CURRICULUM VITAE OF ANDREW W. THOMAS

Consultant
Collision Analytics LLC
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SUMMARY

Andrew W. Thomas is an ACTAR Accredited Traffic Crash Reconstructionist that specializes in the investigation and reconstruction of motor vehicle crashes. Andrew has had more than 1,100 hours of crash investigation and reconstruction training. He serves as an adjunct instructor with the Northwestern University Center for Public Safety, instructing crash investigation and reconstruction courses throughout the United States and Canada. During his 15 years in law enforcement Andrew led the McHenry County Sheriff's Office (IL) Major Crash Investigation Unit which was responsible for all major injury and fatality crash investigations. He is an Illinois certified Crash Reconstruction Specialist and certified instructor with expertise in Advanced Truck Enforcement. Andrew also spent over 3 years as a full-time Commercial Vehicle Enforcement Officer and 10 years as a motorcycle officer. Andrew is a Crash Data Retrieval technician and analyst and regularly utilizes light vehicle and heavy vehicle collision event data within investigations.

PROFESSIONAL CERTIFICATIONS

ACTAR Accredited Traffic Crash Reconstructionist #2828
SINCE 2015 - Accreditation Commission for Traffic Accident Reconstruction

Crash Reconstruction Specialist #PTB10505
SINCE 2012 - Illinois Law Enforcement Training & Standards Board

Crash Data Retrieval Specialist
SINCE 2013 - Collision Safety Institute

Graduate of Northwestern University's Center for Public Safety
SINCE 2011 - Crash Investigation & Reconstruction Program

National Child Passenger Safety Seat Certified Technician
SINCE 2017 – SafeKids Worldwide

Pix4D Certified User and Photogrammetrist
SINCE 2020 – Pix4D

Certified Instructor – Advanced Truck Enforcement
SINCE 2013 - Illinois Law Enforcement Training & Standards Board

Heavy Vehicle Enforcement Officer & Portable Scale Use
SINCE 2008 - Illinois Law Enforcement Training & Standards Board

Breath Alcohol Operator & Preliminary Breath Test Examiner
SINCE 2008 - State of Illinois Department of State Police

Certified Illinois Law Enforcement Officer
SINCE 2006 - Illinois Law Enforcement Training & Standards Board

EMPLOYMENT HISTORY

05/17 to Present **Collision Analytics LLC** – Consultant / Owner

Collision Analytics LLC serves as a complete crash investigation and reconstruction company providing expert consultation, analysis, and testimony for attorneys and insurers throughout the Midwestern United States. Available for rapid response to collision scenes and involved vehicles, Collision Analytics utilizes the latest proven technology to document and preserve critical physical and electronic evidence. These proven methods lead to a detailed understanding and analysis, allowing its clients to make informed decisions at every stage of their case.

10/16 to Present **Northwestern University Center for Public Safety** – Adjunct Instructor

The Center for Public Safety specializes in the instruction of crash investigation and crash reconstruction topics throughout the United States and abroad. Classroom instruction, hands-on field testing and inspections and case studies are a few of the numerous methods utilized to ensure students develop a thorough understanding of curricula. Andrew has also participated in the development of curriculum for the crash investigation online courses. Classes instructed throughout the United States and Canada include:

- Traffic Crash Investigation 1 – Classroom & Online Learning
- Traffic Crash Investigation 2 – Classroom & Online Learning
- Math and Physics Review
- Vehicle Dynamics – Classroom & Online Learning
- Traffic Crash Reconstruction 1 – Classroom & Online Learning
- Traffic Crash Reconstruction 2 – Classroom & Online Learning
- Traffic Crash Reconstruction 3 – Classroom
- Crash Data Retrieval System Operators Course
- Traffic Crash Reconstruction Refresher
- Pedestrian Crash Reconstruction

