

CRASH & INCIDENT INVESTIGATION



PRIORITY # 1 IS

SAFETY OF ALL

AT THE SCENE

WARNING



While it may not always be possible or necessary to utilize all of the techniques described here, anyone investigating accidents should be aware of these methods. Use these if there is time and it is appropriate.

NEVER INSIST ON CONTINUING IF THE POLICE TELL YOU TO DESIST.

Shoot pictures from outside of police tape if necessary

TOOLS



Safety Vest

Gloves/BBP Kit

Cell Phone/Camera

Flash Light

Rain/Cold Gear

Lumber Crayon/Chalk

TOOLS

Clipboard/Paper

Pen & Pencil

Measuring Wheel or 100' Tape

Tape Measure

Compass

Chain of Events in a Collision

Point of Possible Perception – should see potential?

Point of Perception – did see potential

Operator Response – $\frac{1}{2}$ to $\frac{3}{4}$ second (if any) +

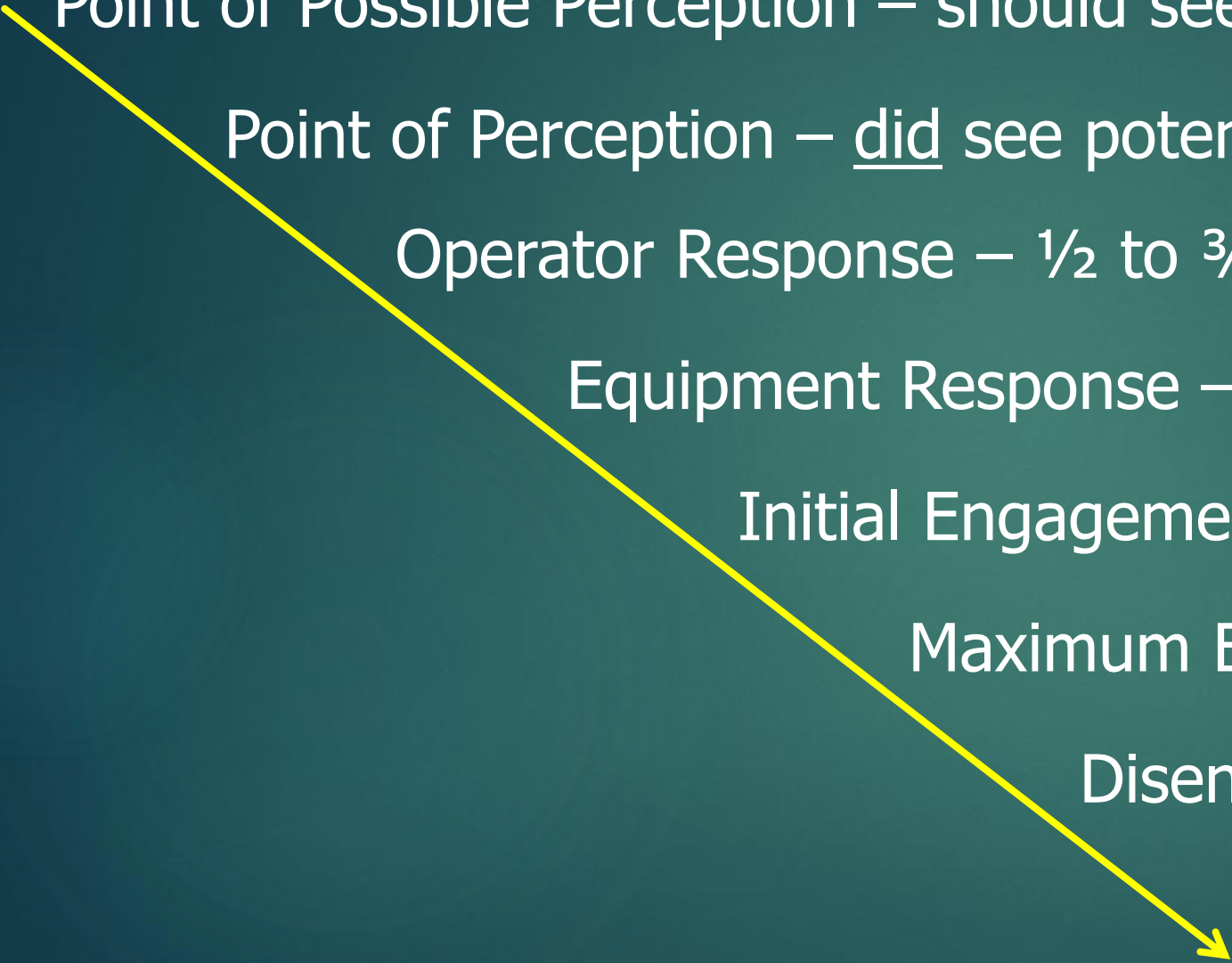
Equipment Response – w/air brakes $\frac{1}{2}$ to $\frac{3}{4}$ second

Initial Engagement – Point of Impact (POI)

Maximum Engagement

Disengagement – separation starts?

