IDAHO STATE POLICE PROCEDURE

07.03 CRASH RECONSTRUCTION

I. General

A. Each District has Troopers assigned to the Idaho State Police (ISP) Crash Reconstruction Unit (CRU). Positions within the CRU include Measurement Technicians, Technical Collision Investigators (TCI), Collision Reconstructionists, ACTAR-Accredited Reconstructionists (Accreditation Commission for Traffic Accident Reconstruction), Reconstruction Specialists, and a Collision Reconstruction Program Coordinator (CRPC). Any CRU Member that is qualified to reconstruct a collision will be referred to herein as "Reconstructionist."

B. The CRU's purpose is to assist ISP and other agencies in any case that necessitates specialized investigative techniques in the field of collision investigation, vehicular homicide, vehicle-related deaths, crime scene processing, and courtroom testimony. CRU Members actively reconstruct traffic crashes, using the most up-to-date universally accepted investigative methodology and scientific principles. The CRU provides accurate and complete crash investigation and reconstruction analyses as a public service.

II. Trooper Nomination

A. Troopers are nominated for positions in the CRU based on demonstrated:
1. desire;
2. investigative abilities;
3. mathematical skills; and
4. attention to detail.

B. The nominee's most recent performance evaluation rating must be at least an "Achieves Performance Standards."

C. Nominations are made to the Trooper's District Captain by a direct supervisor or other District Command Staff.

D. Generally, the nominees to the CRU are Patrol Troopers with the rank of Corporal or lower.

III. Selection

A. A Trooper can be selected for a Measurement Technician position in the CRU with the prior approval of their supervisor and District Command Staff.

B. The Major, Program Captain, and CRPC make the final selection of TCIs, Collision Reconstructionists, and ACTAR-Accredited Reconstructionists. There can be up to 11 (eleven) ACTAR-Accredited Reconstructionists including the CRPC and Reconstruction Specialists.

IV. Requirements for CRU Members

A. Measurement Technicians must:
1. Be trained and certified on the measuring equipment used by the Measurement Technician; and
2. Recertify on their measuring equipment every 2 years.

B. TCIs:
1. Must currently be an active Measurement Technician and complete the Institute of Police Technology and Management (IPTM) Advanced Traffic Crash Investigation course or the equivalent outside accredited course(s) which have been approved by both the CRPC and Program Captain; and
2. Regularly completes the EHF 07-03-02 Traffic Collision Evaluation Reports.

C. Collision Reconstructionist:
1. Must complete IPTM's Traffic Crash Reconstruction course, or the equivalent outside accredited course(s) which have been approved by both the CRPC and Program Captain.
2. Sign an agreement to actively serve in that capacity for at least 2 years.
3. Regularly complete the EHF 07-03-01 Collision Analysis and Reconstruction Reports, and the EHF 07-03-02 Traffic Collision Evaluation Reports.

D. ACTAR-Accredited Reconstructionists:
1. Must currently be a Collision Reconstructionist in good standing;
2. Must sign an agreement to actively serve in that capacity for at least 2 years; and
3. Must pass the ACTAR examination within one year of selection.
4. Those who fail to complete and pass the examination within one year must repeat the selection process and will again have one year to complete and pass the ACTAR examination if selected.
5. Must maintain current ACTAR accreditation by meeting the minimum required continuing education credits: and
6. Must comply with the ACTAR Code of Conduct as outlined in Articles 6-8 of the ACTAR Bylaws.

E. Reconstructionists who have completed IPTM's Event Data Recorder (EDR) Use in Traffic Crash Reconstruction course or the equivalent outside accredited course(s) which have been approved by both the CRPC and Program Captain, will regularly complete the EHF 07-03-03 Crash Data Retrieval Analysis Report.

F. All CRU Members must maintain a performance evaluation of "Achieves Performance Standards" or higher.

G. Any CRU Member placed on a performance improvement plan is suspended from the program until successful completion of a performance improvement plan.

