the next section.

FRA Inventory Database

Based on the current documentation available for the FRA database, the research team were unable to find answers to a few questions. The researchers resolved these questions through personal communication with FRA. These issues and their resolution are described below.

FRA historical data updating: In the FRA website, historical crossing data are available every two years (starting from 2010). In May 2022, the research team noticed that the 2022–2023 data is already included in the historical crossing data query system, as shown in Figure 30. Therefore, one may assume that for this particular 2022–2023 time frame, the data update is still in progress, which begs the question when one can presume that the dataset for a particular time frame is final and will not be updated.

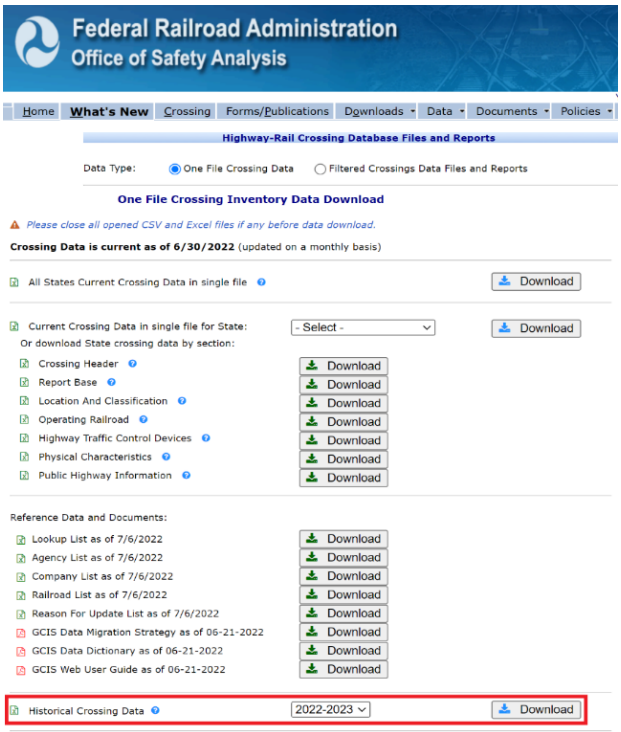


Figure 30. Screenshot. Historical data in FRA database.

As informed by FRA, the updates are broken into two years based on the physical storage size of the Excel file. Each download shows every update made to the inventory within those two years. It is possible that a single crossing could be updated multiple times within those two years by a railroad or state, or no updates to certain crossings may have been made during those two years.

Reporting status: In the historical data, the column "ReportStatus" has several options—bulk upload error, cancelled, expired, pending, and published. For the majority of the data records, this column reports either "expired" or "published." Figure 31 shows a screenshot of the historical inventory record of 2018–2019, where all available records for crossing 004176Y are filtered and their report statuses highlighted. Based on the available FRA documentation, the designation of these report statuses is not clear.

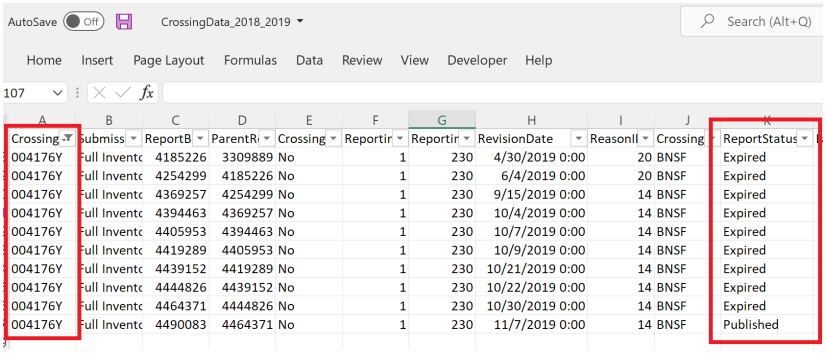
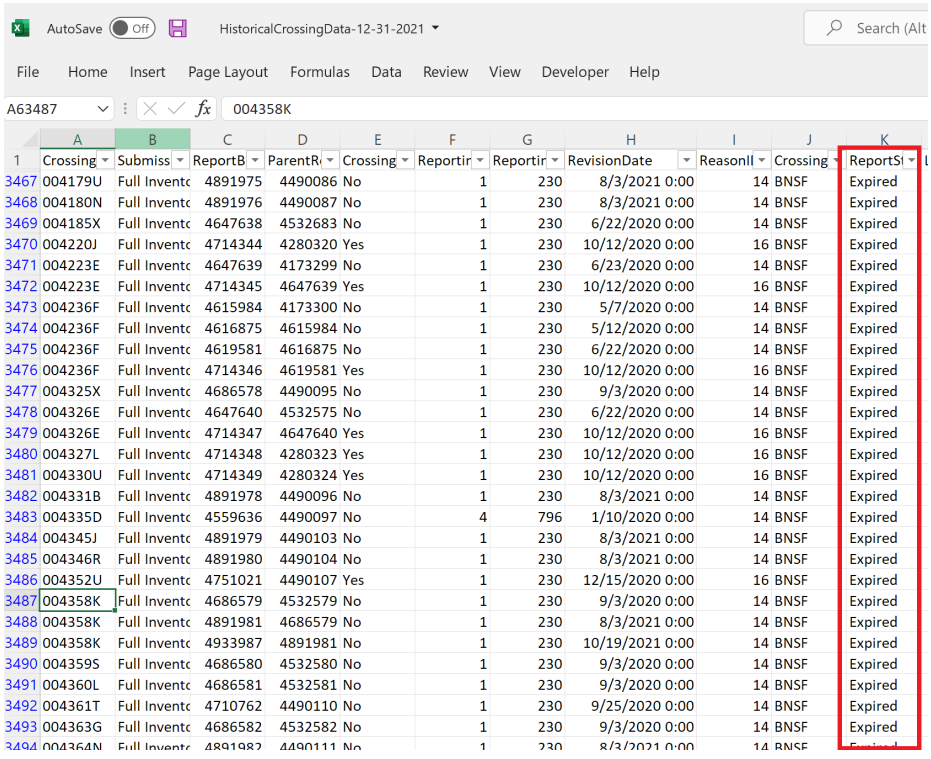


Figure 31. Screenshot. All available records for crossing 004176Y in the 2018–2019 historical inventory data and their report statuses.

Based on personal communication with FRA, the research team came to know that the “expired” status means that another inventory update was made after the date of the last update, which will be discussed below. The “published” status means that it is the current version. For example, for the crossing shown in Figure 31, the update 11/7/2019 0:00 is the latest, indicating this is the last update made to it.

Crossings with no “published” data: According to the definitions of the “expired” and “published” report statuses, every crossing should have a “published” record in the historical inventory data, which is the latest updated inventory data of that corresponding crossing. However, that is not always the case. While working with the 2020–2021 data, the research team noticed that there is no “published” record for any crossing in Illinois. Figure 32 shows a fraction of the 2020–2021 dataset downloaded from the FRA website and filtered for Illinois, which shows that all presented records are expired. Further investigation of these crossings in the 2022–2023 dataset (as of May 2022) reveals that the crossings represented in this figure are not available as well. This means that the last available inventory record for these crossings is designated as “expired,” which contradicts the definition.



	A	B	C	D	E	F	G	H	I	J	K
1	Crossing	Submiss	ReportB	ParentR	Crossing	Reportir	Reportir	RevisionDate	ReasonII	Crossing	ReportSt
3467	004179U	Full Inventc	4891975	4490086	No	1	230	8/3/2021 0:00	14	BNSF	Expired
3468	004180N	Full Inventc	4891976	4490087	No	1	230	8/3/2021 0:00	14	BNSF	Expired
3469	004185X	Full Inventc	4647638	4532683	No	1	230	6/22/2020 0:00	14	BNSF	Expired
3470	004220J	Full Inventc	4714344	4280320	Yes	1	230	10/12/2020 0:00	16	BNSF	Expired
3471	004223E	Full Inventc	4647639	4173299	No	1	230	6/23/2020 0:00	14	BNSF	Expired
3472	004223E	Full Inventc	4714345	4647639	Yes	1	230	10/12/2020 0:00	16	BNSF	Expired
3473	004236F	Full Inventc	4615984	4173300	No	1	230	5/7/2020 0:00	14	BNSF	Expired
3474	004236F	Full Inventc	4616875	4615984	No	1	230	5/12/2020 0:00	14	BNSF	Expired
3475	004236F	Full Inventc	4619581	4616875	No	1	230	6/22/2020 0:00	14	BNSF	Expired
3476	004236F	Full Inventc	4714346	4619581	Yes	1	230	10/12/2020 0:00	16	BNSF	Expired
3477	004325X	Full Inventc	4686578	4490095	No	1	230	9/3/2020 0:00	14	BNSF	Expired
3478	004326E	Full Inventc	4647640	4532575	No	1	230	6/22/2020 0:00	14	BNSF	Expired
3479	004326E	Full Inventc	4714347	4647640	Yes	1	230	10/12/2020 0:00	16	BNSF	Expired
3480	004327L	Full Inventc	4714348	4280323	Yes	1	230	10/12/2020 0:00	16	BNSF	Expired
3481	004330U	Full Inventc	4714349	4280324	Yes	1	230	10/12/2020 0:00	16	BNSF	Expired
3482	004331B	Full Inventc	4891978	4490096	No	1	230	8/3/2021 0:00	14	BNSF	Expired
3483	004335D	Full Inventc	4559636	4490097	No	4	796	1/10/2020 0:00	14	BNSF	Expired
3484	004345J	Full Inventc	4891979	4490103	No	1	230	8/3/2021 0:00	14	BNSF	Expired
3485	004346R	Full Inventc	4891980	4490104	No	1	230	8/3/2021 0:00	14	BNSF	Expired
3486	004352U	Full Inventc	4751021	4490107	Yes	1	230	12/15/2020 0:00	16	BNSF	Expired
3487	004358K	Full Inventc	4686579	4532579	No	1	230	9/3/2020 0:00	14	BNSF	Expired
3488	004358K	Full Inventc	4891981	4686579	No	1	230	8/3/2021 0:00	14	BNSF	Expired
3489	004358K	Full Inventc	4933987	4891981	No	1	230	10/19/2021 0:00	14	BNSF	Expired
3490	004359S	Full Inventc	4686580	4532580	No	1	230	9/3/2020 0:00	14	BNSF	Expired
3491	004360L	Full Inventc	4686581	4532581	No	1	230	9/3/2020 0:00	14	BNSF	Expired
3492	004361T	Full Inventc	4710762	4490110	No	1	230	9/25/2020 0:00	14	BNSF	Expired
3493	004363G	Full Inventc	4686582	4532582	No	1	230	9/3/2020 0:00	14	BNSF	Expired
3494	004364N	Full Inventc	4891982	4490111	No	1	230	8/3/2021 0:00	14	BNSF	Expired

Figure 32. Screenshot. A fraction of the 2020–2021 dataset filtered for Illinois showing all records are expired.

Multiple date stamps: In the FRA historical data, each record is associated with three date stamps—“RevisionDate,” “LastUpdated,” and “ReportYear.” (A few examples are shown in the screenshot in Figure 33.) For the “published” records, these date stamps are the same. However, for many “expired” records, these date stamps are not the same. If someone is to use such an “expired” record

(given that there is no publish date), it is not clear which year should be considered as the corresponding year of record.

	A	B	H	L	GC	GD
1	Crossing	SubmissionType	RevisionDate	LastUpdated	ReportY	ReportT
63467	004179U	Full Inventory Record	8/3/2021 0:00	10/27/2021 13:50	2021	Major
63468	004180N	Full Inventory Record	8/3/2021 0:00	10/27/2021 13:55	2021	Major
63469	004185X	Full Inventory Record	6/22/2020 0:00	9/3/2020 10:10	2020	Major
63470	004220J	Full Inventory Record	10/12/2020 0:00	10/13/2020 10:00	2020	Major
63471	004223E	Full Inventory Record	6/23/2020 0:00	10/12/2020 14:40	2020	Major
63472	004223E	Full Inventory Record	10/12/2020 0:00	10/13/2020 10:00	2020	Major
63473	004236F	Full Inventory Record	5/7/2020 0:00	5/12/2020 9:59	2020	Major
63474	004236F	Full Inventory Record	5/12/2020 0:00	6/22/2020 14:22	2020	Major
63475	004236F	Full Inventory Record	6/22/2020 0:00	10/12/2020 14:40	2020	Major
63476	004236F	Full Inventory Record	10/12/2020 0:00	10/13/2020 10:00	2020	Major
63477	004325X	Full Inventory Record	9/3/2020 0:00	10/13/2020 12:49	2020	Major
63478	004326E	Full Inventory Record	6/22/2020 0:00	10/12/2020 14:40	2020	Major
63479	004326E	Full Inventory Record	10/12/2020 0:00	10/13/2020 10:00	2020	Major
63480	004327L	Full Inventory Record	10/12/2020 0:00	10/13/2020 10:00	2020	Major
63481	004330U	Full Inventory Record	10/12/2020 0:00	10/13/2020 10:00	2020	Major
63482	004331B	Full Inventory Record	8/3/2021 0:00	10/27/2021 8:46	2021	Major

Figure 33. Screenshot. A few examples of crossings with three time stamps.

According to FRA, the revision date is the date that a specific update in the inventory was made. The last updated field is when the most recent update has been made for that crossing. The two would only match if the record is the most recent update/current version.

Mismatch between AADT year and report year: The research team noticed that for many crossings, regardless of the reporting year, the AADT years are from previous years. For some crossings the AADT value is from 1970. Figure 34 shows a few examples where the reporting years of the crossings are either 2020 or 2021; however, the AADT years are quite different.

A	B	H	L	FW	GC	GD
Crossin	Submiss	RevisionDate	LastUpdated	AadtYear	ReportYe	ReportT
004179U	Full Invent	8/3/2021 0:00	10/27/2021 13:50	1970	2021	Major
004180N	Full Invent	8/3/2021 0:00	10/27/2021 13:55	1970	2021	Major
004185X	Full Invent	6/22/2020 0:00	9/3/2020 10:10	1970	2020	Major
004220J	Full Invent	10/12/2020 0:00	10/13/2020 10:00	2018	2020	Major
004223E	Full Invent	6/23/2020 0:00	10/12/2020 14:40	1970	2020	Major
004223E	Full Invent	10/12/2020 0:00	10/13/2020 10:00	1970	2020	Major
004236F	Full Invent	5/7/2020 0:00	5/12/2020 9:59	1970	2020	Major
004236F	Full Invent	5/12/2020 0:00	6/22/2020 14:22	1970	2020	Major
004236F	Full Invent	6/22/2020 0:00	10/12/2020 14:40	1970	2020	Major
004236F	Full Invent	10/12/2020 0:00	10/13/2020 10:00	1970	2020	Major
004325X	Full Invent	9/3/2020 0:00	10/13/2020 12:49	2018	2020	Major
004326E	Full Invent	6/22/2020 0:00	10/12/2020 14:40	1981	2020	Major
004326E	Full Invent	10/12/2020 0:00	10/13/2020 10:00	1981	2020	Major
004327L	Full Invent	10/12/2020 0:00	10/13/2020 10:00	2018	2020	Major
004330U	Full Invent	10/12/2020 0:00	10/13/2020 10:00	2018	2020	Major
004331B	Full Invent	8/3/2021 0:00	10/27/2021 8:46	1970	2021	Major

Figure 34. Screenshot. A few examples showing the year discrepancies in AADT.

While consulting with FRA, the research team came to know that the AADT data is provided by the state. If the AADT year is recorded as 1970, that means the state has not provided an update to the AADT values since then. It can also be the case that the state did update the actual AADT values but forgot to change the AADT year data field.

ICC Collision Datasets

The collision data provided by ICC from 2005 to 2020 consist of two different formats. From 2005 to 2009, five years of collision data are described by 106 variables. Among them, some variables are added by FRA and some by ICC. On the other hand, the 2010 to 2020 data are described by 82 variables. The variable names in these two datasets are different. For many of them, a proper description of the variable name is absent in the data dictionaries.

Besides the collision dataset, ICC also shared a version of the inventory dataset with the research team that they modified from FRA. The research team consulted with the TRP to resolve some of the terminologies used in this dataset. A detailed description of these terminologies is included in Appendix B.

DATA MERGING/COLLISION DATA PREPARATION

Once the complete collision and inventory data are obtained, the research team focused on merging these two data types into one database, in which for each collision comprehensive information of that corresponding crossing can be obtained. This merging process involved two steps: 1) collision data merging and 2) collision-inventory data merging.

Collision Data Merging

The objective of this first step is to combine the collision data from 2005 to 2020 to have a master collision dataset for an extended period. The data format of the 2005–2009 collision dataset is different from the other two. The 2005–2009 dataset describes each collision with 107 variables, whereas the other two datasets use 82 variables. While merging these three datasets, 49 common variables were retained.

Collision-Inventory Data Merging

The objective of this step was to combine the collision data with the inventory data. To achieve this, for each of the collision incidents, the inventory information of the corresponding crossing at the time of the incident should be brought together with the collision data. This procedure would reveal the status of the crossing environment in a comprehensive manner at the time of collision.

Because every biennial FRA inventory dataset can have multiple records for the same crossing, the “published” version record of that crossing is taken from the corresponding dataset. In the case that no published record is available for a crossing, the latest available record was selected. Following these two rules, row-wise filtering was employed for each of the inventory datasets downloaded from FRA. The FRA inventory datasets contain 186 variables. After careful consideration, these datasets were filtered down to 113 variables of potential value for this study. Finally, this filtered inventory dataset was merged with the collision data.

In this merging, for each collision, the inventory record of that crossing no earlier than six months was extracted. The assumption behind this six-month threshold is that the crossing status would be the same at the time of a collision with the status reported six months earlier. If the inventory record was not found from the past six months, earlier entries were searched until the record for that crossing

was found. Figure 35 shows the format of the merged dataset. Each row in the merged dataset corresponds to a collision, where 49 variables are used to describe the collision characteristics and 113 variables are used to describe the crossing characteristics. Note that there can be some common variables between the 49 variables from the collision dataset and the 113 variables from the inventory datasets. However, in the merged dataset, the common variables are kept so that they can be used to resolve any conflicts that may arise in future research tasks.

The graph in Figure 36 shows the discrepancies between a collision year and an inventory year in the merged dataset. Figure 36 shows that there are around 40 collisions with zero year discrepancies. For those collisions, the inventory record in the same year's FRA inventory dataset was found with a minimum six-month gap. This figure also shows that for more than 300 collisions, inventory data was found within a one-year gap. However, there were a few instances where the search had to be extended to more than five previous years to find the most recent inventory records.

Collision no	Crossing ID	Collision characteristics from ICC collision datasets	Crossing characteristics from FRA inventory datasets
1		49 variables	113 variables
2			
…	…		
719			

Figure 35. Screenshot. Merged dataset format.

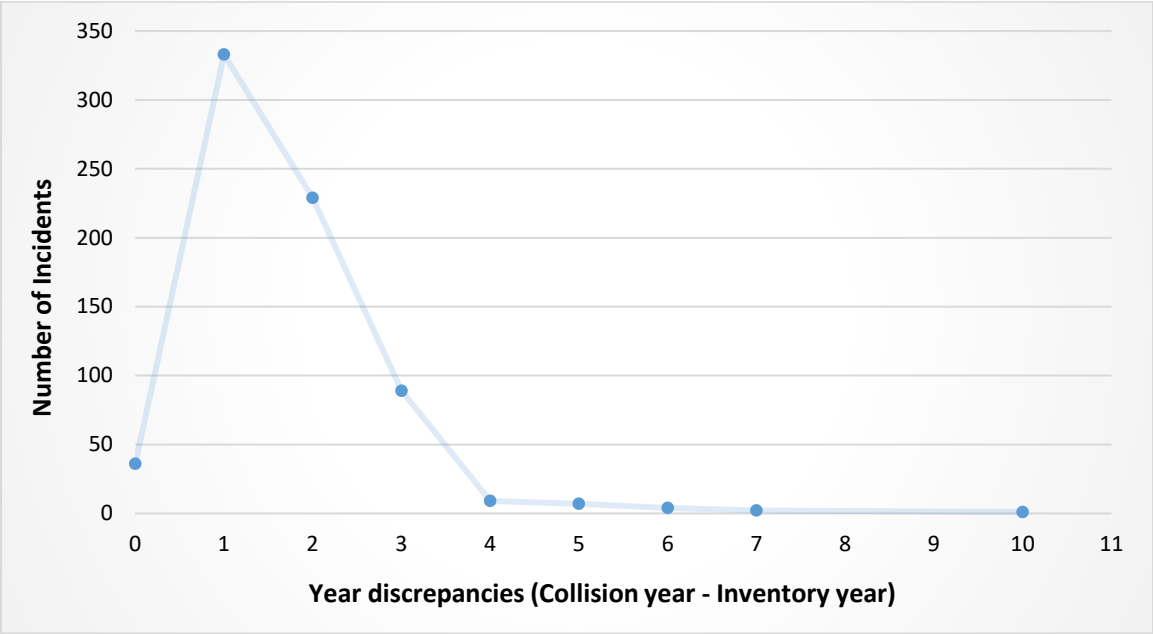


Figure 36. Graph. Year discrepancies in the merged dataset.

Summary Statistics of the Merged Dataset

In the 16 years between 2005 and 2020, the six counties had 719 collisions at 432 crossings. The histogram shown in Figure 37 presents the number of collisions per crossing. As shown, 277 crossings out of 432 crossings had one collision incident in the 16-year period. Fewer crossings experienced multiple collisions in the same period.

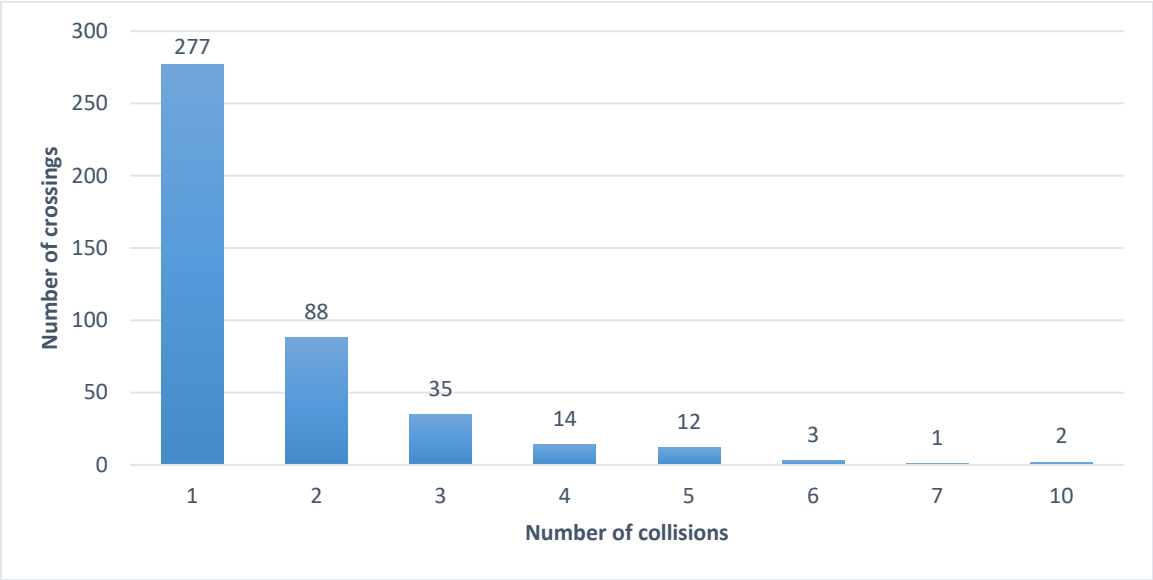


Figure 37. Histogram. Collision distribution across crossings.

The distribution of the number of collisions per year, as shown in Figure 38, does not suggest any steady trend. The number of collisions varies significantly from year to year. But sudden decreases are often followed by increases, suggesting regression toward the mean.

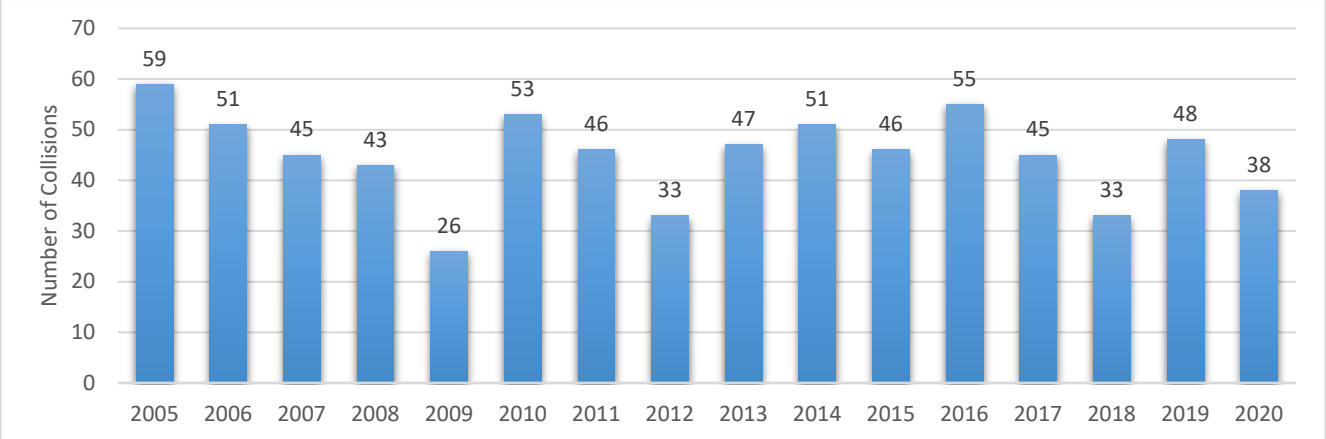


Figure 38. Bar chart. Number of collisions per year.

Figure 39 presents the yearly collision per county. Among the six counties, Cook County consistently has a much higher number of yearly collisions compared to the other five counties.

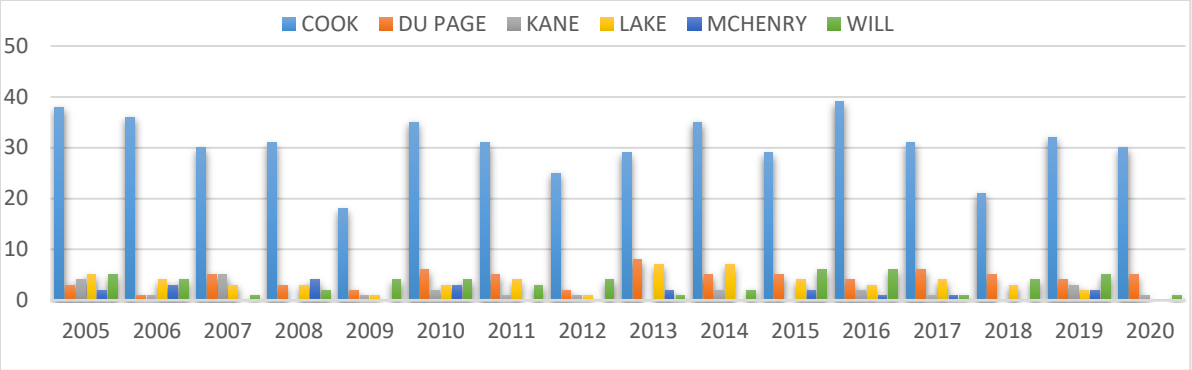
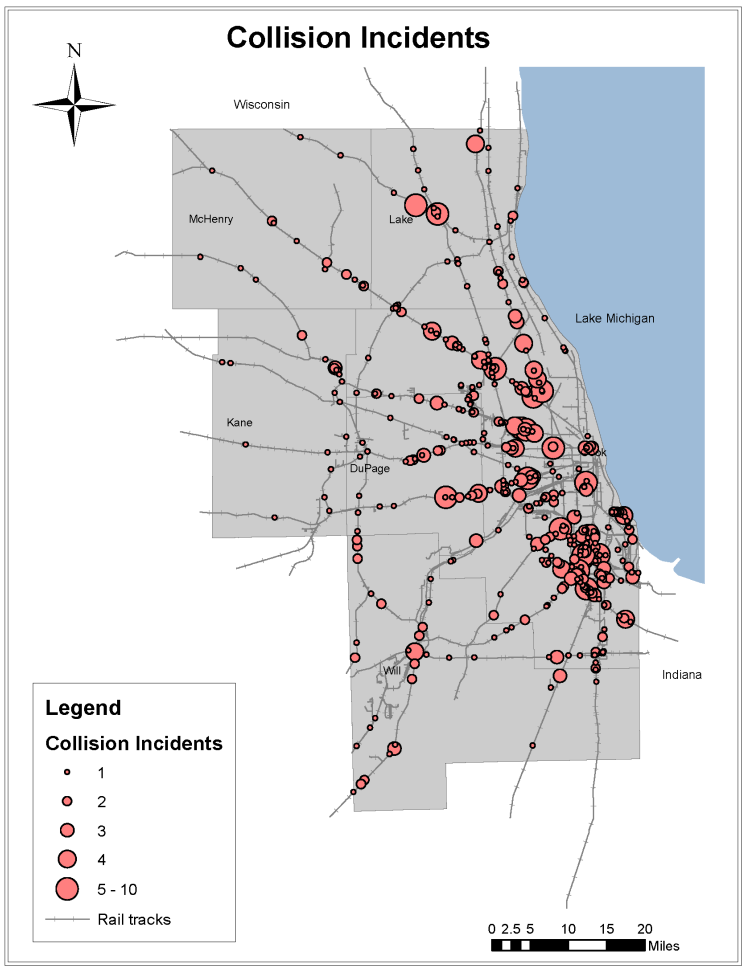
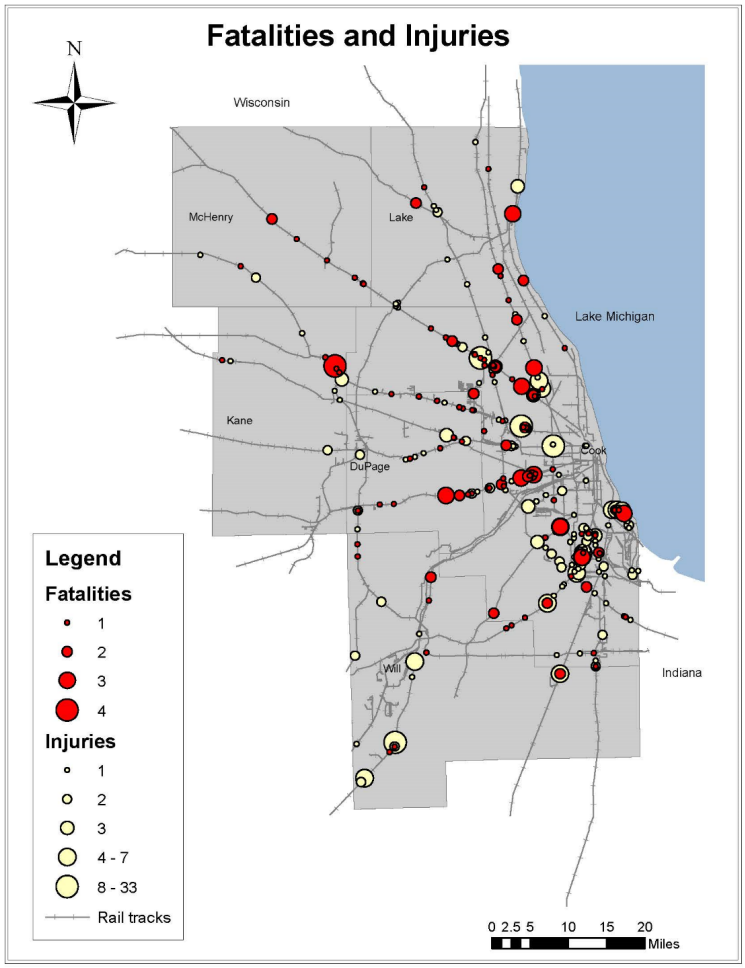


Figure 39. Bar chart. Yearly collisions per county.

Figure 40 presents the geographic locations of the crossings with collisions within the six-county area as well as the locations of injuries and fatalities. The size of the bubbles is proportional to the number of collisions, fatalities, and injuries in that crossing within the 16-year period (2005–2020). The number of incidents is higher in the Cook County area. Figure 40(b) shows that some rail lines have multiple crossings with fatalities.



A. Collision locations



B. Sites of collisions with fatalities and injuries

Figure 40. Maps. Incident sites in the six-county area.

DATA PREPARATION FOR MODEL DEVELOPMENT

For model development, another dataset is prepared where each row corresponds to a crossing inventory record for a specific year. For this, the FRA crossing inventory data was utilized from 2014 to 2019. From the FRA database, biennial historical inventory data is downloaded for 2019–2018, 2017–2016, and 2015–2014. To filter the crossing records, the sequential steps shown in Figure 41 are followed.

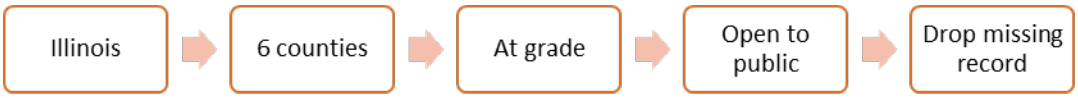


Figure 1. Flow diagram. Sequential steps to filter crossing inventory records.

This dataset also includes the collision information for each crossing, the estimated expected crash frequency (ECF values), and crash prediction value (CPV). Collision data from 2004 to 2019 were

provided by ICC. Filtered FRA data for each biennial period is considered to be the inventory data for both years. For example, after filtering 2014–2015 inventory data, 1,400 records were kept for both 2014 and 2015. As for the collision data, data from the last 10 years was merged for each crossing. For example, with the 2014 inventory data, the collision data was merged for 2005–2014. Note that five-year collision data were also included in the dataset to make a comparison. This process yielded a dataset of 8,478 crossing records. A breakdown of yearly records is shown in Table 2. A detailed description of each variable is provided in Table 3.

Table 2. Dataset Yearly Breakdown

Inventory data	10-year collision data	5-year collision data	Available records of inventory
2014	2005–2014	2010–2014	1,400
2015	2006–2015	2011–2015	1,400
2016	2007–2016	2012–2016	1,441
2017	2008–2017	2013–2017	1,441
2018	2009–2018	2014–2018	1,398
2019	2010–2019	2015–2019	1,398
Total			**8,478**

Table 3. Variables Used in Model Building

Variable type	Variable name	Description/categories
Numeric	PassCnt	Average Passenger Train Count Per Day: Number per day
	MaxTtSpd	Maximum Timetable Speed
	MinSpd	Typical Speed Range Over Crossing (minimum)
	MaxSpd	Typical Speed Range Over Crossing—MaxTypical Speed Range Over Crossing (maximum)
	MainTrk	Number of Main tracks
	Train_per_day	Number of trains per day
	AADT	Annual average daily traffic
Categorical	land_use	Land use type: Industrial, Commercial, Residential, Institutional, Farm, Recreational, Open Space
	Quiet_zone	Quiet zone: 24 hr, Chicago Excused, Partial, No
	xing_purpose	Crossing purpose: Highway, Pathway+Pedestrian, Station+Pedestrian
	XAngle	Crossing angle: 1 = 0° – 29°, 2 = 30° – 59°, 3 = 60° - 90°
	Max_warn_dev	Maximum warning device: Cross buck, Gates, Flash light, Stop sign, None
	HwyClassCD	Functional Classification of Road at Crossing0 = (0) Rural; 1 = (1) Urban
	HwySys	Highway System: 1 = (01) Interstate Highway System, 2 = (02) Other Nat Hwy System (NHS), 3 = (03) Federal Aid, Not NHS, 8 = (08) Non-Federal Aid

Variable type	Variable name	Description/categories
Binary	W10_1	
	W10_2	
	W10_4	
	W10_11	
	Highway_signal	Highway Traffic Signals Controlling Crossing
	CWT	
	MD	
	other_circuitry	
	AFO	
	PTC	
	DC	
	Freight	
	Intercity_Passenger	
	TouristOrOther	
	Commuter	
	Local	
	Gates	
	flash_light	
	stop_sign	
	wigwag	
	xbucks	
Other descriptive variables	Year	Crossing inventory year
	B_factor_crit	ECF model B factor criteria
	B_factor	ECF model B factor value
	A_factor	ECF model A factor value
	ECF_local_only	ECF value for local crossing
	ECF_rest	ECF value for non-local crossing
	ECF	ECF value
	LAFFEY_CPV	CPV obtained from data shared by Mr. Laffey
	PEARSALL_CPV	CPV obtained from data shared by Mr. Pearsall
Dependent variables	Col_both_10_year_period	Number of both auto and ped collision in 10-year period (e.g., if data is labeled 2019, then the collision from 2019 to 2010 is accumulated)
	Col_both_5_year_period	Number of both auto and ped collision in 5-year period
	Col_auto_10_year_period	Number of auto collision in 10-year period
	Col_auto_5_year_period	Number of auto collision in 5-year period
	Col_ped_10_year_period	Number of ped collision in 10-year period
	Col_ped_5_year_period	Number of ped collision in 5-year period

CHAPTER 5: VIDEO ANALYSIS OF PEDESTRIAN BEHAVIOR

INTRODUCTION

Along with the survey activities of the state DOTs (in Chapter 3) and data preparation (in Chapter 4), the research team conducted video monitoring at 10 selected crossing locations. The main purpose was to observe and understand (a) the factors affecting the pedestrian crossing behavior; (b) confirmation of circuitry activation at the crossings; (c) variation in pedestrian traffic during a typical 24-hour weekday period by 15-minute intervals; and (d) the comparison of pre-COVID-19 to COVID-19 pandemic pedestrian counts at selected crossings.

Observing pedestrian activity at the crossings is a time-consuming process and can be done by computerized techniques (Lam, Lee, & Cheung, 2002; Sheikh et al., 2004). In data collection, resource allocation constraints during field work did not allow us to fully automate data collection and processing. A realized benefit in using "trained eyes" to assist the data processing was that it allowed us to customize the collection of information with attributes unlikely to have been discerned by existing computer algorithms.

DATA COLLECTION

The research team conducted traffic counts of pedestrians for a 24-hour weekday period at 10 selected crossing locations identified by the TRP. The purpose of this experiment was to determine pedestrian exposure at these site locations. At each crossing site, the research team used a time-lapse video camera to collect a 24-hour video at 3-second time steps of pedestrian traffic on weekdays. At each crossing, the camera's field of view encompassed all approaches to the crossing location. The camera was portable enough to fit in a car and be set up by at least one person at the location. As a result, video data from 10 selected crossing locations for 10 full days were recorded for screening in a controlled environment.

The camera was mounted on either a stop sign, tree, or road sign available at least 150 feet (50 m) from these crossing locations. Criteria for a suitable camera location included the potential to capture higher pedestrian activity and likely directional flow patterns of pedestrians. The 10 crossing sites' USDOT identification, location, and data collection dates and times are listed in Figure 42.

DATA SCREENING

The data recorded with the video camera at the 10 selected crossing locations is then transferred to a computer for further processing. The time-lapse video was replayed in slow motion using camera software to count the pedestrians crossing the railroad tracks in both directions. Two research aides viewed the 10 videos separately and tallied crossing pedestrians in each crossing direction using tally sheets. A blank tally sheet is shown in Figure 43. After tallying 10 crossings independently, one research aide was assigned 5 of 10 sites for quality control (QC) while the other research aide was assigned the remaining 5 sites for QC. In performing QC, each research aide compared his or her tally sheets to the other research aide's tally sheets and corrected any pedestrian count discrepancy per

15-minute interval by re-reviewing the videos. In this QC process, pedestrian count errors per 15-minute interval are minimized. With the corrected tally sheets, the research aide transcribed the adjusted pedestrian counts into a spreadsheet for further processing. The final QC spreadsheets for the 10 sites are shown in Figure 42.