Final Rest



GET THE FACTS

Wisconsin couple were treated for minor injuries at the local hospital emergency. After their Smart Car hit a squirrel on highway 8. The squirrel refused treatment and left the scene!



PHOTOS

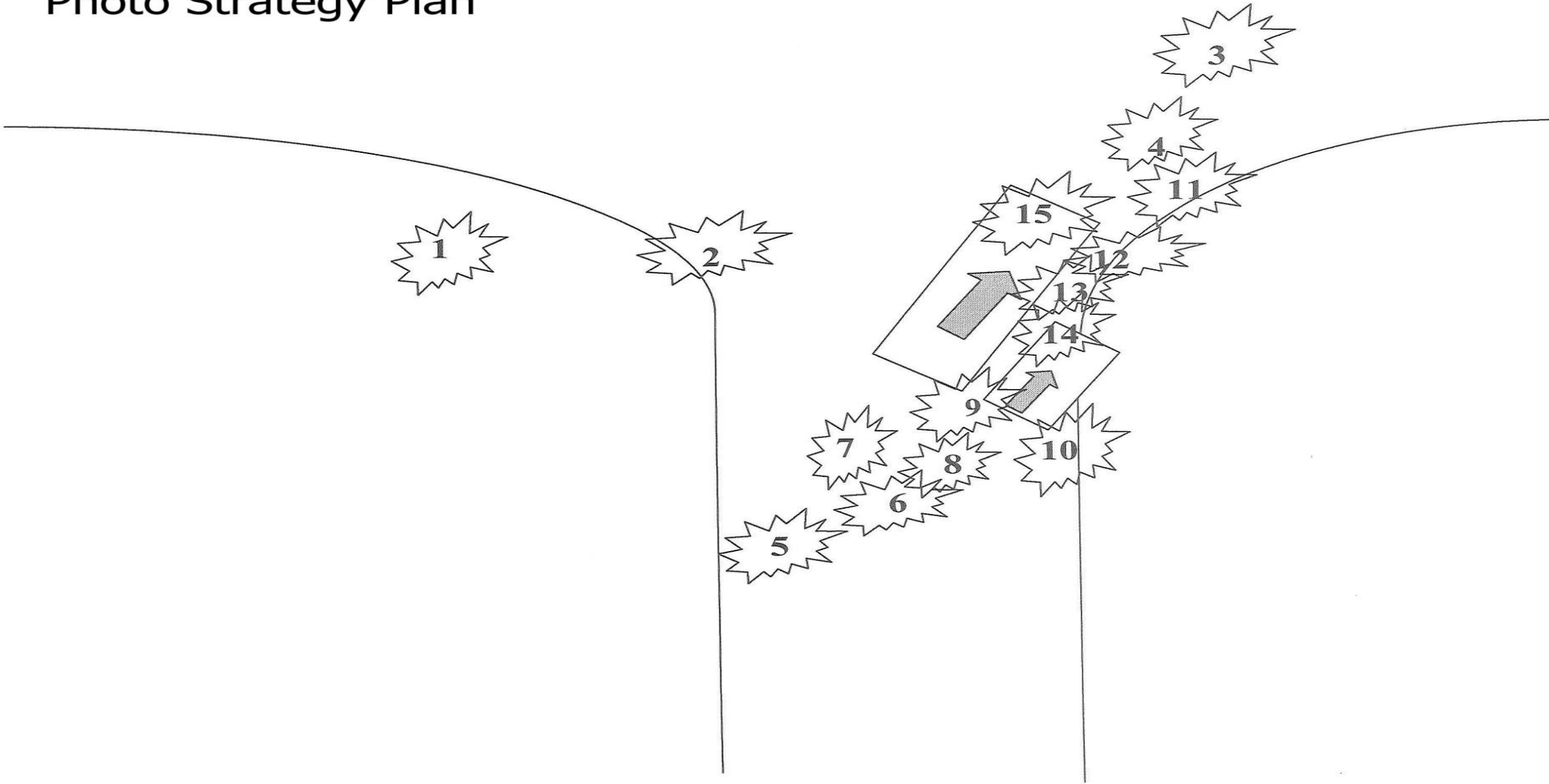


PERMANENT VISUAL PROOF

GET VIN # / VEHICLE # / PLATE #

INTERIOR

Photo Strategy Plan



TRANSIENT EVIDENCE



Physical evidence that might
disappear within a
short time

MARKS FLUIDS DEBRIS



WHICH ONE?