H. The District Command Staff has the ability to remove any CRU Member from the program with the approval of the area Major.

I. If necessary, appropriate remedial training for the CRU Member is arranged by the CRPC;

J. When appropriate, the CRPC completes an evaluation;

K. If there is not acceptable progress toward the resolution of the identified issues, the CRU Member is removed from the program based on concurrence of the CRPC, District Captain and Program Captain.

V. Training and Equipment

A. Annual collision investigation refresher courses for Collision Reconstructionists and ACTAR-Accredited Reconstructionists are typically scheduled by the CRPC.

B. Refresher training and certifications for Measurement Technicians and TCIs are typically scheduled by the assigned Reconstruction Specialist.

C. The Program Captain and CRPC must approve additional crash investigation training.

D. Software and equipment are issued to CRU Members with the approval of the CRPC. The use of other unapproved software or equipment is prohibited.

VI. Roles and Responsibilities

A. A Reconstruction Specialist is a promoted ACTAR-accredited reconstructionist assigned to each District. The Reconstruction Specialist is responsible for managing the casework generated in their District as well as other duties described in ISP's CRU Manual. Additional full-time CRU Members may be assigned to a District by consensus of the Area Major, District Captain and CRPC.

B. The Reconstruction Specialists coordinate the peer reviews of the crash reconstruction related reports written by CRU Members within their District. The Reconstruction Specialists assist the CRPC and coordinates information between their District and the CRPC.

C. The primary investigator of any crash may request assistance from a CRU Member when elements of the investigation are beyond the primary investigator's capabilities and training.

D. Any Sergeant or member of Command Staff may request assistance from a CRU Member.

E. The following report or evaluation is to be completed when ISP is the primary investigating agency:

1. Collision Analysis and Reconstruction Report is to be completed for the following types of crashes:
   a. fatality traffic crashes with a possibility of criminal charges;
   b. fatality crashes needing additional analysis to determine if a criminal act occurred;
   c. crashes with a probability of public safety or public perceptions issues;
   d. injury crashes requiring unique technical expertise when requested by a prosecuting attorney's office or if extenuating circumstances exist;
   e. other serious injury or fatality crashes at the request of any local police agency, with the concurrence of a supervisor; or
   f. at the direction of the District Command Staff.

2. Traffic Collision Evaluation is to be completed for fatality traffic crashes involving a surviving party with no criminal charges. The Traffic Collision Evaluation is to be peer reviewed by a Reconstruction Specialist and the CRPC. It is then submitted to the District Commander or designee for signature.

F. Reconstructionist are not required to attend every crash they reconstruct.

G. If the Reconstructionist investigates a crash requiring reconstruction, it is suggested a that a separate Reconstructionist carries out the reconstruction of the crash.

H. CRU embers may be required to visit the scene at a later date to obtain photographs, collect missing information and/or take measurements.

I. A scale diagram using the collected measurements is drawn using a Computer Aided Design (CAD) program.
   1. The CRU Member responsible for measuring the scene will typically be responsible for preparing the scale diagram.
   2. Scale diagrams are completed for all fatality collisions.
   3. All scale diagrams must be peer reviewed by another CRU Member.

J. The primary roles of Reconstructionists are to:
   1. Take information obtained from the primary investigator and reconstruct the crash;
   2. Assist with the crash measurements;
   3. Give technical advice on or assist with obtaining drag factors and coefficients of friction;
   4. Prepare momentum calculations;
   5. Develop vector diagrams;
   6. Perform falls, vaults and speed calculations;
   7. Prepare time and distance charts;
   8. Preserve and collect EDR data;
   9. Determine acceleration factors; and

10. Assist in collecting necessary forensic evidence to determine driver and passenger positions in the vehicle and the mechanism of injury.

K. Reconstructionists and the primary investigator collaborate regarding:
   1. where and how to obtain witness statements;
   2. occupant information;
   3. sight distances;
   4. measure slopes or grades, and;
   5. aid in performing a comprehensive profile of the drivers and occupants.