DOT ID #	TRP Keep 10	STREET	CITY	Date Begun	Time Begun	Date Ended	Time Ended
079493L*	Keep	HARLEM AVENUE, IL43, south of 31st St	RIVERSIDE	Tuesday, 2 November 2021	10:45 AM	Wednesday, 3 November 2021	10:45 AM
079508Y*	Keep	LA GRANGE ROAD, US12, south of US34 (Ogden Ave)	LAGRANGE	Thursday, 14 October 2021	11:15 AM	Friday, 15 October 2021	11:15 AM
173887G*	Keep	N NAGLE AVENUE south of Northwest Hwy	CHICAGO	Thursday, 28 October 2021	9:45 AM	Friday, 29 October 2021	9:45 AM
174924K	Keep	S WEST STREET north of Roosevelt Rd (IL38)	WHEATON	Tuesday, 9 November 2021	12:15 PM	Wednesday, 10 November 2021	12:15 PM
174948Y*	Keep	N PARK BLVD south of St Charles Rd	GLEN ELLYN	Tuesday, 19 October 2021	10:15 AM	Wednesday, 20 October 2021	10:15 AM
372126H	Keep	N HARLEM AVENUE, IL43, south of Grand Ave	CHICAGO	Tuesday, 9 November 2021	11:00 AM	Wednesday, 10 November 2021	11:00 AM
372196X	Keep	ROSELLE ROAD south of Irving Pk (IL19)	ROSELLE	Thursday, 4 November 2021	11:15 AM	Friday, 5 November 2021	11:15 AM
388040W*	Keep	OSTERMAN AVENUE east of Waukegan Rd (IL43)	DEERFIELD	Thursday, 21 October 2021	1:15 PM	Friday, 22 October 2021	1:15 PM
840136F	Keep	W 115TH STREET west of I94	CHICAGO	Thursday, 11 November 2021	11:30 AM	Friday, 12 November 2021	11:30 AM
840147T^	Keep	LINCOLN AVENUE west of Forest Ave	DOLTON	Tuesday, 26 October 2021	11:00 AM	Wednesday, 27 October 2021	11:00 AM

Legend:

Railroad Crossing IDs marked with * were part of 2013 study (Metaxatos & Sriraj, 2013).

Railroad Crossing IDs marked with ^ were part of Dolton Riverdale Study (Sriraj & Fazio, 2020).

Collected

Figure 42. Screenshot. Sites of video data collection.

PEDESTRIAN ENUMERATION RESULTS

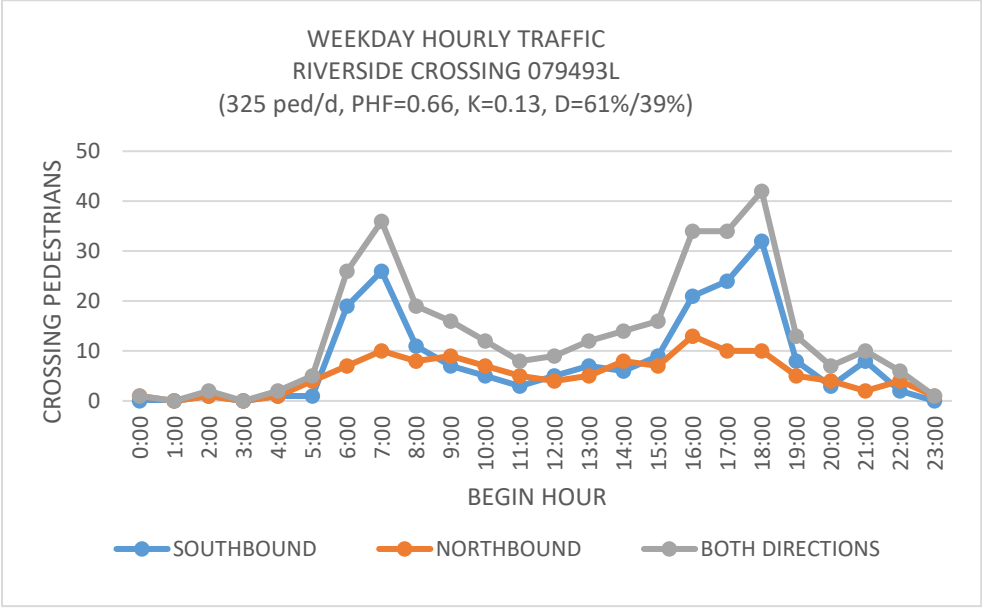
Important parameters that quantify daily traffic are PHF, K, and D. PHF is the peak hour factor based on 15-minute intervals. PHF = (peak hour volume)/(4*maximum peak hour 15-minute count). K is the K-factor. K= (peak hour volume)/(daily traffic volume). The directional split of traffic is D. D = (major movement proportion)/(minor movement proportion).

Riverside At-Grade Railroad-Highway Crossing, AAR#079493L

The Riverside site is located on Harlem Ave (i.e., IL 43) between Stanley Ave. and Windsor Ave. The crossing is formed when three main tracks traverse four main traffic lanes, as shown in Figure 43(a). Land use in the immediate area primarily consists of Metra parking, Riverside School District 96, and commercial businesses. The Riverside crossing has a pedestrian weekday daily traffic of 325 ped/day. The pedestrian peak hour occurs between 6:00 p.m. and 7:00 p.m. The pedestrian peak hour factor, (i.e., PHF) is 0.66. The proportion of pedestrian peak hour traffic in daily traffic (i.e., K) is 0.13. The direction split (i.e., D) of pedestrian weekday traffic is 61% southbound and 39% northbound. A Metra station is situated on the northeast side of the crossing with general commercial land use that

results in heavy southbound pedestrian weekday traffic in morning and evening peaks. Returning northbound pedestrian traffic probably returns using different modes or via a different route. Figure 43(b) illustrates hourly pedestrian counts through the 24-hour period.

A. Riverside at-grade railroad-highway crossing



B. Riverside at-grade railroad-highway daily traffic

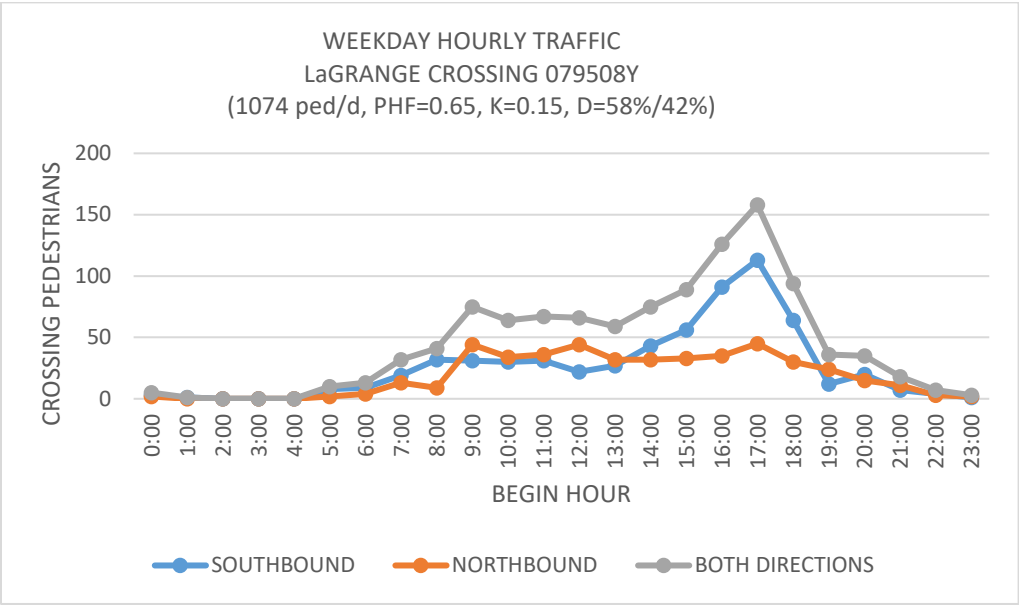
Figure 43. Photo and Graph. Riverside at-grade railroad-highway crossing and daily traffic.

La Grange At-Grade Railroad-Highway Crossing, AAR#079508Y

The location of the La Grange site is on La Grange Rd (i.e., US 45/US 20/US 12) between Hillgrove Ave. and Burlington Ave. Three main tracks that traverse five highway lanes form the crossing, as shown in

Figure 44(a). Metra parking and commercial businesses primarily comprise the land use in the immediate area. The La Grange crossing weekday pedestrian daily traffic is 1,074 ped/day. The pedestrian peak hour occurs between 4:45 p.m. and 5:45 p.m. The pedestrian PHF (15) is 0.65. The pedestrian K-factor is 0.15. The D-factor of pedestrian weekday traffic is 58% southbound and 42% northbound. The hourly pedestrian counts through the 24-hour period are shown in Figure 44(b).

A. La Grange at-grade railroad-highway crossing

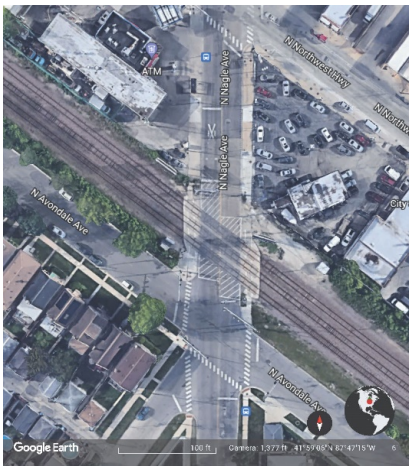


B. La Grange at-grade railroad-highway daily traffic

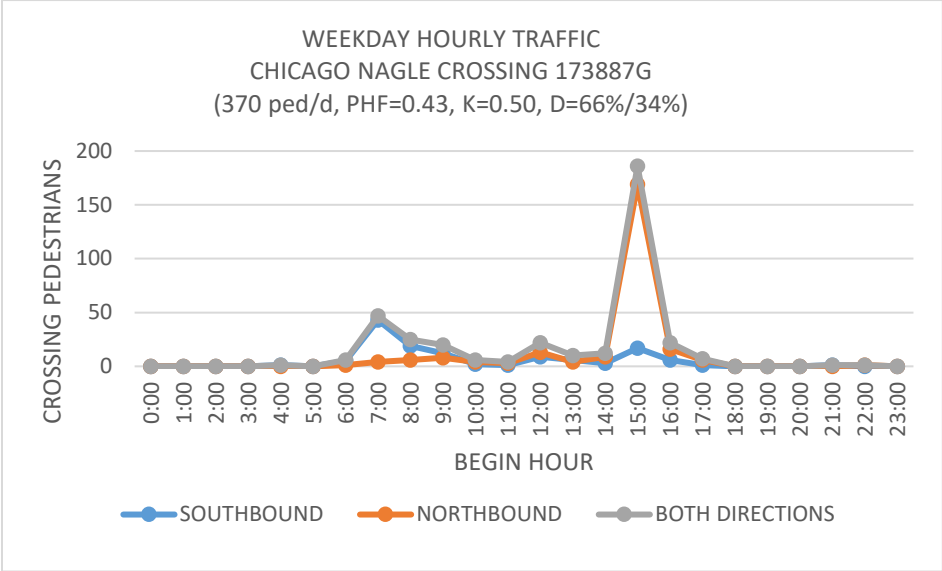
Figure 44. Photo and Graph. La Grange at-grade railroad-highway crossing and daily traffic.

Chicago–Nagle At-Grade Railroad-Highway Crossing, AAR#173887G

The Chicago–Nagle site is located on Nagle Ave. between Northwest Hwy. and Avondale Ave. The crossing is formed when three main tracks traverse four traffic lanes, as shown in Figure 45(a). Land use in the immediate area primarily consists of residential houses, Taft Chicago public high school, and commercial businesses. The Chicago–Nagle crossing has a pedestrian weekday daily traffic of 370 ped/day. The pedestrian peak hour occurs between 3:00 p.m. and 4:00 p.m. The pedestrian PHF is 0.43. The pedestrian K-factor is 0.50. The D-factor of pedestrian weekday traffic is 66% northbound and 34% southbound. The high northbound directional split occurs because the nearby Taft High School dismisses students at the end of the day, and students walk northbound to catch a CTA bus and beyond. In the morning peak, students probably are being dropped off with personal motor vehicles. Figure 45(b) illustrates hourly pedestrian counts through the 24-hour period.



A. Chicago–Nagle at-grade railroad-highway crossing

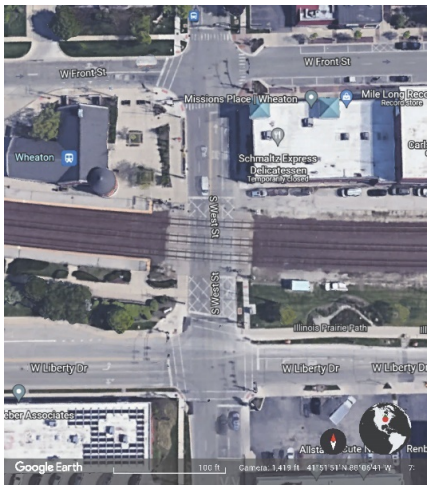


B. Chicago–Nagle at-grade railroad-highway daily traffic

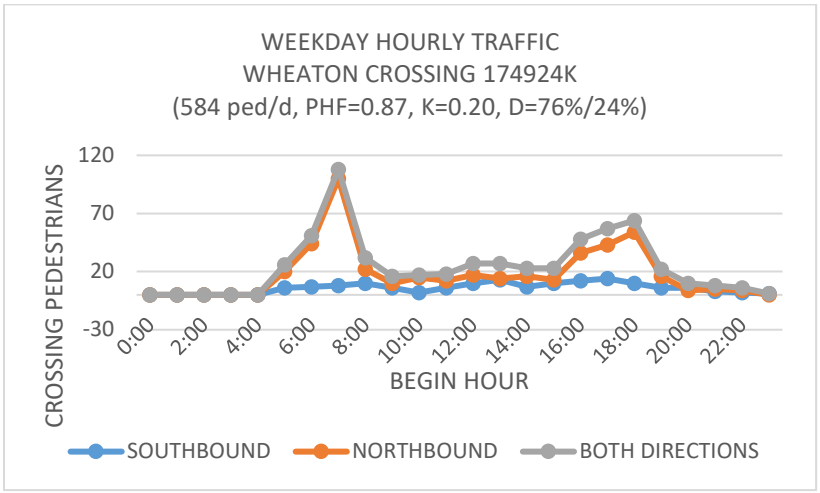
Figure 45. Photo and Graph. Chicago–Nagle at-grade railroad-highway crossing and daily traffic.

Wheaton At-Grade Railroad-Highway Crossing, AAR#174924K

The location of the Wheaton site is on West St. between Front St. and Liberty Dr. Three main tracks that traverse four street lanes form the crossing, as shown in Figure 46(a). Some Metra parking and commercial businesses primarily comprise the land use in the immediate area. The Wheaton crossing weekday pedestrian daily traffic is 584 ped/day. The pedestrian peak hour occurs between 6:45 a.m. and 7:45 a.m. The pedestrian PHF is 0.87. The pedestrian K-factor is 0.20. The D-factor of pedestrian weekday traffic is 76% northbound and 24% southbound. The lopsided directional split is probably due to unique land use of the area and the close proximity of other at-grade crossings. South of the crossing is predominantly residential while north has a Metra station and downtown Wheaton. The crossing has heavy northbound pedestrian traffic in morning and evening weekday peaks. Due to the nearby Wheaton Ave., Hale St., Main St., and Cross St. at-grade crossing, southbound pedestrian traffic is probably using these crossings as alternative return routes. The hourly pedestrian counts through the 24-hour period are shown in Figure 46(b).



A. Wheaton at-grade railroad-highway crossing

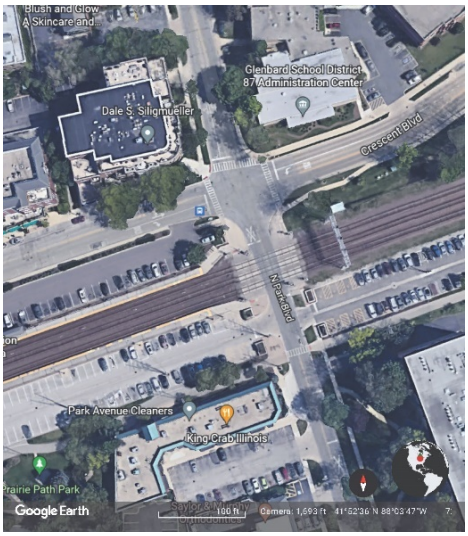


B. Wheaton at-grade railroad-highway daily traffic

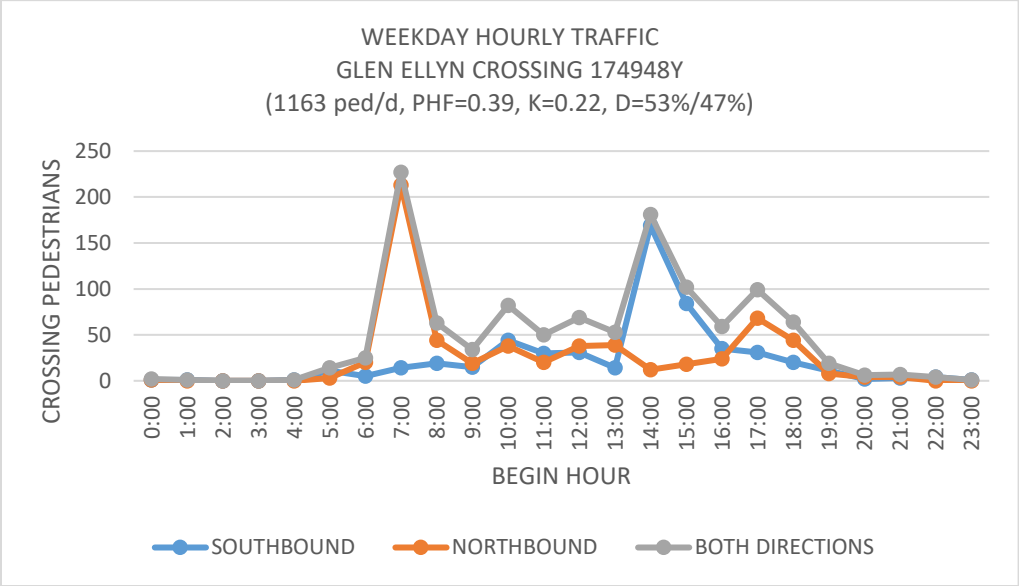
Figure 46. Photo and Graph. Wheaton at-grade railroad-highway crossing and daily traffic.

Glen Ellyn At-Grade Railroad-Highway Crossing, AAR#174948Y

The Glen Ellyn site is located on Park Blvd. between Crescent Blvd. and Illinois Prairie Path Main Stem. The crossing is formed when three main tracks traverse two traffic lanes, as shown in Figure 47(a). Land use in the immediate area primarily consists of Glenbard School District 87 Administration Center, some commercial businesses, and a Metra station with parking. The Glen Ellyn crossing has a pedestrian weekday daily traffic of 1,163 ped/day. The pedestrian peak hour occurs between 2:45 p.m. and 3.45 p.m. The pedestrian PHF is 0.39. The pedestrian K-factor is 0.22. The D-factor of pedestrian weekday traffic is 53% northbound and 47% southbound. Figure 47(b) illustrates hourly pedestrian counts through the 24-hour period.



A. Glen Ellyn at-grade railroad-highway crossing

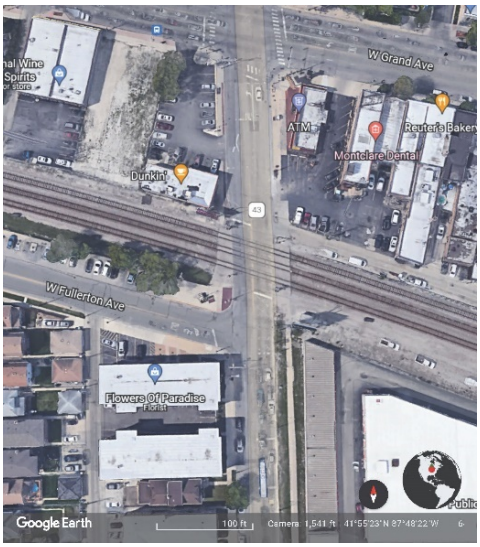


B. Glen Ellyn at-grade railroad-highway daily traffic

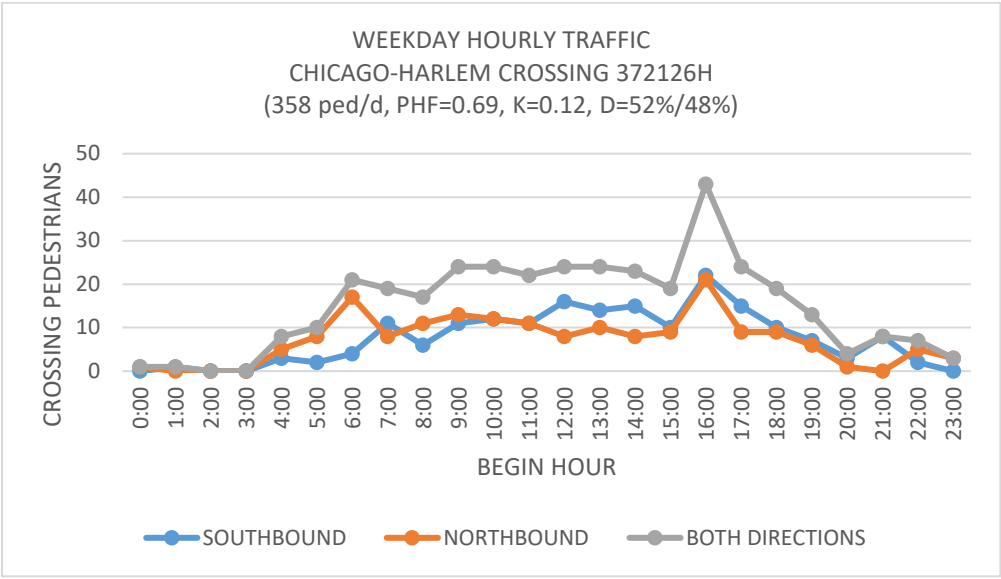
Figure 47. Photo and Graph. Glen Ellyn at-grade railroad-highway crossing and daily traffic.

Chicago–Harlem At-Grade Railroad-Highway Crossing, AAR#372126H

The location of the Chicago–Harlem site is on Harlem Ave. (i.e., IL 43) between Grand Ave. and Fullerton Ave. Three main tracks that traverse four street lanes form the crossing, as shown in Figure 48(a). Commercial businesses, residential housing, and some Metra parking primarily comprise the land use in the immediate area. The Chicago–Harlem crossing weekday pedestrian daily traffic is 358 ped/day. The pedestrian peak hour occurs between 4:15 p.m. and 5:15 p.m. The pedestrian PHF is 0.69. The pedestrian K-factor is 0.12. The D-factor of pedestrian weekday traffic is 51% southbound and 49% northbound. The hourly pedestrian counts through the 24-hour period are shown in Figure 48(b).



A. Chicago–Harlem at-grade railroad-highway crossing



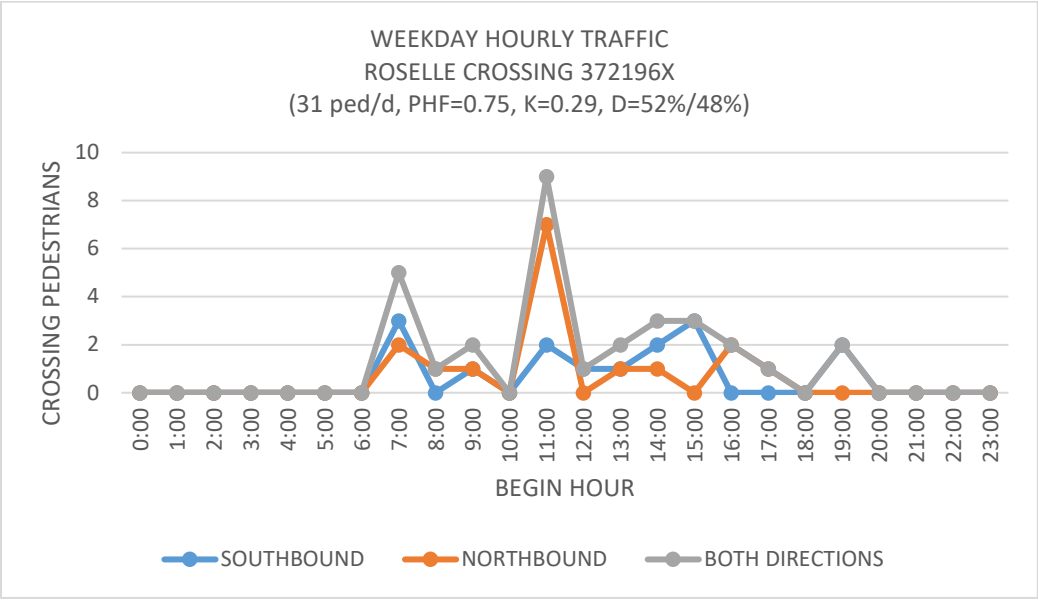
B. Chicago–Harlem at-grade railroad-highway daily traffic

Figure 48. Photo and Graph. Chicago–Harlem at-grade railroad-highway crossing and daily traffic.

Roselle At-Grade Railroad-Highway Crossing, AAR#372196X

The Roselle site is located on Roselle Rd. between Irving Park Rd. (i.e., IL 19) and Central Ave. The crossing is formed when two main tracks traverse five highway lanes, as shown in Figure 49(a). Land use in the immediate area primarily consists of commercial businesses and some residential houses. The Roselle crossing has a pedestrian weekday daily traffic of 31 ped/day. The pedestrian peak hour occurs between 11:00 a.m. and 12:00 p.m. The pedestrian PHF is 0.75. The pedestrian K-factor is 0.29. The D-factor of pedestrian weekday traffic is 52% northbound and 48% southbound. Figure 49(b) illustrates hourly pedestrian counts through the 24-hour period.

A. Roselle at-grade railroad-highway crossing



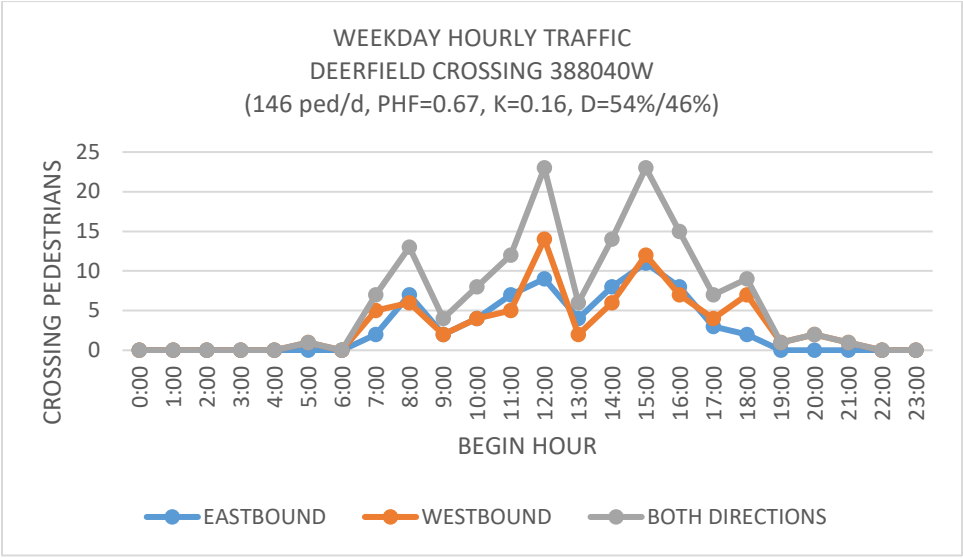
B. Roselle at-grade railroad-highway daily traffic

Figure 49. Photo and Graph. Roselle at-grade railroad-highway crossing and daily traffic.

Deerfield At-Grade Railroad-Highway Crossing, AAR#388040W

The location of the Deerfield site is on Osterman Ave. between Elm St. and Robert York Ave. Two main tracks and one side track that traverse two street lanes form the crossing, as shown in Figure 50(a). Residential housing and Metra parking primarily comprise the land use in the immediate area. The Deerfield crossing weekday pedestrian daily traffic is 146 ped/day. The pedestrian peak hour occurs between 2:30 p.m. and 3:30 p.m. The pedestrian PHF is 0.67. The pedestrian K-factor is 0.16. The D-factor of pedestrian weekday traffic is 54% westbound and 46% eastbound. The hourly pedestrian counts through the 24-hour period are shown in Figure 50(b).

A. Deerfield at-grade railroad-highway crossing



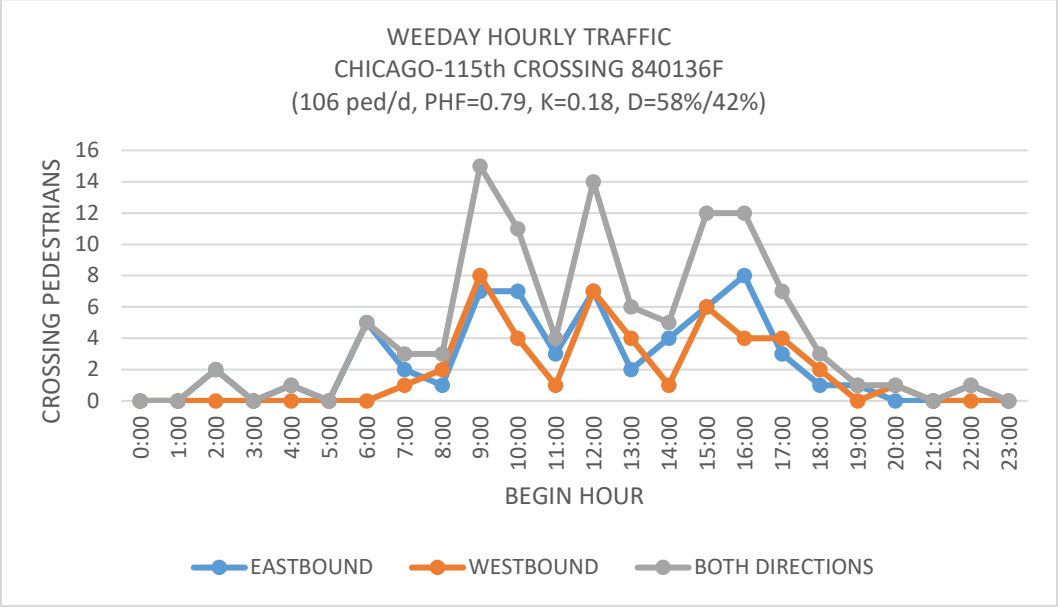
B. Deerfield at-grade railroad-highway daily traffic

Figure 50. Photo and Graph. Deerfield at-grade railroad-highway crossing and daily traffic.

Chicago–115th At-Grade Railroad-Highway Crossing, AAR#840136F

The Chicago–115th site is located on 115th St. between Perry Ave. and 1st St. The crossing is formed when two main tracks traverse four highway lanes, as shown in Figure 51(a). Land use in the immediate area primarily consists of residential housing and some commercial businesses. The Chicago–115th crossing has a pedestrian weekday daily traffic of 106 ped/day. The pedestrian peak hour occurs between 3:30 p.m. and 4:30 p.m. The pedestrian PHF is 0.79. The pedestrian K-factor is 0.18. The D-factor of pedestrian weekday traffic is 58% eastbound and 42% westbound. Figure 51(b) illustrates hourly pedestrian counts through the 24-hour period.

A. Chicago–115th at-grade railroad-highway crossing

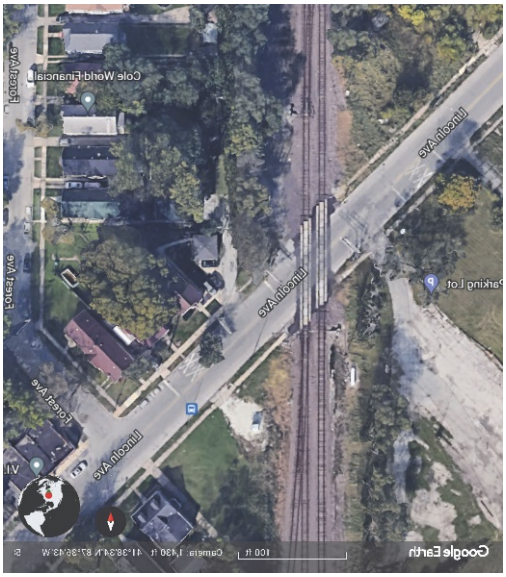


B. Chicago–115th at-grade railroad-highway daily traffic

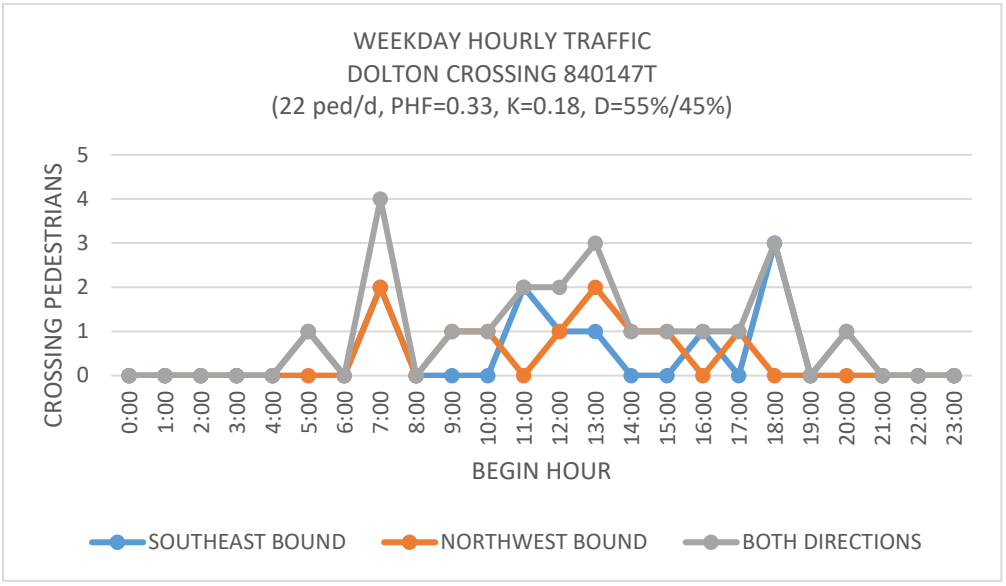
Figure 51. Photo and Graph. Chicago–115th at-grade railroad-highway crossing and daily traffic.

Dolton At-Grade Railroad-Highway Crossing, AAR#840147T

The location of the Dolton site is on Lincoln Ave. between 138th St. and Forest Ave. Two main tracks that traverse four street lanes form the crossing, as shown in Figure 52(a). Residential housing and a park primarily comprise the land use in the immediate area. The Dolton crossing weekday pedestrian daily traffic is 22 ped/day. The pedestrian peak hour occurs between 6:45 a.m. and 7:45 a.m. The pedestrian PHF is 0.33. The pedestrian K-factor is 0.18. The D-factor of pedestrian weekday traffic is 55% southeast bound and 45% northwest bound. The hourly pedestrian counts through the 24-hour period are shown in Figure 52(b).



A. Dolton at-grade railroad-highway crossing



B. Dolton at-grade railroad-highway daily traffic

Figure 52. Photo and Graph. Dolton at-grade railroad-highway crossing and daily traffic.

PRE-COVID-19 PANDEMIC COMPARISON

In Illinois, the effects of the COVID-19 pandemic on pedestrian behavior significantly began in April 2020 when the state entered a lockdown with early reports of cases in December 2019. Prior to this time, the research team collected pedestrian video data at railroad grade crossings from previous studies during 2013 and October/November 2019 (Metaxatos & Sriraj, 2013; Sriraj & Fazio, 2020). Six of ten sites were part of previous studies; this overlap allowed a comparison of pre-COVID-19 pedestrian behavior to pedestrian behavior at the six crossings in October/November 2021.

The results of the pre-COVID-19 pandemic comparison are shown in Figure 53. In four of the six sites, pedestrian weekday daily traffic decreased between 16% and 56% at crossings with nearby Metra commuter rail stations. The only exception is the Glen Ellyn station at 0% change. This exception could be because of major land use development at this location during the prior years since the 2013 pedestrian count that generated increases in foot traffic. The Dolton crossing also showed no significant decrease primarily because it is in a residential area with no nearby Metra station, only PACE suburban bus stations; PACE did not decrease its bus operations during the pandemic.

DOT ID #	TRP Keep 10	STREET	CITY	Pre-COVID Pandemic	COVID Pandemic (2021)	Percent Change (%)
079493L*	Keep	HARLEM AVENUE, IL43, south of 31st St	RIVERSIDE	598	325	-46
079508Y*	Keep	LA GRANGE ROAD, US12, south of US34 (Ogden Ave)	LAGRANGE	2451	1074	-56
173887G*	Keep	N NAGLE AVENUE south of Northwest Hwy	CHICAGO	781	370	-53
174924K	Keep	S WEST STREET north of Roosevelt Rd (IL38)	WHEATON	unavailable	584	
174948Y*	Keep	N PARK BLVD south of St Charles Rd	GLEN ELLYN	1159	1163	0
372126H	Keep	N HARLEM AVENUE, IL43, south of Grand Ave	CHICAGO	unavailable	358	
372196X	Keep	ROSELLE ROAD south of Irving Pk (IL19)	ROSELLE	unavailable	31	
388040W*	Keep	OSTERMAN AVENUE east of Waukegan Rd (IL43)	DEERFIELD	174	146	-16
840136F	Keep	W 115TH STREET west of I94	CHICAGO	unavailable	106	
840147T^	Keep	LINCOLN AVENUE west of Forest Ave	DOLTON	24	22	-8
843811C*		MARQUETTE RD	CHICAGO	512	unavailable	
079521M*		PED/PARK ST	HINSDALE	51	unavailable	
174937L*		PED/VILLA PARK DEPOT	VILLA PARK	1018	unavailable	
372128W*		PED/ELMWOOD PARK DEPOT	ELMWOOD PK	530	unavailable	
840146L^		138th ST	DOLTON	35	unavailable	
167450K^		142nd ST	DOLTON	110	unavailable	
167451S^		144th ST	DOLTON	63	unavailable	
326894T^		INDIANA AVE near 140th St	RIVERDALE	92	unavailable	
163611P^		INDIANA AVE and 138th ST	RIVERDALE	105	unavailable	
163610H^		137th ST	RIVERDALE	53	unavailable	
163612W^		PARK AVE and LINCOLN AVE	DOLTON	70	unavailable	

Legend:

Railroad Crossing IDs marked with * were part of 2013 study (Metaxatos & Sriraj, 2013).

Railroad Crossing IDs marked with ^ were part of Dolton Riverdale Study (Sriraj & Fazio, 2020).

Dedicated pedestrian crossing

Collected

Figure 53. Screenshot. Pedestrian daily traffic comparison between pre-COVID-19 and COVID-19 pandemic.