04/06 to 06/21 **McHenry County Sheriff's Police** – Merited Sergeant

Following his promotion to Sergeant in 2015, Andrew oversaw a team of 6 reconstructionists and 7 investigators responsible for the investigation of all traffic related fatalities and major injury crashes within unincorporated McHenry County. He progressively worked to raise the bar through investigative thoroughness; the use and continual development of new technology; the utilization of quality peer and expert training, and attentiveness to victims and their families. During his tenure as a crash investigator and reconstructionist, he served as lead investigator for over 80 major crashes and participated in the investigation of over 180 major incidents involving nearly 400 persons, and over 250 vehicles (including light vehicles, motorcycles, heavy vehicles, off road vehicles, farming implements, and trains). Andrew served as a motorcycle officer and a heavy vehicle enforcement officer where he specialized in the enforcement of heavy vehicle laws and developed and instructed heavy vehicle enforcement curriculum. During his tenure, Andrew also imaged and reviewed cellular phone and cellular carrier data, performing Cell Site Analyses on over 60 cellular devices involved in a myriad of major investigations.

02/13 TO 09/15 **Dynamic Safety, LLC** – As-Needed Technician

Duties included assisting Dynamic Safety Partners with passenger vehicle and commercial vehicle inspections; operation of total stations and 3D point cloud surveying equipment; imaging vehicle electronic data recorders; location and documentation of exemplar vehicles; creating diagrams, photograph logs, deposition abstracts, and duty log analyses.

FORMAL EDUCATION

09/04 TO 12/09 **Western Illinois University** – B.A. degree – Board of Trustees Major

09/03 TO 06/04 **Iowa State University** – Architecture Major – Accepted to 4-year program in August 2004

EXPERT TESTIMONY

Expertise in Traffic Crash Reconstruction
McHenry County (IL) 22nd Judicial Circuit: April 2014, September 2018
Kane County (IL) 16th Judicial Circuit: August 2019
Dane County (WI) Circuit Court: September 2020
Cook County (IL) Circuit Court: December 2020, March 2021

Expertise in Cellular Site Analysis
McHenry County (IL) 22nd Judicial Circuit: March 2019, April 2019, August 2020

LICENSES

Illinois Department of Professional Regulation
Licensed Private Detective Agency 117.001857 (SINCE 2020)
Licensed Private Detective 115.002578 (SINCE 2018)
Permanent Employee Registration 129.371321 (SINCE 2013)

Illinois Driver's License
Class B-CDL Permit (2015-2016) - Class M (SINCE 2006) - Class D (SINCE 2001)

Federal Aviation Administration
Small Unmanned Aircraft System (SINCE 2017)

PROFESSIONAL ASSOCIATIONS

NOVEMBER 2017 **National Association of Professional Accident Reconstruction Specialists**

SEPTEMBER 2012 **Illinois Association of Technical Accident Investigators**

AUGUST 2012 **Illinois Truck Enforcement Association**

AWARDS & COMMENDATIONS

JANUARY 2015 **Glenn Strebel Award** – Illinois Truck Enforcement Association

AUGUST 2006 **Ervin H. Warren Award** – Police Training Institute – University of Illinois

TENURE **2 Letters of Commendation** – McHenry County Sheriff's Office
1 Letter of Commendation – Northwestern University Center for Public Safety

CONTINUING EDUCATION – CRASH INVESTIGATION & RECONSTRUCTION

MARCH 2021 **Commercial Vehicle Law Symposium** – 8 Hours – Fried Goldberg LLC, Webinar

FEBRUARY 2021 **IDRR (Interactive Driver Response Research) User Forum** – 28 Hours – Crash Safety Solutions, Webinar

FEBRUARY 2021 **Child Passenger Safety Continuing Education** – 6 Hours – National Child Passenger Safety Board, Webinar on crash injuries to children, pediatric anatomy, basic and advanced use of Latch Manual, and manufacturer update

Continuing Education (continued)