SKID

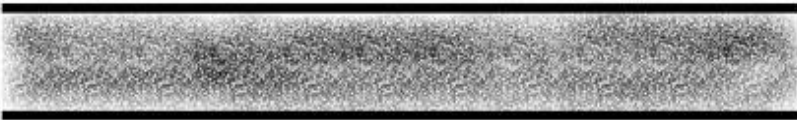
FINAL REST

TAKE PIX OF ALL SKID MARKS AT SCENE FIRST

Measurements



**FRONT TIRE
Over Deflection**



**REAR TIRE
Under Deflection**



SKID MARKS



ABS SKID



OFF SET SKID

SKID MARKS



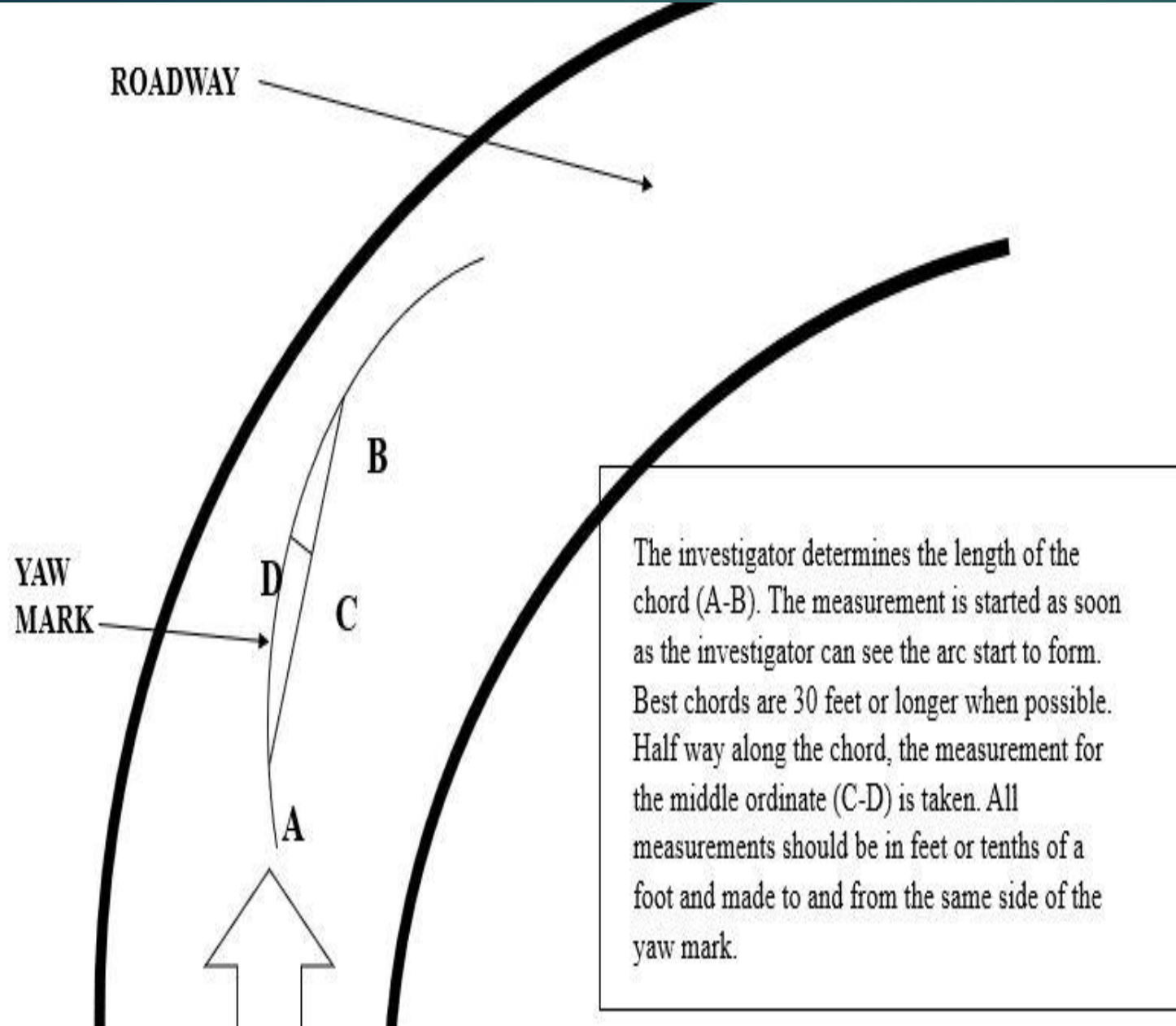
GAP SKID



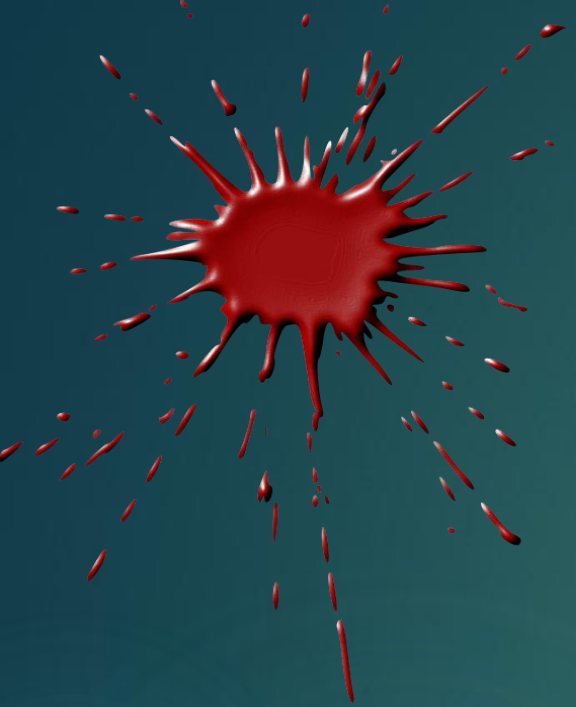
This is a typical skip skid caused by an empty trailer on a tractor trailer rig. The driver approached the intersection too fast and skidded over 100 feet before getting the truck under control.

SKIP SKID

YAW MARK



FLUIDS



SPLASH DOWN



RUN-OFF



SOAK-IN



PUDDLE



DRIBBLE TRAIL

DEBRIS

FIELD



Reference Point

N

S

E

W



This is a chart that can be used to record the various measurements made at the collision site. Changes should never be made on the sketch unless they are made at the accident site.

SKETCHES



NOT TO SCALE

PART OF LEGAL FILE

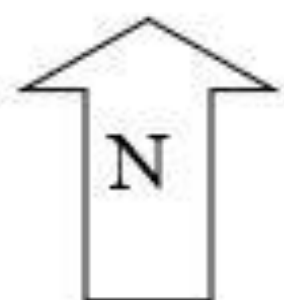
CONTENTS

TRIANGULATION METHOD

LAMP POST # 377

RP #2

OAK STREET



RP #1 = Hydrant south of Oak

RP #2 = Lamp post #377, 28.1 from RP #1

Point out
discrepancy.
(28.1 vs. 28.2)