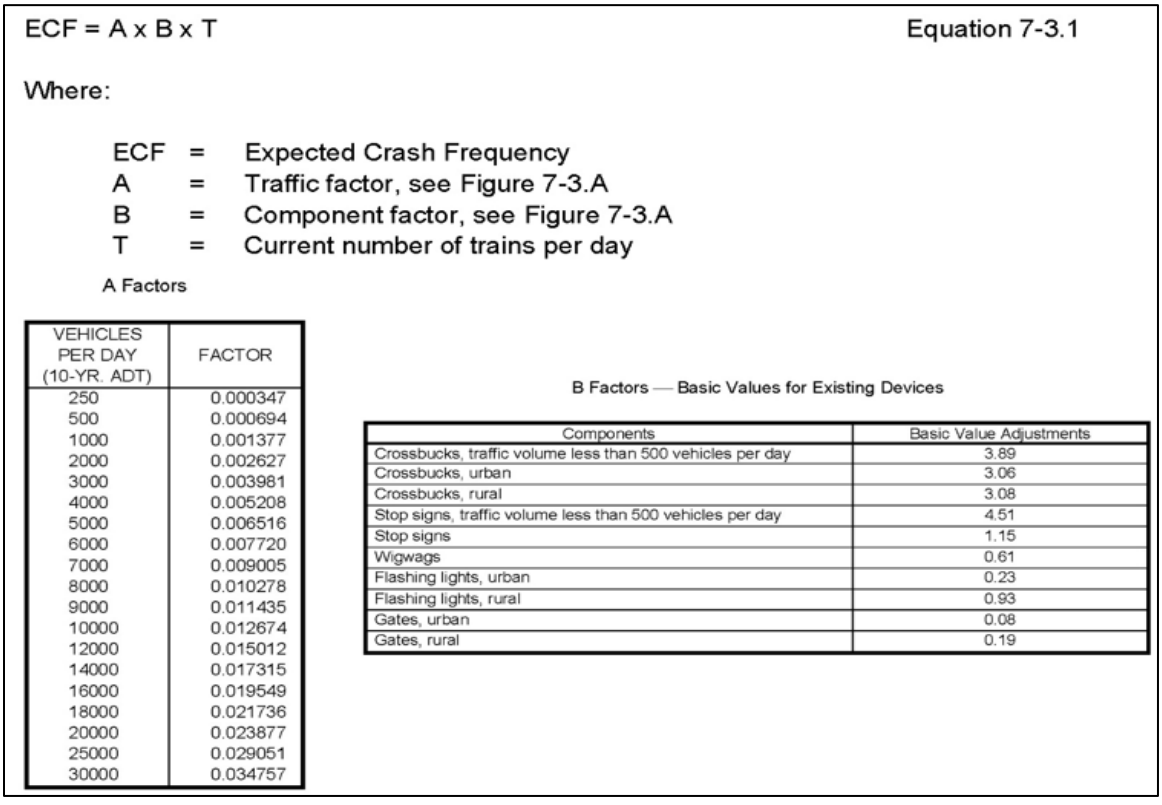
CHAPTER 6: EVALUATION OF IDOT'S EXISTING PRIORITIZATION TOOLS

This chapter will review IDOT's existing prioritization tools and evaluate them with a data sample prepared in Chapter 4.

IDOT EXISTING PRIORITIZATION TOOLS

IDOT ECF Model from the *Bureau of Design and Environment Manual*

The official Illinois expected crash frequency (ECF) model is published in Chapter 7 of IDOT's *Bureau of Design and Environment Manual* (*BDE Manual*, 2010). The model is presented in Equation 7-3.1 in the manual, as shown in Figure 54. The origins of IDOT's ECF model stem from 1968 National Cooperative Highway Research Program (NCHRP) Report 50 (Schoppert & Hoyt, 1968). Many parameters are the same in the NCHRP 50 model and IDOT's ECF model. The B-factor values are the same except "crossbucks, rural" at 3.08 for IDOT instead of 3.035 for the NCHRP model, "flashing lights, urban" at 0.23 for IDOT instead of 0.323 for the NCHRP model, and "gates, urban" at 0.08 for IDOT instead of 0.323 for the NCHRP 50 model. The IDOT ECF model has two advantages: its ease of use and its minimal input data requirements. Four variables are required when using IDOT's ECF model: (a) traffic volume (AADT), (b) train volume, (c) existing maximum warning device, and (d) highway type/context.



ECF = A x B x T Equation 7-3.1

Where:

ECF = Expected Crash Frequency
A = Traffic factor, see Figure 7-3.A
B = Component factor, see Figure 7-3.A
T = Current number of trains per day

A Factors

VEHICLES PER DAY (10-YR. ADT)	FACTOR
250	0.000347
500	0.000694
1000	0.001377
2000	0.002627
3000	0.003981
4000	0.005208
5000	0.006516
6000	0.007720
7000	0.009005
8000	0.010278
9000	0.011435
10000	0.012674
12000	0.015012
14000	0.017315
16000	0.019549
18000	0.021736
20000	0.023877
25000	0.029051
30000	0.034757

B Factors — Basic Values for Existing Devices

Components	Basic Value Adjustments
Crossbucks, traffic volume less than 500 vehicles per day	3.89
Crossbucks, urban	3.06
Crossbucks, rural	3.08
Stop signs, traffic volume less than 500 vehicles per day	4.51
Stop signs	1.15
Wigwags	0.61
Flashing lights, urban	0.23
Flashing lights, rural	0.93
Gates, urban	0.08
Gates, rural	0.19

Figure 54. Screenshot. The official Illinois expected crash frequency (ECF) model.
Source: Illinois Department of Transportation (2010)

Modified IDOT ECF Formula for Local Road Networks

After discussing with ICC-IDOT members, the research team learned that ICC has been using the ECF formula in IDOT's *BDE Manual* for state routes and using a modified version of the ECF formula on local road networks (William Pearsall, personal communication, November 20, 2020). The formula is shown in the equation presented in Figure 55. The "B" factors are the same as in Chapter 7 of IDOT's *BDE Manual* (2010). ICC also considers the straight exposure formula, i.e., ADT × trains per day and FRA's Web Accident Prediction System (WBAPS), for RHC prioritization.

$$ECF = 1.3 * 10^{-6} * ADT * Trains\ per\ day * \text{"B" factor}$$

Figure 55. Equation. Modified IDOT ECF formula for local road networks.

Section 130 Program Criteria Used by IDOT (FY2021)

According to the discussion with ICC members, IDOT also uses selection criteria from FHWA's Section 130 program for FY2021 and these criteria are updated as needed. The selection criteria are as follows (William Pearsall, personal communication, November 20, 2020): (a) crossing closure; (b) crossbuck/AFLS to AFLS&G—addition of new protective devices; (c) pedestrian protection; (d) crash history (FRA Data) (2009–2018); (e) top 20% ECF from applications; (f) ECF > 0.003; (g) top 20% WBAPS (FRA) in IL per WBAPS report 2-6-2020; (h) top 50% WBAPS (FRA) in IL per WBAPS report 2-6-2020; (i) exposure >= 1000; (j) location geometry (angle, roadway geometry, buildings, trees, crops, embankment, etc.); (k) associated work with nearby crossing; (l) timetable train speed 40+ mph; (m) roadway speed limit 40+ mph; and (n) ICC project.

The ECF model's B-factors neither include pedestrian safety devices such as pedestrian gates nor circuitry devices/factors. The ECF model does not apply to pedestrian-only railroad crossings. Also, it does not include important factors such as crash history, number of tracks, pedestrian volume, and sidewalk/footpath surface condition/type, which can greatly affect pedestrian safety at RHCs.

EVALUATION OF EXPECTED CRASH FREQUENCY FORMULA

Figure 56 illustrates the prediction performance of the online Illinois BDE ECF and local road models using reported collision rates from the second working database with 96 random sites.

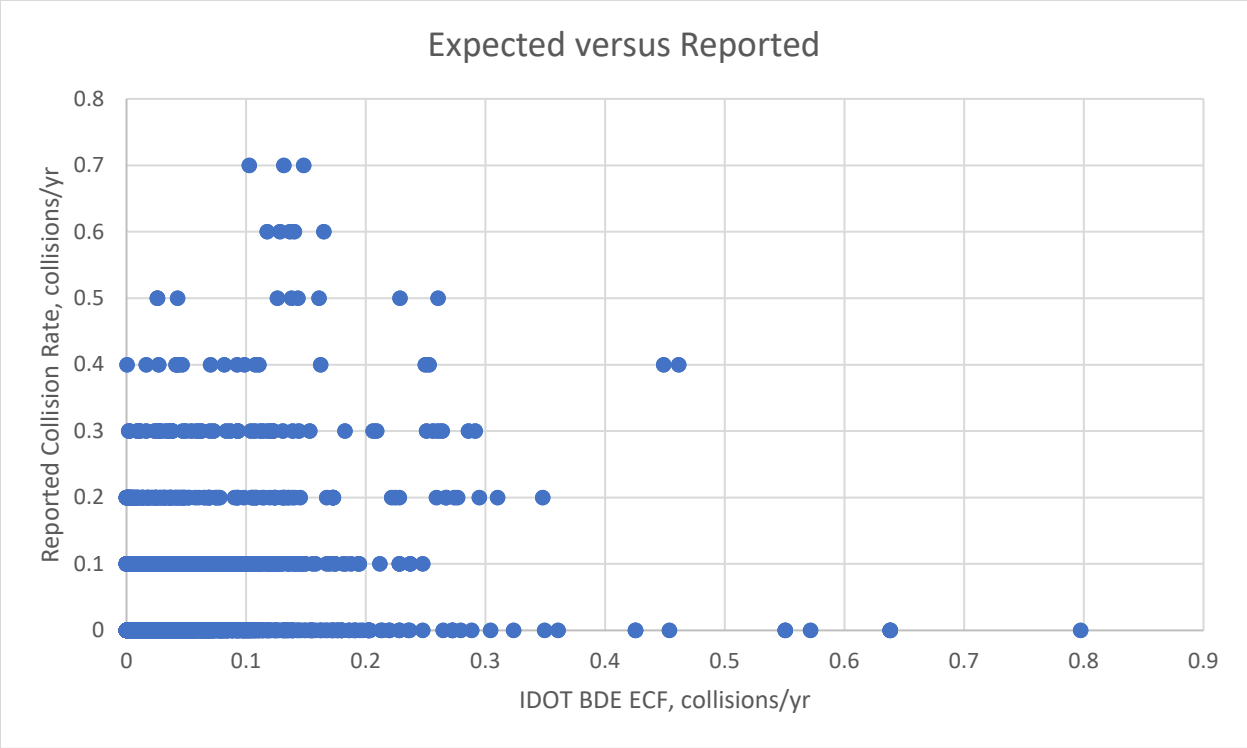


Figure 56. Graph. Illinois BDE ECF model predictions versus reported collision rates.

The best fit lines through the points and subsequent statistical results are listed in Table 4 using approximately 8,130 crossing records. The sum of squared residuals is slightly less for the intercept line than the no intercept line. The regression sum of squares is less for the intercept line than the one with no intercept. The Illinois BDE ECF and local road model that has no intercept has a slightly higher correlation coefficient with reported collision rates than the one with an intercept. For standard error, the Illinois BDE ECF model is approximately the same for both lines.

Table 4. Illinois BDE ECF Model Prediction Comparison with Reported Collision Rates

Statistic	Comparison of Total Collision per Year based on 10 years with:	
	Intercept	No Intercept
sum of square residuals	39.8	42.2
r^2	0.08	0.17
slope, m	0.38	0.54
intercept, b	0.02	0
degree of freedom, df	8128	8129
standard error, se	0.01	0.01
F	681	1656
sum of squares regression	3.34	8.59

Preliminary Analyses with Extended Sample

For an in-depth analysis, we used the extended data sample compiled in Chapter 4. The analysis is done for six years: 2014 to 2019. For each year, we considered the inventory data for that year and the collision data for two time intervals: 10 years and 5 years. Given the available 15 years of collision data, we divided them into 6 groups for the 10-year time span and the 5-year time span. For example, as shown in Table 5, for analysis year 2014, we considered the FRA inventory data from the year 2014, collision data for a 10-year span from 2005 to 2014, and collision data for a 5-year span from 2010 to 2014. For year 2014, the number of crossing records retained from the FRA inventory data after necessary filtering (discussed in Chapter 4) was 1,400. Similarly, the number of crossings for each of the other years from 2015 to 2019 are mentioned in the fifth column of Table 5. Across all six analysis years the number of common crossings is 1,119. We used these 1,119 crossings for further analysis. Collisions can be classified into three categories: 1) both automobile and pedestrian collisions are considered together (auto+ped), 2) only automobile collisions are considered (auto), 3) only pedestrian collisions are considered (ped). Therefore, considering three collision types and two types of time spans, six sets of analysis can be conducted for each of the six analysis years.

Table 5. Filtering of Crossings for Each Inventory Year

Analysis year (Inventory data)	10-year collision data	5-year collision data	Available crossing records	Common crossings
2014	2005–2014	2010–2014	1,400	1,119
2015	2006–2015	2011–2015	1,400	
2016	2007–2016	2012–2016	1,441	
2017	2008–2017	2013–2017	1,441	
2018	2009–2018	2014–2018	1,398	
2019	2010–2019	2015–2019	1,398	

Nonparametric Test of ECF Model Predictions

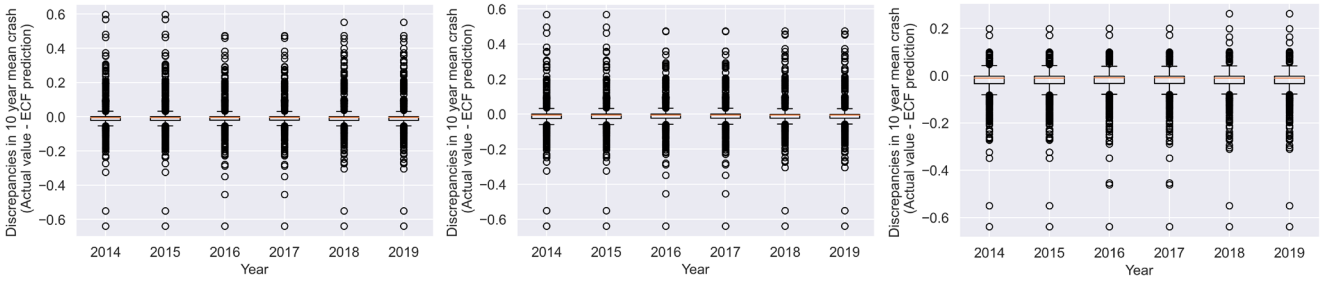
Two nonparametric tests were conducted with the ranks of ECF values and actual mean crash rate (both 10-year and 5-year spans) to check the statistical significance of the relation between the ECF and the actual mean crash. These two tests are the Kendall Tau test and the Spearman-correlation test. The null hypothesis is that there is no correlation between ECF and crash rate. The results presented in Table 6 are for the 10-year mean crash rate for three types of collision and for 6 analysis years separately. Table 6 shows that the p-values of all tests are less than 0.05, which signifies that with a 95% confidence level, we can reject the null hypothesis and that there is no statistical correlation. The values of both tests should range from 1 (high correlation) to −1 (no correlation). However, the correlation values are very small and range from 0.10 to 0.23. Furthermore, when “auto+ped” and “ped” collisions are considered, the correlations are higher compared to “ped” only collisions. Another trend is that the correlation values decrease in later analysis years. Similar results can be observed from the analysis of the 5-year mean crash data in Appendix D, with slightly smaller correlation values across every testing scenario.

Table 6. Nonparametric Statistical Results for 10-year Mean Collision Data

	Year	Kendall tau test		Spearman's correlation test	
		score	p-value	score	p-value
Auto+Ped	2014	0.23	0.00	0.28	0.00
	2015	0.23	0.00	0.28	0.00
	2016	0.20	0.00	0.25	0.00
	2017	0.20	0.00	0.25	0.00
	2018	0.20	0.00	0.24	0.00
	2019	0.20	0.00	0.24	0.00
Auto	2014	0.20	0.00	0.25	0.00
	2015	0.20	0.00	0.25	0.00
	2016	0.18	0.00	0.23	0.00
	2017	0.18	0.00	0.23	0.00
	2018	0.17	0.00	0.22	0.00
	2019	0.17	0.00	0.22	0.00
Ped	2014	0.15	0.00	0.18	0.00
	2015	0.15	0.00	0.18	0.00
	2016	0.12	0.00	0.14	0.00
	2017	0.12	0.00	0.14	0.00
	2018	0.11	0.00	0.13	0.00
	2019	0.11	0.00	0.13	0.00

ECF Model Prediction Discrepancies

To evaluate the performance of the ECF model, the prediction of ECF values of 1,119 selected crossings were evaluated against the actual mean crashes. The prediction error is calculated as: ECF prediction error of year t = Actual x year mean crash (from year t to $t-10$) – ECF prediction for the year t, where $t \in \{2019, 2018, 2017, 2016, 2015, 2014\}$ and $x \in \{10, 5\}$. This prediction error is known as the "Discrepancies in x year mean crash." In Figure 57, these discrepancies are plotted for a 10-year mean crash for three types of collisions. Across all three collision types, the discrepancies vary widely, which is evident from the large number of outliers shown in each of the three box plots. Specifically for ped-only collisions, the ECF seems to overpredict the values, given that the dispersion of outliers seems to be higher in the negative side of the y-axis. The patterns are similar for the 5-year span of collisions, which can be observed from the box plots included in Appendix D.



(a) Auto+ped (b) Auto only (c) Ped only

Figure 57. Box Plots. Yearly discrepancies for ECF model prediction for different collision types.

Rank Comparison

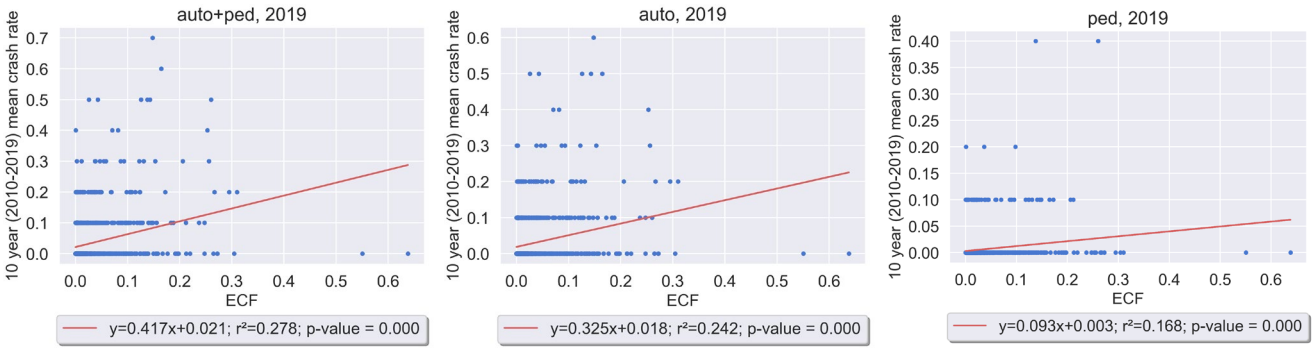
We tried to visualize the ranking of crossings based on both the ECF values and actual mean crash rates. Figure 58 presents the rank comparison for all three types of crashes for analysis year 2019 for a 10-year span. For brevity, we only consider the crossings with crashes among 1,119 crossings considered in the analysis. In each rank comparison plot in Figure 58, the left vertical scale shows the ranking of crossings based on ECF values, where a higher rank means higher ECF values. The right vertical scale shows the ranking of crossings based on their actual mean crash rate. One would expect that the crossing with crashes has a higher ECF ranking. The green lines are the crossings that are placed at the same level or above in the ECF ranking. However, the red lines, which seem to be the majority, are crossings that are placed below in the ECF ranking. Additionally, these crossings seem to be distributed evenly across the entire ECF scale. This also indicates a poor performance of the ECF model in terms of crossing ranking. Similar results can be observed for all other analysis years and 5-year span, as shown in Appendix D.

(a) Auto+ped (b) Auto only (c) Ped only

Figure 58. Rank comparison plots. Comparison between the ECF rank and crash rank for analysis year 2019.

Regression Plot

The next analysis concerned a regression between the ECF values and actual mean crash rate. Figure 59 shows the regression results for three types of crashes for analysis year 2019 for a 10-year span. Each blue dot represents one crossing with their ECF values and a 10-year mean crash rate. The red straight line is the regression line. The r^2 value is highest for auto+ped (0.278) and lowest for ped (0.168) with a p-value < 0.05. These values indicate significant but poor correlation values between ECF and actual mean crash rate. Similar results can be observed for other analysis years and a 5-year span, as presented in Appendix D.



(a) Auto+ped (b) Auto only (c) Ped only

Figure 59. Regression plots. Regression between 10-year mean crash rate and ECF values for analysis year 2019.

CHAPTER 7: EVALUATE ALTERNATIVE PRIORITIZATION TOOLS

BACKGROUND

The A-factors and B-factors in IDOT's *BDE Manual* ECF model come directly from the NCHRP 50 model, as shown in Figure 54. A-factor and B-factor values are the same in each model. The database used in the NCHRP 50 report (Schoppert & Hoyt, 1968) comprised 7,500 crossings with 5 years of collision reports. Data used in its model development came from many states, not just from Illinois.

The research team assembled a model development database, i.e., the second working database (discussed in Chapter 4), that is exclusively from Illinois public at-grade crossings in the six northeastern Illinois counties of the study area. In the model development database, each record represents a unique crossing for a specific year. Sources for the database are FRA, ICC, and research team analyses. The database consists of 8,478 records containing six years (i.e., 2014, 2015, 2016, 2017, 2018, and 2019) with 10 years of collision information for each year from 2004 through 2019 and with 5 years of collision information for each year from 2010 through 2019. The developed models are based on the latest data, not pre-1968 data, and on Illinois-only data, not national data.

THE MODELS

Three alternative models are calibrated and validated with recent Illinois data. Calibration data include the years 2014, 2015, 2016, 2017, and 2019. Validation data include the year 2018. Model 1 updates the existing IDOT *BDE Manual* ECF model's B-factors. Model 2 updates B-factors with six circuitry types and has an additional pedestrian factor named P-factor. The third model, Model 3, modifies FRA's Web-Based Accident Prediction System (WBAPS) model to adjust its collision prediction rate (i.e., APF or CPV) by incorporating a pedestrian factor. Model 3 is discussed in detail in Appendix C. Model 1 has the form of ECF = A * B * T, which is similar to the existing Illinois BDE ECF model. Model 2 takes the form ECF = A * B * T * P. Model 3's general form is ECF = CPV * P.

Model 1

Calibration

For each crossing, the actual total collision rate based on 10 years, the AADT, i.e., A-factor, and daily trains, i.e., T, are known. The obtainment of updated B-factors by maximum traffic control device group used two equations. The first equation calculated the B-factor for each crossing record in the database as shown in Figure 60:

$$B_i = \frac{(total\ collisions/10)_i}{A_i \times T_i}$$

Figure 60. Equation. B-factor calculation for each crossing record in the database.

where:

- i is USDOT crossing ID

- *total collisions* is the number of collisions occurring at the crossing for the past 10-year period
- A is the A-factor, as previously defined in the Illinois BDE model
- T is the number of daily trains, as previously defined in the Illinois BDE model

The second equation derived the updated B-factor for each maximum traffic control device group. By taking the mean of B_i in a maximum traffic control device group, an updated B-factor is determined for the maximum traffic control group:

$$B_j = \frac{\sum B_{i,j}}{n_j}$$

Figure 61. Equation. Updated B-factor for each maximum traffic control device group.

where:

- j is the maximum traffic control device group, i.e., "Crossbucks, < 500 veh/d," "Crossbucks, Urban," "Crossbucks, Rural," "Stop signs," "Stop signs, < 500 veh/d," "Flashing lights, Urban," "Flashing lights, Rural," "Gates, Urban," and "Gates, Rural"
- $B_{i,j}$ is the calculated B-factor for USDOT crossing ID *i* in group *j*
- n_j is the number of crossings in group j

Using calibration data, the updated Model 1 B-factors compared with the current B-factors are listed in Table 7. When insufficient data occurred, B-factors from the Illinois BDE model are used to fill in the gaps.

Table 7. Updated B-Factors

Maximum Traffic Control Device	Model 1 B-Factor	Current Illinois BDE B-Factor
Crossbucks, < 500 veh/d	5.86	3.89
Crossbucks, Urban	1.34	3.06
Crossbucks, Rural	3.08[a]	3.08
Stop signs	1.15[a]	1.15
Stop signs, < 500 veh/d	18.87	4.51
Flashing lights, Urban	0.70	0.23
Flashing lights, Rural	0.93[a]	0.93
Gates, Urban	0.48	0.08
Gates, Rural	1.61	0.19

[a] Insufficient sample size, BDE B-Factor used

To determine the accuracy of the updated ECF model using calibration data from 2014, 2015, 2016, 2017 and 2019, a simple linear regression was performed with reported total collision per year based on a 10-year period as the dependent variable and Model 1's ECF value as the independent variable. The results of the linear regression analysis were then compared to the results of linear regression analysis involving the existing Illinois BDE ECF model using the same calibration data. The analysis results involving both models are shown in Table 8.

Table 8. Illinois BDE Model and Model 1 Comparison with Reported Collision Rates

Statistic	Comparison of Reported Total Collision per Year based on 10-years with:			
	Illinois BDE ECF Model (intercept)	**ECF Model 1 (intercept)**	**Illinois BDE ECF Model (no intercept)**	**ECF Model 1 (no intercept)**
slope, m	0.3841	0.0910	0.5397	0.1169
intercept, b	0.0194	0.0170	0	0
standard error, se	0.0147	0.0028	0.0133	0.0025
standard error b, seb	0.0009	0.0009		
r^2	0.0775	0.1188	0.1698	0.2151
standard error v, sev	0.0701	0.0685	0.0721	0.0701
F	679.0	1089.0	1652.9	2214.2
degree of freedom, df	8078	8078	8079	8079
sum of squares regression	3.3355	5.1105	8.5976	10.8890
sum of squares residual	39.6848	37.9099	42.0224	39.7310

To determine if the relationship between reported and expected was nonlinear, more comparisons were analyzed using natural logarithms. One group of comparisons only used the natural logarithms of dependent variable values (i.e., reported collisions for 10 years) plus one. The other group used natural logarithms of both dependent and independent variable values plus one. Comparison results involving the first group revealed an r^2 of 0.08, df = 8078 for the Illinois BDE model, and an r^2 of 0.12, df = 8078 for Model 1 with intercept term. With no intercept term, the Illinois BDE model had an r^2 of 0.17, df = 8079, and Model 1 had an r^2 of 0.22, df = 8079. For the second group of comparisons using the natural logarithms of both dependent and independent variable values plus one, the Illinois BDE model's r^2 was 0.08, df = 8078, and Model 1's r^2 was 0.13 with intercept term. Without intercept term, Illinois BDE model's r^2 was 0.19, df = 8079, and Model 1's r^2 was 0.22, df = 8079. No significant predictive improvements were observed over the linear relationship.

The comparisons using calibration data indicate that both models' ECF values poorly predict reported collision rates as shown by weak r^2 values. The poor prediction performance is primarily due to the inherent structure of the models themselves. Calibration results show that Model 1 performs slightly better than the original Illinois BDE ECF model in that r^2 is higher, standard error is lower, and sum of square of residuals are lower for both intercept and no intercept analyses. Overall, Model 1, which is

an updated version of the Illinois BDE ECF model, performs slightly better in predicting reported collision rates than the online Illinois BDE ECF model using calibration data.

Validation

The validation database came from crossings exclusively from 2018 with 1,350 records. The 2018 data were not used in the determination of updated B-factors. In general, models that predict collision rates have poor correlation coefficients with reported collision rates due to the scarcity of collisions at a specific site even though collisions per year are based on a 10-year period to minimize the crossings with zero collision rates. Therefore, a relative comparison is made between the Illinois BDE ECF model's predictive capabilities of reported collision rates and its updated version—Model 1. A simple linear regression analyzed predictive capabilities of a model by using a crossing's reported collision rate based on a 10-year period as the dependent variable and the expected collision rate as the independent variable. A perfect model would have a slope that equals 1.00 and an r^2 of 1.00. Comparison results are listed in Table 9.

Table 9. Illinois BDE ECF Model and Model 1 Validation

Statistic	Comparison of Reported Total Collision per Year based on 10-years with:			
	Illinois BDE ECF Model (intercept)	ECF Model 1 (intercept)	Illinois BDE ECF Model (no intercept)	ECF Model 1 (no intercept)
slope, m	0.4137	0.0902	0.5787	0.1180
intercept, b	0.0193	0.0177	0	0
standard error, se	0.0385	0.0070	0.0346	0.0064
standard error b, seb	0.0022	0.0021		
r^2	0.0788	0.1085	0.1715	0.2030
standard error v, sev	0.0699	0.0687	0.0718	0.0704
F	115.3	164.1	279.3	343.6
degree of freedom, df	1348	1348	1349	1349
sum of squares regression	0.5638	0.7750	1.4406	1.7054
sum of squares residual	6.5798	6.3677	6.9594	6.6946

To determine if a nonlinear relationship existed between reported and expected collisions, natural logarithmic values were used in the comparison involving only the dependent variable. The Illinois BDE model had an r^2 of 0.08, df = 1348, and Model 1's r^2 was 0.11, df = 1348 with an intercept term. Without an intercept term, Illinois BDE model's r^2 was 0.18, df = 1349, and Model 1's r^2 was 0.21, df = 1349. In the comparisons using the natural logarithms of both dependent and independent variables plus one, Illinois BDE model's r^2 was 0.08, df=1348; Model 1's r^2 was 0.12, df = 1348, with intercept term. Without an intercept term, Illinois BDE ECF model's r^2 was 0.19, df = 1349; Model 1's r^2 was 0.23, df = 1349. Overall, the nonlinear relationship between reported and expected collisions per 10 years did not significantly improve the models' predictive performance.

Validation results show that in terms of fit statistics, Model 1 performs slightly better than the original Illinois BDE ECF model in that r^2 is higher and standard error and sum of square of residuals are lower for both intercept and no intercept analyses. Overall, Model 1, which is an updated version of the Illinois BDE ECF model, performs slightly better in predicting reported collision rates than the existing BDE ECF model. However, the Illinois BDE ECF model had a higher slope.

Model 2

Model 2 B-Factor

Model 2 incorporates circuitry type into the existing B-factor criteria in the Illinois BDE ECF model. The database contained six circuitry types, i.e., CWT, MD, other, AFO, PTC, and DC. It is assumed that at-grade crossings have maximum traffic control devices that are passive and have no circuitry types, although data showed some were tagged with a circuitry type. Not many rural crossings appear because the database involved six northeastern Illinois counties, which is a large, urbanized region. Further, some labels have "mix" as a circuitry type. This occurs because the database listed the crossing as having two or more circuitry types. The "mix" type is ignored in the calculation of B-factor values. The "none" type meant that no circuitry type was designated for the crossing in the database. The "none" type was used in the determination of B-factors for crossings with passive devices as the maximum warning device. The cross-referencing of circuitry types into B-factor criteria is listed in Table 10.

Table 1. Model 2 B-Factor Group Count

Maximum Warning Device, Circuitry Type	B-Factor Count	B-Factor Mean	Total Collisions for 10 Years	Pedestrian Collisions for 10 years	AADT*T Mean
Crossbucks, < 500 veh/d, AFO	1	0.00	0	0	275.00
Crossbucks, < 500 veh/d, CWT	66	6.61	8	0	1077.17
Crossbucks, < 500 veh/d, DC	58	10.29	8	0	1291.72
Crossbucks, < 500 veh/d, MD	7	0.00	0	0	1428.57
Crossbucks, < 500 veh/d, mix	3	13.34	1	0	1025.00
Crossbucks, < 500 veh/d, none	102	3.10	4	0	882.04
Crossbucks, < 500 veh/d, other	5	0.00	0	0	358.60
Crossbucks, < 500 veh/d, PTC	1	0.00	0	0	625.00
Crossbucks, Rural, none	2	0.00	0	0	2500.00
Crossbucks, Urban, CWT	116	1.38	9	0	10137.64
Crossbucks, Urban, DC	186	1.05	20	0	12774.70
Crossbucks, Urban, MD	9	9.47	4	0	4611.11
Crossbucks, Urban, mix	2	0.00	0	0	7087.50
Crossbucks, Urban, none	412	1.33	32	0	6980.12
Crossbucks, Urban, other	35	0.05	3	0	21067.14
Flashing lights, Rural, DC	6	0.00	0	0	5516.67
Flashing lights, Rural, MD	2	0.00	0	0	14400.00
Flashing lights, Urban, AFO	3	0.00	0	0	0.00
Flashing lights, Urban, CWT	172	0.63	23	0	40839.49
Flashing lights, Urban, DC	268	0.69	23	0	36186.01
Flashing lights, Urban, MD	52	1.04	7	0	12707.21

Maximum Warning Device, Circuitry Type	B-Factor Count	B-Factor Mean	Total Collisions for 10 Years	Pedestrian Collisions for 10 years	AADT*T Mean
Flashing lights, Urban, mix	1	0.00	0	0	24600.00
Flashing lights, Urban, none	174	0.67	23	0	54984.31
Flashing lights, Urban, other	67	0.76	8	0	21316.42
Gates, Rural, CWT	62	2.44	17	2	20610.48
Gates, Rural, DC	9	0.00	0	0	57700.00
Gates, Rural, MD	6	0.00	0	0	19254.17
Gates, Rural, mix	1	0.00	0	0	4500.00
Gates, Rural, none	3	0.00	0	0	272166.67
Gates, Rural, other	21	0.62	2	0	38298.81
Gates, Urban, AFO	12	0.08	2	0	173775.00
Gates, Urban, CWT	2741	0.37	1133	211	348651.54
Gates, Urban, DC	970	0.63	333	50	376757.82
Gates, Urban, MD	153	0.54	49	7	192640.13
Gates, Urban, mix	38	0.09	11	4	450497.37
Gates, Urban, none	423	0.96	158	19	282945.52
Gates, Urban, other	522	0.43	184	43	306570.11
None, Rural, DC	2	0.00	0	0	5605.00
None, Rural, none	2	0.00	0	0	550.00
None, Urban, AFO	1	0.00	0	0	0.00
None, Urban, CWT	35	5.10	3	0	14446.03
None, Urban, DC	76	0.00	0	0	19571.92
None, Urban, MD	2	0.00	0	0	10400.00
None, Urban, none	176	0.00	0	0	13375.12
None, Urban, other	13	0.74	1	0	7667.31
None, Urban, PTC	1	0.0	0	0	0
Stop signs, <500 veh/d, CWT	10	14.41	1	0	2075
Stop signs, <500 veh/d, DC	3	0.00	0	0	2050
Stop signs, <500 veh/d, MD	3	128.08	3	0	467
Stop signs, <500 veh/d, none	7	0.00	0	0	1336
Stop signs, <500 veh/d, other	6	0.00	0	0	767
Stop signs, DC	11	0.00	4	0	1959
Stop signs, MD	3	0.00	2	0	1133
Stop signs, mix	1	0.00	0	0	26468
Stop signs, none	13	0.00	0	0	12080
Stop signs, other	4	0.00	0	0	6880

For each crossing, the actual total collision rate based on 10 years, the AADT (i.e., A-factor), and daily trains (i.e., T) are known. Using calibration data (i.e., 2014, 2015, 2016, 2017 and 2019 data) a B-factor is calculated for each pertinent crossing. It is assumed that passive maximum traffic control devices (i.e., crossbucks and stop signs) have no crossing circuitry. Six types of crossing circuitry are present in the database, i.e., constant warning time (CWT), motion detection (MD), other, audio frequency overlay (AFO), positive train control (PTC), and direct current (DC). The database contained no “Wigwags” as an active maximum traffic control device, only as a non-maximum.

Cross-referencing circuitry types with active maximum traffic control device groups determined if a sufficient sample size was present, shown in Table 11. If sufficient, the maximum traffic control device group was modified to include circuitry type, i.e., "Flashing lights, Urban, CWT," "Flashing lights, Urban, MD," "Gates, Urban, CWT," "Gates, Urban, MD," "Gates, Urban, AFO," "Gates, Rural, CWT," and "Gates, Rural, MD." If insufficient, the B-factors defaulted to Model 1 B-factors or Illinois BDE ones. The B-factors that included circuitry type are derived using similar equations mentioned for Model 1 except that the maximum traffic control device group included a circuitry component. The derivation of B-factors used two equations. The first one is shown in Figure 62,

$$B_i = \frac{(total\ collisions/10)_i}{A_i \times T_i}$$

Figure 62. Equation. Derivation of B-factor without circuitry type.

Where:

- i is USDOT crossing ID
- *total collisions* is the number of collisions occurring at the crossing for the past 10-year period
- A is the A-factor, as previously defined in the Illinois BDE model
- T is the number of daily trains, as previously defined in the Illinois BDE model

The second equation derived the updated B-factor for each maximum traffic control device group cross-referenced by circuitry type. By taking the mean of B_i in a cross-referenced maximum traffic control device group, an updated B-factor is determined for the maximum traffic control group with circuitry type, as shown in Figure 63:

$$B_j = \frac{\sum B_{i,j}}{n_j}$$

Figure 63. Equation. Derivation of B-factor with circuitry type.

where:

- j is the cross-referenced maximum traffic control device group, e.g., "Gates, Urban, AFO" and "Flashing lights, Urban, CWT"
- $B_{i,j}$ is the calculated B-Factor for USDOT crossing ID i in group j
- n_j is the number of crossings in group j

Model 2 B-factors with circuitry types for active maximum traffic control devices are listed in Table 11. Given insufficient sample size in some cases, updated B-factors from Model 1 are substituted when possible. Otherwise, Illinois BDE model B-factors are used.

Table 11. B-Factors Incorporated with Circuitry Types

Maximum Traffic Control Device, Circuitry Type	Model 2 B-Factor
Crossbucks, < 500 veh/d, none	3.10[a]
Crossbucks, Urban, none	1.33[a]
Crossbucks, Rural, none	3.08[b]
Stop signs, < 500 veh/d, none	14.41
Stop signs, none	1.15[b]
Flashing lights, Urban, AFO	0.70[c]
Flashing lights, Urban, CWT	0.63
Flashing lights, Urban, DC	0.69
Flashing lights, Urban, MD	1.04
Flashing lights, Urban, other	0.76
Flashing lights, Rural, unknown	0.93[b]
Gates, Urban, AFO	0.08
Gates, Urban, CWT	0.37
Gates, Urban, DC	0.63
Gates, Urban, MD	0.54
Gates, Urban, other	0.43
Gates, Rural, AFO	1.61[c]
Gates, Rural, CWT	2.44
Gates, Rural, DC	1.61[c]
Gates, Rural, MD	1.61[c]
Gates, Rural, other	0.62

[a] Passive Max. TCD, "none" circuitry type used.

[b] Insufficient sample size, Illinois BDE B-factor used.

[c] Insufficient sample size, Model 1 B-factor used.

Model 2 P-Factor

The P-factor development methodology is based on 10 crossing sites where pedestrian enumeration was performed. For each crossing record in the working database, a P-factor is calculated as shown in Figure 64:

$$P_i = \frac{(total\ collisions/10)}{A \times T \times B}$$

Figure 64. Equation. P-factor calculation.

where:

- *i* is USDOT crossing ID
- *total collisions* is the number of collisions occurring at the crossing for the past 10-year period

- *A* is the A-factor, as previously defined in the Illinois BDE model
- *T* is the number of daily trains, as previously defined in the Illinois BDE model
- *B* is the appropriate B-factor from Table 11

The second sets of equations derive the P-factor as a function of expected daily traffic of pedestrians, i.e., E[DT_p], at the crossing and total reported collisions for 10 consecutive years. Expected pedestrian daily traffic equations were developed from 10 pedestrian enumerative crossings from field data. The relationship between total reported collisions on a 10-year consecutive basis as the independent variable and expected daily traffic of pedestrians as the dependent variable is shown in Figure 65.