FEBRUARY 2021	**Advanced Crash Reconstruction Utilizing Human Factors Research** – 40 Hours – Crash Safety Solutions, Webinar
JANUARY 2021	**PhotoModeler Photogrammetry Tutorials** – 8 Hours – Photomodeler Technologies, Online
DECEMBER 2020	**Advanced Reconstruction with CDR Applications** – 40 Hours – Northwestern University Center for Public Safety & Accident Analysis and Reconstruction, Woodstock, IL
OCTOBER 2020	**Chip Level Data Recovery from Event Data Recorders** – 2 Hours – NAPARS Joint Virtual Conference by Matt DiSogra, Webinar
OCTOBER 2020	**Perception Response Time at Various Crash Types** – 2 Hours – NAPARS Joint Virtual Conference by Crash Safety Solutions, Webinar
APRIL 2020	**Pix4Dmapper Fundamentals & Pix4Dmapper Essentials Certification Exam** – 16 Hours – Pix4D, Online
MARCH 2020	**vCRASH Environments** – 16 Hours – Virtual Crash Software, Online
FEBRUARY 2020	**vCRASH Simulation Basics** – 16 Hours – Virtual Crash Software, Online
MAY 2019	**Accessing & Interpreting Heavy Vehicle Event Data Recorders** – 28 Hours – SAE International, Appleton, WI
APRIL 2019	**Tire Forensics & Fleet Technician Clinic** – 16 Hours – Tennent & Associates, Lockport, IL
APRIL 2019	**Illinois Child Seat Technician Skill Builder** – 6 Hours – IDOT, Sycamore, IL
MARCH 2019	**Investigating Insurance Fraud and Staged Vehicle Crashes** – 16 Hours – National Insurance Crime Bureau, Woodstock & Elgin, IL
DECEMBER 2018	**How to use the Bosch Crash Data Retrieval Tool** – 4 Hours – Crash Data Group's Crash Academy, Online
NOVEMBER 2018	**Pedestrian & Bicycle Crash Reconstruction** – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL
OCTOBER 2018	**sUAS Crash Investigation Remote Pilot & Crash Investigation Aerial Photogrammetrist** – 32 Hours – Aerial Metrics, Woodstock, IL
OCTOBER 2018	**Event Data Recorder Use in Traffic Crash Reconstruction-Level 1** – 40 Hours – Institute of Police Technology and Management, Houston, TX
AUGUST 2018	**Fundamental Techniques of Crash Investigation** – 6 Hours – Institute of Police Technology and Management, Online
MARCH 2018	**Event Data Recorder Summit** – 20 Hours – Crash Data Group & Texas Association of Accident Reconstruction Specialists, Houston, TX.
NOVEMBER 2017	**Nation Child Passenger Safety Seat Technician Certification** –26 Hours – Safe Kids Worldwide, Advocate Condell Hospital, Libertyville, IL.
MARCH 2017	**Traffic Crash Reconstruction 3** – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL
SEPTEMBER 2016	**Illinois Association of Technical Accident Investigators Conference** – 3 Days – Peoria, IL
MARCH 2016	**Biomechanical Engineering Application to Crash Investigations** – 12 Hours – Dr. Sean Shimada
NOVEMBER 2014	**Vericom Familiarization for Crash Reconstruction** – 24 Hours – Vericom Computers, Lake Zurich, IL
SEPTEMBER 2014	**Crash Data Retrieval System – Backpowering/Imaging Practice** – 8 Hours – McHenry County Sheriff's Office, Woodstock, IL
SEPTEMBER 2014	**Illinois Association of Technical Accident Investigators Conference** – 3 Days – Peoria, IL

Continuing Education (continued)

