

Laura Brill and Ellen Evans  
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Los Angeles, CA 90069

November 30, 2014

Michael Feuer, Esq.  
City Attorney  
The Office of the City Attorney  
800 City Hall East  
200 N. Main Street  
Los Angeles, CA 90012

Hon. Tom LaBonge  
Councilmember, 4<sup>th</sup> District  
Los Angeles City Hall  
200 N. Spring Street  
Room 480  
Los Angeles, CA 90012

Re: Board of Building & Safety Commissioners Case No. BF140042; Council File 14-1524; Item No. 6, PLUM Committee Hearing December 2, 2014

Dear Mr. Feuer and Councilmember LaBonge:

We write concerning the above-referenced administrative appeal, which is scheduled to be heard in the PLUM Committee on December 2, 2014.

The appeal concerns BBSC's approval of a hauling route for more than one thousand truckloads of dirt in the hillside area on Doheny Drive north of Sunset Boulevard.

BBSC's approval imposes significant risks for the community which BBSC expressly stated it had no power to address or remedy in its approval process. We live near the project cite and directly along the approved hauling route and are deeply concerned that the result of this approval in which the BBSC expressly determined that it lacked authority to implement reasonable safety standards for the hauling vehicles did not reasonably consider appropriate safeguard and will endanger our community.

On nearby Loma Vista Drive in Beverly Hills, which has a similar grade to our street, **three recent fatalities** have been attributed to construction vehicles losing control while going downhill. **Two of the victims were police officers.** We are attaching a copy of a news article about these issues. In response, the City of Beverly Hills implemented an immediate moratorium and has since ordered increased safety precautions for the hauling trucks, including third-party inspections and secondary braking devices on all hauling vehicles.

In contrast, the City of Los Angeles BBSC expressly held at the hearing on this appeal that it had no power to regulate trucks as part of approving the hauling route. The appellants in this matter expressly requested secondary braking devices and third party inspections, but were told that BBSC was not the appropriate body to consider the matter.

If the City of Beverly Hills has the power to order secondary braking devices and third-party inspections for trucks, then certainly someone in City of LA does. And if it is not BBSC then the appropriate committee of this Council or the Council as a whole must review the matter in the first instance or send it to the appropriate agency.

The Hollywood Hills are a treasured resource of the City of Los Angeles. While development is an important goal, approval of massive hauling projects without appropriate safeguards places the entire neighborhood at risk. The street has no sidewalks and many people walk either to reach homes where they are employed or because they are dog owners or for recreational purposes.

Please take a serious look at this issue and ensure that the appropriate agency considers the appropriate safeguards for trucking in the hills.

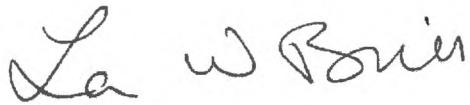
If BBSC did have discretion to impose the requested standards for hauling, then the appeal ought to be sent back to them to exercise their discretion because they expressly stated that they believed they had no power to act. It is an abuse of discretion to fail to exercise discretion.

From a common sense point of view, the City really has no business approving thousands of hauling trips as safety compliant when it has not put in place the measures to review the relevant risks of such hauling. A simple Google search turns up many news reports about fatal dump truck accidents, especially on hillsides.

Finally, while not specifically directed to this appeal, we ask that PLUM should consider an immediate moratorium on massive projects in the hills while it determines how to manage these matters safely. BBSC also suggested this at the hearing on this appeal and stated that the number of projects being approved is too great and that there is no mechanism for coordinating the massive hauling.

We believe strongly that the issue of hillside development has not been appropriately managed and is creating serious risks. Please give this matter serious attention.

Sincerely,

Handwritten signature of Laura Brill in cursive script.

Laura Brill

Handwritten signature of Ellen Evans in cursive script.

Ellen Evans

Encl: Audiotape DVD of BBSC meeting  
Patch article about Loma Vista  
Haul Truck Safety powerpoint

cc: Jonathan Brand  
Sharon Gin  
BBSC President Van Ambatielos  
Councilmember Jose Huizar  
Councilmember Gilbert A. Cedillo  
Councilmember Mitchell Englander



## Loma Vista Drive Accident Takes Life of Off-Duty LAPD Officer -- Again

*Loma Vista Drive is closed to traffic between Doheny Road and Drury Lane. Loma Vista Drive is closed to traffic between Doheny Road and Drury Lane.*

By Penny Arévalo (Patch Staff) (/users/penny-arvalo-ef50db93)  
 © May 9, 2014 at 10:16pm  
<http://contribute.patch.com/moderation/23464666>



*Originally posted at 3:55 p.m. May 9, 2014. Edited with new details.*

An off-duty Los Angeles police detective was killed today when a cement mixer struck his pickup truck along the same winding, hilly stretch of road in Beverly Hills where an LAPD officer was killed in March in a collision with a dump truck.