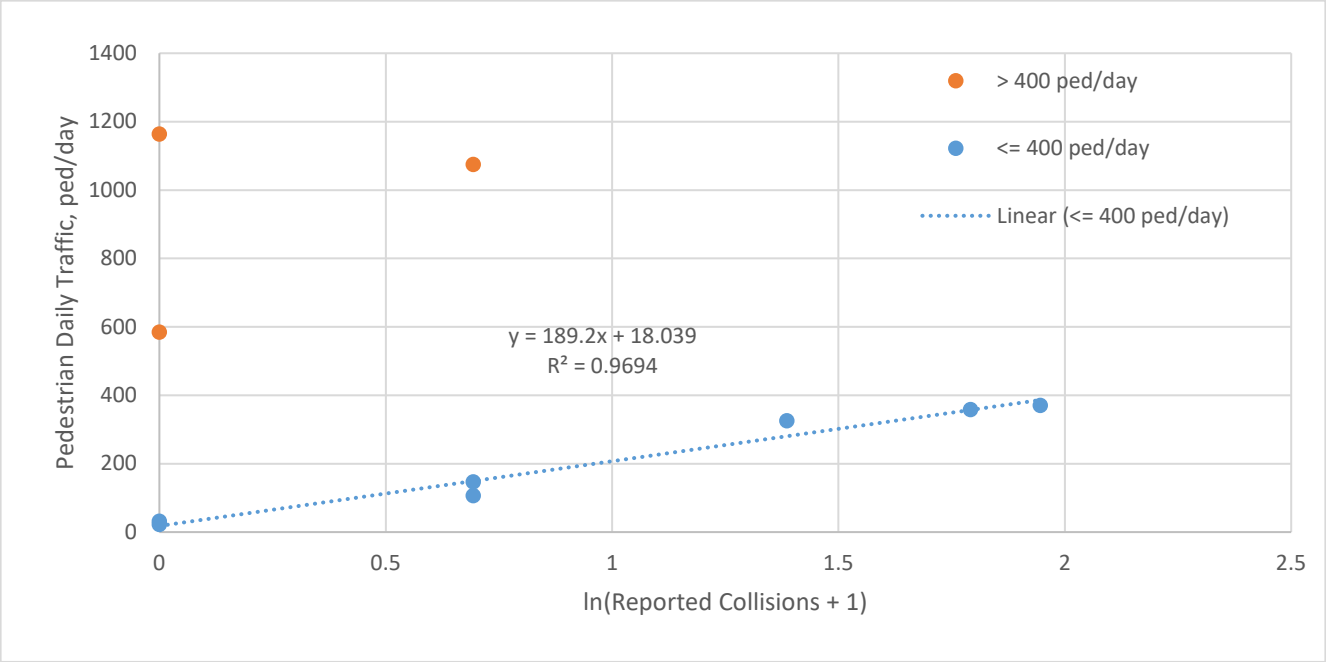


Figure 65. Graph. Daily traffic of pedestrians' relationship with reported collisions.

Expected pedestrian daily traffic results from one of the following equations shown in Figure 66:

$$Equation\ 1\text{: } E\left[DT_p\right] = 189.1982 \times \ln(C+1) + 18.039\ when\ (Eqn\ 1 <= 400\ and\ Eqn\ 2\ <= 400)\ or\ (Eqn\ 1 <= 400\ and\ Eqn\ 2\ > 400), \quad R^2 = 0.97$$

$$Equation\ 2\text{: } E\left[DT_p\right] = 1549.5 \times \ln(C+1)\ when\ (Eqn\ 1 > 400\ and\ Eqn\ 2 > 400), \quad R^2 = 0.41$$

Figure 66. Equation. Expected pedestrian daily traffic.

where:

- E[DTp] is expected daily traffic of pedestrians in ped/day
- C is reported collisions for 10 consecutive years, collisions

Expected pedestrian daily traffic is then calculated for each crossing record in the database. The relationship between the calculated P-factor and expected pedestrian daily traffic is shown in Figure 67.

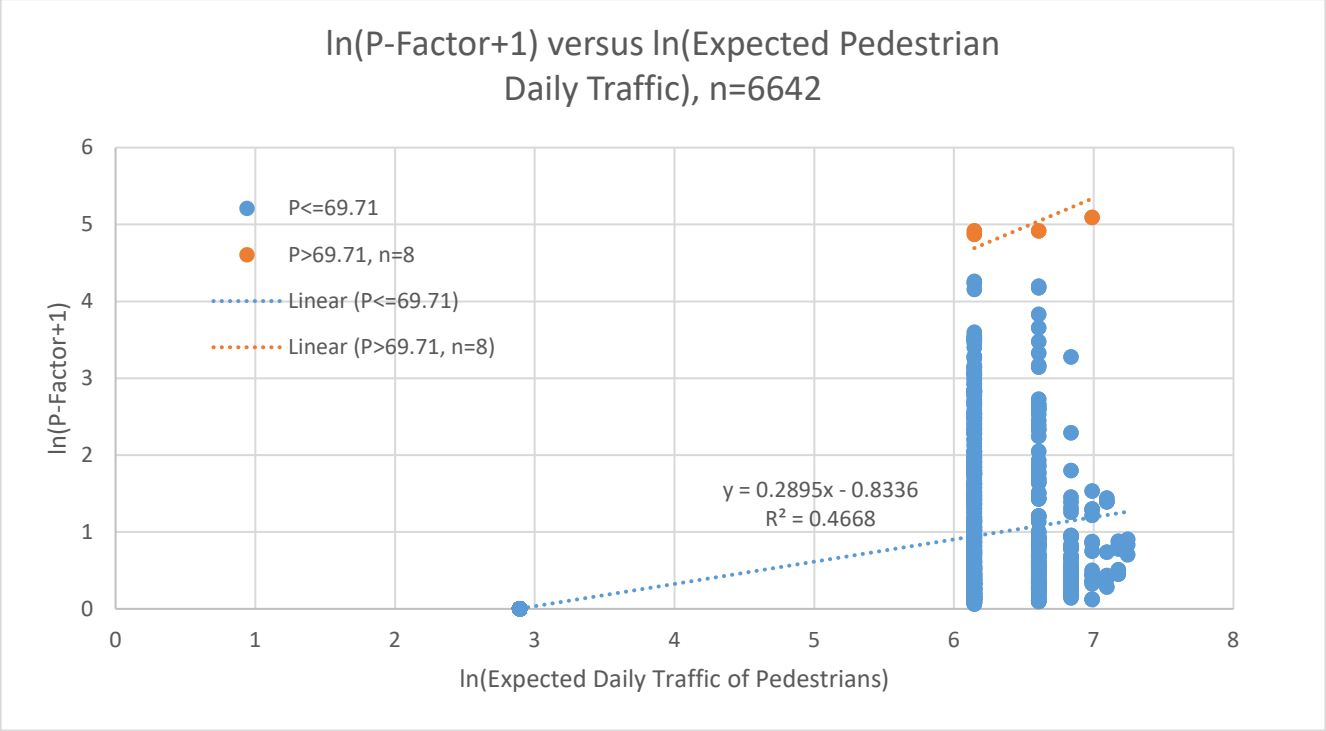


Figure 67. Graph. Relationship between P-factor and expected daily traffic of pedestrians in model 2.

An estimate of the P-factor for use in model 2 is produced from the equations shown in Figure 68:

$$Equation\ 3: P = EXP(0.2895 * ln(E[DTp] - 0.8336) - 1\ when\ E[DTp] > = \left(19\frac{ped}{day}\right) AND\ ((Eqn\ 3\ P <= 69.71\ and\ Eqn\ 4\ P <= 69.71) or\ (Eqn\ 3\ P <= 69.71\ and\ Eqn\ 4\ P > 69.71)), R^2 = 0.47$$

$$Equation\ 4: P = EXP(0.7635 * ln(E[DTp])) - 1\ when\ (Eqn\ 3\ P > 69.71\ and\ Eqn\ 4\ P > 69.71), R^2 = 1.00$$

Figure 68. Equation. Estimation of the p-factor for use in model 2.

where:

- E[DTp] is expected daily traffic of pedestrians in ped/day
- P is estimated pedestrian P-factor for the crossing

Calibration

Once a P-factor is estimated for crossing records in the database, calibration and validation analyses can be performed. Using the calibration dataset, Model 2's ECFs are compared to their counterpart's reported collision rates based on a 10-year basis, as shown in Figure 69.

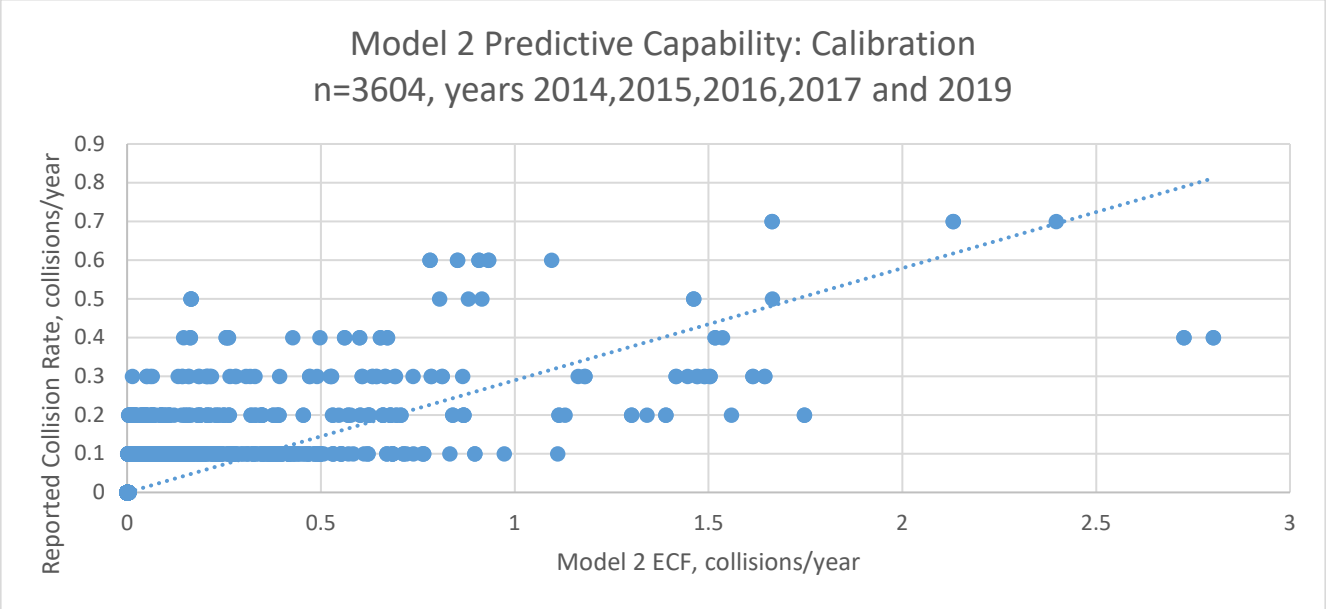


Figure 69. Graph. Model 2 predictive capability in calibration.

The equation of the best-fit line is shown in Figure 70.

$$Reported\ Collision\ Rate = 0.2896 \times (Model\ 2\ ECF), R^2 = 0.57$$

Figure 70. Equation. Best-fit line for reported collision rate.

Validation

Validation of Model 2 performance in predicting reported collision rates is based on 2018 data that were not used in B-factor development. Figure 71 shows Model 2's predictive capability.

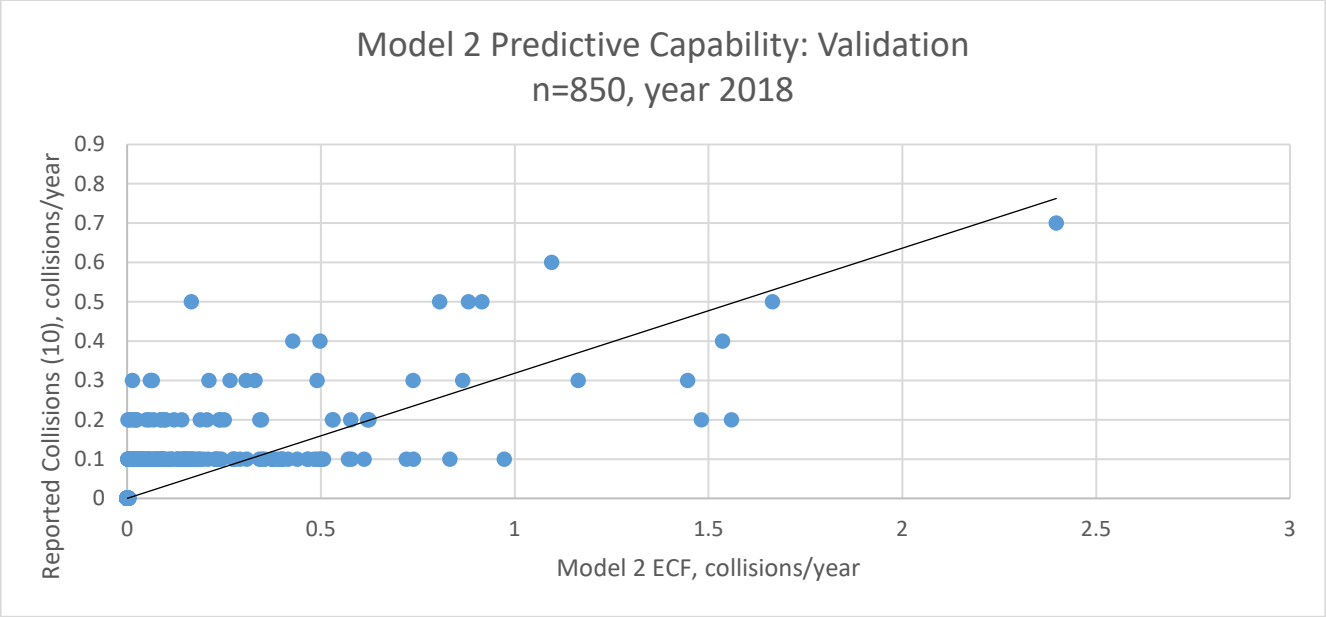


Figure 71. Graph. Model 2 predictive capability in validation.

Table 12 and Table 13 compare Model 2's predictive performance of reported collision rates with the original Illinois BDE ECF model's performance using only 2018 data.

Table 12. Model 2 ECF Validation Analysis

m =	0.318159	0	= b
se =	0.009373	#N/A	= seb
r2 =	0.575738	0.05602	= sev
F =	1152.124	849	= df
ss_reg =	3.615638	2.664362	= ssresid

Table 13. Illinois BDE ECF Validation Analysis

m =	0.578693	0	= b
se =	0.034627	#N/A	= seb
r2 =	0.170691	0.071819	= sev
F =	279.3011	1357	= df
ss_reg =	1.440628	6.999372	= ssresid

The comparison indicates that Model 2's R^2 is approximately three times higher than the original Illinois model's R^2.

MODEL SUMMARIES

The final versions of three proposed models are summarized for implementation. Each developed model is presented in Figure 72, Figure 73, and Figure 74. Model 3 development, calibration, and validation appears in Appendix C.

$$ECF = A * B * T$$

Where:
ECF = Expected Crash Frequency, collisions/year
A = Traffic Factor
B = Component Factor
T = Current number of trains per day

A. Updated Model 1 formulation

VEHICLES PER DAY (10-YR. ADT)	A-FACTOR
250	0.000347
500	0.000694
1000	0.001377
2000	0.002627
3000	0.003981
4000	0.005208
5000	0.006516
6000	0.007720
7000	0.009005
8000	0.010278
9000	0.011435
10000	0.012674
12000	0.015012
14000	0.017315
16000	0.019549
18000	0.021736
20000	0.023877
25000	0.029051
30000	0.034757

B. Values for A-factor in Updated Model 1

Maximum Traffic Control Device	B-Factor
Crossbucks, <500 veh/d	5.86
Crossbucks, Urban	1.34
Crossbucks, Rural	3.08
Stop signs	1.15
Stop signs, <500 veh/d	18.87
Wigwags	0.61
Flashing lights, Urban	0.70
Flashing lights, Rural	0.93
Gates, Urban	0.48
Gates, Rural	1.61

C. Values for B-Factor in Updated Model 1

Figure 72. Equation. Model 1 updated with new B-factor values.

ECF = A * B * T * P

Where:
ECF = Expected Crash Frequency, collisions/year
A = Traffic Factor
B = Component Factor
T = Current number of trains per day
P = Estimated Pedestrian Factor

A. Formulation of Model 2—Circuitry and Pedestrian Adjustments

VEHICLES PER DAY (10-YR. ADT)	A-FACTOR
250	0.000347
500	0.000694
1000	0.001377
2000	0.002627
3000	0.003981
4000	0.005208
5000	0.006516
6000	0.007720
7000	0.009005
8000	0.010278
9000	0.011435
10000	0.012674
12000	0.015012
14000	0.017315
16000	0.019549
18000	0.021736
20000	0.023877
25000	0.029051
30000	0.034757

B. Values for A-factors in Model 2

Maximum Traffic Control Device, Circuitry Type	B-Factor
Crossbucks, <500 veh/d, none	3.10
Crossbucks, Urban, none	1.33
Crossbucks, Rural, none	3.08
Stop signs, <500 veh/d, none	14.41
Stop signs, none	1.15
Wigwags	0.61
Flashing lights, Urban, AFO	0.70
Flashing lights, Urban, CWT	0.63
Flashing lights, Urban, DC	0.69
Flashing lights, Urban, MD	1.04
Flashing lights, Urban, other	0.76
Flashing lights, Rural, unknown	0.93
Gates, Urban, AFO	0.08
Gates, Urban, CWT	0.37
Gates, Urban, DC	0.63
Gates, Urban, MD	0.54
Gates, Urban, other	0.43
Gates, Rural, AFO	1.61
Gates, Rural, CWT	2.44
Gates, Rural, DC	1.61
Gates, Rural, MD	1.61
Gates, Rural, other	0.62

C. Values for B-factors in Model 2

P-FACTOR, P

Equation 1: E[DTp] = 189.1981946 * ln(C +1) + 18.0387
when (Eqn 1<=400 and Eqn 2 <=400) or (Eqn 1<=400 and Eqn 2 >400)

Equation 2: E[DTp]= 1549.454474 * ln(C +1) when (Eqn 2>400)

Equation 3: P= EXP(0.2895*ln(E[DTp] - 0.8336) - 1
when E[DTp]>=(19 ped/day) AND ((Eqn 3 P<=69.71 and Eqn 4 P<=69.71) or (Eqn 3 P<=69.71 and Eqn 4 P>69.71))

Equation 4: P = EXP(0.7635*ln(E[DTp])) - 1 when (Eqn 4 P> 69.71)

Where:
E[DTp] = Expected Daily Traffic of Pedestrians, pedestrians/day
C = Total number of collision reported at crossing through 10 consecutive years, collisions
P = Estimated Pedestrian Factor

D. Equations for P-factor in Model 2

Figure 73. Equation. Model 2—Circuitry and pedestrian adjustments.

ECF = CPV * P

Where:
ECF = Expected Crash Frequency, collisions/year
CPV = Crash Prediction Value from USDOT WBAPS website for the crossing
P = Estimated Pedestrian Factor

A. Formulation of Model 3—USDOT WBAPS Model with Pedestrian Adjustment

P-FACTOR, P

Equation 1: E[DTp] = 189.1981946 * ln(C +1) + 18.0387
when (Eqn 1<=400 and Eqn 2 <=400) or (Eqn 1<=400 and Eqn 2 >400)

Equation 2: E[DTp]= 1549.454474 * ln(C +1) when (Eqn 2>400)

Equation 3: P=EXP(0.2547*ln(E[DTp] - 0.7380)-1 when (E[DTp]>=19 ped/day) AND ((Eqn 3 P<=31.14 and Eqn 4 P<=31.14) or (Eqn 3 P<=31.14 and Eqn 4 P>31.14))

Equation 4: P= EXP(0.9077*ln(E[DTp]))- 1 when (E[DTp]>=19)AND (Eqn 3 P>31.14 and Eqn 4 P> 31.14)

Where:
E[DTp] = Expected Daily Traffic of Pedestrians, pedestrians/day
C = Total number of collision reported at crossing through 10 consecutive years, collisions
P = Estimated Pedestrian Factor

B. Equations of P-factor for Model 3—USDOT WBAPS Model with Pedestrian Adjustment

Figure 74. Equation. Model 3—USDOT WBAPS model with pedestrian adjustment.

CHAPTER 8: DEVELOP SOFTWARE OR INTERNET-BASED TOOL

This chapter is devoted to developing software for calculating the expected crash frequency (ECF) based on the model proposed in Chapter 7. The model chosen to develop the software is model 2 of Chapter 7, which incorporates circuitry type into the existing B-factor and considers pedestrian factor. An Excel file is developed based on Figure 73. The Excel file contains a READ_ME file that explains which information are available in each sheet, as shown in Figure 75.

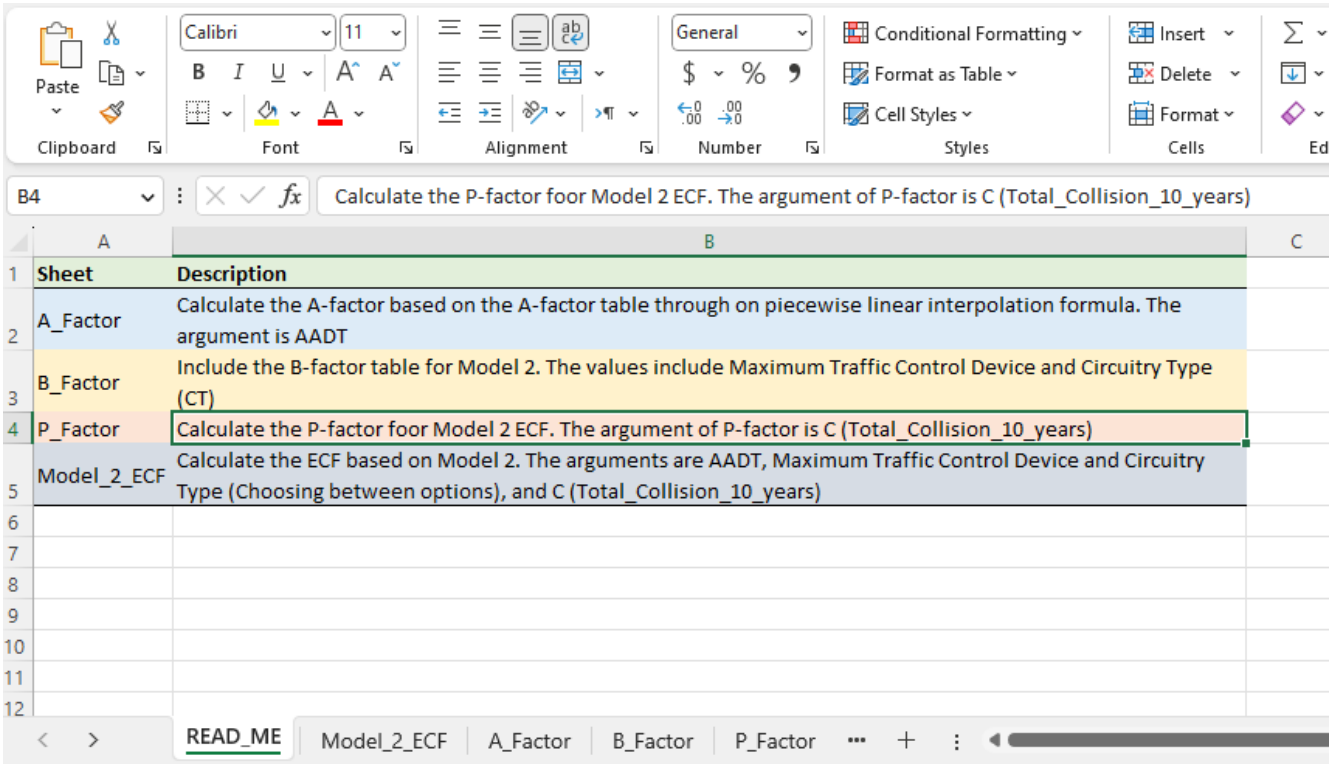
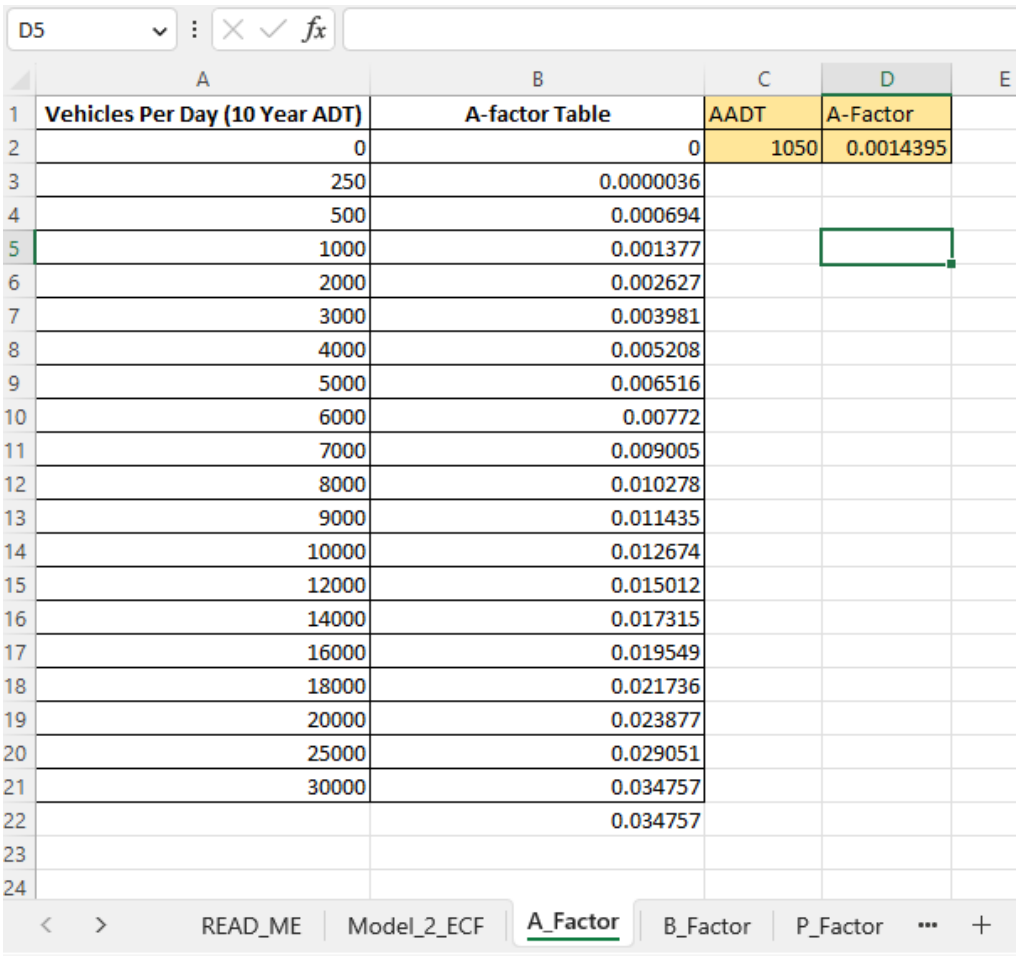


Figure 75. Screenshot. Screenshot of READ_ME sheet of the software.

Sheet "A_Factor" includes values for the A-factor of Model 2. Moreover, in this sheet, the A-factor value for a given AADT is calculated through a piecewise linear interpolation between values of A-factor. As an example, for AADT of 1,050, the A-factor is calculated as shown in Figure 76. The screenshot of Sheet "A_Factor" is shown in Figure 77.

$$A - \text{factor} = 0.001377 * \frac{950}{1000} + 0.002627 * \frac{50}{1000} = 0.0014395$$

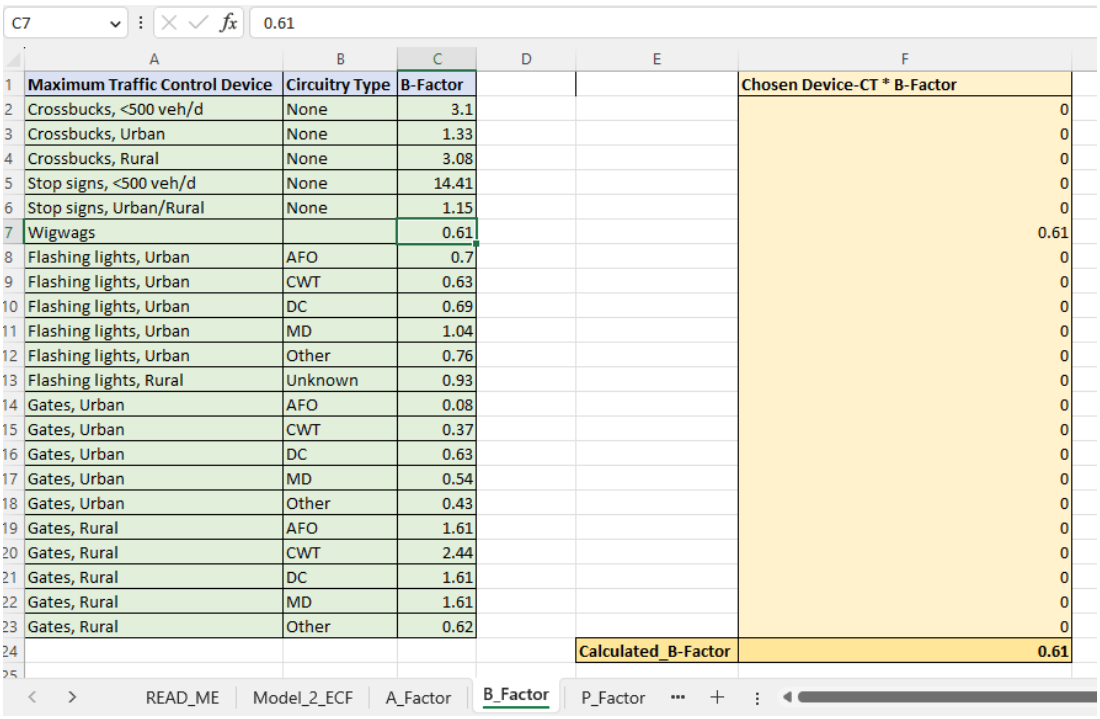
Figure 76. Equation. Calculation of A-factor for the example.



	A	B	C	D	E
1	Vehicles Per Day (10 Year ADT)	A-factor Table	AADT	A-Factor	
2	0	0	1050	0.0014395	
3	250	0.0000036			
4	500	0.000694			
5	1000	0.001377			
6	2000	0.002627			
7	3000	0.003981			
8	4000	0.005208			
9	5000	0.006516			
10	6000	0.00772			
11	7000	0.009005			
12	8000	0.010278			
13	9000	0.011435			
14	10000	0.012674			
15	12000	0.015012			
16	14000	0.017315			
17	16000	0.019549			
18	18000	0.021736			
19	20000	0.023877			
20	25000	0.029051			
21	30000	0.034757			
22		0.034757			
23					
24					

Figure 77. Screenshot. "A_Factor" sheet of the software for model 2.

Sheet "B_Factor" includes B-factor values of Model 2, which incorporates circuitry type into the Illinois BDE ECF model. There are 22 options for a combination of maximum traffic control device and circuitry type. Users must choose one option, otherwise they get a "Just Choose One Device" message. As an example, for a crossing with a maximum traffic control device of flashing lights in an urban area and with an AFO circuitry type, the B-factor is 0.7. The screenshot of "B_Factor" sheet is shown in Figure 78.



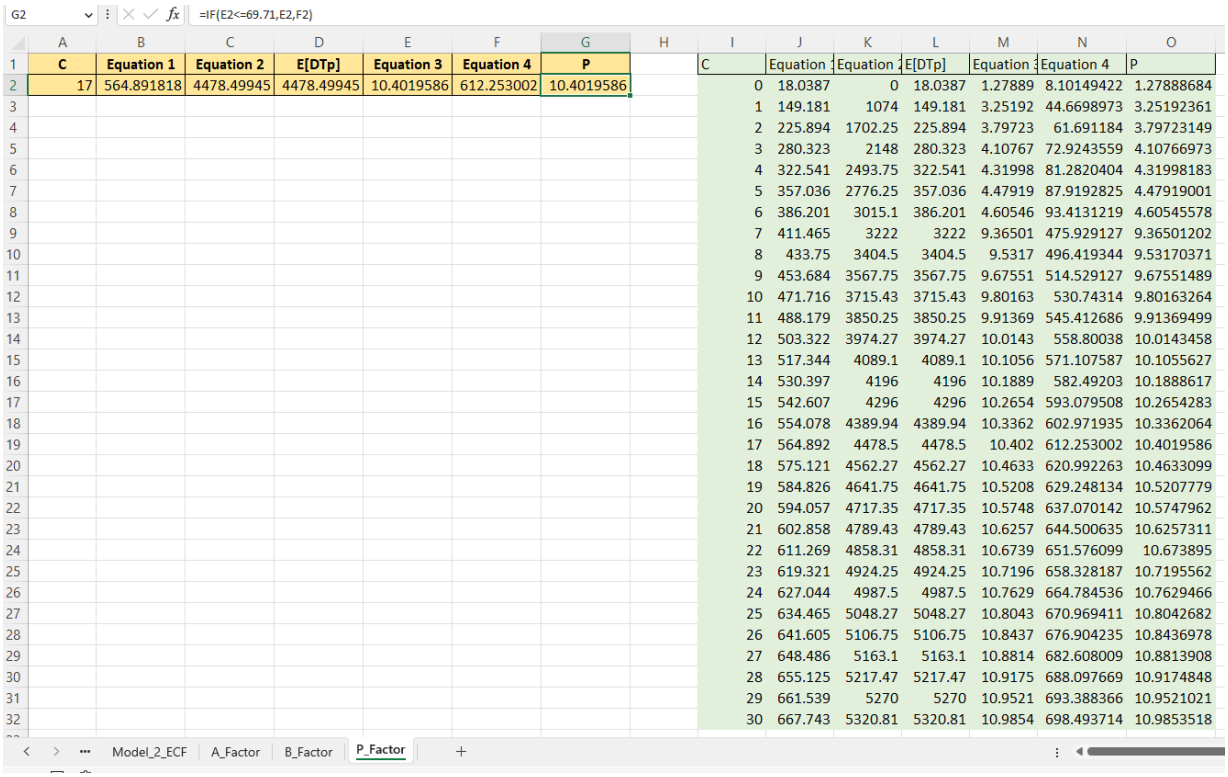
C7 | 0.61

	A	B	C	D	E	F
1	Maximum Traffic Control Device	Circuitry Type	B-Factor			Chosen Device-CT * B-Factor
2	Crossbucks, <500 veh/d	None	3.1			0
3	Crossbucks, Urban	None	1.33			0
4	Crossbucks, Rural	None	3.08			0
5	Stop signs, <500 veh/d	None	14.41			0
6	Stop signs, Urban/Rural	None	1.15			0
7	Wigwags		0.61			0.61
8	Flashing lights, Urban	AFO	0.7			0
9	Flashing lights, Urban	CWT	0.63			0
10	Flashing lights, Urban	DC	0.69			0
11	Flashing lights, Urban	MD	1.04			0
12	Flashing lights, Urban	Other	0.76			0
13	Flashing lights, Rural	Unknown	0.93			0
14	Gates, Urban	AFO	0.08			0
15	Gates, Urban	CWT	0.37			0
16	Gates, Urban	DC	0.63			0
17	Gates, Urban	MD	0.54			0
18	Gates, Urban	Other	0.43			0
19	Gates, Rural	AFO	1.61			0
20	Gates, Rural	CWT	2.44			0
21	Gates, Rural	DC	1.61			0
22	Gates, Rural	MD	1.61			0
23	Gates, Rural	Other	0.62			0
24					Calculated_B-Factor	0.61

READ_ME | Model_2_ECF | A_Factor | B_Factor | P_Factor

Figure 78. Screenshot. "B_Factor" sheet of software for model 2.

Sheet "P_Factor" calculates the pedestrian factor of the model based on C (the total number of collisions reported at the crossing through 10 consecutive years). The sheet first calculates E[DTp] (expected daily traffic of pedestrians, pedestrian/day) based on Figure 66 and then calculates the P-factor according to Figure 68. As an example, for the value C of 17, the E[DTp] and P-factors are 4478.4994 and 10.4019, respectively. A screenshot of the "P_Factor" sheet is shown in Figure 79.



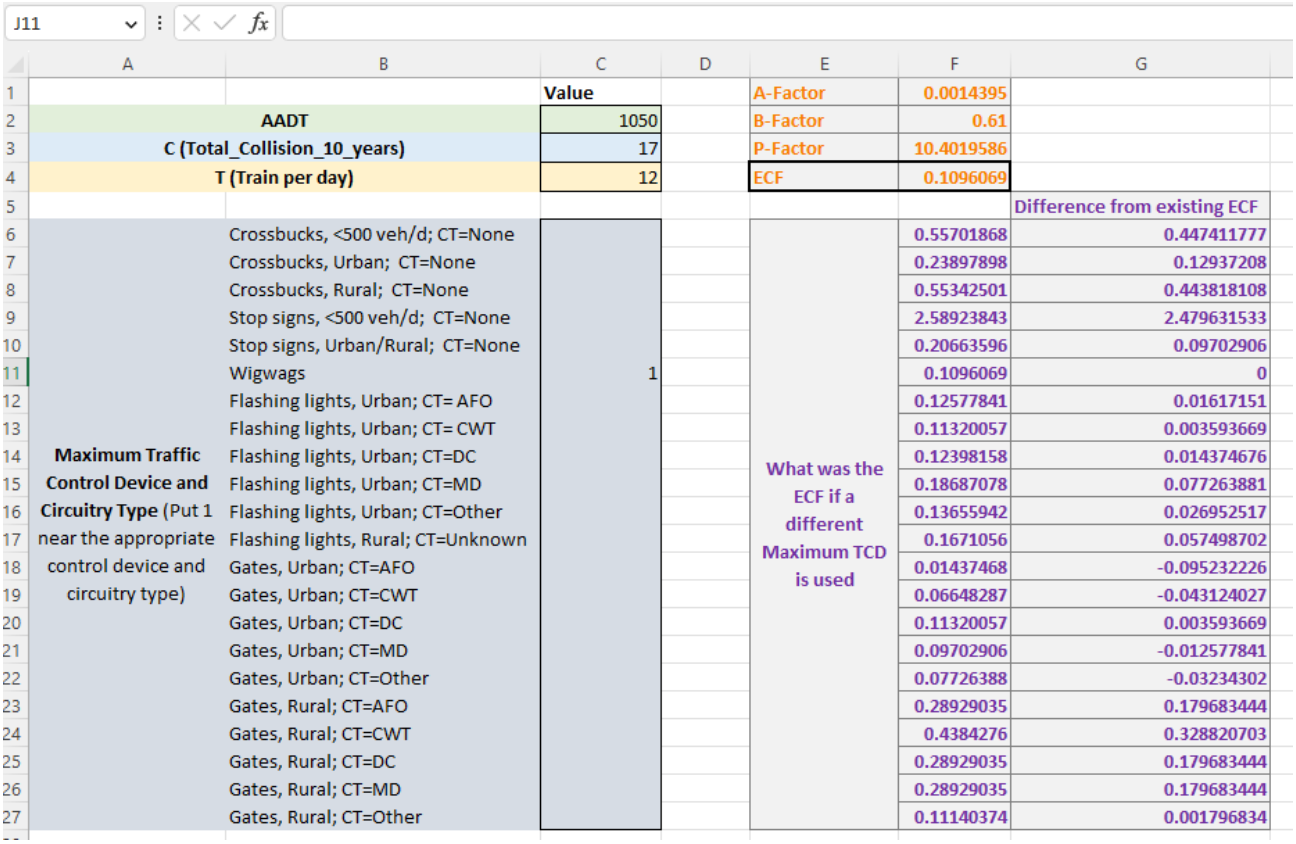
G2 =IF(E2<=69.71,E2,F2)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	C	Equation 1	Equation 2	E[DTp]	Equation 3	Equation 4	P		C	Equation 1	Equation 2	E[DTp]	Equation 3	Equation 4	P
2	17	564.891818	4478.49945	4478.49945	10.4019586	612.253002	10.4019586		0	18.0387	0	18.0387	1.27889	8.10149422	1.27888684
3									1	149.181	1074	149.181	3.25192	44.6698973	3.25192361
4									2	225.894	1702.25	225.894	3.79723	61.691184	3.79723149
5									3	280.323	2148	280.323	4.10767	72.9243559	4.10766973
6									4	322.541	2493.75	322.541	4.31998	81.2820404	4.31998183
7									5	357.036	2776.25	357.036	4.47919	87.9192825	4.47919001
8									6	386.201	3015.1	386.201	4.60546	93.4131219	4.60545578
9									7	411.465	3222	3222	9.36501	475.929127	9.36501202
10									8	433.75	3404.5	3404.5	9.5317	496.419344	9.53170371
11									9	453.684	3567.75	3567.75	9.67551	514.529127	9.67551489
12									10	471.716	3715.43	3715.43	9.80163	530.74314	9.80163264
13									11	488.179	3850.25	3850.25	9.91369	545.412686	9.91369499
14									12	503.322	3974.27	3974.27	10.0143	558.80038	10.0143458
15									13	517.344	4089.1	4089.1	10.1056	571.107587	10.1055627
16									14	530.397	4196	4196	10.1889	582.49203	10.1888617
17									15	542.607	4296	4296	10.2654	593.079508	10.2654283
18									16	554.078	4389.94	4389.94	10.3362	602.971935	10.3362064
19									17	564.892	4478.5	4478.5	10.402	612.253002	10.4019586
20									18	575.121	4562.27	4562.27	10.4633	620.992263	10.4633099
21									19	584.826	4641.75	4641.75	10.5208	629.248134	10.5207779
22									20	594.057	4717.35	4717.35	10.5748	637.070142	10.5747962
23									21	602.858	4789.43	4789.43	10.6257	644.500635	10.6257311
24									22	611.269	4858.31	4858.31	10.6739	651.576099	10.673895
25									23	619.321	4924.25	4924.25	10.7196	658.328187	10.7195562
26									24	627.044	4987.5	4987.5	10.7629	664.784536	10.7629466
27									25	634.465	5048.27	5048.27	10.8043	670.969411	10.8042682
28									26	641.605	5106.75	5106.75	10.8437	676.904235	10.8436978
29									27	648.486	5163.1	5163.1	10.8814	682.608009	10.8813908
30									28	655.125	5217.47	5217.47	10.9175	688.097669	10.9174848
31									29	661.539	5270	5270	10.9521	693.388366	10.9521021
32									30	667.743	5320.81	5320.81	10.9854	698.493714	10.9853518

Model_2_ECF | A_Factor | B_Factor | P_Factor

Figure 79. Screenshot. "P_Factor" sheet of the software for model 2.