VII. Collision Analysis and Reconstruction Reports; Traffic Collision Evaluation Reports; and Crash Data Retrieval Analysis Reports

A. Reports are factual and contain proven theories or information confirmed by evidence or known facts;
B. Conclusions must be logical and consistent with evidence;
C. The report contains:
   1. an inserted scale diagram;
   2. photos showing the roadway characteristics and conditions as close to the time of the collision as possible;
   3. photos of vehicle damage;
   4. formulae used to determine conclusions; and
   5. a list of key information obtained, reviewed, or considered in completing the report.

D. CRU Members are encouraged to consult with their fellow CRU Members before submitting a draft report.

E. CRU Members post the completed draft report in the Recon folder on the global drive and notify their assigned Reconstruction Specialist. If a Reconstruction Specialist is the author of the draft report, he/she will coordinate with another Reconstruction Specialist or CRPC for peer review.

VIII. Report Peer Review

A. The peer review process provides quality control and encompasses the following report elements:
   1. completeness and neatness;
   2. correct spelling and proper grammar;
   3. appropriate application of formulae and laws of physics;
   4. quality and accuracy of scale drawing(s);
   5. appropriate rationale and logic of evidence-based conclusions; and
   6. overall quality and accuracy of the report.

B. With the approval of the CRPC, qualified CRU Members may peer review reconstruction reports from other agencies.

C. The assigned Reconstruction Specialist selects a qualified CRU Member to peer review the draft. With the approval of the CRPC, the draft may be reviewed by a qualified Reconstructionist from another agency.

D. The peer reviewer makes comments, if necessary, on the draft and reports back to the author. The peer reviewer shall complete their review within 10 calendar days of being assigned. If their schedule and/or workload will not allow completion of the review within that time frame, they shall immediately notify the Reconstruction Specialist or CRPC. The Reconstruction Specialist or the CRPC will re-assign the peer review or approve the delay if necessary.

E. If the investigation has revealed the case will involve criminal charges, there will be two peer reviews completed. One of the peer reviews must be completed by a Reconstruction Specialist or the CRPC.

F. The report author makes the appropriate changes and submits the completed report to the peer reviewers. If approved, the peer reviewers add their credentials to the bottom of the report. The report is then printed, added to the case file and forwarded to the prosecutor's office.

G. If a Reconstruction Specialist, the CRPC, Program Captain, or District Command Staff believes the final submitted report needs further revision, a teleconference or meeting is held between the CRU Member who authored the report, the District Command Staff, the District's Reconstruction Specialist, the Program Captain and the CRPC to resolve the issues. The District Command Staff have the final say in the approval process:
   1. issues noted during the review process are addressed directly to the CRU Member;
   2. problems include but are not limited to:
      a. misapplication of formulae or the laws of physics;
      b. failure to follow best practice or proven methods;
      c. inappropriate opinions or conclusions; and
      d. poor quality or incomplete narrative or drawings.

IX. Idaho Vehicle Collision Reports (IVCR)

A. If a District Commander chooses, a Collision Reconstructionist may be assigned to review and approve IVCRs and case files for the District.

B. The review of IVCRs and case files focus on:
   a. measurements;
   b. photographs;
   c. witness statements;
   d. presence and quality of the Investigative Log entries;
   e. the officer's synopsis of the investigation; and
   f. the overall quality, completeness, and accuracy of the investigation

C. For supervision purposes, the Collision Reconstructionist notifies the Trooper's supervisor of any significant or recurring deficiencies in the IVCR or case file.

X. Training Records and Curriculum Vitae

A. In addition to the ISP Training Section, each CRU Member maintains their crash training records and a current curriculum vitae.

B. Each CRU Member must keep a record of all documented testimony involving collision reconstruction for the previous five years. This includes depositions, civil, and criminal court testimony.

C. Each year, the CRPC directs the Reconstruction Specialists to update their curriculum vitae and court testimony lists. The CRPC places a copy of the curriculum vitae for each Reconstruction Specialist into their personnel file.