36.3

36.3

28.2

22.0

29.6

29.6

40

RP #1

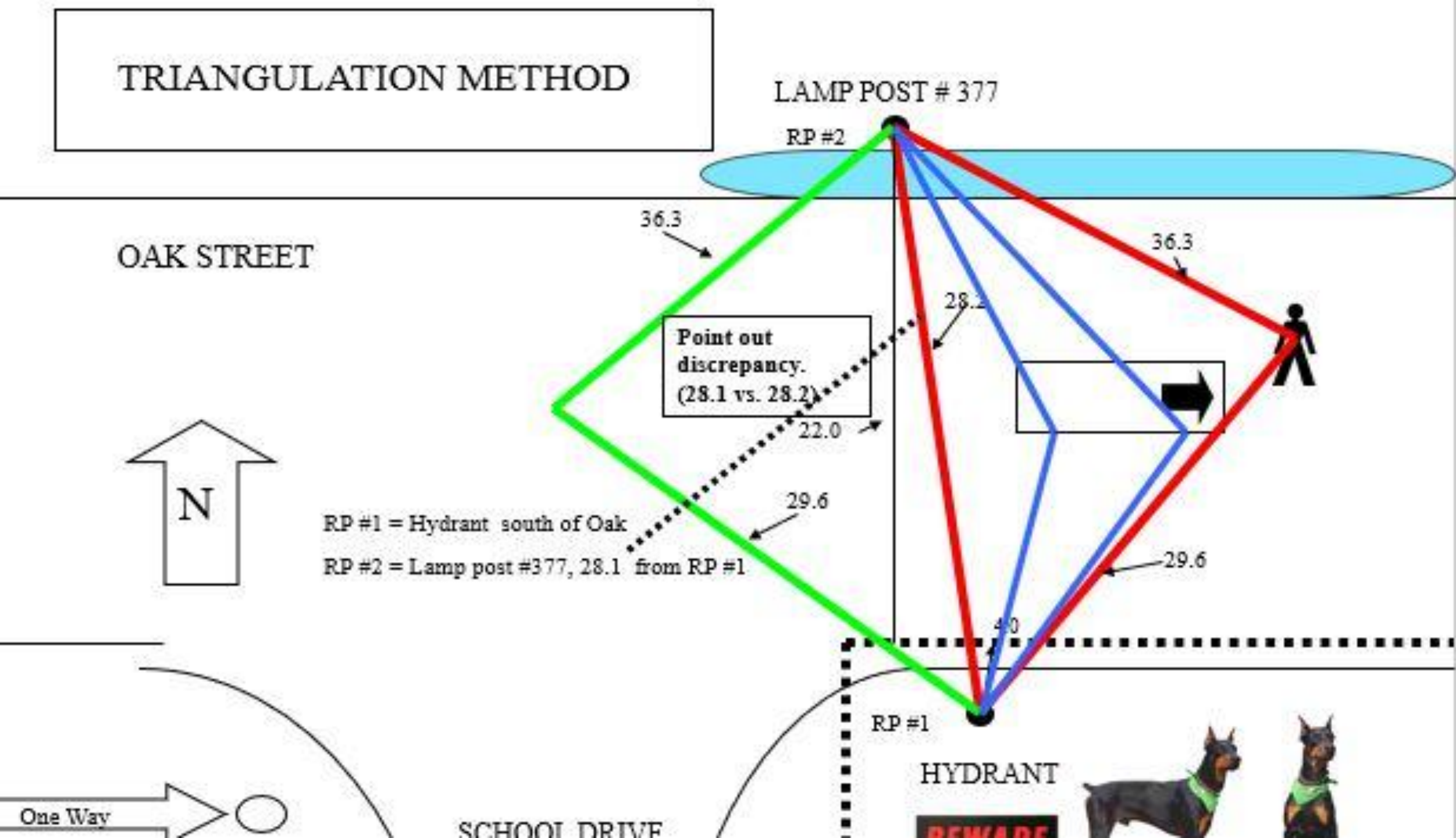
HYDRANT

BEWARE



One Way

SCHOOL DRIVE



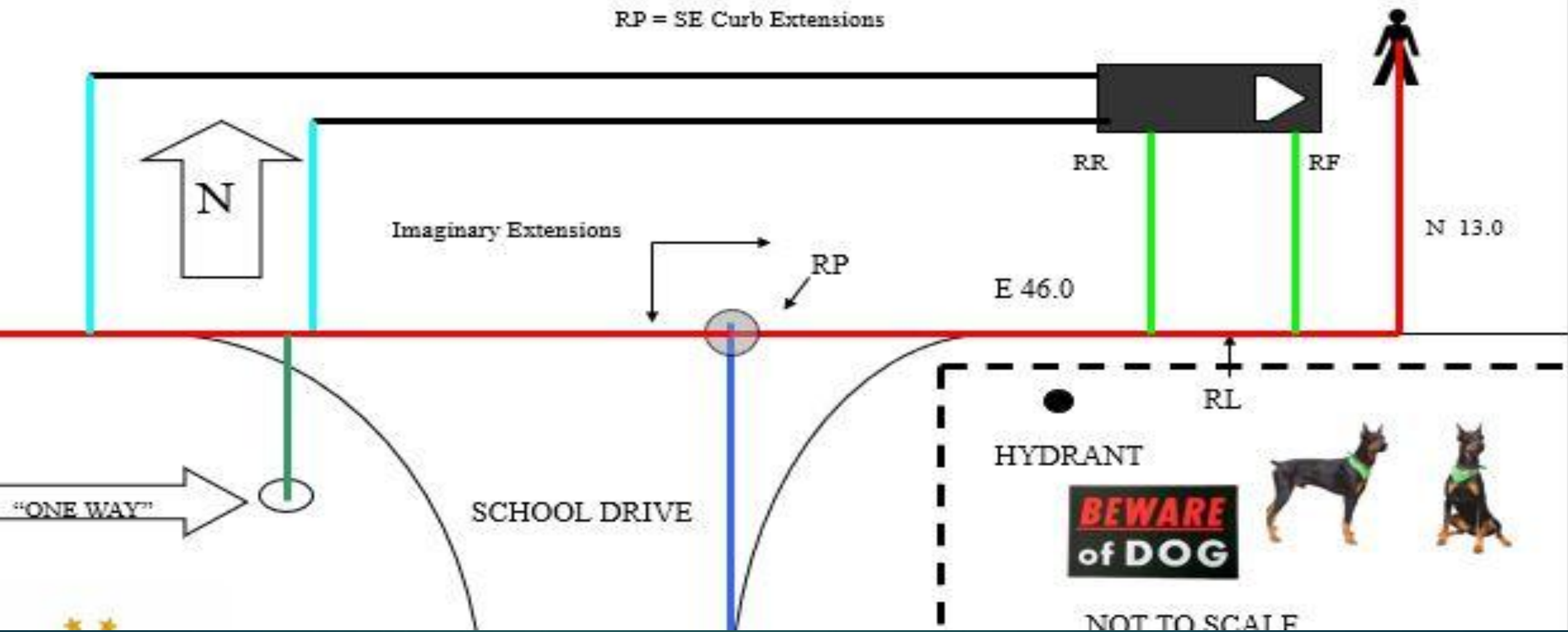
COORDINATE METHOD

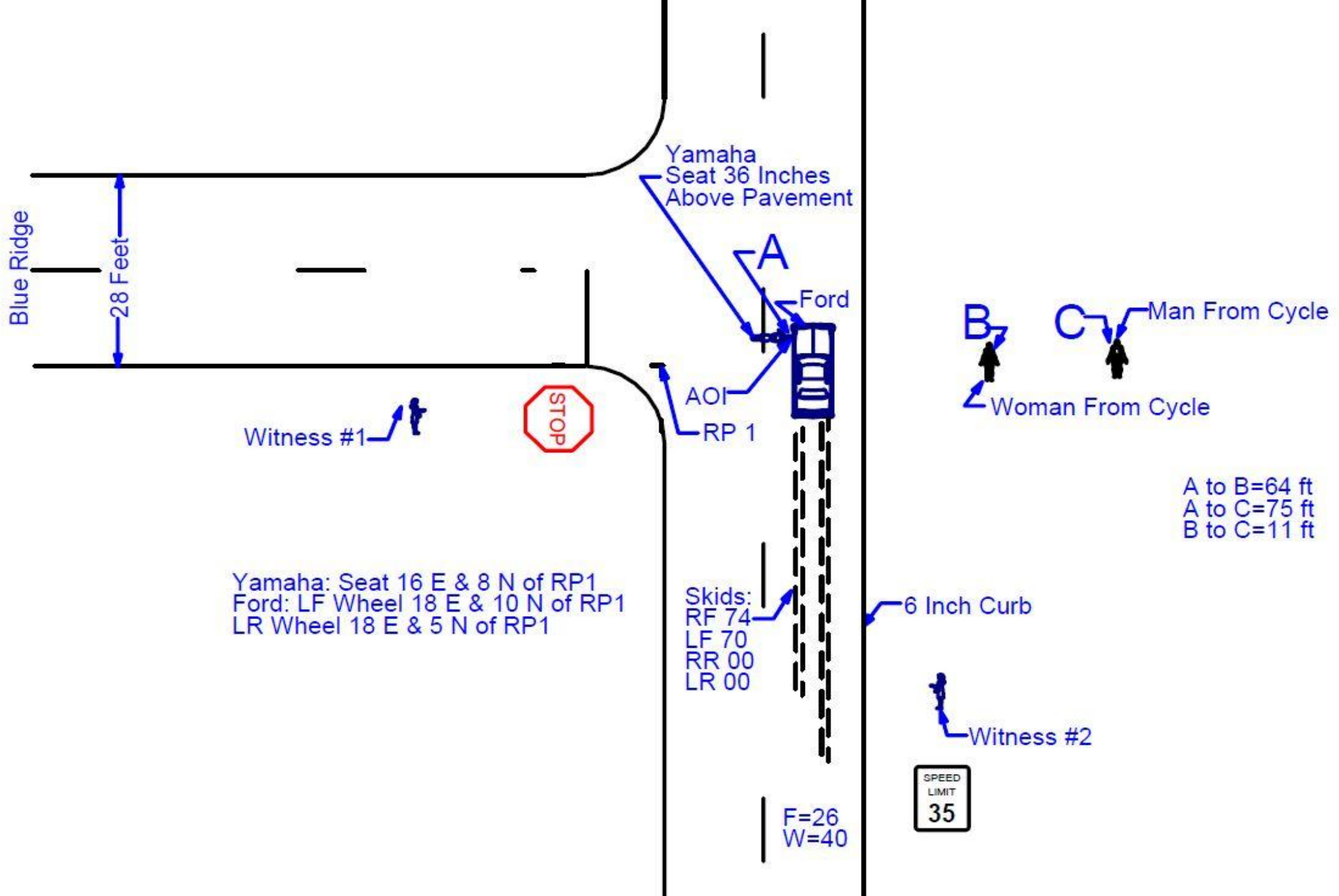
LAMP POST # 377

OAK STREET

RP = SE Curb Extensions

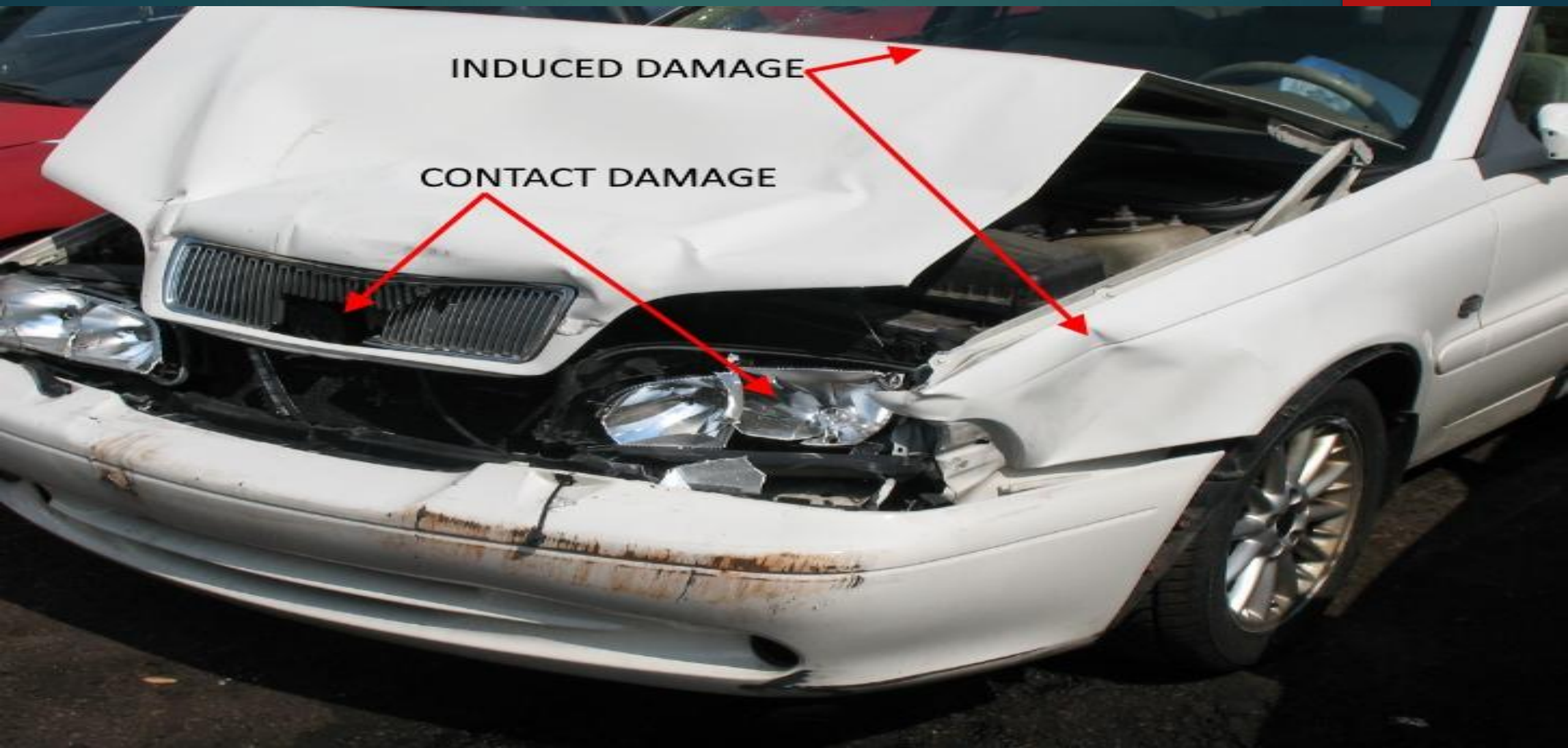
RP = SE Curb Extensions





F=26
W=40

FIXED EVIDENCE



FIXED EVIDENCE



EXTERIOR

HEAD

STRIKE



EXTERIOR HEAD STRIKE

INTERIOR HEAD STRIKE



DISTORTION

TWISTING

BENDING

STRESS RELIEF



PUNCTURE



RUB-OFF



IMPRINT



RUB-OFF

IMPRINT



WEIRD
CONTACT
ABOUT
TO
INDUCE



CONTACT

&

INDUCED



CONTACT

&

INDUCED



INTERVIEWS



OPERATOR

PASSENGERS

OBSERVERS

RESPONDERS

INTERVIEWS



AT SCENE

ASAP AFTER

NEUTRAL LOCATION FOR HOSTILE

OBSERVER FACTORS



PERCEPTION v REALITY

EMOTIONS / INTELLIGENCE

CREDIBILITY

OBSERVER FACTORS



ENVIRONMENT

PHYSIOLOGY

PSYCHOLOGICAL

DEALING WITH PRESS & PUBLIC



ASSUME EVERYTHING YOU SAY
WILL BE QUOTED

NO SUCH THING AS “OFF THE RECORD”