Finally, sheet "Model_2_ECF" calculates the ECF value for a given crossing with the information of AADT, C, T (number of trains per day), and the maximum traffic control device and circuitry type. Following the example, for 12 trains per day and the abovementioned values for AADT, C, maximum traffic control device, and circuitry type, the ECF is 0.1258. A screenshot of "Model_2_ECF" is shown in Figure 80. The corresponding sheet includes a column that indicates the ECF value when a different maximum TCF is utilized, as well as the difference between the ECF values and the current ECF.



	A	B	C	D	E	F	G
1			Value		A-Factor	0.0014395	
2	AADT		1050		B-Factor	0.61	
3	C (Total_Collision_10_years)		17		P-Factor	10.4019586	
4	T (Train per day)		12		ECF	0.1096069	
5							Difference from existing ECF
6		Crossbucks, <500 veh/d; CT=None				0.55701868	0.447411777
7		Crossbucks, Urban; CT=None				0.23897898	0.12937208
8		Crossbucks, Rural; CT=None				0.55342501	0.443818108
9		Stop signs, <500 veh/d; CT=None				2.58923843	2.479631533
10		Stop signs, Urban/Rural; CT=None				0.20663596	0.09702906
11		Wigwags	1			0.1096069	0
12		Flashing lights, Urban; CT= AFO				0.12577841	0.01617151
13		Flashing lights, Urban; CT= CWT				0.11320057	0.003593669
14	**Maximum Traffic**	Flashing lights, Urban; CT=DC				0.12398158	0.014374676
15	**Control Device and**	Flashing lights, Urban; CT=MD			What was the	0.18687078	0.077263881
16	**Circuitry Type** (Put 1	Flashing lights, Urban; CT=Other			ECF if a	0.13655942	0.026952517
17	near the appropriate	Flashing lights, Rural; CT=Unknown			different	0.1671056	0.057498702
18	control device and	Gates, Urban; CT=AFO			Maximum TCD	0.01437468	-0.095232226
19	circuitry type)	Gates, Urban; CT=CWT			is used	0.06648287	-0.043124027
20		Gates, Urban; CT=DC				0.11320057	0.003593669
21		Gates, Urban; CT=MD				0.09702906	-0.012577841
22		Gates, Urban; CT=Other				0.07726388	-0.03234302
23		Gates, Rural; CT=AFO				0.28929035	0.179683444
24		Gates, Rural; CT=CWT				0.4384276	0.328820703
25		Gates, Rural; CT=DC				0.28929035	0.179683444
26		Gates, Rural; CT=MD				0.28929035	0.179683444
27		Gates, Rural; CT=Other				0.11140374	0.001796834

Figure 80. Screenshot. "Model_2_ECF" sheet of the developed software for model 2.

CHAPTER 9: CONCLUSION AND RECOMMENDATIONS

An extensive literature review was conducted to review and analyze the existing model and prioritization tool proposed and used by various states. The research team mainly focused on existing published reports and studies conducted or sponsored by DOTs and FRA. The review found that the USDOT-proposed accident prediction model is directly adopted by many states. This model required a normalizing constant, the value of which may vary from year to year. Unless this constant value is provided by USDOT, this model cannot be used. Other than the USDOT-proposed model, many states used customized state-specific models. Among them, the research team found the New Hampshire Hazard Index model (used by Michigan, Massachusetts, Nevada, Louisiana, and Kansas), the Peabody-Dimmick Formula (used by Georgia), and the NCHRP 50 accident prediction model (used by Illinois as an ECF model).

The research team conducted a nationwide online survey to extract information regarding state practices to improve safety at railroad crossings. The survey was divided into two parts, one focused on pedestrian safety treatments and the other on train-detection circuitry. The survey questionnaire was developed based on a literature review and was approved by the UIC Institutional Review Board. The survey was disseminated to representatives of all 50 US state DOTs and non-DOT experts. In total, responses from 32 states were received. The overall survey response rate was 26% and 3.6% for DOTs and experts outside DOTs, respectively. The non-DOT expert responses were very limited, and only three were meaningful, so they were combined with the DOT responses. Expected crash frequency and hazard index models were identified as the most used models among states. As for the train-detection circuitry, CWT is the most commonly used model. States also mentioned that federal sources, railroad companies, and state DOTs are the top three entities to fund the installation of RHC and RPC train-detection circuitries.

The research team encountered several data issues while working with collision and inventory datasets from ICC and FRA, respectively. Resolving these issues was challenging due to inadequate documentation and communication. Nonetheless, the team reached out to the responsible entities to address the data issues as accurately as possible and as allowed by the project deadline and available resources constraints. Two datasets were prepared. First, by merging the collision and inventory data, an elaborate record was prepared for all 719 collisions that occurred in a six-county area within 17 years. This provided 162 descriptive variables for each collision. Another dataset was prepared for model development using datasets from 2014 to 2019. Based on the inventory data available from FRA's database, each year consists of a different number of data records, which totaled 8,478 data records.

The research team used the compiled dataset containing 8,478 records to evaluate the performance of the existing ECF model used by IDOT. Note that the existing ECF model parameters in the IDOT *BDE Manual* are calibrated and validated with pre-1968 datasets. This is evident from an NSFRP 50 report from 1968 having the same model parameters as the ECF model in IDOT's *BDE Manual* 2022. The nonparametric tests of ECF values and the actual mean crash rate identified a statistically significant correlation between them; however, this correlation is very small. Moreover, the discrepancies

between them vary widely. Compared to both auto+pedestrian and auto-only crashes, ECF seems to be underperforming when predicting pedestrian crashes.

Three proposed alternative ECF models are developed and compared to the existing online IDOT Bureau of Design and Environment's ECF model performance in predicting expected total collision rates at public railroad grade crossings. The proposed models presented in this report have been converted to a digital tool. The tool is included in separate media. The first proposed model updated existing B-factors used in the IDOT ECF model using recent Illinois-specific collision data instead of national 1968-era data that the Illinois model was originally validated. The comparisons using calibration data indicate that both models' ECF values poorly predict reported collision rates, as shown by weak r^2 values. However, the performance of the proposed model was slightly better. The performance comparison revealed that the Illinois BDE model had an r^2 of 0.17 between reported collision rates and BDE model's expected collision rates using year 2018 validation data records, n = 1350. The proposed model that updated existing B-factors had an r^2 of 0.20 using year 2018 validation data records, n = 1350. More comparisons were analyzed using natural logarithms for dependent and independent variables to determine if the relationship between reported and expected was nonlinear. No significant predictive improvements were observed over the linear relationship.

The second proposed model modified B-factors to include circuitry types for crossings with active maximum control devices and includes a separate P-factor to account for the presence of pedestrians. The values for maximum traffic control device group were modified to include circuitry type if sufficient sample size was present. If insufficient, the B-factors defaulted to Model 1 B-factors or Illinois BDE ones. The P-factor development methodology was based on the 10 crossing sites where pedestrian enumeration was performed. Using appropriate Illinois-specific 2018 validation data, the performance comparison revealed that Model 2 significantly outperforms the original Illinois model. The Illinois BDE model had an r^2 of 0.17 between reported collision rates and the BDE model's expected collision rates, n = 1350. However, the proposed model that modified B-factors with circuitry types and included the effect of crossing pedestrians had an r^2 of 0.58, n = 850.

The third proposed model supplemented CPVs produced by FRA's WBAPS model with a P-factor to account for crossing pedestrians. The performance comparison revealed that FRA's WBAPS model had an r^2 of 0.50 between reported collision rates and WBAPS model's CPVs using year 2018 Illinois-specific validation data records, n = 1,379. The proposed model that supplemented the WBAPS model with a P-factor had an r^2 of 0.70 using year 2018 Illinois-specific validation data records, n = 286.

The second proposed model is recommended. The second proposed model had three times the r^2 as the existing Illinois BDE ECF model using recent Illinois-specific year 2018 validation data in predicting expected collision rates. Note that the third proposed model had an r^2 of 0.82 in calibration, n = 574, and decreased significantly in validation.

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APPENDIX A: SURVEY MATERIAL AND PARTICIPANT RESPONSES

Invitation Letter to Participants

A letter similar to the one below was emailed to survey of states contacts requesting their participation in the survey.

Dear Sir/Madam,

The Illinois DOT through the Illinois Center for Transportation (ICT) is sponsoring a project to determine the effect pedestrian safety treatments and train detection circuitry upgrades have in its at-grade railroad-highway and/or railroad-pedestrian crossing prioritization tool. The tool is used to update high-priority hazardous crossing lists in the state on an annual basis.

We are contacting you because you have been identified as the person responsible in your state for railroad crossing safety. If you are not the appropriate person, please let us know and share this survey with the responsible person in your organization to have them complete it for your state.

The objective of this survey is to elicit information about state practices regarding tools used to improve safety at railroad crossings in different states. It should take you no more than **20 minutes** of your time to complete the survey. We would appreciate your time to complete this survey. The final report will be available for public dissemination by the ICT upon completion of the project.

Thank you.

Survey Questionnaire

The following survey Instrument was developed by the researchers and approved by the study TRP and UIC Institutional Review Board. The Qualtrics survey link for the questionnaire was emailed to the state contacts and the online responses were recorded.

Please select your state:

[DROP DOWN BOX]

Select one

1. Alabama
2. Alaska
3. Arizona
4. Arkansas
5. California
6. Colorado
7. Connecticut
8. Delaware
9. Florida
10. Georgia
11. Hawaii
12. Idaho
13. Illinois
14. Indiana
15. Iowa
16. Kansas
17. Kentucky
18. Louisiana
19. Maine
20. Maryland
21. Massachusetts
22. Michigan
23. Minnesota
24. Mississippi
25. Missouri
26. Montana
27. Nebraska
28. Nevada
29. New Hampshire
30. New Jersey
31. New Mexico
32. New York
33. North Carolina
34. North Dakota
35. Ohio
36. Oklahoma
37. Oregon
38. Pennsylvania
39. Rhode Island
40. South Carolina
41. South Dakota
42. Tennessee
43. Texas
44. Utah
45. Vermont
46. Virginia
47. Washington
48. West Virginia
49. Wisconsin
50. Wyoming

Survey Questions

Questions that require multiple responses will be highlighted when clicked on the choices.

Part I. Pedestrian Safety Treatments at At-Grade Railroad-Pedestrian Crossings (RPCs)

Questions in this part pertains to your state's approach to prioritize safety improvement projects for at-grade Railroad-Pedestrian Crossings (RPCs).

1. Does your DOT use an expected crash frequency (ECF) model for RPC safety improvement prioritizations?

● Yes
● No

<u>If "No," go to Question 2.</u>

1.a. What model is used?

● U.S. Department of Transportation (USDOT) Accident Prediction Model/Web Accident Prediction System (WBAPS)
● National Cooperative Highway Research Program (NCHRP) 50 Accident Prediction Model
● Peabody-Dimmick Formula
● State-Specific Model/Formula
● Other: _____

1.b. What are the *pedestrian related* factors used in the ECF model? Click all boxes that apply.

● Pedestrian Volume
● Pedestrian Signage/Markings
● Pedestrian Automatic Gates
● Pedestrian Swing Gates
● "Z" Crossing Channelization
● Pedestrian "Maze" Barriers
● Pedestrian Crossing Gate Skirts
● Sidewalk/Footpath Surface
● Other: _____

1.c. What are the *train related* factors used in the ECF model? Click all boxes that apply.

● Train Volume
● Train Speed
● Number of Tracks
● Train Type
● Number of Train Cars
● Flashing Light Signals
●Other: _____

1.d. What are the *environmental factors* used in the model? Click all boxes that apply.

- Sight Distance
- Approach Grade
- Crossing Angle
- Crossing Condition
- Crash History
- Crash Severity
- Other: _____

1.e. Does your state DOT identify high priority crossings in state using ECF model?

- Yes
- No

1.f. What threshold value is used in the ECF model to determine "high" priority crossings?

- Model/Formula threshold, e.g., Illinois uses 0.02 collisions/year

_____

- Other performance value, e.g., fatalities/year, pedestrian collisions/year

_____

2. Does your DOT use a Hazard Index (HI) formula for RPC safety improvement prioritizations?

- Yes
- No

<u>If "No," go to Question 3.</u>

2.a. What Hazard Index (HI) formula is used?

- New Hampshire Hazard Index
- State-Specific Hazard Index
- Other Index: _____

2.b. What are the *pedestrian related* factors used in the Hazard Index (HI) formula? Click all boxes that apply.

- Pedestrian Volume
- Pedestrian Signage/Markings
- Pedestrian Automatic Gates
- Pedestrian Swing Gates
- "Z" Crossing Channelization

- Pedestrian "Maze" Barriers
- Pedestrian Crossing Gate Skirts
- Sidewalk/Footpath Surface
- Other: _____

2.c. What are the *train related* factors used in the Hazard Index (HI) formula? Click all boxes that apply.

- Train Volume
- Train Speed
- Number of Tracks
- Train Type
- Number of Train Cars
- Flashing Light Signals
- Other: _____

2.d. What are the *environmental factors* used in the Hazard Index (HI) formula? Click all boxes that apply.

- Sight Distance
- Approach Grade
- Crossing Angle
- Crossing Condition
- Crash History
- Crash Severity
- Other: _____

2.e. Does your state DOT identify high priority crossings in state using Hazard Index (HI) formula?

- Yes
- No

2.f. What threshold value is used in the Hazard Index (HI) formula to determine "high" priority crossings?

- Hazard Index value: _____
- Other Values: _____

3. Does your DOT use a decision tree as a tool to determine appropriate pedestrian-rail at-grade crossing treatments?

- Yes
- No

If "No," go to Question 4.

3.a. Are any following decision points used in the tree? Click all the boxes that apply.

- Sidewalk present
- Minimum pedestrian activity met
- Train speed greater than threshold specified in your DOT's tree
- Sight distance restrictions on approach
- Rail-pedestrian crossing (RPC) in school zone
- High pedestrian activity
- Pedestrian surge occurs
- High pedestrian inattention
- Other: _____

3.b. Are any of the following passive treatments recommended at the end of such decision-making process? Click all the boxes that apply.

- Provide pedestrian access and passive warning devices
- Provide striped channelization
- Provide swing gates
- Provide pedestrian gate skirts
- No specific pedestrian treatment required
- Other: _____

3.c. Are any of the following active treatments recommended at the end of such decision-making process? Click all the boxes that apply.

- Provide active warning devices
- Provide two-quadrant pedestrian gate treatment
- Provide pedestrian automatic gates
- Provide audible warning devices
- Provide "another train coming warning system" (ATCWS)
- Other: _____

4. Does your DOT use any criteria to determine railroad-pedestrian (RPC) safety improvement prioritization such as in the Section 130 Program?

- Yes
- No

If "No", go to Question 5.

4.a. What safety criteria are used to determine RPC safety improvement? Click all the boxes that apply.

● Federal Railroad Administration (FRA) crash history
● Top Percentile Expected Crash Frequency (ECF) from applications = _____
● Expected Crash Frequency (ECF) threshold = _____
● Top Percentile in state's Federal Railroad Administration (FRA) Web Accident Prediction System (WBAPS) report = _____
● Exposure value =_____
● Timetable train speed = _____
● Other: _____

4.b. What Additional Factors are used to determine RPC safety improvement? Click all the boxes that apply.

● Crossing closure
● Associated work with nearby crossing
● Upgrade from Crossbuck/Automatic Flashing Light Signal (AFLS) to Automatic Flashing Light Signal and Gates (AFLS&G)
● Projects recommended by State's Commerce Commission
● Addition of Pedestrian Protection
● Location geometry (angle, footpath geometry, buildings, trees, crops, embankments, etc.)
● Other: _____

5. What are the specific railroad-pedestrian crossing (RPC) passive safety treatments considered at the end of the prioritization process? Click all the boxes that apply.

● passive signage
● Z-crossing channelization
● pedestrian "maze" barriers
● swing gates
● install sidewalk
● improve crossing surface quality
● improve sidewalk/footpath surface
● pedestrian gate skirt
● Other: _____

6. What are the specific railroad-pedestrian crossing (RPC) active safety treatments considered at the end of the prioritization process? Click all the boxes that apply.

● automatic pedestrian gates
● flashing light signals

● train detection circuitry
● "smart" signs
● audible warning devices
● another train coming warning system (ATCWS)
● Other: _____

7. What is the source of funding for the railroad-pedestrian crossing (RPC) safety treatments? Click all the boxes that apply.
● Railroad Company
● Local jurisdiction
● County Agency or Department
● State DOT
● Statewide Agency (e.g. Commerce Commission, Public Utility Commission, etc.)
_____
● Federal Sources

7.a. What issue or issues are involved in securing a source of funding for railroad-pedestrian crossing (RPC) safety treatments? Click all the boxes that apply.
● Lack of dedicated infrastructure fund
● Lack of railroad company interest
● No elected official involvement
● Lack of local advocates
● Surrounding land use, e.g., school zone
● Other: _____

8. What entity or entities are responsible for the installation railroad-pedestrian crossing (RPC) safety treatments? Click all the boxes that apply.
● Railroad Company
● Local jurisdiction
● County Agency or Department
● State DOT
● Statewide Agency (e.g., Commerce Commission, Public Utility Commission, etc.)
_____

9. Who maintains/upgrades railroad-pedestrian crossing (RPC) safety treatments? Click all the boxes that apply.
● Railroad Company
● Local jurisdiction
● County Agency or Department
● State DOT

● Statewide Agency (e.g. Commerce Commission, Public Utility Commission, etc.)

_____

Part II. Train Detection Circuitry at At-Grade Railroad-Highway Crossings (RHCs) and Railroad-Pedestrian Crossings (RPCs)

The questions in this part pertain to your state's approach to upgrade train detection circuitry at both At-Grade Railroad-Highway Crossings (RHCs) and Railroad-Pedestrian Crossings (RPCs).

10. What are the specific train detection circuitries at RHCs that are considered in the upgrade process? Check all that applies.

● No circuitry
● DC track circuit
● Three-track circuit system
● Track circuits with timing sections
● AC/DC track circuit
● Audio frequency overlay (AFO) track circuit
● Motion-detection (MD) track circuit
● Constant warning time (CWT) track circuit
● Positive train control (PTC)
● Other: _____

11. What entity or entities determine the need for train detection circuitry upgrades at railroad-highway crossings (RHCs) and railroad-pedestrian crossings (RPCs)? Check all that applies.

● Railroad Company
● Local jurisdiction
● Community concerns
● Elected officials
● County Agency or Department
● State DOT
● Statewide Agency (e.g., Commerce Commission, Public Utility Commission, etc.)

_____

12. What qualitative or quantitative procedure/criteria/"rule of thumb" is used to determine the specific train detection circuitry upgrade? Check all that applies.

● No criterion
● Collision history

● Exposure
● Train speed
● Analytical model/software: _____
● Train frequency
● Community concerns
● Elected officials
● School zone
● Quiet Zone
● urban/rural
● Land use
● local/state
● Other: _____

13. What entity or entities fund the installation of railroad-highway crossing (RHC) and railroad-pedestrian crossing (RPC) train detection circuitry? Check all that applies.
● Railroad Company
● Local jurisdiction
● County agency or department
● State DOT
● Statewide Agency (e.g., Commerce Commission, Public Utility Commission, etc.)
_____
● Federal sources

14. What entity or entities install railroad-highway crossing (RHC) and railroad-pedestrian crossing (RPC) train detection circuitry upgrades? Check all that applies.
● Railroad Company
● Local jurisdiction
● County agency or department
● State DOT
● Statewide Agency (e.g., Commerce Commission, Public Utility Commission, etc.)
_____

15. What entity or entities maintain railroad-highway crossing (RHC) and railroad-pedestrian crossing (RPC) train detection circuitry? Check all that applies.
● Railroad Company
● Local jurisdiction
● County agency or department

● State DOT
● Statewide Agency (e.g., Commerce Commission, Public Utility Commission, etc.)

_____

III. General

16. May we contact you for a follow-up?

● Yes
● No

16.a. If "Yes," please provide contact information: _____

THANK YOU!!!

University of Illinois at Chicago – Urban Transportation Center
Project Title: **Railroad-Highway Crossing (RHC) Safety Improvement Evaluation and Prioritization Tool (ICT R27-218)**
Document: **Potential Subjects Recruitment Email Script.**

This email script will be sent out to the potential subjects in order to recruit them for this study by Project PI.

Dear Respondent,

The Illinois DOT through the Illinois Center for Transportation (ICT) is sponsoring a project to determine the effect pedestrian safety treatments and train detection circuitry upgrades have in its at-grade railroad-highway and/or railroad-pedestrian crossing prioritization tool. The tool is used to update high-priority hazardous crossing lists in the state on an annual basis.

We are contacting you because you have been identified as the person responsible in your state for railroad crossing safety. If you are not the appropriate person, please let us know and share this survey with the responsible person in your organization to have them complete it for your state.

The objective of this survey is to elicit information about state practices regarding tools used to improve safety at railroad crossings in different states. It should take you no more than **20 minutes** of your time to complete the survey. We would appreciate your time to complete this survey. The final report will be available for public dissemination by the ICT upon completion of the project.

Should you have any questions or concerns regarding this survey, please contact Dr. J. Fazio at jfazio@uic.edu

Thank you.

Kind Regards,

Dr. P.S. Sriraj, Director
Urban Transportation Center
University of Illinois at Chicago
Phone: (312) 413-7568
e-mail: sriraj@uic.edu

Figure 81. Screenshot. Subject recruitment email script.

APPENDIX B: DISCUSSION WITH THE TRP ABOUT DATA TERMINOLOGIES

The research team discussed some terms in the datasets with the TRP and got the clear idea about it. The terminologies are as follows:

Maximum Warning Device: The warning device in place at the railroad crossing. The type of device is computed based on the number and type of passive signs, flashing lights, bells and gates which are stored as individual data items and then an algorithm identifies the type of devices present and computes the maximum (or highest level) type of warning device.

DETECT: Type of train detection circuitry used at the railroad crossing.

X-PURP: Purpose of crossing i.e., PWY (Pathway crossing), STN (Station Pedestrian crossing), HWY (Railroad-Highway crossing).

Ped/A: Exclusive pedestrian pathway either at a station or as a stand-alone pedestrian pathway.

Pub/A: Public at-grade railroad crossing which may or may not have attached pedestrian sidewalks and pedestrian approaches leading up to the crossing.

Ped/RR Over Path: Pedestrian pathway-rail crossings where the Railroad is Over the pathway.

Ped/RR Under Path: Pedestrian pathway-rail crossings where the Railroad is Under the pathway.

Priv/A: Private highway-rail crossing at grade.

Priv/RR Over Hwy: Private highway-rail crossing where the Railroad is Over the highway.

Priv/RR Under Hwy: Private highway-rail crossing where the Railroad is Under the highway.

Pub/RR Over Hwy: Public highway-rail crossing where the Railroad is Over the highway.

Pub/RR Under Hwy: Public highway-rail crossing where the highway is Under the highway.

APPENDIX C. MODIFIED WBAPS MODEL

The FRA CPV/APF model is very complicated with dozens of environmental, supply and demand independent variables. However, the FRA WBAPS tool frequently posts the latest accident prediction value, i.e., CPV or APF, by crossing. The research team assembled two sets of historical CPV/APF prediction values whose databases were provided by the TRP chairman and a TRP member. The chairman's database CPVs, n=4137 values, came from historical WBAPS tool reports from 2017 to 2019. The member's CPVs, n=8476 values, came from an ICC historical database from 2014 to 2019. After comparing the two databases, the research team selected the historical WBAPS database for use in developing a modified WBAPS model because its CPVs generally resulted in conservatively higher CPVs than ICC's, i.e., the sum of CPV differences, i.e., ICC minus WBAPS, n=4137 differences, was -4.94 collision per year. Further, WBAPS values had higher r^2, r^2=0.58 with intercept, with reported collision rates based on five years than ICC's r^2, r^2=0.51. Supplementing WBAPS CPV historical values to account for pedestrian presence, i.e., P-Factor, the resulting model's general structure is ECF = CPV * P.

The P-Factor development methodology is based upon the ten crossing sites where pedestrian enumeration was performed and cross-referencing with external databases. For each crossing record in the working database, a P-Factor is calculated based on Figure 82:

$$P_i = \frac{(total\ collisions/5)}{CPV_i}$$

Figure 82. Equation. P-factor for each crossing record.

where

- *i* is USDOT crossing ID,
- *total collisions* is the number of collisions occurring at the crossing for the past five-year period and
- *CPVi* is the FRA ECF value for USDOT crossing ID *i*.

The second sets of equations derive the P-Factor as a function of expected daily traffic of pedestrians at the crossing and total reported collisions for ten consecutive years as shown in Figure 83. Expected pedestrian daily traffic equations were developed using reported collisions through the past ten years.

$$Equation\ 1\text{: } E\left[DT_p\right] = 189.1982 \times \ln(C+1) + 18.039\ when\ (Eqn\ 1 <= 400\ and\ Eqn\ 2\ < = 400)\ or\ (Eqn\ 1 <= 400\ and\ Eqn\ 2\ > 400), \quad R^2 = 0.97$$

$$Equation\ 2\text{: } E\left[DT_p\right] = 1549.5 \times \ln(C+1)\ when\ (Eqn\ 1 > 400\ and\ Eqn\ 2 > 400), \quad R^2 = 0.41$$

Figure 83. Equation. Expected pedestrian daily traffic using reported collisions.

where

- E[DTp] is expected daily traffic of pedestrians in ped/day, and
- C is total number of collisions reported at crossing through 10 consecutive years.

Expected pedestrian daily traffic is then calculated for each crossing record in the database. The relationship between the calculated P-Factor and expected pedestrian daily traffic is shown in Figure 84.

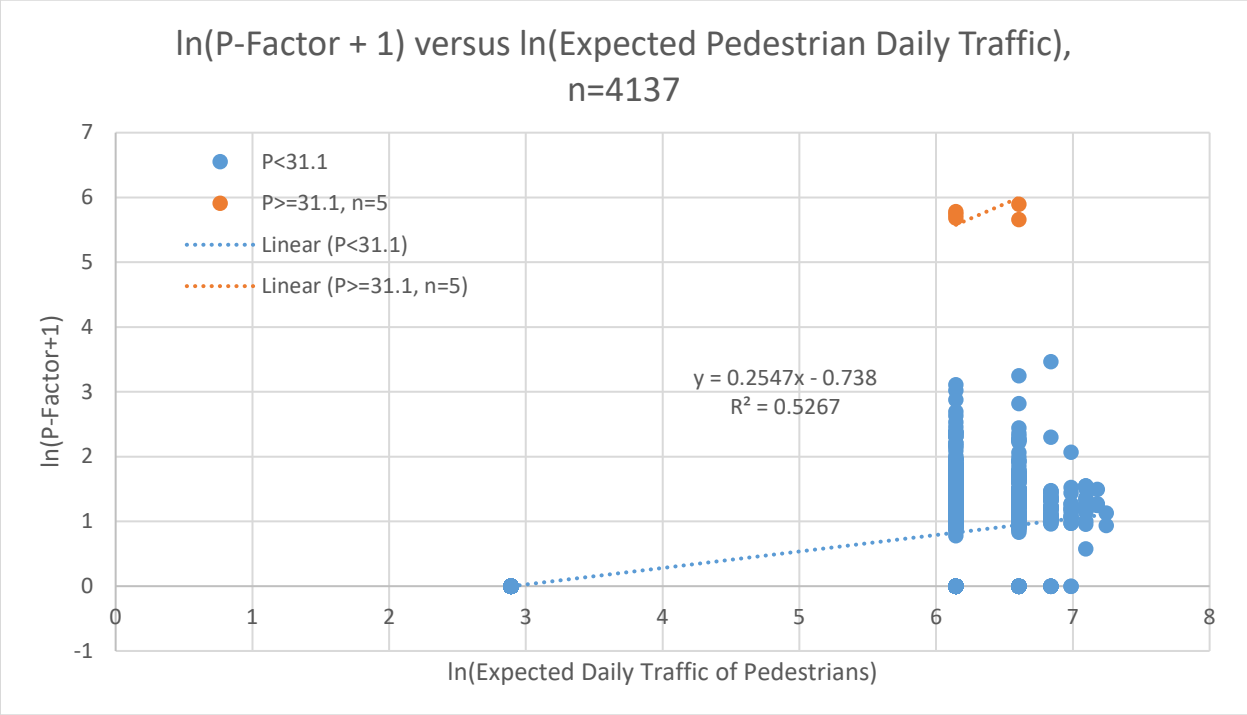


Figure 84. Graph. Relationship between p-factor and expected daily traffic of pedestrians in model 3.

An estimate of the P-Factor for use in Model 3 is produced from Figure 85:

$$Equation\ 3: P = EXP(0.2547 * ln(E[DTp]\ -\ 0.7380) - 1\ when\ (E[DTp] > = 19\ ped/day)\ AND\ ((Eqn\ 3\ P <= 31.14\ and\ Eqn\ 4\ P < = 31.14)\ or\ (Eqn\ 3\ P <= 31.14\ and\ Eqn\ 4\ P > 31.14)), R^2 = 0.53$$

$$Equation\ 4: P = EXP\big(0.9077 * ln(E[DTp])\big) - 1\ when\ (E[DTp] >= 19) AND\ (Eqn\ 3\ P > 31.14\ and\ Eqn\ 4\ P >\ 31.14), R^2 = 1.00$$

Figure 85. Graph. Estimation of p-factor for use in model 3.

where

- E[DTp] is expected daily traffic of pedestrians in ped/day, and
- P is estimated pedestrian P-Factor for the crossing.

Once a P-Factor is estimated for crossing records in the database, calibration and validation analyses can be performed. Using the calibration dataset, Model 3's ECFs are compared to their counterpart reported collision rates based on a five-year basis as shown in Figure 86.

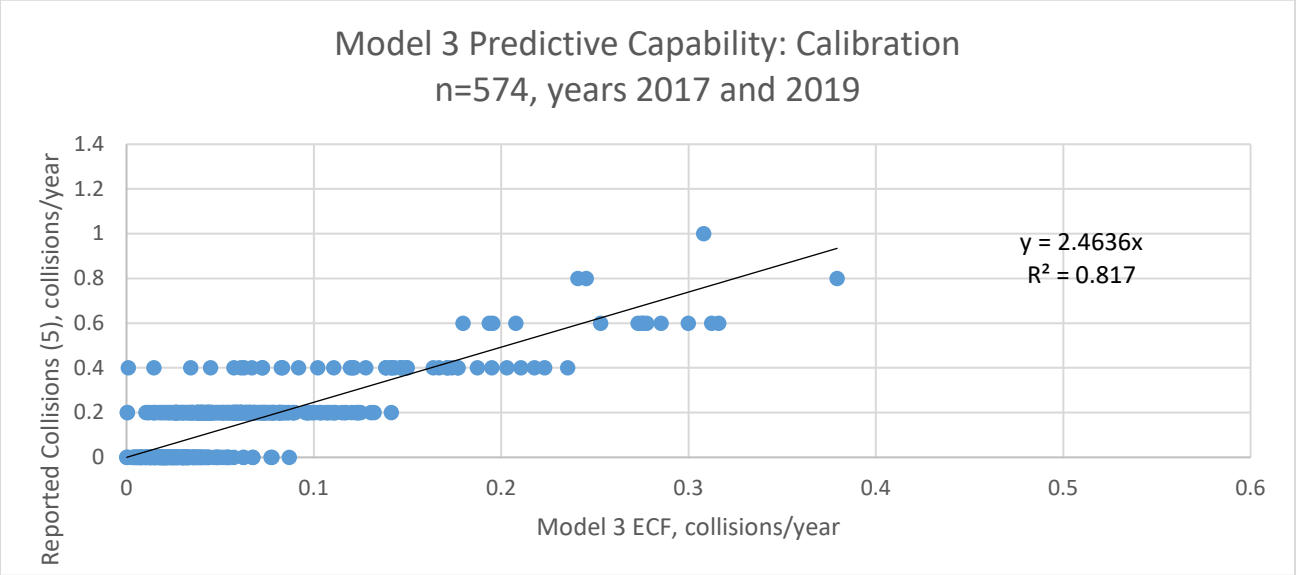


Figure 86. Graph. Model 3 predictive capability in calibration.

The equation of the best-fit line is as shown in Figure 87.

$$Reported\ Collision\ per\ year\ =\ 2.4636\ *\ (Model\ 3\ ECF), R^2 = 0.82$$

Figure 87. Equation. Reported collisions per year for model 3.

VALIDATION

Validation of Model 3 performance in predicting reported collision rates is based on year 2018 data. Figure 88 shows Model 3's predictive capability.

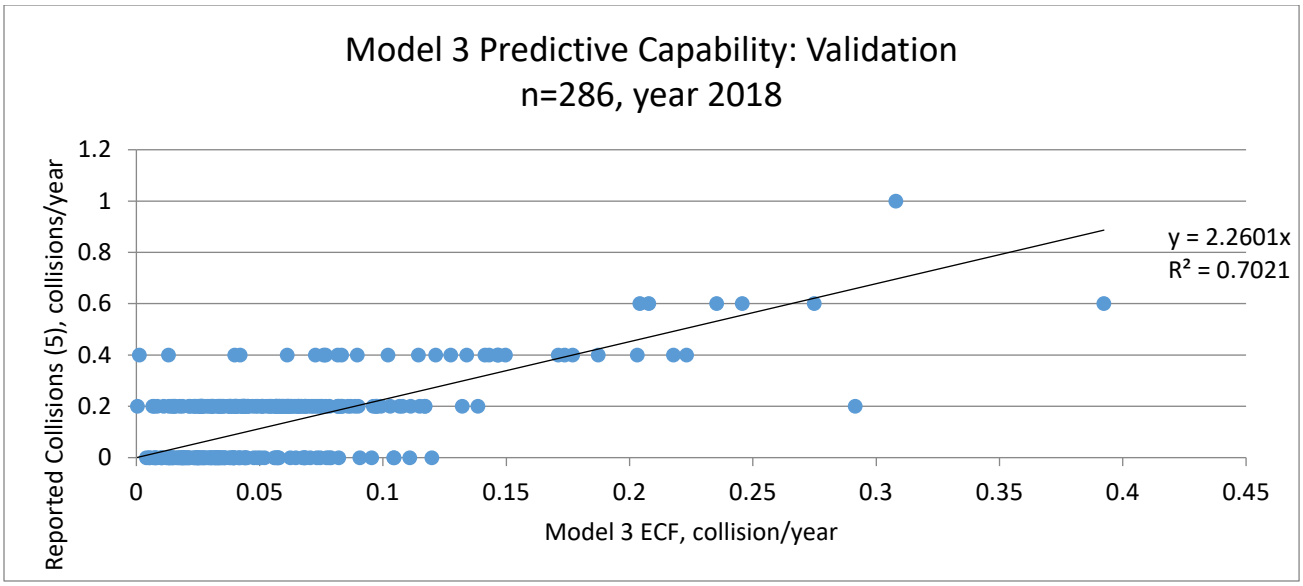


Figure 88. Graph. Model 3 predictive capability in validation.

The equation of the best-fit line is as shown in Figure 89.

$$Reported\ Collision\ per\ year = 2.2601 \times (Model\ 3\ ECF), R^2 = 0.70$$

Figure 89. Equation. Reported collision per year.

MODEL COMPARISON WITH EXISTING USDOT WBAPS MODEL

To evaluate USDOT WBAPS model's predicted collision rates with reported collision rates, a comparison between reported collision rates and the models' expected collision frequencies is made for the year 2018. The comparison can then look at the difference between the existing USDOT WBAPS model and Model 3 with its pedestrian factor. Assuming a P-Factor value of 1.00, i.e., the existing USDOT WBAPS model, Figure 90 illustrates the predictive capability of the existing USDOT WBAPS model for the year 2018.

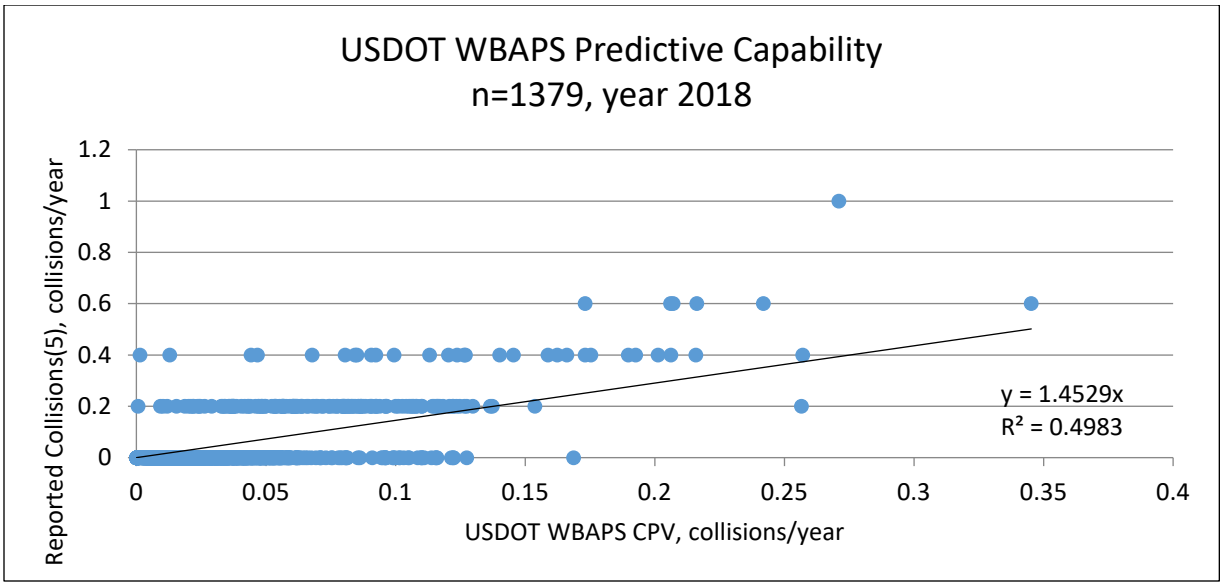


Figure 90. Graph. USDOT WBAPS model predictive capability.