SEPTEMBER 2014	**Crash Investigation Workshop Crash Team** – 24 Hours – Lake County Major Crash Assistance Team, Grayslake, IL
AUGUST 2014	**Grade Crossing Collision Investigation** – 8 Hours – Canadian National and Metra Railroad, Woodstock, IL
JULY 2014	**Racelogic Video VBOX Pro/Software Training Seminar** – 5 Hours – Racelogic USA, Farmington Hills, MI
JUNE 2014	**Bendix Brake Training School** – 24 Hours – Bendix Spicer Foundation Brake LLC, Lisle, IL
MAY 2014	**Advanced Crash Reconstruction Utilizing Human Factors Research** – 40 Hours – Northwestern University Center for Public Safety, Crash Safety Solutions, Evanston, IL
MAY 2014	**Heavy Vehicle Crash Reconstruction** – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL
FEBRUARY 2014	**Refresher Training – Major Accident Investigation Team** – 8 Hours – McHenry County Sheriff's Office, Woodstock, IL
NOVEMBER 2013	**Crash Data Retrieval Data Analyst** – 40 Hours – Northwestern University Center for Public Safety – Collision Safety Institute, Evanston, IL
OCTOBER 2013	**Crash Data Retrieval Technician** – 16 Hours – Northwestern University Center for Public Safety – Collision Safety Institute, Evanston, IL
SEPTEMBER 2012	**Illinois Association of Technical Accident Investigators Conference** – 3 Days – Peoria, IL
MAY 2011	**Traffic Crash Reconstruction II** – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL
APRIL 2011	**Traffic Crash Reconstruction I** – 80 Hours – Northwestern University Center for Public Safety, Evanston, IL
APRIL 2011	**Vehicle Dynamics** – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL
SEPTEMBER 2008	**Basic & Advanced CadZone** – 16 Hours – Vehicle Crash Consulting, LLC, Woodstock, IL
SEPTEMBER 2008	**Accident Investigation II** – Online: 80 Hours – Northwestern University Center for Public Safety, Evanston, IL
JUNE 2008	**TopCon Total Station Operation** – 8 Hours – Positioning Solutions Company, Woodstock, IL
MARCH 2008	**Accident Investigation I** – 80 Hours – Northwestern University Center for Public Safety, Evanston, IL

CONTINUING EDUCATION – HEAVY VEHICLES

MARCH 2021	**Commercial Vehicle Law Symposium** – 8 Hours – Fried Goldberg LLC, Webinar
MARCH 2020	**ITEA Annual Truck Conference** – 8 Hours – Illinois Truck Enforcement Association, Naperville, IL
MAY 2019	**Accessing & Interpreting Heavy Vehicle Event Data Recorders** – 28 Hours – SAE International, Appleton, WI
MARCH 2019	**ITEA Annual Truck Conference** – 8 Hours – Illinois Truck Enforcement Association, Naperville, IL
MARCH 2016	**ITEA Annual Truck Conference** – 8 Hours – Illinois Truck Enforcement Association, Naperville, IL
JANUARY 2015	**ITEA Annual Truck Conference** – 8 Hours – Illinois Truck Enforcement Association, Glen Ellyn, IL
JUNE 2014	**Bendix Brake Training School** – 24 Hours – Bendix Spicer Foundation Brake LLC, Lisle, IL
MAY 2014	**Heavy Vehicle Crash Reconstruction** – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL

AUGUST 2012	**Truck Enforcement Officer Certification** – 8 Hours – Illinois Truck Enforcement Association, St. Charles, IL
APRIL 2011	**Traffic Crash Reconstruction I** – 80 Hours – Northwestern University Center for Public Safety, Evanston, IL
NOVEMBER 2009	**Truck Weight Law Refresher** – 8 Hours – North East Multi-Regional Training, Woodstock, IL
OCTOBER 2009	**Commercial Vehicle Safety Inspection** – 40 Hours – North East Multi-Regional Training, IL
APRIL 2008	**Basic Truck Enforcement & Portable Scale Certification** – 40 Hours – North East Multi-Regional Training, Genoa, IL