NO HYPOTHETICAL QUESTIONS

DEALING WITH PRESS & PUBLIC

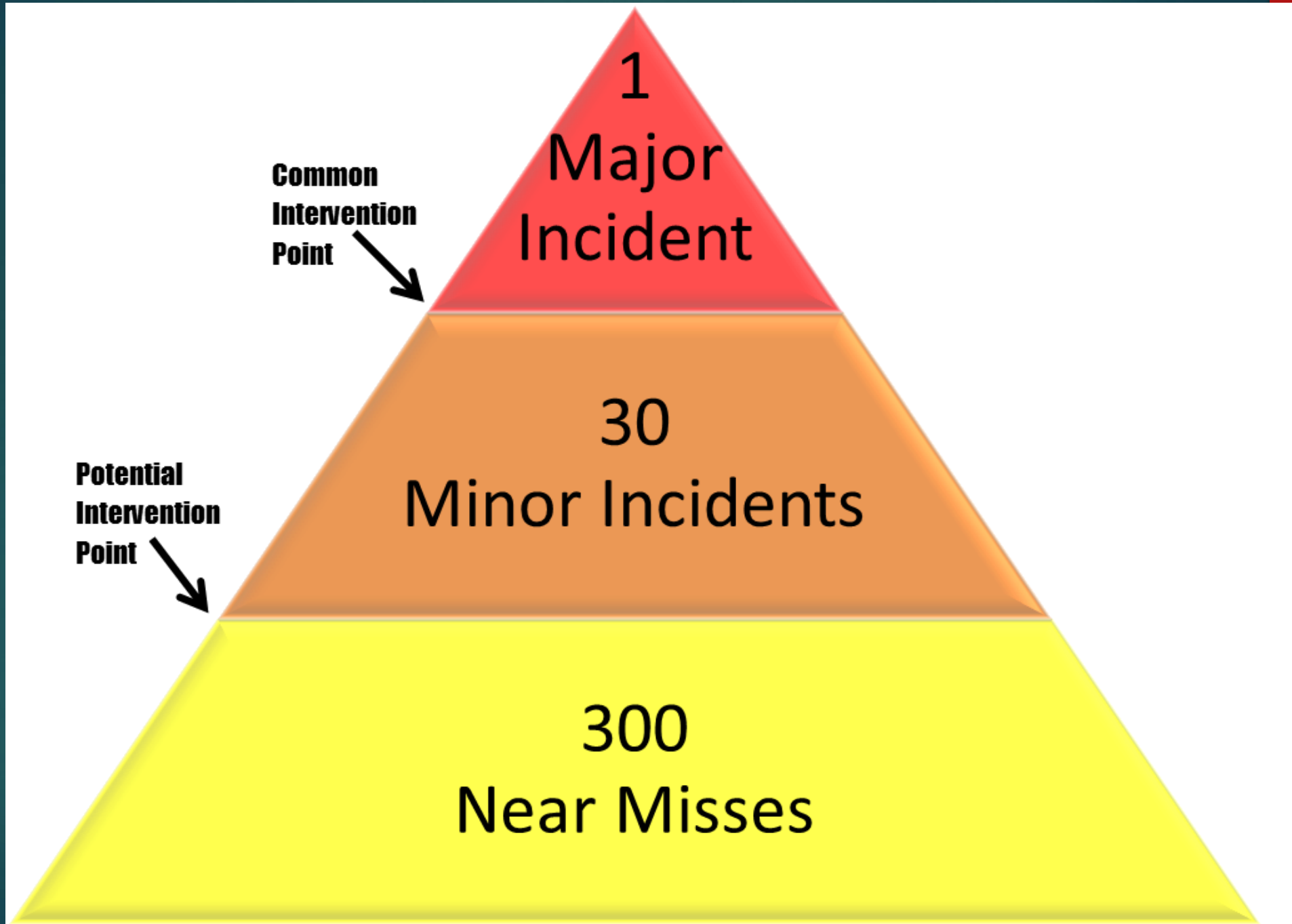


ALWAYS REPLY to PRESS AND PUBLIC:

**“The incident is currently under
investigation and at this
time we do not have
all the facts”**



WAS
THE
MANEUVER
NECESSARY



Problem: Ran through a red light.

Why?

Late for work.

Why?

Woke up late.

Why?

Alarm didn't work.

Why?

Exhausted battery.

Why?

I forgot to check it.

Root cause

NSC Preventability

An accident where the operator could have, but failed to identify a crash-producing situation soon enough to take reasonable action in time to avoid a crash.



What standard of
safe driving performance
do you expect of
your operators

RESOURCES



National RTAP

www.nationalrtap.org

Transportation Safety Institute

www.transportation.gov/tsi

Federal Transit Administration

www.transit.gov

OR

<https://www.transit.dot.gov/regulations-and-guidance/safety/emergency-management>

Homeland Security

[and-workplaceviolence](http://www.dhs.gov/school-and-workplaceviolence)

[www.dhs.gov/school-](http://www.dhs.gov/school-and-workplaceviolence)

National Transit Institute

www.ntionline.com

CDC

<https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/bus-transit-operator.html>

FEMA

www.fema.gov

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