The best fit line with no intercept through the points reveals an R^2=0.50. The predictive capabilities of Model 3 with USDOT WBAPS model capability are shown Table 14.

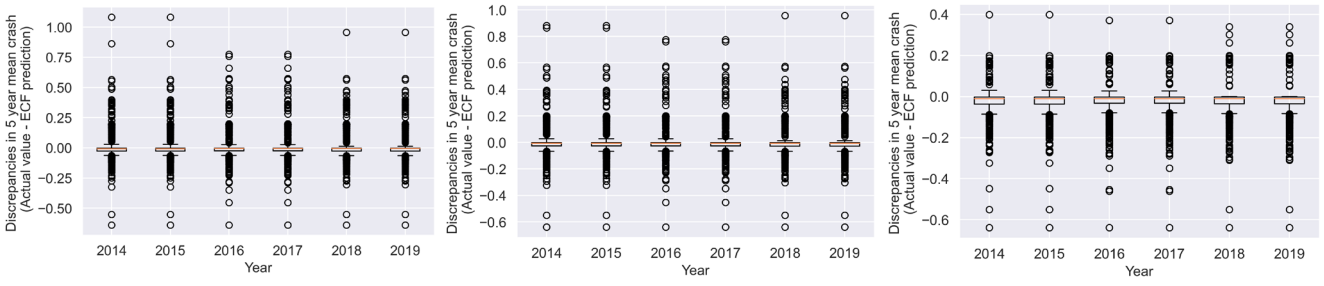
Table 14. Model Prediction Comparison with Reported Collision Rates

Statistic	Comparison of Total Collision per Year based on 5-years with:		
	Model 3 Calibration ECF	Model 3 Validation ECF	USDOT WBAPS CPV
r^2	0.82	0.70	0.50
slope, m	2.4636	2.2601	1.4529
intercept, b	0	0	0
n	574	286	1379

APPENDIX D: ADDITIONAL RESULTS OF THE PRELIMINARY ANALYSIS WITH EXTENDED DATA SAMPLE

Table 15. Nonparametric Statistical Results for 5-year Mean Collision Data

	Year	Kendall tau test		Spearman's correlation test	
		score	p-value	score	p-value
Auto+Ped	2014	0.21	0.00	0.25	0.00
	2015	0.21	0.00	0.25	0.00
	2016	0.17	0.00	0.21	0.00
	2017	0.17	0.00	0.21	0.00
	2018	0.15	0.00	0.18	0.00
	2019	0.15	0.00	0.18	0.00
Auto	2014	0.19	0.00	0.23	0.00
	2015	0.19	0.00	0.23	0.00
	2016	0.15	0.00	0.18	0.00
	2017	0.15	0.00	0.18	0.00
	2018	0.13	0.00	0.15	0.00
	2019	0.13	0.00	0.15	0.00
Ped	2014	0.12	0.00	0.15	0.00
	2015	0.12	0.00	0.15	0.00
	2016	0.09	0.00	0.11	0.00
	2017	0.09	0.00	0.11	0.00
	2018	0.08	0.00	0.10	0.00
	2019	0.08	0.00	0.10	0.00

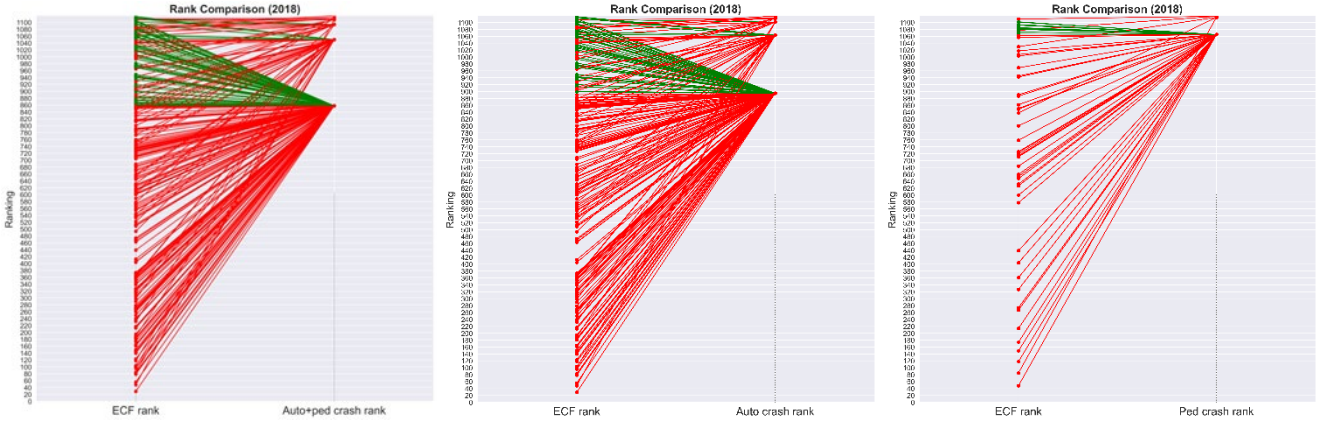


(a) Auto+ped (b) Auto only (c) Ped only

Figure 91. Box Plots. Yearly discrepancies for ECF model prediction for different collision types for 5-year time span.

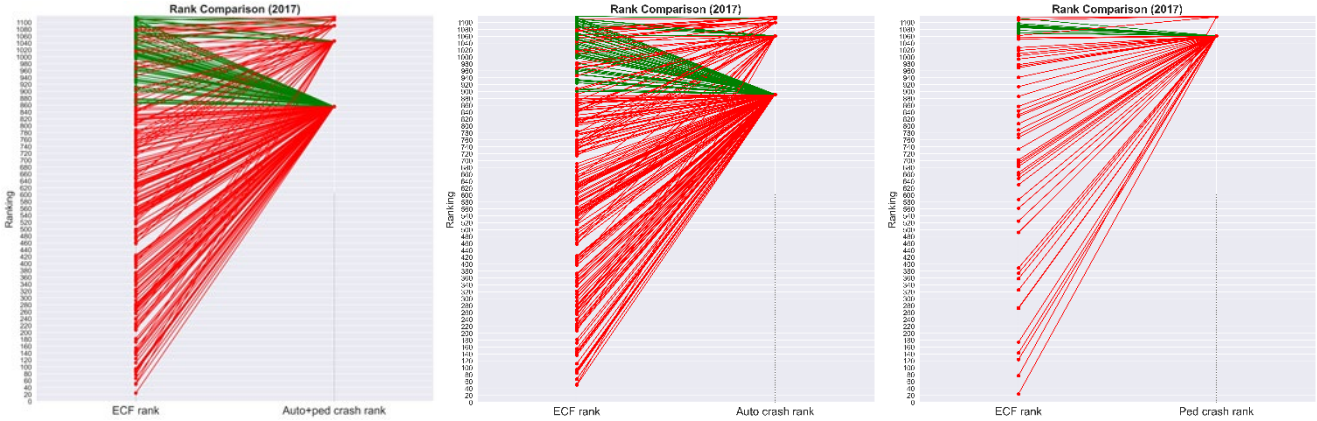
(a) Auto+ped (b) Auto only (c) Ped only

Figure 92. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2019 for the 10-year mean crash.



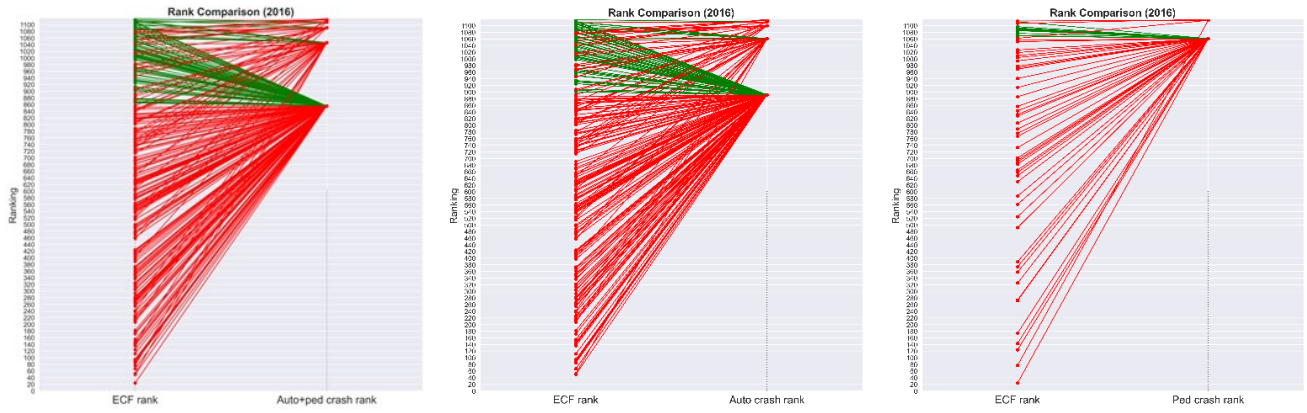
(a) Auto+ped (b) Auto only (c) Ped only

Figure 93. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2018 for the 10-year mean crash.



(a) Auto+ped (b) Auto only (c) Ped only

Figure 94. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2017 for the 10-year mean crash.

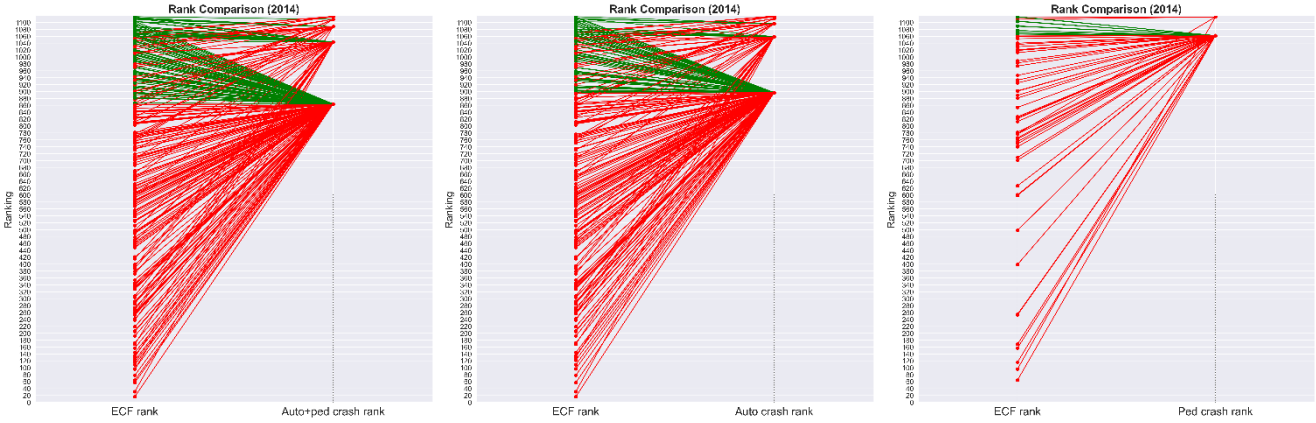


(a) Auto+ped (b) Auto only (c) Ped only

Figure 95. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2016 for the 10-year mean crash.

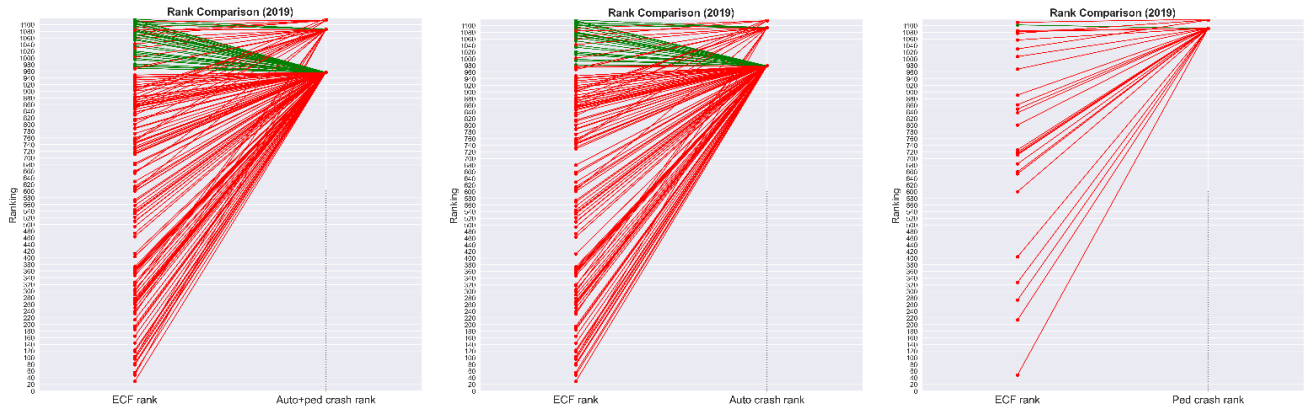
(a) Auto+ped (b) Auto only (c) Ped only

Figure 96. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2015 for the 10-year mean crash.



(a) Auto+ped (b) Auto only (c) Ped only

Figure 97. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2014 for the 10-year mean crash.



(a) Auto+ped (b) Auto only (c) Ped only

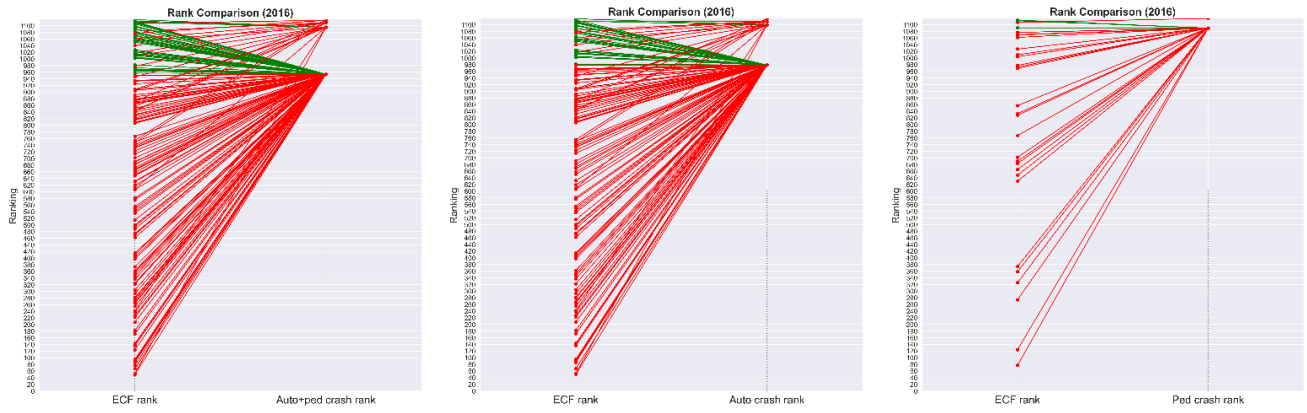
Figure 98. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2019 for the 5-year mean crash.

(a) Auto+ped (b) Auto only (c) Ped only

Figure 99. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2018 for the 5-year mean crash.

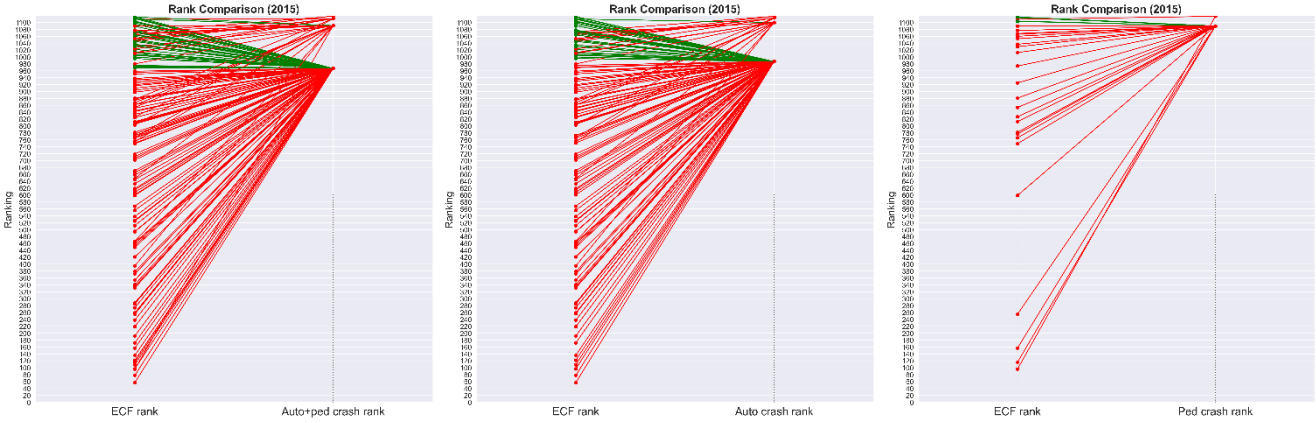
(a) Auto+ped (b) Auto only (c) Ped only

Figure 100. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2017 for the 5-year mean crash.



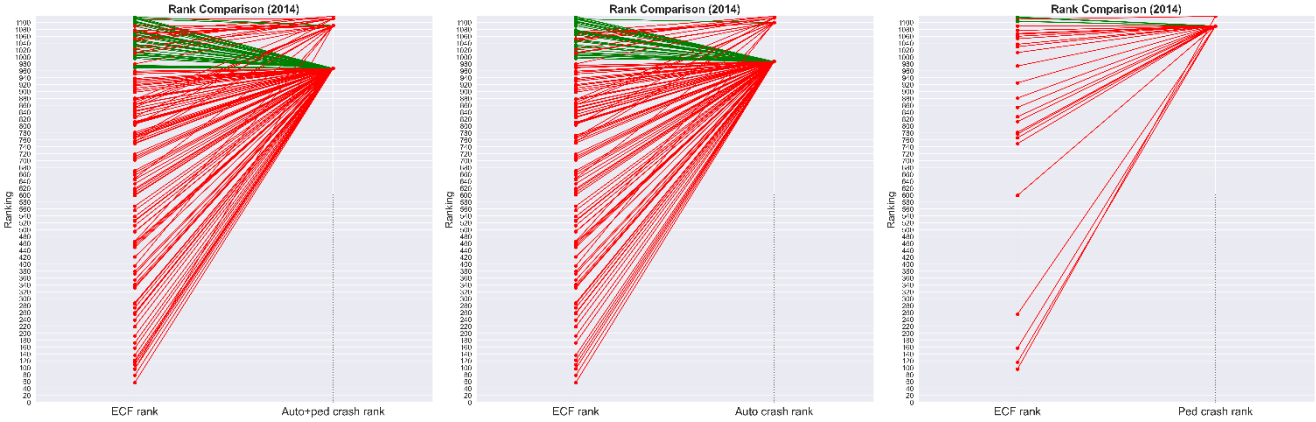
(a) Auto+ped (b) Auto only (c) Ped only

Figure 101. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2016 for the 10-year mean crash.



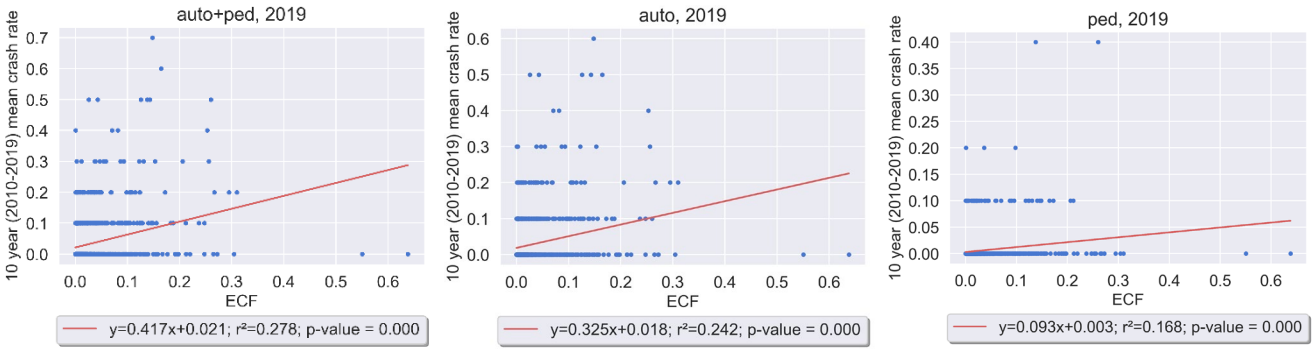
(a) Auto+ped (b) Auto only (c) Ped only

Figure 102. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2015 for the 5-year mean crash.



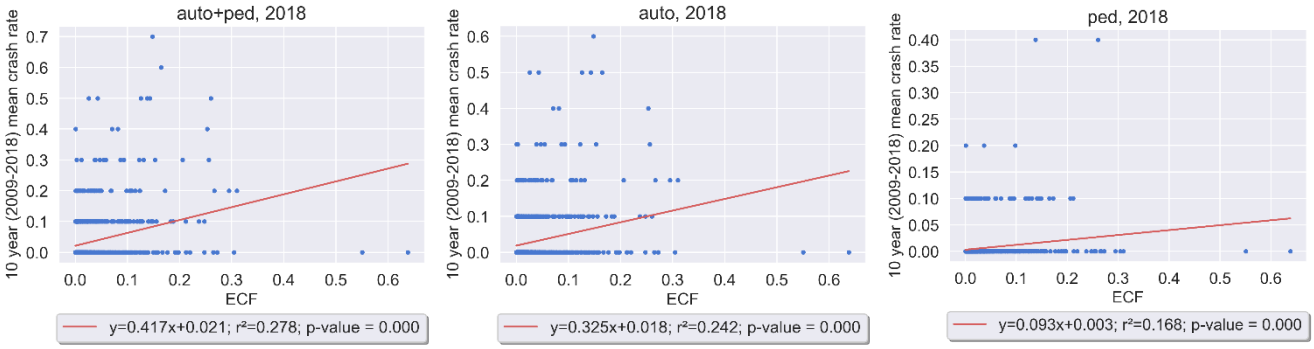
(a) Auto+ped (b) Auto only (c) Ped only

Figure 103. Rank comparison plots. Comparison between the ECF rank and crash rank for the analysis year 2014 for the 5-year mean crash.



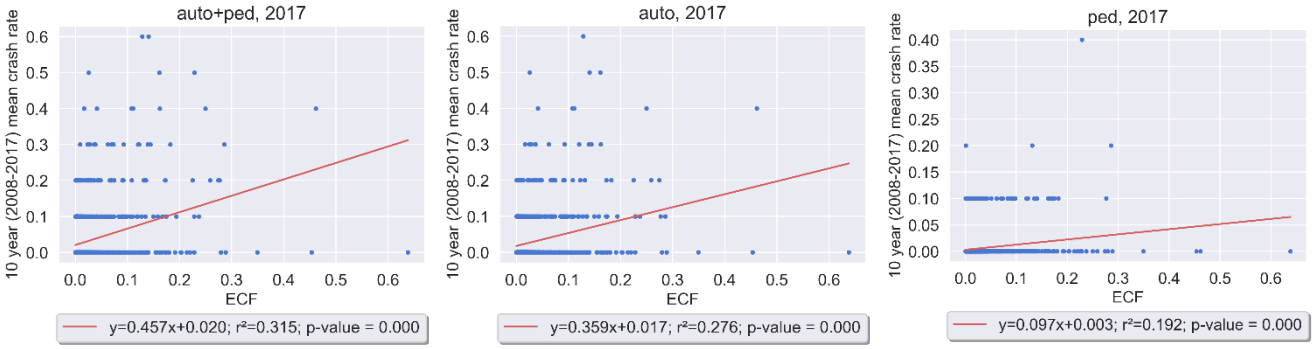
(a) Auto+ped (b) Auto only (c) Ped only

Figure 104. Regression plots. Regression between 10-year mean crash and ECF values for the analysis year 2019.



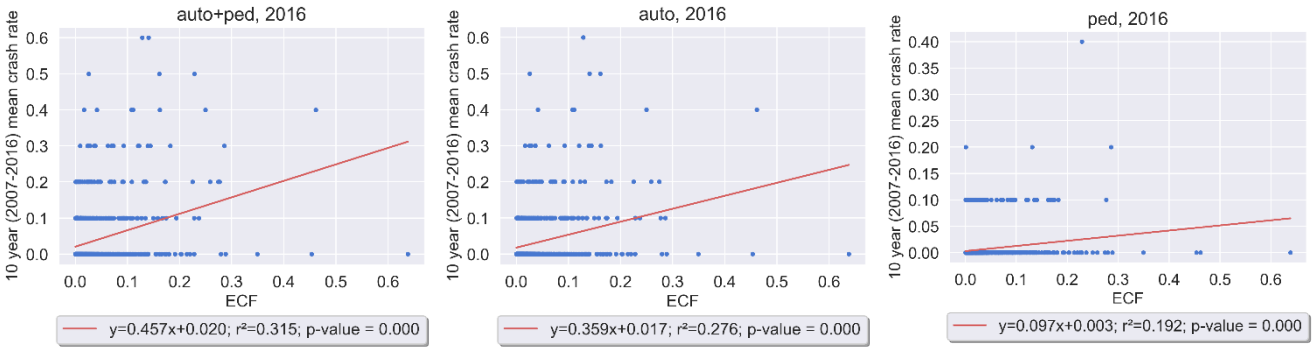
(a) Auto+ped (b) Auto only (c) Ped only

Figure 105. Regression plots. Regression between 10-year mean crash and ECF values for the analysis year 2018.



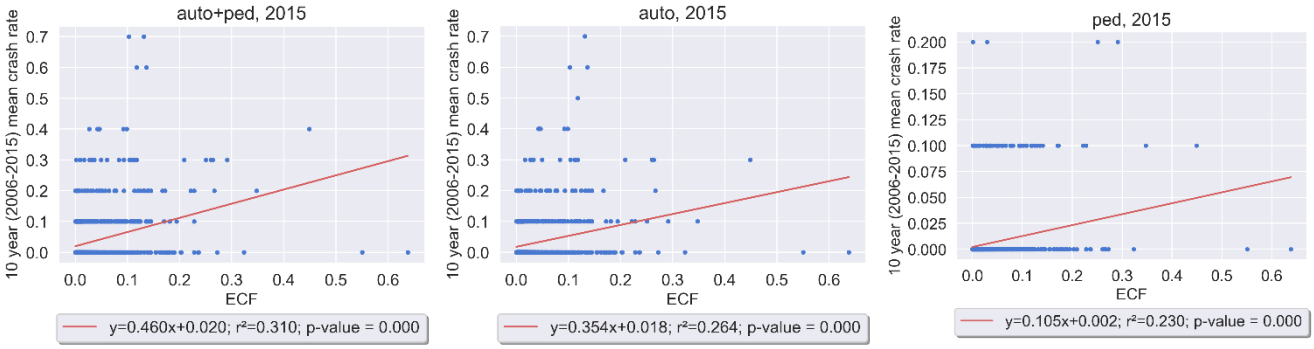
(a) Auto+ped (b) Auto only (c) Ped only

Figure 106. Regression plots. Regression between 10-year mean crash and ECF values for the analysis year 2017.



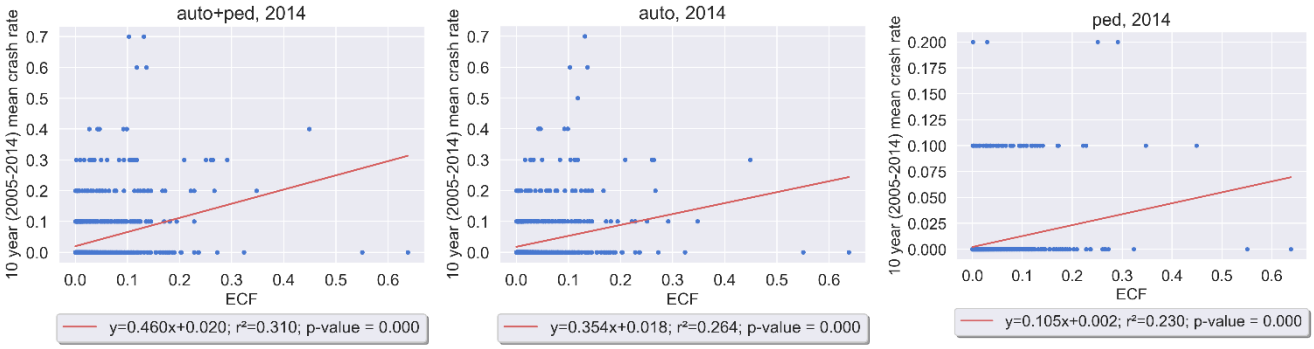
(a) Auto+ped (b) Auto only (c) Ped only

Figure 107. Regression plots. Regression between 10-year mean crash and ECF values for the analysis year 2016.



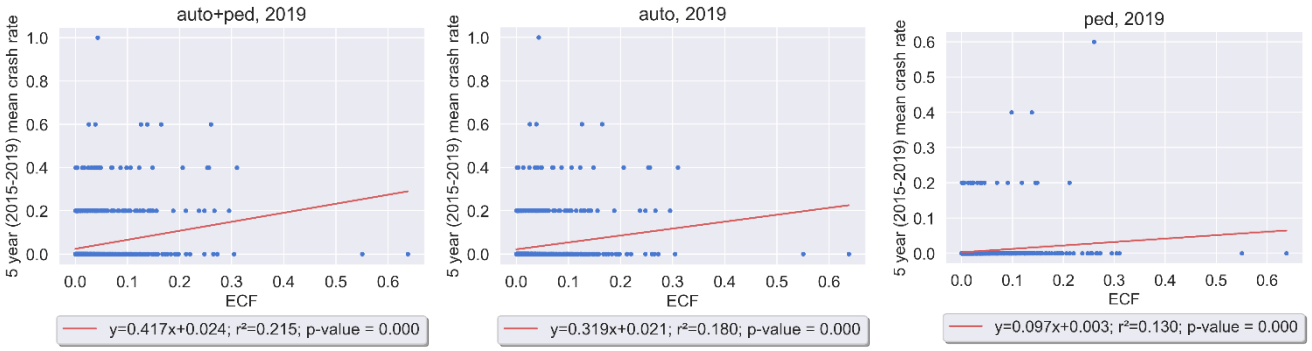
(a) Auto+ped (b) Auto only (c) Ped only

Figure 108. Regression plots. Regression between 10-year mean crash and ECF values for the analysis year 2015.



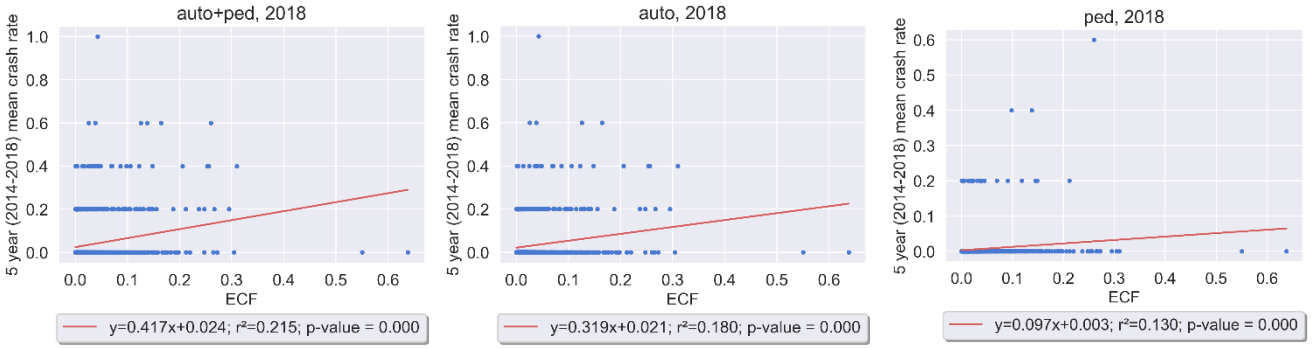
(a) Auto+ped (b) Auto only (c) Ped only

Figure 109. Regression plots. Regression between 1- year mean crash and ECF values for the analysis year 2014.



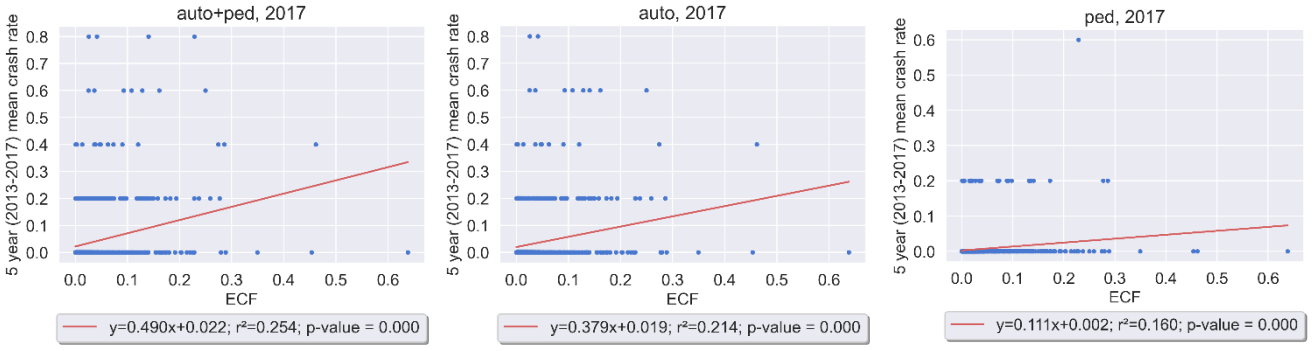
(a) Auto+ped (b) Auto only (c) Ped only

Figure 110. Regression plots. Regression between 5-year mean crash and ECF values for the analysis year 2019.



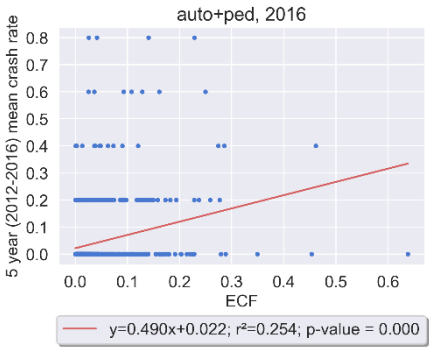
(a) Auto+ped (b) Auto only (c) Ped only

Figure 111. Regression plots. Regression between 5-year mean crash and ECF values for the analysis year 2018.

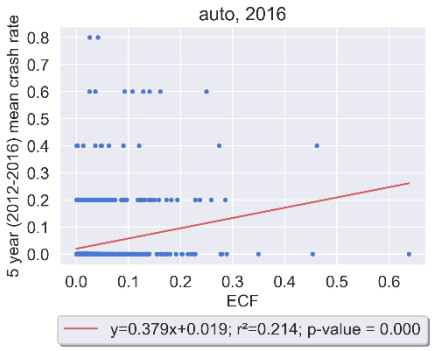


(a) Auto+ped (b) Auto only (c) Ped only

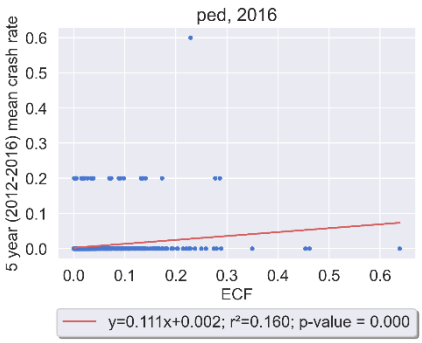
Figure 112. Regression plots. Regression between 5-year mean crash and ECF values for the analysis year 2017.



(a) Auto+ped

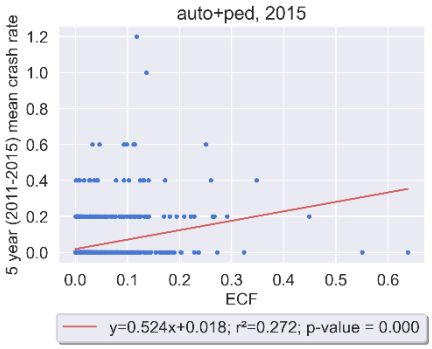


(b) Auto only

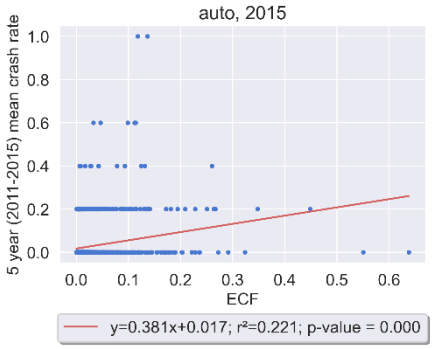


(c) Ped only

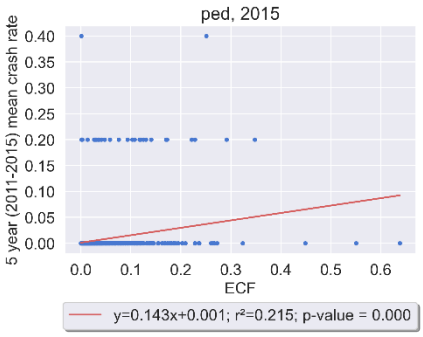
Figure 113. Regression plots. Regression between 5-year mean crash and ECF values for the analysis year 2016.



(a) Auto+ped

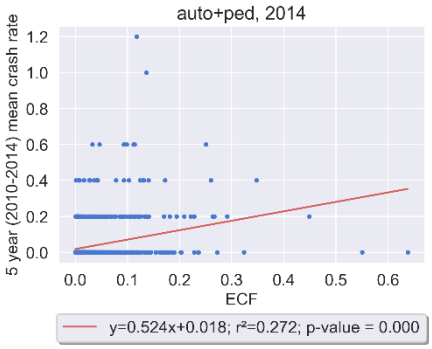


(b) Auto only

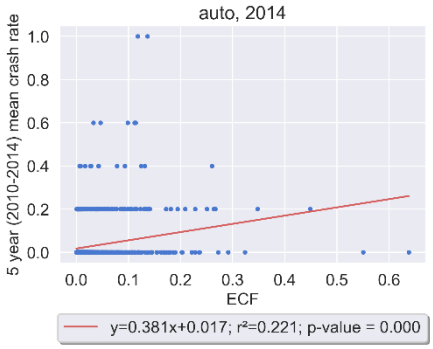


(c) Ped only

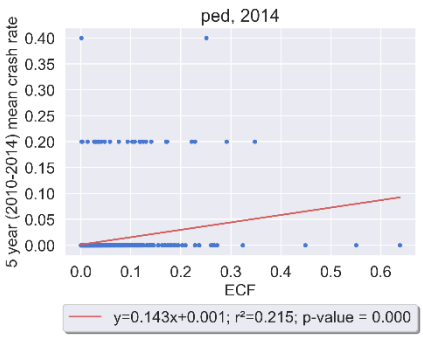
Figure 114. Regression plots. Regression between 5-year mean crash and ECF values for the analysis year 2015.



(a) Auto+ped



(b) Auto only



(c) Ped only

Figure 115. Regression plots. Regression between 5-year mean crash and ECF values for the analysis year 2014.