CONTINUING EDUCATION – CELLULAR SITE & PHONE TECHNOLOGY

OCTOBER 2019	**Basic Historical Cell Site Analysis** – 20 Hours – Federal Bureau of Investigation's Cellular Analysis Survey Team (CAST), Flint, MI
AUGUST 2019	**Using Microsoft Excel for Cell Site Analysis** – 2 Hours – Federal Bureau of Investigation, Online
APRIL 2018	**Advanced Cell Phone Investigations** – 24 Hours – Geocell LLC, Franklin, MA
APRIL 2018	**Introduction to Cell Phone Investigations** – 16 Hours – Geocell LLC, Franklin, MA
MAY 2015	**Properly Preserving Cell Phone and Mobile Device Evidence in a Traffic Crash** – 2 Hours – Traffic Safety Resource Prosecutor webinar
JANUARY 2011	**Cell Phone Investigations** – 16 Hours – Geocell LLC, Kankakee, IL

CONTINUING EDUCATION – LAW ENFORCEMENT PATROL FUNCTIONS

FEBRUARY 2021	**Standardized Field Sobriety Testing Refresher** – 8 Hour – McHenry County Sheriff's Office Training Division, Woodstock, IL
NOVEMBER 2019	**DUI Summit** – 16 Hours – Illinois Truck Enforcement Association, Naperville, IL
MAY 2019	**Advanced Roadside Impaired Driving Enforcement (ARIDE)** – 16 Hours – North East Multi-Regional Training, Woodstock, IL
JANUARY 2019	**THC DUI / Medical Marijuana in Illinois** – 4 Hours – McHenry County Sheriff's Office Training Division, Woodstock, IL
DECEMBER 2018	**Drugged Driving Investigations & the Use of Drug Recognition Experts** – 8 Hours – DuPage County Accident Reconstruction Team, Carol Stream, IL
SEPTEMBER 2018	**Emergency Vehicle Operator Course** – 8 Hours – McHenry County Sheriff's Office, Woodstock, IL
SEPTEMBER 2018	**Focus Group on Emergency Response Interactions with Autonomous Vehicles** – 2 Hours – Virginia Tech Transportation Institute, Online Meeting
SEPTEMBER 2018	**Standardized Field Sobriety Testing Refresher** – 4 Hours – McHenry County Sheriff's Office Training Division, Woodstock, IL
MAY 2018	**Laser Speed Measurement** – 4 Hours – McHenry County Sheriff's Office, Woodstock, IL
DECEMBER 2017	**UAV Pilot Flight School** – 8 Hours – Aerovista Innovations, Northeastern Illinois Public Safety Training Academy, Glenview, IL.
NOVEMBER 2017	**UAV Pilot Ground School** – 8 Hours – Aerovista Innovations, Northeastern Illinois Public Safety Training Academy, Glenview, IL.
NOVEMBER 2017	**Implementing a UAV Program** – 4 Hours – Aerovista Innovations, Northeastern Illinois Public Safety Training Academy, Glenview, IL.

Continuing Education (continued)