APPENDIX E: VIDEO ANALYSIS FOR PEDESTRIAN BEHAVIOR

INTRODUCTION

Along with the survey activities of the state DOTs and research coordinator community, research team conducted video monitoring of pedestrian and traffic at these crossing locations. The main purpose was to observe and understand (a) the factors affecting the pedestrian crossing behavior; (b) confirmation of circuitry activation at the crossings; (c) variation in pedestrian during a typical 24-hour weekday period by 15-minute intervals; and (d) the comparison of pre-COVID pandemic to COVID pandemic pedestrian counts at selected crossings.

Observing pedestrian activity at the crossings is time consuming process and can be done by computerized techniques (Lam, Lee, & Cheung, 2002; Sheikh, Zhai, Shafique, & Shah, 2004). In data collection, resource allocation constraints during field work did not allow us to fully automate data collection and processing. A realized benefit in using "trained eyes" to assist the data processing was that it allowed us to customize the collection of information with attributes unlikely to have been discerned by existing computer algorithms.

DATA COLLECTION

The research team conducted traffic counts of pedestrians for a 24-hour weekday period at ten selected crossing locations identified by the TRP. The purpose of this experiment was to determine the pedestrian exposure at these site locations. At each crossing site, the research team used a time-lapse video camera to collect the 24-hour video at 3-second time steps of pedestrian traffic on weekdays. At each crossing, the camera's field of view encompassed all approaches to the crossing location. The camera was portable enough to fit in a car and set up by at least one person at the location. As a result, video data from ten selected crossing locations for ten full days were recorded for screening in a controlled environment.

The camera was mounted on either stop sign or tree or road sign which were available at least 150 feet (50m) away from these crossing locations. Criteria for a suitable camera location included the potential to capture higher pedestrian activity and likely directional flow patterns of pedestrians. The ten crossing sites' USDOT identification, location, and data collection dates and times are listed in Table 16.

Data Screening

The data recorded with the video camera at these ten selected crossing locations is then transferred to the computer for further processing. The time lapse video was replayed in slow motion using camera software to count the pedestrians crossing the railroad tracks in both directions. Two research aides viewed the ten videos separately and tallied crossing pedestrians in each crossing direction using tally sheets. A blank tally sheet is shown in Appendix A. After tallying ten crossings independently, one research aide was assigned five of ten sites for quality control (QC) while the other research aide was assigned the remaining five sites for QC. In performing QC, each research

aide compared his or hers tally sheets to the other research aide's tally sheets and corrected any pedestrian count discrepancy per 15-minute interval by re-reviewing the videos. In this QC process, pedestrian count errors per 15-minute interval are minimized. With the corrected tally sheets, the research aide transcribed the adjusted pedestrian counts into a spreadsheet for further processing. The final QC spreadsheets for the ten sites are in Appendix B.

Table 16. Video Data Collection

DOT ID #	TRP Keep 10	STREET	CITY	Date Begun	Time Begun	Date Ended	Time Ended
079493L*	Keep	HARLEM AVENUE, IL43, south of 31st St	RIVERSIDE	Tuesday, 2 November 2021	10:45 AM	Wednesday, 3 November 2021	10:45 AM
079508Y*	Keep	LA GRANGE ROAD, US12, south of US34 (Ogden Ave)	LAGRANGE	Thursday, 14 October 2021	11:15 AM	Friday, 15 October 2021	11:15 AM
173887G*	Keep	N NAGLE AVENUE south of Northwest Hwy	CHICAGO	Thursday, 28 October 2021	9:45 AM	Friday, 29 October 2021	9:45 AM
174924K	Keep	S WEST STREET north of Roosevelt Rd (IL38)	WHEATON	Tuesday, 9 November 2021	12:15 PM	Wednesday, 10 November 2021	12:15 PM
174948Y*	Keep	N PARK BLVD south of St Charles Rd	GLEN ELLYN	Tuesday, 19 October 2021	10:15 AM	Wednesday, 20 October 2021	10:15 AM
372126H	Keep	N HARLEM AVENUE, IL43, south of Grand Ave	CHICAGO	Tuesday, 9 November 2021	11:00 AM	Wednesday, 10 November 2021	11:00 AM
372196X	Keep	ROSELLE ROAD south of Irving Pk (IL19)	ROSELLE	Thursday, 4 November 2021	11:15 AM	Friday, 5 November 2021	11:15 AM
388040W*	Keep	OSTERMAN AVENUE east of Waukegan Rd (IL43)	DEERFIELD	Thursday, 21 October 2021	1:15 PM	Friday, 22 October 2021	1:15 PM
840136F	Keep	W 115TH STREET west of I94	CHICAGO	Thursday, 11 November 2021	11:30 AM	Friday, 12 November 2021	11:30 AM
840147T^	Keep	LINCOLN AVENUE west of Forest Ave	DOLTON	Tuesday, 26 October 2021	11:00 AM	Wednesday, 27 October 2021	11:00 AM

Legend:

Railroad Crossing IDs marked with * were part of 2013 study (Metaxatos & Sriraj, 2013).

Railroad Crossing IDs marked with ^ were part of Dolton Riverdale Study (Sriraj & Fazio, 2020).

Collected

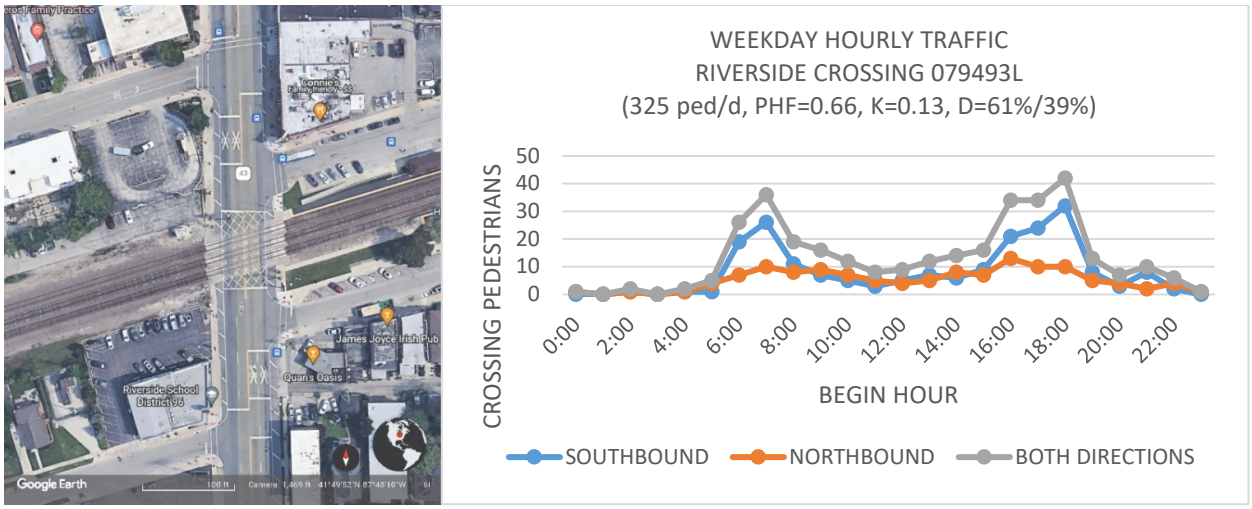
PEDESTRIAN ENUMERATION RESULTS

Important parameters that quantify daily traffic are PHF, K, and D. PHF is the peak hour factor based on 15 -minute intervals. PHF = (peak hour volume)/(4*maximum peak hour 15-minute count). K is the K-factor. K= (peak hour volume)/(daily traffic volume). The directional split of traffic is D. D=(major movement proportion)/(minor movement proportion).

RIVERSIDE At-Grade Railroad-Highway Crossing, AAR#079493L

The Riverside site is located on Harlem Ave, i.e., IL 43 between Stanley Ave. and Windsor Ave. The crossing is formed when three main tracks traverse four main traffic lanes as shown in Figure 116(a). Land use in the immediate area primarily consists of Metra parking, Riverside School District 96, and commercial businesses.

The Riverside crossing has a pedestrian weekday daily traffic of 325 ped/d. The pedestrian peak hour occurs between 6:00 p.m. and 7:00 p.m. The pedestrian peak hour factor, i.e., PHF is 0.66. The proportion of pedestrian peak hour traffic in daily traffic, i.e., K, is 0.13. The direction split, i.e., D, of pedestrian weekday traffic is 61% southbound and 39% northbound. A Metra station is situated on the northeast side of the crossing with general commercial land use that results in heavy southbound pedestrian weekday traffic in morning and evening peaks. Returning northbound pedestrian traffic probably returns using different modes or via a different route. Figure 116(b) illustrates hourly pedestrian counts through the 24-hour period.



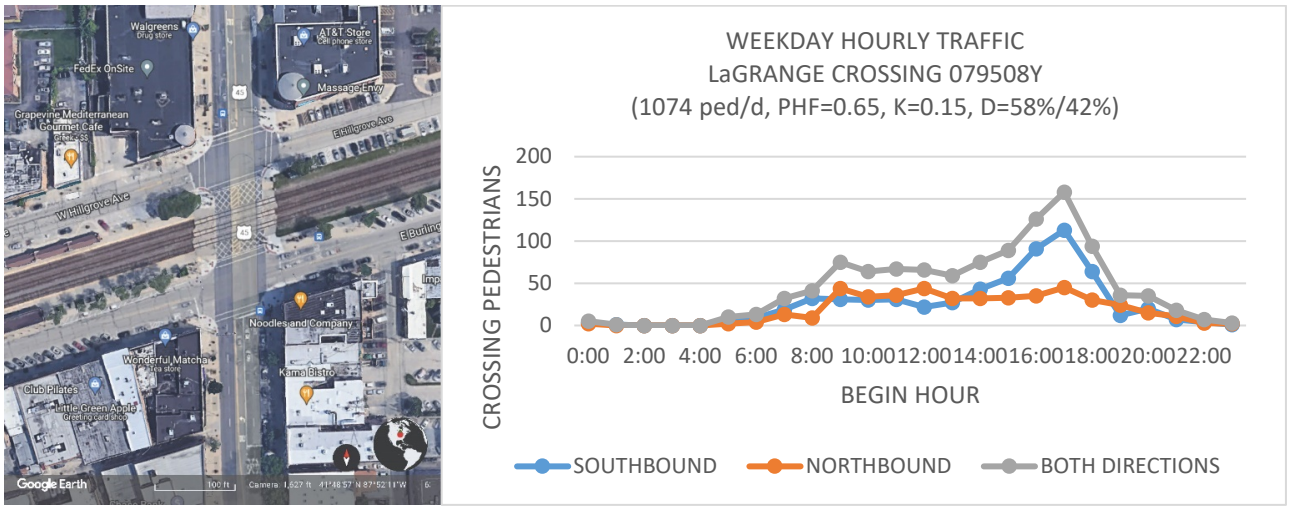
(a) (b)

Figure 116. Photo and graph. Riverside at-grade railroad-highway crossing and daily traffic.

LA GRANGE At-Grade Railroad-Highway Crossing, AAR#079508Y

The location of the La Grange site is on La Grange Rd., i.e., US 45/US 20/US 12, between Hillgrove Ave. and Burlington Ave. Three main tracks that traverse five highway lanes form the crossing as shown in Figure 117(a). Metra parking and commercial businesses primarily comprise the land use in the immediate area.

The La Grange crossing weekday pedestrian daily traffic is 1074 ped/d. The pedestrian peak hour occurs between 4:45 p.m. and 5:45 p.m. The pedestrian PHF(15) is 0.65. The pedestrian K-factor is 0.15. The D-factor of pedestrian weekday traffic is 58% southbound and 42% northbound. The hourly pedestrian counts through the 24-hour period are shown in Figure 117(b).



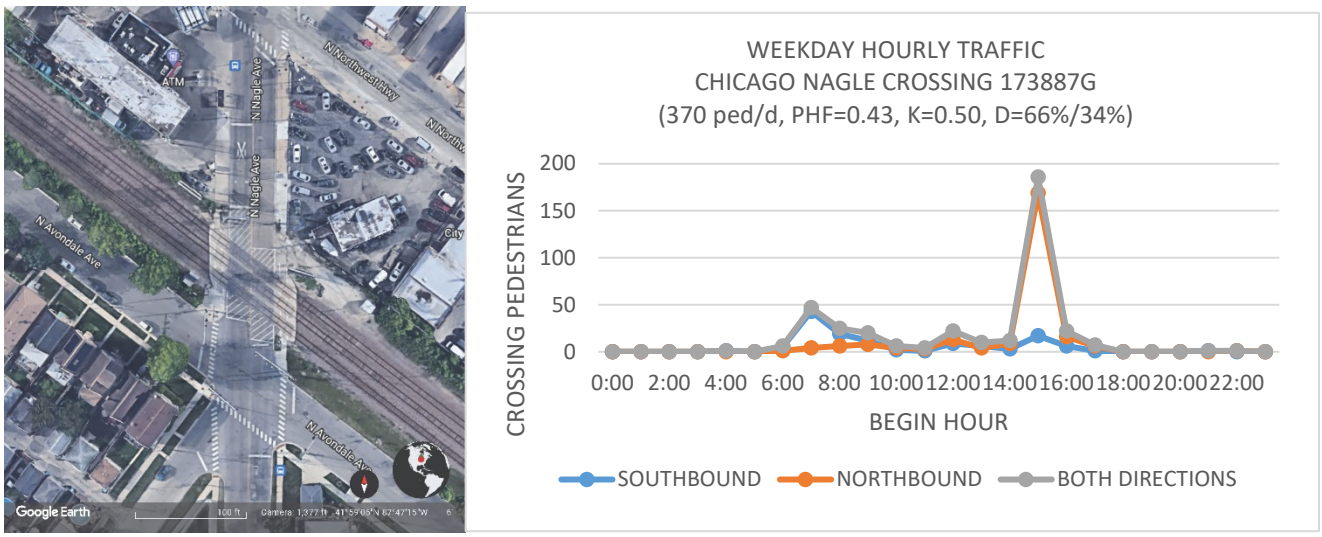
(a) (b)

Figure 117. Photo and graph. La Grange at-grade railroad-highway crossing and daily traffic.

CHICAGO - NAGLE At-Grade Railroad-Highway Crossing, AAR#173887G

The Chicago - Nagle site is located on Nagle Ave. between Northwest Hwy. and Avondale Ave. The crossing is formed when three main tracks traverse four traffic lanes as shown in Figure 118(a). Land use in the immediate area primarily consists of residential houses, Taft Chicago public high school, and commercial businesses.

The Chicago - Nagle crossing has a pedestrian weekday daily traffic of 370 ped/d. The pedestrian peak hour occurs between 3:00 p.m. and 4:00 p.m. The pedestrian peak hour factor is 0.43. The proportion of pedestrian peak hour traffic in daily traffic is 0.50. The direction split of pedestrian weekday traffic is 66% northbound and 34% southbound. The high northbound directional split occurs because the nearby Taft High School dismisses students at the end of the day, and students walk northbound to catch a CTA bus and beyond. In the morning peak, students probably are being dropped off with personal motor vehicles. Figure 118(b) illustrates hourly pedestrian counts through the 24-hour period.



(a) (b)

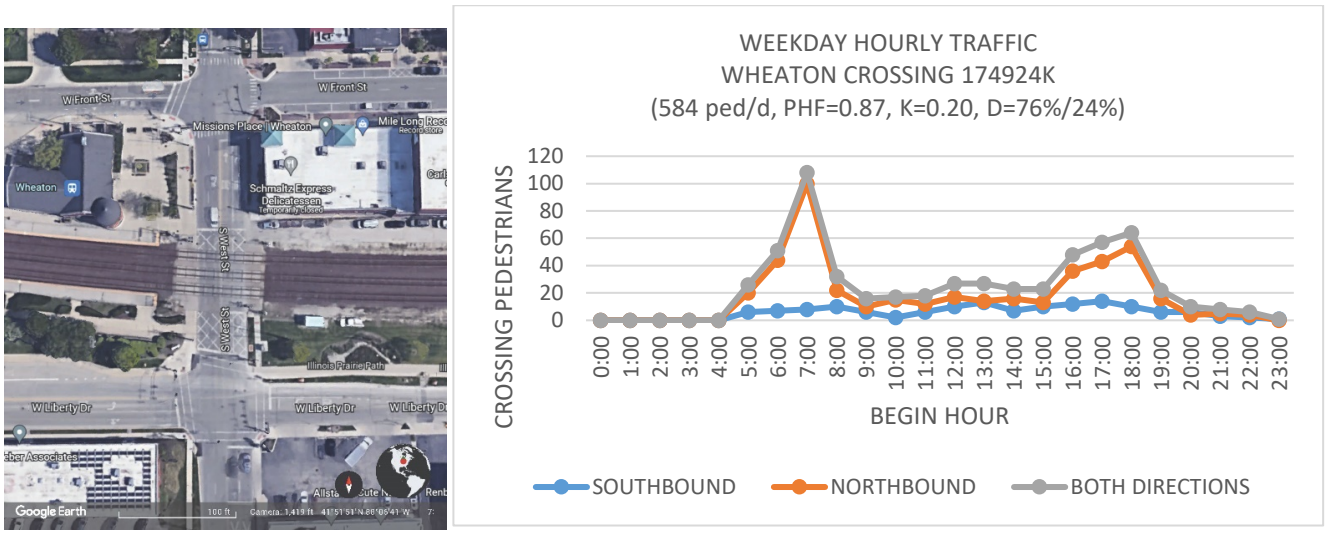
Figure 118. Photo and graph. Chicago–Nagle at-grade railroad-highway crossing and daily traffic.

WHEATON At-Grade Railroad-Highway Crossing, AAR#174924K

The location of the Wheaton site is on West St. between Front St. and Liberty Dr. Three main tracks that traverse four street lanes form the crossing as shown in Figure 119(a). Some Metra parking and commercial businesses primarily comprise the land use in the immediate area.

The Wheaton crossing weekday pedestrian daily traffic is 584 ped/d. The pedestrian peak hour occurs between 6:45 p.m. and 7:45 p.m. The pedestrian peak hour factor is 0.87. The pedestrian K-factor is 0.20. The D-factor of pedestrian weekday traffic is 76% northbound and 24% southbound. The lopsided directional split is probably due to unique land use of the area and the close proximity of other at-grade crossings. South of the crossing is predominantly residential while north has a Metra

station and downtown Wheaton. The crossing has heavy northbound pedestrian traffic in morning and evening weekday peaks. Due to the nearby Wheaton Ave., Hale St., Main St. and Cross St. at-grade crossing, southbound pedestrian traffic is probably use these crossing as alternative return routes. The hourly pedestrian counts through the 24-hour period are shown in Figure 119(b).



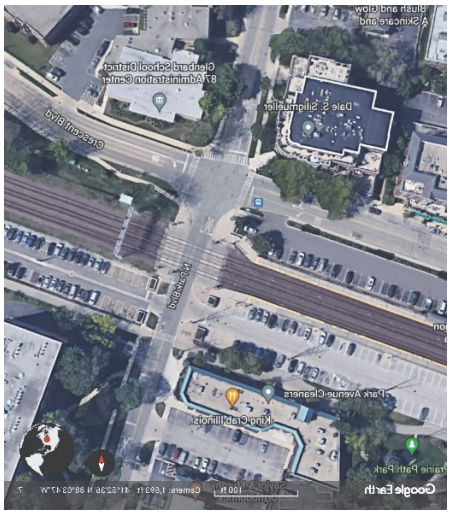
(a) (b)

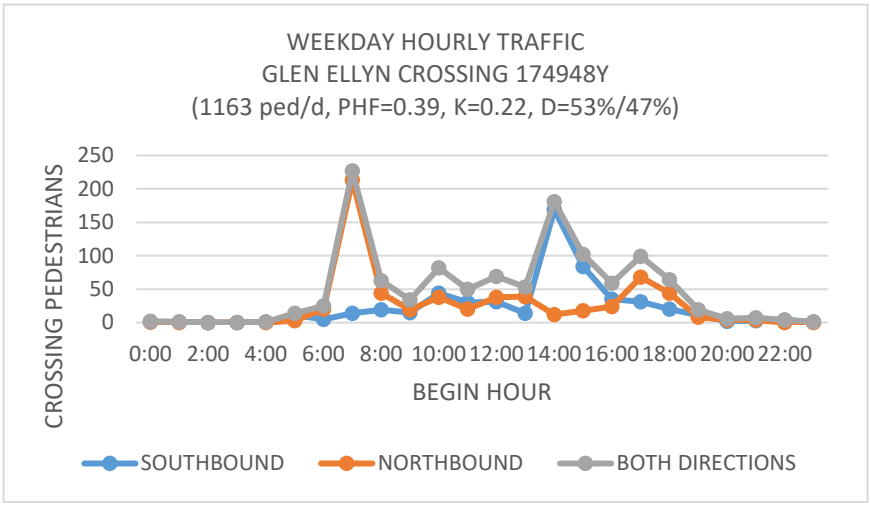
Figure 119. Photo and graph. Wheaton at-grade railroad-highway crossing and daily traffic.

GLEN ELLYN At-Grade Railroad-Highway Crossing, AAR#174948Y

The Glen Ellyn site is located on Park Blvd. between Crescent Blvd. and Illinois Prairie Path Main Stem. The crossing is formed when three main tracks traverse two traffic lanes as shown in Figure 120(a). Land use in the immediate area primarily consists of Glenbard School District 87 Administration Center, some commercial businesses, and a Metra station with parking.

The Glen Ellyn crossing has a pedestrian weekday daily traffic of 1163 ped/d. The pedestrian peak hour occurs between 2:45 p.m. and 3.45 p.m. The pedestrian peak hour factor is 0.39. The proportion of pedestrian peak hour traffic in daily traffic is 0.22. The direction split of pedestrian weekday traffic is 53% northbound and 47% southbound. Figure 120(b) illustrates hourly pedestrian counts through the 24-hour period.





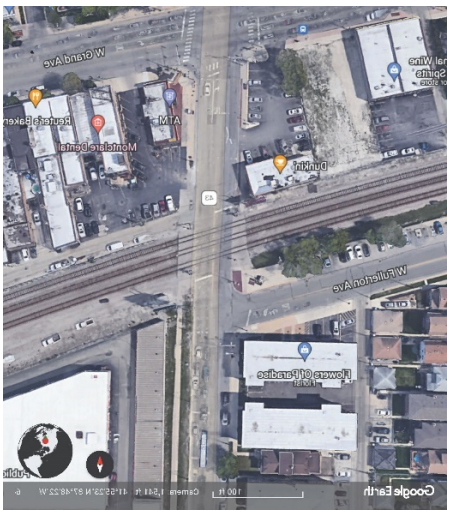
(a) (b)

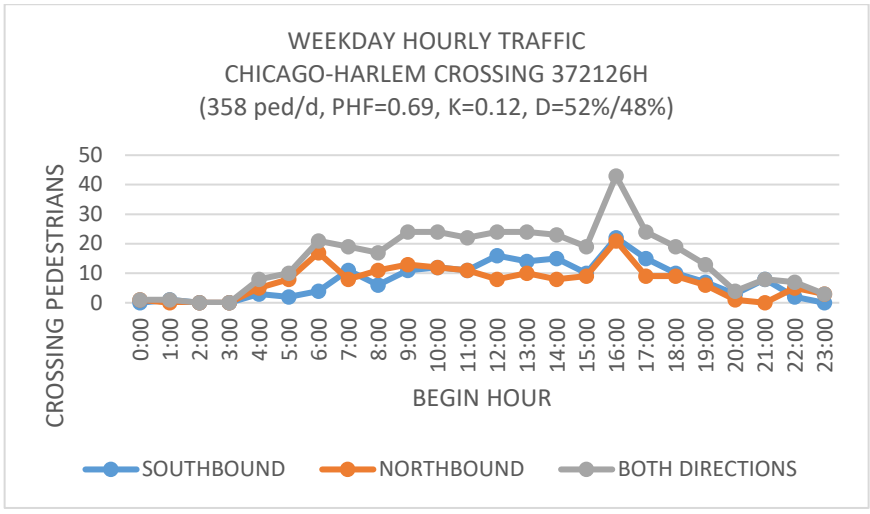
Figure 120. Photo and graph. Glen Ellyn at-grade railroad-highway crossing and daily traffic.

CHICAGO - HARLEM At-Grade Railroad-Highway Crossing, AAR#372126H

The location of the Chicago - Harlem site is on Harlem Ave., i.e., IL 43, between Grand Ave. and Fullerton Ave. Three main tracks that traverse four street lanes form the crossing as shown in Figure 121(a). Commercial businesses, residential housing, and some Metra parking primarily comprise the land use in the immediate area.

The Chicago - Harlem crossing weekday pedestrian daily traffic is 358 ped/d. The pedestrian peak hour occurs between 4:15 p.m. and 5:15 p.m. The pedestrian peak hour factor is 0.69. The pedestrian K-factor is 0.12. The D-factor of pedestrian weekday traffic is 51% southbound and 49% northbound. The hourly pedestrian counts through the 24-hour period are shown in Figure 121(a).





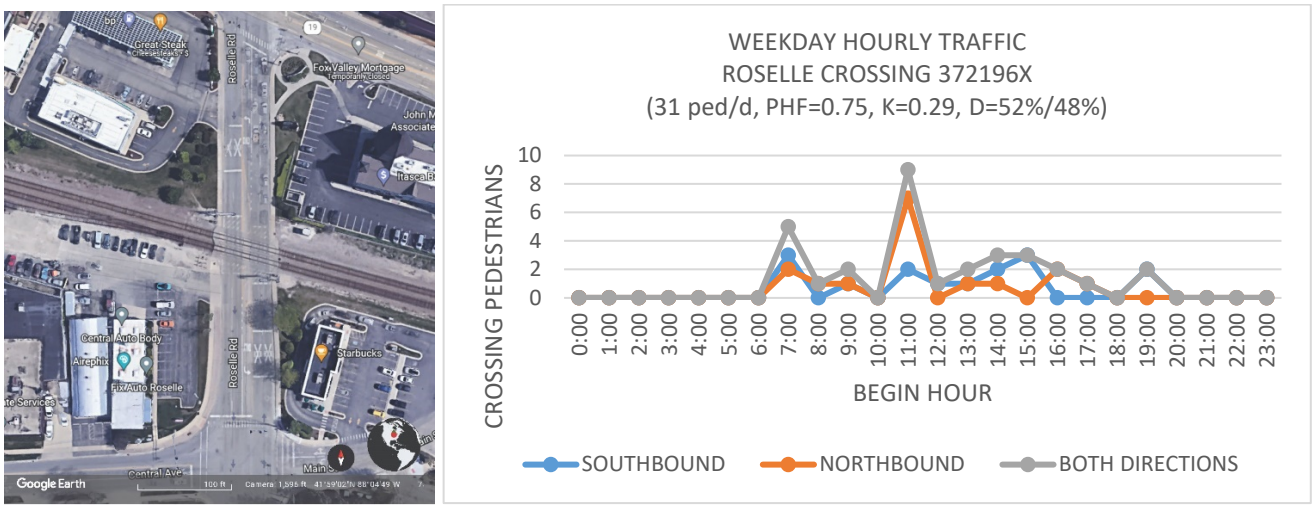
(a) (b)

Figure 121. Photo and graph. Chicago–Harlem at-grade railroad-highway crossing and daily traffic.

ROSELLE At-Grade Railroad-Highway Crossing, AAR#372196X

The Roselle site is located on Roselle Rd. between Irving Park Rd., i.e., IL 19, and Central Ave. The crossing is formed when two main tracks traverse five highway lanes as shown in Figure 122(a). Land use in the immediate area primarily consists of commercial businesses and some residential houses.

The Roselle crossing has a pedestrian weekday daily traffic of 31 ped/d. The pedestrian peak hour occurs between 11:00 a.m. and 12:00 p.m. The pedestrian peak hour factor is 0.75. The proportion of pedestrian peak hour traffic in daily traffic is 0.29. The direction split of pedestrian weekday traffic is 52% northbound and 48% southbound. Figure 122(b) illustrates hourly pedestrian counts through the 24-hour period.



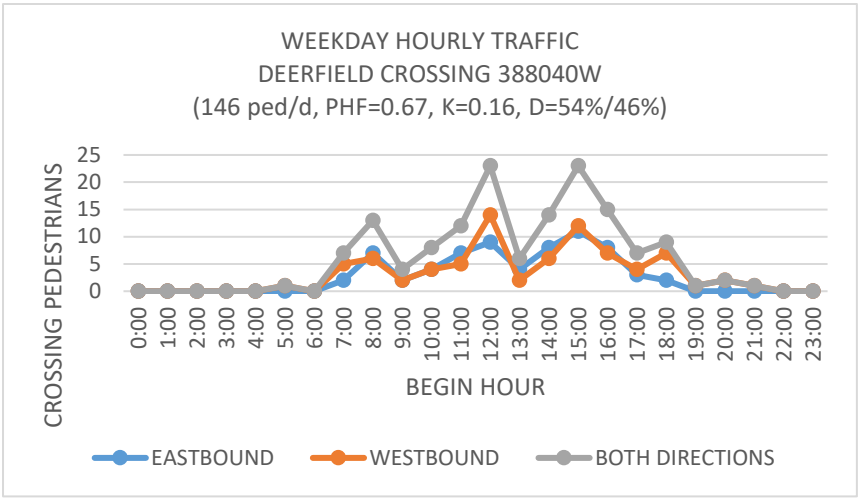
(a) (b)

Figure 122. Photo and graph. Roselle at-grade railroad-highway crossing and daily traffic.

DEERFIELD At-Grade Railroad-Highway Crossing, AAR#388040W

The location of the Deerfield site is on Osterman Ave. between Elm St. and Robert York Ave. Three main tracks that traverse two street lanes form the crossing as shown in Figure 123(a). Residential housing and Metra parking primarily comprise the land use in the immediate area.

The Deerfield crossing weekday pedestrian daily traffic is 146 ped/d. The pedestrian peak hour occurs between 2:30 p.m. and 3:30 p.m. The pedestrian peak hour factor is 0.67. The pedestrian K-factor is 0.16. The D-factor of pedestrian weekday traffic is 54% westbound and 46% eastbound. The hourly pedestrian counts through the 24-hour period are shown in Figure 123(b).



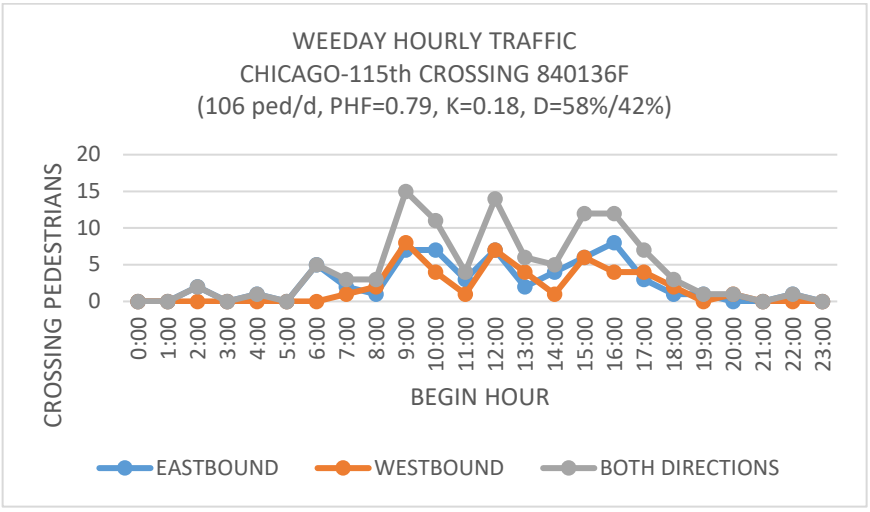
(a) (b)

Figure 123. Photo and graph. Deerfield at-grade railroad-highway crossing and daily traffic.

CHICAGO – 115TH At-Grade Railroad-Highway Crossing, AAR#840136F

The Chicago -115th site is located on 115th St. between Perry Ave. and 1st St. The crossing is formed when two main tracks traverse four highway lanes as shown in Figure 124(a). Land use in the immediate area primarily consists of residential house and some commercial businesses.

The Chicago – 115th crossing has a pedestrian weekday daily traffic of 106 ped/d. The pedestrian peak hour occurs between 3:30 p.m. and 4:30 p.m. The pedestrian peak hour factor is 0.79. The proportion of pedestrian peak hour traffic in daily traffic is 0.18. The direction split of pedestrian weekday traffic is 58% eastbound and 42% westbound. Figure 124(b) illustrates hourly pedestrian counts through the 24-hour period.



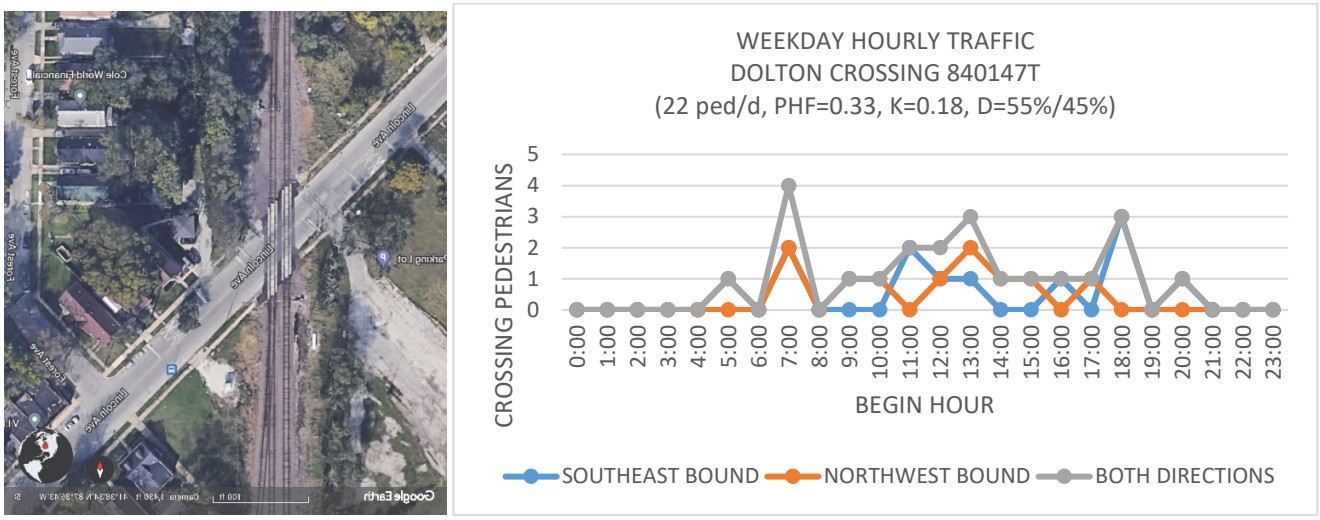
(a) (b)

Figure 124. Photo and graph. Chicago–115th at-grade railroad-highway crossing and daily traffic.

DOLTON At-Grade Railroad-Highway Crossing, AAR#840147T

The location of the Dolton site is on Lincoln Ave. between 138th St. and Forest Ave. Two main tracks that traverse four street lanes form the crossing as shown in Figure 125(a). Residential housing and a park primarily comprise the land use in the immediate area.

The Dolton crossing weekday pedestrian daily traffic is 22 ped/d. The pedestrian peak hour occurs between 6:45 a.m. and 7:45 a.m. The pedestrian peak hour factor is 0.33. The pedestrian K-factor is 0.18. The D-factor of pedestrian weekday traffic is 55% southeast bound and 45% northwest bound. The hourly pedestrian counts through the 24-hour period are shown in Figure 125(b).



(a) (b)

Figure 125. Photo and graph. Dolton at-grade railroad-highway crossing and daily traffic.

PRE-COVID PANDEMIC COMPARISON

The effects of the COVID-19 pandemic on U.S.A. pedestrian behavior significantly began in April 2020; early reports of cases came from the Peoples Republic of China in December 2019. Prior to this time, the research team collected pedestrian video data at railroad crossings from previous studies during 2013 and October/November 2019 (Metaxatos and Sriraj, 2013; Sriraj and Fazio, 2020). Six of ten sites were part of previous studies; this overlap allowed a comparison of pre-COVID pedestrian behavior to pedestrian behavior at the six crossings in October/November 2021.

The results of the pre-COVID pandemic comparison are shown in Table 17. In four of the six sites, pedestrian weekday daily traffic decreased between 16% and 56% at crossings with nearby Metra commuter rail stations. The only exception being the Glen Ellyn station at 0% change. This exception could be because of major land use development at this location during the prior years since the 2013 pedestrian count that generated increases in foot traffic. The Dolton crossing also showed no significant decrease primarily because it is in a residential area with no nearby Metra station, only PACE suburban bus stations; PACE did not decrease its bus operations during the pandemic.

Table 17. Pedestrian Daily Traffic Comparison between Pre-COVID and COVID Pandemic

DOT ID #	TRP Keep 10	STREET	CITY	Pre-COVID Pandemic	COVID Pandemic (2021)	Percent Change (%)
079493L*	Keep	HARLEM AVENUE, IL43, south of 31st St	RIVERSIDE	598	325	-46
079508Y*	Keep	LA GRANGE ROAD, US12, south of US34 (Ogden Ave)	LAGRANGE	2451	1074	-56
173887G*	Keep	N NAGLE AVENUE south of Northwest Hwy	CHICAGO	781	370	-53
174924K	Keep	S WEST STREET north of Roosevelt Rd (IL38)	WHEATON	unavailable	584	
174948Y*	Keep	N PARK BLVD south of St Charles Rd	GLEN ELLYN	1159	1163	0
372126H	Keep	N HARLEM AVENUE, IL43, south of Grand Ave	CHICAGO	unavailable	358	
372196X	Keep	ROSELLE ROAD south of Irving Pk (IL19)	ROSELLE	unavailable	31	
388040W*	Keep	OSTERMAN AVENUE east of Waukegan Rd (IL43)	DEERFIELD	174	146	-16
840136F	Keep	W 115TH STREET west of I94	CHICAGO	unavailable	106	
840147T^	Keep	LINCOLN AVENUE west of Forest Ave	DOLTON	24	22	-8
843811C*		MARQUETTE RD	CHICAGO	512	unavailable	
079521M*		PED/PARK ST	HINSDALE	51	unavailable	
174937L*		PED/VILLA PARK DEPOT	VILLA PARK	1018	unavailable	
372128W*		PED/ELMWOOD PARK DEPOT	ELMWOOD PK	530	unavailable	
840146L^		138th ST	DOLTON	35	unavailable	
167450K^		142nd ST	DOLTON	110	unavailable	
167451S^		144th ST	DOLTON	63	unavailable	
326894T^		INDIANA AVE near 140th St	RIVERDALE	92	unavailable	
163611P^		INDIANA AVE and 138th ST	RIVERDALE	105	unavailable	
163610H^		137th ST	RIVERDALE	53	unavailable	
163612W^		PARK AVE and LINCOLN AVE	DOLTON	70	unavailable	

Legend:

Railroad Crossing IDs marked with * were part of 2013 study (Metaxatos & Sriraj, 2013).

Railroad Crossing IDs marked with ^ were part of Dolton Riverdale Study (Sriraj & Fazio, 2020).

Dedicated pedestrian crossing

Collected

OBSERVABLE LAND-USE SUMMARY

Video data collectors at each ten crossings made observations on the general land-use at the crossings. Land usages were categorized into four general types: (1) near Metra station, (2) near small businesses such as in strip malls, (3) near school, and (4) residential. Table 18 list the various land usages that were observed.

Table 18. Observable Land-Use at Ten Enumerated Pedestrian Crossings

DOT ID #	STREET	CITY	Land Use			
			Near METRA Station	Near small businesses	Near school	Residential
079493L	HARLEM AVENUE, IL43, south of 31st St	RIVERSIDE	yes	yes	no	no
079508Y	LA GRANGE ROAD, US12, south of US34 (Ogden Ave)	LAGRANGE	yes	yes	no	no
173887G	N NAGLE AVENUE south of Northwest Hwy	CHICAGO	no	no	yes	no
174924K	S WEST STREET north of Roosevelt Rd (IL38)	WHEATON	yes	yes	no	no
174948Y	N PARK BLVD south of St Charles Rd	GLEN ELLYN	yes	yes	yes	no
372126H	N HARLEM AVENUE, IL43, south of Grand Ave	CHICAGO	no	yes	no	no
372196X	ROSELLE ROAD south of Irving Pk (IL19)	ROSELLE	no	yes	no	no
388040W	OSTERMAN AVENUE east of Waukegan Rd (IL43)	DEERFIELD	no	no	no	yes
840136F	W 115TH STREET west of I94	CHICAGO	no	no	yes	yes
840147T	LINCOLN AVENUE west of Forest Ave	DOLTON	no	no	yes	yes

APPENDIX F: BLANK TALLY SHEET

NAME: _____ TODAY'S DATE: _____ SHEET ____ of _____

SITE NAME: _____ LOCATION: _____

VIDEO BEGIN DATE: _____ VIDEO BEGIN TIME: _____ OTHER: __p=pedestrian _____

TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

BEGIN TIME:	OUTBOUND compass direction: ____	SUB-TOTAL	INBOUND compass direction: ____	SUB-TOTAL

BEGIN TIME:	OUTBOUND compass direction: ____	SUB-TOTAL	INBOUND compass direction: ____	SUB-TOTAL

APPENDIX G: FINAL QUALITY CONTROL SPREADSHEETS

ANALYST NAME: Vaibhav Burman TODAY'S DATE: 7/14/2022 Completed untill 7:30 PM FINAL QC

SITE NAME: Riverside LOCATION: Harlem Ave south of 31st

VIDEO BEGIN DATE: Nov 2, 2021 VIDEO BEGIN TIME: 10:45:00 OTHER:

TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor-trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

15-minute interval	OUTBOUND compass direction: SB		INBOUND compass direction: NB		BOTH DIRECTIONS	
1	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
2	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
3	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
4	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	5	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

5	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
6	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
7	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
8	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	5	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

9	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	1	pa =	2		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
10	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	3	pa =	4		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
11	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	3	pa =	2	pa =	5		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
12	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	2	pa =	0	pa =	2		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	7	pa =	6	pa =	13		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

13	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
14	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
15	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
16	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
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	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	1	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

17	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	7	pa =	11
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
18	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	3	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
19	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
20	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	1	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	10	pa =	13	pa =	23
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

21	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	3	pa =	1	pa =	4		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
22	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	5	pa =	2	pa =	7		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
23	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	4	pa =	2	pa =	6		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
24	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	9	pa =	7	pa =	16		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	21	pa =	12	pa =	33		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

25	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	3	pa =	2	pa =	5		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
26	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	4	pa =	4	pa =	8		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
27	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	9	pa =	2	pa =	11		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
28	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	10	pa =	0	pa =	10		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	26	pa =	8	pa =	34		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

29	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	4		pa =	5
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
30	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	15		pa =	1		pa =	16
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
31	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	3		pa =	4
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
32	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	11		pa =	2		pa =	13
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	28		pa =	10		pa =	38
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

33	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	4	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
34	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	1	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
35	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
36	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	3	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	8	pa =	19
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

37	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	2	pa =	1	pa =	3		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
38	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	1	pa =	2		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
39	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	0	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
40	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	2	pa =	2		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	4	pa =	4	pa =	8		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

41	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
42	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
43	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
44	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	2	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

45	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	1	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
46	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	4	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
47	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
48	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	5	pa =	12
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

49	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
50	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
51	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
52	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

53	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
54	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	1	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
55	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
56	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	1	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

57	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
58	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
59	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
60	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

61	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
62	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
63	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
64	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

65	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
66	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
67	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
68	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

69	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
70	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
71	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
72	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

73	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
74	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
75	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	4	pa =	4		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
76	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	4	pa =	4		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

77	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
78	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
79	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	2	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
80	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	2	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	6	pa =	17
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

81	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	9	pa =	1	pa =	10		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
82	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	2	pa =	6	pa =	8		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
83	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	10	pa =	2	pa =	12		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
84	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	3	pa =	1	pa =	4		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	24	pa =	10	pa =	34		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

85	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	1	pa =	12
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
86	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	3	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
87	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	0	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
88	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	2	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	20	pa =	6	pa =	26
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

89	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	3	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
90	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	2	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
91	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
92	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	3	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	8	pa =	15
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

93	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	4	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
94	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
95	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	4	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
96	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	9	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

24 HOUR TOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	199	pa =	126	pa =	325
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
24 HOUR TOTAL	trains =	0	trains =	0	trains =	0
GROUPINGS	motor vehicles=	0	motor vehicles=	0	motor vehicles=	0
	heavy vehicles =	0	heavy vehicles =	0	heavy vehicles =	0
	pedestrians =	199	pedestrians =	126	pedestrians =	325
	children =	0	children =	0	children =	0
	bicycles =	0	bicycles =	0	bicycles =	0
	night trains =	0	night trains =	0	night trains =	0

ANALYST NAME: Vaibhav Burman TODAY'S DATE: 5/30/2022

SITE NAME: La Grange LOCATION:South of US 34 South of Ogden Ave

VIDEO BEGIN DATE: Oct 14, 2021 VIDEO BEGIN TIME: 11:15:00 OTHER:

TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor-trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

15-minute interval	OUTBOUND compass direction: SB		INBOUND compass direction: NB		BOTH DIRECTIONS	
1	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	11	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	0	k =	3	k =	3
2	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	10	pa =	7	pa =	17
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
3	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	10	pa =	6	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
4	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	19	pa =	23
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	29	pa =	43	pa =	72
	pc =	0	pc =	0	pc =	0
	k =	2	k =	4	k =	6

5	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	6	pa =	11	pa =	17		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
6	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	4	pa =	6	pa =	10		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	1	k =	2		
7	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	8	pa =	8	pa =	16		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
8	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	10	pa =	1	pa =	11		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	28	pa =	26	pa =	54		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	1	k =	2		

9	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	8	pa =	13	pa =	21
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
10	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	5	pa =	11
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
11	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	13	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
12	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	12	pa =	15	pa =	27
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	29	pa =	46	pa =	75
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1

13	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	8		pa =	4		pa =	12
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
14	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	7		pa =	5		pa =	12
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
15	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	16		pa =	8		pa =	24
	pc =	0		pc =	0		pc =	0
	k =	0		k =	3		k =	3
16	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	14		pa =	6		pa =	20
	pc =	0		pc =	0		pc =	0
	k =	1		k =	1		k =	2
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	45		pa =	23		pa =	68
	pc =	0		pc =	0		pc =	0
	k =	1		k =	4		k =	5

17	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	17	pa =	9	pa =	26		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
18	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	6	pa =	7	pa =	13		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	0	k =	1		
19	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	19	pa =	11	pa =	30		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
20	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	9	pa =	7	pa =	16		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	51	pa =	34	pa =	85		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	0	k =	1		

21	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	22	pa =	6	pa =	28		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	1	k =	1		
22	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	6	pa =	13	pa =	19		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	1	k =	2		
23	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	54	pa =	9	pa =	63		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	0	k =	1		
24	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	11	pa =	11	pa =	22		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	0	k =	1		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	93	pa =	39	pa =	132		
	pc =	0	pc =	0	pc =	0		
	k =	3	k =	2	k =	5		

25	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	35	pa =	16	pa =	51		
	pc =	0	pc =	0	pc =	0		
	k =	2	k =	1	k =	3		
26	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	20	pa =	8	pa =	28		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	3	k =	4		
27	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	47	pa =	10	pa =	57		
	pc =	0	pc =	0	pc =	0		
	k =	5	k =	0	k =	5		
28	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	4	pa =	5	pa =	9		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	4	k =	4		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	106	pa =	39	pa =	145		
	pc =	0	pc =	0	pc =	0		
	k =	8	k =	8	k =	16		

29	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	33	pa =	15	pa =	48		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	2	k =	2		
30	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	9	pa =	7	pa =	16		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
31	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	18	pa =	3	pa =	21		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
32	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	5	pa =	5		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	60	pa =	30	pa =	90		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	2	k =	2		

33	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	3		pa =	4		pa =	7
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
34	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	4		pa =	6		pa =	10
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
35	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	5		pa =	9		pa =	14
	pc =	0		pc =	0		pc =	0
	k =	0		k =	1		k =	1
36	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	8		pa =	2		pa =	10
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	20		pa =	21		pa =	41
	pc =	0		pc =	0		pc =	0
	k =	0		k =	1		k =	1

37	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	6		pa =	3		pa =	9
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
38	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	3		pa =	8		pa =	11
	pc =	0		pc =	0		pc =	0
	k =	3		k =	0		k =	3
39	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	3		pa =	2		pa =	5
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
40	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	13		pa =	14		pa =	27
	pc =	0		pc =	0		pc =	0
	k =	3		k =	0		k =	3

41	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	2	pa =	7	pa =	9		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
42	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
43	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	4	pa =	3	pa =	7		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
44	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	2	pa =	0	pa =	2		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	8	pa =	10	pa =	18		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

45	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	3		pa =	5
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
46	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
47	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
48	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	3		pa =	5
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

49	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
50	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
51	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	2		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
52	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	2		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	4		pa =	5
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

53	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	3		pa =	0		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	1		k =	0		k =	1
54	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
55	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
56	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	3		pa =	0		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	1		k =	0		k =	1

57	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
58	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
59	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
60	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

61	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
62	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
63	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	0	k =	1		
64	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	1	k =	1		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	1	k =	2		

65	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
66	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
67	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
68	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

69	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	1		k =	0		k =	1
70	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	1		k =	1
71	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
72	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	1		k =	1		k =	2

73	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
74	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
75	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
76	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	1	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	2	pa =	11
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1

77	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	1	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
78	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	2	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
79	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
80	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	1	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	12	pa =	4	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

81	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	5	pa =	2	pa =	7		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
82	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	7	pa =	8	pa =	15		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
83	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	2	pa =	2	pa =	4		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
84	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	15	pa =	2	pa =	17		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	0	k =	1		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	29	pa =	14	pa =	43		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	0	k =	1		

85	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	6	pa =	2	pa =	8		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	2	k =	2		
86	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	8	pa =	3	pa =	11		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	1	k =	1		
87	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	3	pa =	2	pa =	5		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
88	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	3	pa =	14	pa =	17		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	20	pa =	21	pa =	41		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	3	k =	3		

89	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	14	pa =	6	pa =	20		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
90	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	4	pa =	7	pa =	11		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	2	k =	2		
91	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	10	pa =	17	pa =	27		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
92	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	5	pa =	9	pa =	14		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	33	pa =	39	pa =	72		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	2	k =	2		

93	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	9	pa =	4	pa =	13		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
94	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	6	pa =	7	pa =	13		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
95	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	10	pa =	14	pa =	24		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
96	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	6	pa =	12	pa =	18		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	31	pa =	37	pa =	68		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

24 HOUR TOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	624	pa =	450	pa =	1074
	pc =	0	pc =	0	pc =	0
	k =	24	k =	30	k =	54
24 HOUR TOTAL	trains =	0	trains =	0	trains =	0
GROUPINGS	motor vehicles=	0	motor vehicles=	0	motor vehicles=	0
	heavy vehicles =	0	heavy vehicles =	0	heavy vehicles =	0
	pedestrians =	624	pedestrians =	450	pedestrians =	1074
	children =	0	children =	0	children =	0
	bicycles =	24	bicycles =	30	bicycles =	54
	night trains =	0	night trains =	0	night trains =	0

ANALYST NAME: Vaibhav Burman TODAY'S DATE: 5/30/2022

SITE NAME: Chicago Nagle LOCATION: Nagle street south of Northwest Hwy

VIDEO BEGIN DATE: Oct 28, 2021 VIDEO BEGIN TIME: 09:45:00 OTHER:

TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor-trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

15-minute interval	OUTBOUND compass direction: NB		INBOUND compass direction: SB		BOTH DIRECTIONS	
1	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	3	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
2	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
3	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
4	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	4	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

5	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
6	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
7	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
8	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	2	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2

9	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
10	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
11	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	1	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
12	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	1	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	8	pa =	4	pa =	12
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

13	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	5	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
14	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
15	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	0	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
16	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	9	pa =	18
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

17	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
18	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	1	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
19	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	1	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
20	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	5	pa =	14
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1

21	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
22	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	104	pa =	3	pa =	107
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
23	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	40	pa =	11	pa =	51
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2
24	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	16	pa =	1	pa =	17
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	160	pa =	15	pa =	175
	pc =	0	pc =	0	pc =	0
	k =	2	k =	2	k =	4

25	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	2	pa =	11
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
26	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
27	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	3	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
28	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	3	pa =	12
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	24	pa =	8	pa =	32
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

29	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
30	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
31	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	1	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
32	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	1	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1

33	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
34	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
35	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
36	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

37	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
38	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
39	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
40	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

41	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
42	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
43	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
44	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

45	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
46	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
47	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
48	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

49	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
50	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
51	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
52	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

53	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
54	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
55	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
56	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

57	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
58	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
59	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
60	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

61	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
62	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
63	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
64	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

65	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
66	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
67	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
68	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

69	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
70	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
71	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
72	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

73	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
74	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
75	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
76	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

77	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
78	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
79	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
80	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

81	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
82	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
83	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
84	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

85	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	5	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
86	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	6	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
87	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	5	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
88	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	24	pa =	26
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	40	pa =	44
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1

89	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	8	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
90	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	13	pa =	13
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
91	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
92	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	23	pa =	24
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

93	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	4	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
94	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	4	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
95	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	5	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
96	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	13	pa =	24
	pc =	0	pc =	0	pc =	0
	k =	2	k =	0	k =	2

24 HOUR TOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	244	pa =	126	pa =	370
	pc =	0	pc =	0	pc =	0
	k =	6	k =	5	k =	11
24 HOUR TOTAL	trains =	0	trains =	0	trains =	0
GROUPINGS	motor vehicles=	0	motor vehicles=	0	motor vehicles=	0
	heavy vehicles =	0	heavy vehicles =	0	heavy vehicles =	0
	pedestrians =	244	pedestrians =	126	pedestrians =	370
	children =	0	children =	0	children =	0
	bicycles =	6	bicycles =	5	bicycles =	11
	night trains =	0	night trains =	0	night trains =	0

ANALYST NAME: Vaibhav Burman TODAY'S DATE: 5/30/2022

SITE NAME: A Street Wheaton LOCATION: West street north of Roosevelt Rd

VIDEO BEGIN DATE: Nov 9, 2021 VIDEO BEGIN TIME: 12:15:00 OTHER:

TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor-trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

15-minute interval	OUTBOUND compass direction: SB		INBOUND compass direction: NB		BOTH DIRECTIONS	
1	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	7	pa =	11
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
2	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	1	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
3	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	3	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
4	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	1	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	12	pa =	23
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

5	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =		b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	1	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
6	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	8	pa =	13
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
7	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	4	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
8	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	4	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	13	pa =	17	pa =	30
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

9	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	5	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
10	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	3	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
11	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	4	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2
12	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	3	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	15	pa =	19
	pc =	0	pc =	0	pc =	0
	k =	1	k =	2	k =	3

13	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	1	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
14	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	6	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2
15	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	3	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
16	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	4	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	14	pa =	25
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2

17	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	2	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
18	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	18	pa =	21
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
19	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	12	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
20	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	3	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	17	pa =	35	pa =	52
	pc =	0	pc =	0	pc =	0
	k =	2	k =	1	k =	3

21	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	23	pa =	24
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
22	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	12	pa =	18
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
23	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	5	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
24	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	8	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	48	pa =	57
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1

25	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	21	pa =	25
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
26	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	18	pa =	20
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
27	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	7	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
28	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	5	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	8	pa =	51	pa =	59
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1

29	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	3	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
30	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	8	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
31	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
32	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	11	pa =	18
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1

33	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	1	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
34	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
35	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
36	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	4	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

37	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	2	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
38	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
39	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
40	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	6	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1

41	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
42	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
43	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
44	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	3	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

45	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
46	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
47	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
48	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

49	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
50	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
51	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
52	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

53	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
54	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
55	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
56	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

57	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
58	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
59	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
60	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

61	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
62	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
63	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
64	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

65	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
66	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
67	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
68	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

69	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
70	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
71	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	18	pa =	20
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
72	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	20	pa =	23
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

73	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	14	pa =	14
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
74	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	5	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
75	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	25	pa =	28
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
76	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	28	pa =	30
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	72	pa =	81
	pc =	0	pc =	0	pc =	0
	k =	0	k =	2	k =	2

77	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	34	pa =	34
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
78	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	23	pa =	26
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
79	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	15	pa =	18
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
80	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	13	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	85	pa =	94
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2

81	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
82	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	5	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
83	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	3	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
84	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	11	pa =	18
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2

85	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	1	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
86	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	6	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
87	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
88	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	10	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1

89	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
90	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	5	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
91	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	7	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
92	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	14	pa =	17
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1

93	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
94	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	9	pa =	11
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
95	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	2	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	3	k =	3
96	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	6	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	8	pa =	17	pa =	25
	pc =	0	pc =	0	pc =	0
	k =	0	k =	3	k =	3

24 HOUR TOTAL:		l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	139	pa =	445	pa =	584
		pc =	0	pc =	0	pc =	0
		k =	9	k =	14	k =	23
24 HOUR TOTAL		trains =	0	trains =	0	trains =	0
GROUPINGS		motor vehicles=	0	motor vehicles=	0	motor vehicles=	0
		heavy vehicles =	0	heavy vehicles =	0	heavy vehicles =	0
		pedestrians =	139	pedestrians =	445	pedestrians =	584
		children =	0	children =	0	children =	0
		bicycles =	9	bicycles =	14	bicycles =	23
		night trains =	0	night trains =	0	night trains =	0

ANALYST NAME: VAIBHAV BURMAN TODAY'S DATE: 7/12/2022

SITE NAME GLEN ELLYN LOCATION: N Park Blvd south of Saint Charles Rd

VIDEO BEGIN DATE: Oct 19, 2021 VIDEO BEGIN TIME: 10:15:00 OTHER:

TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor-trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

15-minute interval	OUTBOUND compass direction: NB		INBOUND compass direction: SB		BOTH DIRECTIONS	
1	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	8	pa =	17	pa =	25
	pc =	0	pc =	0	pc =	0
	k =	3	k =	1	k =	4
2	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	4	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
3	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	19	pa =	8	pa =	27
	pc =	0	pc =	0	pc =	0
	k =	3	k =	1	k =	4
4	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	8	pa =	16	pa =	24
	pc =	0	pc =	0	pc =	0
	k =	0	k =	3	k =	3
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	41	pa =	45	pa =	86
	pc =	0	pc =	0	pc =	0
	k =	6	k =	5	k =	11

5	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
6	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	10	pa =	13
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
7	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	4	pa =	13
	pc =	0	pc =	0	pc =	0
	k =	2	k =	0	k =	2
8	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	24	pa =	7	pa =	31
	pc =	0	pc =	0	pc =	0
	k =	2	k =	3	k =	5
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	36	pa =	21	pa =	57
	pc =	0	pc =	0	pc =	0
	k =	4	k =	3	k =	7

9	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	22	pa =	26
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
10	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	1	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	5	k =	5
11	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	8	pa =	1	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
12	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	16	pa =	12	pa =	28
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	30	pa =	36	pa =	66
	pc =	0	pc =	0	pc =	0
	k =	1	k =	6	k =	7

13	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	3	k =	3
14	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	2	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
15	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	13	pa =	0	pa =	13
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
16	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	9	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	23	pa =	11	pa =	34
	pc =	0	pc =	0	pc =	0
	k =	1	k =	3	k =	4

17	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	2	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
18	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	4	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
19	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	8	pa =	154	pa =	162
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
20	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	32	pa =	38
	pc =	0	pc =	0	pc =	0
	k =	2	k =	0	k =	2
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	18	pa =	192	pa =	210
	pc =	0	pc =	0	pc =	0
	k =	3	k =	0	k =	3

21	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	38	pa =	39
	pc =	0	pc =	0	pc =	0
	k =	1	k =	0	k =	1
22	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	8	pa =	13
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
23	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	6	pa =	12
	pc =	0	pc =	0	pc =	0
	k =	0	k =	4	k =	4
24	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	9	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	12	pa =	61	pa =	73
	pc =	0	pc =	0	pc =	0
	k =	2	k =	5	k =	7

25	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	10	pa =	8	pa =	18
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
26	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	9	pa =	14
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
27	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	9	pa =	18
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
28	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	30	pa =	6	pa =	36
	pc =	0	pc =	0	pc =	0
	k =	2	k =	5	k =	7
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	54	pa =	32	pa =	86
	pc =	0	pc =	0	pc =	0
	k =	2	k =	5	k =	7

29	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	22	pa =	9	pa =	31
	pc =	0	pc =	0	pc =	0
	k =	3	k =	2	k =	5
30	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	13	pa =	6	pa =	19
	pc =	0	pc =	0	pc =	0
	k =	1	k =	1	k =	2
31	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	10	pa =	13
	pc =	0	pc =	0	pc =	0
	k =	0	k =	5	k =	5
32	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	14	pa =	12	pa =	26
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	52	pa =	37	pa =	89
	pc =	0	pc =	0	pc =	0
	k =	4	k =	9	k =	13

33	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	23	pa =	2	pa =	25
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
34	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	1	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
35	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	5	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
36	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	31	pa =	10	pa =	41
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

37	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
38	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	3	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
39	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	6	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
40	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	1	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	10	pa =	10	pa =	20
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

41	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
42	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
43	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
44	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	3	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

45	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
46	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
47	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
48	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	1	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

49	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
50	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
51	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
52	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	4	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

53	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
54	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
55	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
56	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

57	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
58	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
59	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
60	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

61	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
62	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
63	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
64	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

65	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
66	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
67	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
68	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

69	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
70	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
71	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
72	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

73	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
74	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
75	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
76	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

77	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	5	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
78	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	5	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
79	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	1	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
80	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	0	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	11	pa =	18
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

81	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1
82	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	1	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
83	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	3	pa =	12
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
84	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	16	pa =	4	pa =	20
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	32	pa =	9	pa =	41
	pc =	0	pc =	0	pc =	0
	k =	0	k =	1	k =	1

85	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	21	pa =	1	pa =	22
	pc =	0	pc =	0	pc =	0
	k =	2	k =	0	k =	2
86	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	114	pa =	4	pa =	118
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
87	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	62	pa =	5	pa =	67
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
88	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	3	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	204	pa =	13	pa =	217
	pc =	0	pc =	0	pc =	0
	k =	2	k =	0	k =	2

89	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	22	pa =	4	pa =	26
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
90	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	7	pa =	11
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
91	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	5	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
92	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	3	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	41	pa =	19	pa =	60
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

93	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	6	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
94	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	3	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
95	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	8	pa =	3	pa =	11
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
96	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	15	pa =	20
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	20	pa =	27	pa =	47
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

24 HOUR TOTAL:		l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	617	pa =	546	pa =	1163
		pc =	0	pc =	0	pc =	0
		k =	25	k =	37	k =	62
24 HOUR TOTAL		trains =	0	trains =	0	trains =	0
GROUPINGS		motor vehicles=	0	motor vehicles=	0	motor vehicles=	0
		heavy vehicles =	0	heavy vehicles =	0	heavy vehicles =	0
		pedestrians =	617	pedestrians =	546	pedestrians =	1163
		children =	0	children =	0	children =	0
		bicycles =	25	bicycles =	37	bicycles =	62
		night trains =	0	night trains =	0	night trains =	0

ANALYST NAME: Anagha Srivaths TODAY'S DATE: 6/13/2022

SITE NAME: CHICAGO HARLEM LOCATION: Harlem Ave 1643 South of Grand Ave

VIDEO BEGIN DATE: Nov 9, 2021 VIDEO BEGIN TIME: 11:00:00 OTHER:
NOTE: Video timestamp was 12:00 but camera was not adjusted to Standard daylight time
TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor-trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

15-minute interval	OUTBOUND compass direction: SB		INBOUND compass direction: NB		BOTH DIRECTIONS	
1	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	4	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
2	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	2	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
3	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
4	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	3	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	11	pa =	22
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

5	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	3	pa =	12
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
6	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	2	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
7	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	2	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
8	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	1	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	16	pa =	8	pa =	24
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

9	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	6	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
10	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	2	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
11	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	2	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
12	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	14	pa =	10	pa =	24
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

13	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	2	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
14	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	2	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
15	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	3	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
16	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	1	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	15	pa =	8	pa =	23
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

17	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	6	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
18	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
19	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	2	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
20	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	10	pa =	9	pa =	19
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

21	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	1	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
22	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	10	pa =	6	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
23	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	11	pa =	15
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
24	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	3	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	22	pa =	21	pa =	43
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

25	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	2	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
26	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
27	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	2	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
28	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	3	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	15	pa =	9	pa =	24
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

29	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	2	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
30	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	2	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
31	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
32	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	5	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	10	pa =	9	pa =	19
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

33	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
34	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	3	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
35	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	0	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
36	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	7	pa =	6	pa =	13
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

37	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
38	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
39	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
40	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	1	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

41	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
42	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
43	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
44	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	8	pa =	0	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

45	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
46	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	4	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
47	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
48	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	5	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

49	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
50	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
51	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
52	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

53	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
54	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
55	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
56	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

57	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
58	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
59	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
60	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

61	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
62	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
63	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
64	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

65	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
66	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
67	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
68	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

69	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
70	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
71	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
72	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	4	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	5	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

73	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
74	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
75	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
76	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	4	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	8	pa =	10
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

77	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
78	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	5	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
79	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	5	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
80	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	5	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	17	pa =	21
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

81	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	2	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
82	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	2	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
83	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	2	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
84	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	8	pa =	19
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

85	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
86	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	4	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
87	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	3	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
88	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	11	pa =	17
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

89	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	2	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
90	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	3	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
91	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	2	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
92	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	6	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	13	pa =	24
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

93	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	4	pa =	4	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
94	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
95	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	3	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
96	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	5	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	12	pa =	12	pa =	24
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

24 HOUR TOTAL:		l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	183	pa =	175	pa =	358
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0
24 HOUR TOTAL		trains =	0	trains =	0	trains =	0
GROUPINGS		motor vehicles=	0	motor vehicles=	0	motor vehicles=	0
		heavy vehicles =	0	heavy vehicles =	0	heavy vehicles =	0
		pedestrians =	183	pedestrians =	175	pedestrians =	358
		children =	0	children =	0	children =	0
		bicycles =	0	bicycles =	0	bicycles =	0
		night trains =	0	night trains =	0	night trains =	0

ANALYST NAME: Anagha Srivaths TODAY'S DATE: 7/5/2022

SITE NAME: ROSELLE LOCATION: Roselle road south of Irving park

VIDEO BEGIN DATE : Nov 4, 2021 VIDEO BEGIN TIME: 11:15:00 OTHER:

TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor-trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

15-minute interval	OUTBOUND compass direction: NB		INBOUND compass direction: SB		BOTH DIRECTIONS	
1	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
2	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
3	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	0	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
4	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	2	pa =	7
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

5	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
6	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
7	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
8	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

9	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
10	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
11	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
12	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

13	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
14	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
15	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
16	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

17	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
18	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
19	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
20	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

21	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
22	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
23	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	0		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
24	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	0		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

25	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
26	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
27	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
28	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

29	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
30	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
31	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
32	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	2		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	2		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

33	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
34	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
35	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
36	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

37	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
38	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
39	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
40	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

41	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
42	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
43	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
44	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

45	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
46	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
47	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
48	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

49	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
50	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
51	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
52	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

53	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
54	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
55	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
56	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

57	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
58	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
59	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
60	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

61	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
62	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
63	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
64	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

65	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
66	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
67	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
68	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

69	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
70	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
71	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
72	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

73	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
74	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
75	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
76	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

77	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
78	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
79	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
80	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

81	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	0		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
82	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	3		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
83	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
84	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	3		pa =	5
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

85	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
86	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
87	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
88	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

89	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
90	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
91	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
92	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

93	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
94	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
95	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
96	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	1		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	1		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

24 HOUR TOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	16	pa =	15	pa =	31
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
24 HOUR TOTAL	trains =	0	trains =	0	trains =	0
GROUPINGS	motor vehicles=	0	motor vehicles=	0	motor vehicles=	0
	heavy vehicles =	0	heavy vehicles =	0	heavy vehicles =	0
	pedestrians =	16	pedestrians =	15	pedestrians =	31
	children =	0	children =	0	children =	0
	bicycles =	0	bicycles =	0	bicycles =	0
	night trains =	0	night trains =	0	night trains =	0

ANALYST NAME: Anagha Srivaths TODAY'S DATE: 7/18/2022

SITE NAME: DEERFIELD LOCATION: 388040 W Osterman Ave East of Waukesan Rd

VIDEO BEGIN DATE : 21,Oct 2021 VIDEO BEGIN TIME: 13:15:00 OTHER:

TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor-trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

15-minute interval		OUTBOUND compass direction: EB		INBOUND compass direction: WB		BOTH DIRECTIONS	
	1	l =		l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	1	pa =	0	pa =	1
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0
	2	l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	0	pa =	0	pa =	0
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0
	3	l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	0	pa =	1	pa =	1
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0
	4	l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	3	pa =	0	pa =	3
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0
HOUR SUBTOTAL:		l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	4	pa =	1	pa =	5
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0

	5	l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	0	pa =	2	pa =	2
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0
	6	l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	3	pa =	3	pa =	6
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0
	7	l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	2	pa =	1	pa =	3
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0
	8	l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	5	pa =	1	pa =	6
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0
HOUR SUBTOTAL:		l =	0	l =	0	l =	0
		c =	0	c =	0	c =	0
		b =	0	b =	0	b =	0
		t =	0	t =	0	t =	0
		pa =	10	pa =	7	pa =	17
		pc =	0	pc =	0	pc =	0
		k =	0	k =	0	k =	0

9	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	3	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
10	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
11	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	5	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
12	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	1	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	9	pa =	12	pa =	21
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

13	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	2	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
14	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	2	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
15	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	2	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
16	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	7	pa =	13
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

17	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
18	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
19	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
20	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	3	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

21	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	3		pa =	4
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
22	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	2		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
23	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	2		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
24	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	7		pa =	9
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

25	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
26	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
27	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
28	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

29	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
30	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
31	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
32	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

33	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
34	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
35	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
36	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

37	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
38	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
39	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
40	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

41	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
42	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
43	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
44	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

45	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
46	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
47	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
48	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

49	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
50	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
51	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
52	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

53	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
54	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
55	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
56	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

57	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
58	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
59	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
60	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

61	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
62	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
63	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
64	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

65	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
66	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
67	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
68	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

69	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
70	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
71	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
72	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

73	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
74	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
75	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	4		pa =	5
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
76	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	3		pa =	4
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	3		pa =	7		pa =	10
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

77	l =	0		l =	0	l =	0
	c =	0		c =	0	c =	0
	b =	0		b =	0	b =	0
	t =	0		t =	0	t =	0
	pa =	2		pa =	1	pa =	3
	pc =	0		pc =	0	pc =	0
	k =	0		k =	0	k =	0
78	l =	0		l =	0	l =	0
	c =	0		c =	0	c =	0
	b =	0		b =	0	b =	0
	t =	0		t =	0	t =	0
	pa =	3		pa =	0	pa =	3
	pc =	0		pc =	0	pc =	0
	k =	0		k =	0	k =	0
79	l =	0		l =	0	l =	0
	c =	0		c =	0	c =	0
	b =	0		b =	0	b =	0
	t =	0		t =	0	t =	0
	pa =	1		pa =	2	pa =	3
	pc =	0		pc =	0	pc =	0
	k =	0		k =	0	k =	0
80	l =	0		l =	0	l =	0
	c =	0		c =	0	c =	0
	b =	0		b =	0	b =	0
	t =	0		t =	0	t =	0
	pa =	0		pa =	0	pa =	0
	pc =	0		pc =	0	pc =	0
	k =	0		k =	0	k =	0
HOUR SUBTOTAL:	l =	0		l =	0	l =	0
	c =	0		c =	0	c =	0
	b =	0		b =	0	b =	0
	t =	0		t =	0	t =	0
	pa =	6		pa =	3	pa =	9
	pc =	0		pc =	0	pc =	0
	k =	0		k =	0	k =	0

81	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
82	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
83	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	2		pa =	4
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
84	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	3		pa =	2		pa =	5
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

85	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	2		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
86	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	2		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
87	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	3		pa =	0		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
88	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	4		pa =	5		pa =	9
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

89	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	3		pa =	0		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
90	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	3		pa =	4
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
91	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	1		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
92	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	3		pa =	4
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	7		pa =	7		pa =	14
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

93	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	4	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
94	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	2	pa =	8
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
95	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	5	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
96	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	1	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	11	pa =	12	pa =	23
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

24 HOUR TOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	67		pa =	79		pa =	146
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
24 HOUR TOTAL	trains =	0		trains =	0		trains =	0
GROUPINGS	motor vehicles=	0		motor vehicles=	0		motor vehicles=	0
	heavy vehicles =	0		heavy vehicles =	0		heavy vehicles =	0
	pedestrians =	67		pedestrians =	79		pedestrians =	146
	children =	0		children =	0		children =	0
	bicycles =	0		bicycles =	0		bicycles =	0
	night trains =	0		night trains =	0		night trains =	0

ANALYST NAME: Anagha Srivaths TODAY'S DATE: 7/25/2022

SITE NAME: CHICAGO 115th LOCATION: W 115th Street west of I94

VIDEO BEGIN DATE: Nov 11, 2021 VIDEO BEGIN TIME: 11:30:00 OTHER:

TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor-trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

15-minute interval	OUTBOUND compass direction: WB		INBOUND compass direction: EB		BOTH DIRECTIONS	
1	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
2	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
3	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	2	pa =	1	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
4	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	1	pa =	4
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	4	pa =	9
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

5	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
6	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	4	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
7	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	3	pa =	0	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
8	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	6	pa =	11
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

9	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
10	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
11	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
12	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	2		pa =	4
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

13	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	1	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
14	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	2	pa =	2		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
15	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	1	k =	1		
16	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	0	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	0	k =	1		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	3	pa =	4		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	1	k =	2		

17	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	6	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
18	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	0	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
19	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
20	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	4	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	13	pa =	19
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

21	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	2	pa =	0	pa =	2		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
22	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	1	pa =	2		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
23	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	1	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
24	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	1	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	3	pa =	3	pa =	6		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

25	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	1	pa =	2		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
26	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	3	pa =	0	pa =	3		
	pc =	0	pc =	0	pc =	0		
	k =	2	k =	0	k =	2		
27	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	0	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	1	k =	0	k =	1		
28	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	1	k =	1		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	5	pa =	1	pa =	6		
	pc =	0	pc =	0	pc =	0		
	k =	3	k =	1	k =	4		

29	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
30	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
31	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
32	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

33	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
34	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
35	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
36	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

37	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
38	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
39	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
40	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

41	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
42	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
43	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
44	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	1	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	1	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

45	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
46	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
47	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
48	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

49	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
50	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
51	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
52	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

53	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
54	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
55	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
56	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

57	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
58	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
59	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
60	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

61	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
62	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
63	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
64	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

65	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
66	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
67	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
68	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

69	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
70	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
71	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
72	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

73	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
74	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
75	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
76	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	2		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	2		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

77	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	2		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
78	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
79	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
80	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	5		pa =	5
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

81	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
82	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
83	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
84	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	3		pa =	1		pa =	4
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

85	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
86	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
87	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
88	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	1		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	2		pa =	4
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

89	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	5	pa =	6
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
90	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	5	pa =	0	pa =	5
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
91	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
92	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	6	pa =	10	pa =	16
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

93	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
94	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	4		pa =	2		pa =	6
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
95	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	1		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
96	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	5		pa =	3		pa =	8
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

24 HOUR TOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	45	pa =	61	pa =	106
	pc =	0	pc =	0	pc =	0
	k =	4	k =	2	k =	6
24 HOUR TOTAL	trains =	0	trains =	0	trains =	0
GROUPINGS	motor vehicles=	0	motor vehicles=	0	motor vehicles=	0
	heavy vehicles =	0	heavy vehicles =	0	heavy vehicles =	0
	pedestrians =	45	pedestrians =	61	pedestrians =	106
	children =	0	children =	0	children =	0
	bicycles =	4	bicycles =	2	bicycles =	6
	night trains =	0	night trains =	0	night trains =	0

ANALYST NAME: Anagha Srivaths TODAY'S DATE: 8/1/2022

SITE NAME: Dolton LOCATION: Lincoln ave west of Forest Ave

VIDEO BEGIN DATE:Oct 26, 2021 VIDEO BEGIN TIME: 11:00:00 OTHER:

TALLY MARK CODES: l = locomotive, train c = car, van, minivan, SUV, pick-up truck b = bus
t = single-unit truck, tractor-trailer truck pa = adult pedestrian pc = child pedestrian k = bicycle

15-minute interval	OUTBOUND compass direction: NB		INBOUND compass direction: SB		BOTH DIRECTIONS	
1	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
2	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
3	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
4	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

5	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
6	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
7	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
8	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	1	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

9	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
10	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	0		pa =	2
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
11	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
12	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	2		pa =	1		pa =	3
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

13	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
14	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
15	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
16	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	0	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	0	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

17	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
18	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
19	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
20	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	1	pa =	0	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

21	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
22	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
23	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
24	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	1	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	1	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

25	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
26	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
27	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	0	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
28	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	0	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

29	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
30	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	2	pa =	2
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
31	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	1	pa =	1
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
32	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	3	pa =	3
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

33	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
34	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
35	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
36	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

37	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
38	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
39	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
40	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

41	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
42	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
43	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
44	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
HOUR SUBTOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	0	pa =	0	pa =	0
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0

45	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
46	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
47	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
48	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

49	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
50	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
51	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
52	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

53	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
54	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
55	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
56	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

57	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
58	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
59	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
60	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

61	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
62	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
63	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
64	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

65	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
66	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
67	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
68	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

69	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
70	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
71	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
72	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

73	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
74	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
75	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
76	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	1		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

77	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
78	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
79	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
80	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

81	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	0	pa =	1		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
82	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
83	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	1	pa =	2	pa =	3		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
84	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	0	pa =	0	pa =	0		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		
HOUR SUBTOTAL:	l =	0	l =	0	l =	0		
	c =	0	c =	0	c =	0		
	b =	0	b =	0	b =	0		
	t =	0	t =	0	t =	0		
	pa =	2	pa =	2	pa =	4		
	pc =	0	pc =	0	pc =	0		
	k =	0	k =	0	k =	0		

85	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
86	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
87	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
88	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

89	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
90	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
91	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
92	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

93	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
94	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
95	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
96	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	0		pa =	0		pa =	0
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0
HOUR SUBTOTAL:	l =	0		l =	0		l =	0
	c =	0		c =	0		c =	0
	b =	0		b =	0		b =	0
	t =	0		t =	0		t =	0
	pa =	1		pa =	0		pa =	1
	pc =	0		pc =	0		pc =	0
	k =	0		k =	0		k =	0

24 HOUR TOTAL:	l =	0	l =	0	l =	0
	c =	0	c =	0	c =	0
	b =	0	b =	0	b =	0
	t =	0	t =	0	t =	0
	pa =	10	pa =	12	pa =	22
	pc =	0	pc =	0	pc =	0
	k =	0	k =	0	k =	0
24 HOUR TOTAL	trains =	0	trains =	0	trains =	0
GROUPINGS	motor vehicles=	0	motor vehicles=	0	motor vehicles=	0
	heavy vehicles =	0	heavy vehicles =	0	heavy vehicles =	0
	pedestrians =	10	pedestrians =	12	pedestrians =	22
	children =	0	children =	0	children =	0
	bicycles =	0	bicycles =	0	bicycles =	0
	night trains =		night trains =		night trains =	


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