OCTOBER 2017	**Breath Alcohol Operator & Preliminary Breath Test Examiner Recertification** – Online 1.5 Hours – Illinois State Police
MARCH 2017	**Standardized Field Sobriety Testing Refresher** – 8 Hour – McHenry County Sheriff's Office Training Division, Woodstock, IL
SEPTEMBER 2016	**Emergency Vehicle Operator Course** – 8 Hours – McHenry County Sheriff's Office, Woodstock, IL
MAY 2015	**Decision Making for Critical Incident Response** – 8 Hours – Woodstock, IL
DECEMBER 2014	**Breath Alcohol Operator & Preliminary Breath Test Examiner Recertification** – Online 1.5 Hours – Illinois State Police
JANUARY 2014	**Advanced Roadside Impaired Driving Enforcement (ARIDE)** – 16 Hours – North East Multi-Regional Training, Woodstock, IL
JUNE 2013	**Reid Interviews & Interrogations: Basic & Advanced** – 32 Hours – Reid & Associates, Woodstock, IL
DECEMBER 2012	**Basic Evidence Technician Program** – 40 hours – North East Multi-Regional Training, Lake in the Hills, IL
JANUARY 2012	**Fraudulent Documentation Identification** – 1 Hour – Illinois Secretary of State, Woodstock, IL
DECEMBER 2011	**Breath Alcohol Operator & Preliminary Breath Test Examiner Recertification** – Online 1.5 Hours – Illinois State Police
SEPTEMBER 2011	**Emergency Vehicle Operator Course** – 8 Hours – McHenry County Sheriff's Office, Woodstock, IL
SEPTEMBER 2011	**Mock Crime Scene** – 8 Hours – McHenry County Sheriff's Office Investigations, Woodstock, IL
MAY 2011	**Police Motorcycle Operator** – 80 Hours – Midwest Police Motorcycle Training, Troy, MI
MAY 2011	**Responding to Utility Emergencies** – 3 Hours – RTUE Online
APRIL 2011	**Testifying in a DUI Trial** – 8 Hours – North East Multi-Regional Training, Woodstock, IL
OCTOBER 2010	**Laser Speed Measurement** – 4 Hours – McHenry County Sheriff's Office, Woodstock, IL
FEBRUARY 2010	**Radar Speed Measurement** – 4 Hours – McHenry County Sheriff's Office, Woodstock, IL
SEPTEMBER 2009	**Advanced Vehicle Contraband Concealment** – 16 Hours – Midwest Counterdrug Training Center, Johnston, IA
JULY 2009	**Roadside Interviews** – 32 Hours – Midwest Counterdrug Training Center, Johnston, IA
MAY 2009	**Emergency Vehicle Operator Course** – 8 Hours – McHenry County Sheriff's Office, Woodstock, IL
DECEMBER 2008	**Breath Alcohol Operator & Preliminary Breath Test Examiner** – 32 Hours – Illinois State Police, Woodstock, IL
NOVEMBER 2008	**Standardized Field Sobriety Testing Refresher** – 8 Hour – North East Multi-Regional Training, Woodstock, IL
NOVEMBER 2008	**Understanding Felony Review and License Abstracts** – 1 Hour – McHenry County State's Attorney, Woodstock, IL
JUNE 2008	**Reid Interviews & Interrogations: Basic & Advanced** – 32 Hours – Reid & Associates, Woodstock, IL
APRIL-JULY 2006	**Basic Law Enforcement** – 480 Hours – University of Illinois Police Training Institute, Champaign, IL

PRESENTATIONS

OCTOBER 2020	**Asociación de Peritos en Investigación de Accidentes de Tránsito A.P.I.A.T. – Webinar 4A** – Topic: Use of Photogrammetry in the Investigation of Traffic Accidents – 1.25 Hours – Webinar presentation to countries throughout South America

2014 - 2021

McHenry County Sheriff's Office Major Crash Investigation Unit – During his tenure on the Major Crash Investigation Unit, Andrew has developed curriculum and instructed on the following topics:

- Mock crash scene training
- DUI protocol
- Investigative methods
- Total station operations
- Vehicle inspections
- Motorcycle inspections
- Reconstruction methods & refresher
- Part 107 FAA Test Preparation
- UAV Remote Pilot Training
- UAV photography for crash investigations
- Nighttime UAV photography of crash/crime scenes
- Search warrants and subpoenas
- Cell phone investigations
- Vehicle skid testing
- The Crash Zone software
- Crash Data Retrieval refresher
- Event data recorder preservation
- Lamp inspection and preservation

Andrew also provides educational presentations to heavy trucking companies on the following topics:

- Commercial Driver's License policy
- CDL licensing laws
- Effects of violations on CDL licenses
- Safe driving habits
- Incident reporting
- Vehicle weight laws
- Load securement & equipment laws
- Trailer braking systems
- Pre-trip inspections
- Farm trucking laws

2013 - 2021

Illinois Truck Enforcement Association – While maintaining membership and certification through the Illinois Truck Enforcement Association, Andrew developed curriculum in cooperation with the Illinois Department of Transportation, Illinois Secretary of State, and Illinois State Police. Classes presented throughout Illinois include:

- Basic Truck Enforcement
- Advanced Truck Enforcement
- Truck Enforcement Officer Certification