The crash, which happened at 1:53 p.m. in the 1000 block of Loma Vista Drive, also seriously injured the cement truck's driver, who was taken to a hospital for treatment, Beverly Hills police Sgt. Max Subin said.

Los Angeles Police Department Chief Charlie Beck said the detective, who was pronounced dead at the scene, has been on the force for more than 25 years. He did not release the detective's name or where he was assigned.

The detective, who was in his personal vehicle, had off-duty employment in the area and regularly travels the street where he was killed, according to Beck, who said the truck was traveling southbound, or downhill, when the crash happened.

### TRENDING PATCH

- 1 ▶ [Boy Missing for 4 Year: Behind False Wall: Geo News](#)  
 (/georgia/decalur/boy-missir found-behind-false-wall-geo)
- 2 ▶ [Neighbors Combine Fc Incredible 'Let It Go' Cl Display](#)  
 (/maryland/belair/amyclae-f show-inspired-let-it-go)
- 3 ▶ [Mom's Plea: Please Do My Kids](#)  
 (/california/alameda/bp--ple help-my-kids)
- 4 ▶ [This Pig Really Can't Fl: Asked to Remove 'Disr Pig From Plane](#)  
 (/connecticut/milford/pig-re: woman-asked-remove-disru plane-0)
- 5 ▶ [Top 5 Longest Lasting Christmas Trees](#)  
 (/michigan/oaklandtownship longest-lasting-christmas-tre

Los Angeles police Officer Nicholas Lee, 40, was killed on the same stretch of Loma Vista Drive on March 7 and another cement mixer slammed into several parked cars on the road last Friday, leaving the driver hospitalized with serious injuries.

"I was stunned into disbelief when I got the phone call and they gave me the location," Beck told reporters at the scene shortly after police officers and firefighters solemnly formed a cortege and brought the fallen detective's body to a waiting coroner's van.

Loma Vista Drive was expected to be closed to traffic between Doheny Road and Drury Lane through early Saturday as police investigated the latest crash, Subin said.

Beverly Hills Police Department Chief David Snowden said a 30-day heavy traffic moratorium, effective immediately, is now in place on that road.

Snowden said his officers, with help from the California Highway Patrol, would be weighing every vehicle attempting to enter the area.

Beverly Hills police issued a statement after last Friday's crash saying officers have increased commercial vehicle enforcement in the area and that the city was "developing stringent regulations to control truck traffic on high-risk streets through the construction permit process."

The statement called it "a critical public safety issue" and said the Beverly Hills Police Department and other city departments "are aggressively working together to avoid future accidents."

The detective's death was the third of an LAPD officer in the span of a week and the fifth this year.

Officer Roberto C. Sanchez, 32, a six-year veteran of the force, died on Saturday when an SUV crashed into the cruiser in which he and his partner were following another vehicle in Harbor City.

The SUV driver, 20-year-old Mynor Enrique Varela of Harbor City, has been charged with murder for allegedly intentionally crashing into the patrol car to help a friend in the car being followed escape the police.

Sanchez's partner, Officer Richard Medina, suffered a broken jaw and other injuries. He was released from the hospital Sunday and is home recovering, authorities said.

On April 5, motorcycle Officer Chris Cortijo, 51, was struck from behind by an SUV while stopped at a red light at Lankershim Boulevard and Satcoy Street in Sun Valley. He died four days later. The driver was charged with driving under the influence of cocaine.

The department was also mourning the death of Officer George Nagata, a 35-year LAPD veteran who became ill while on duty and died last Friday after being hospitalized with an apparent heart condition.

Los Angeles Mayor Eric Garcetti said city officials are horrified at the news of the fifth LAPD fatality in a little more than two months.

"The city is still reeling from the recent death of three on-duty LAPD officers and my heart aches at the death today of yet another of our officers. Amy's and my thoughts are with his family and everyone in the Los Angeles Police Department," Garcetti said, referring to his wife.



TOP NEWS CALIFORNIA

**Grinch Alert: Police Offer Tips to Prevent Package Thieves**  
(/california/elcerrito/grinch-alert-police-offer-tips-package-thefts)



Police say tend to occur normal but when residents are away,

**A Book to Help Kids Give Thanks**  
(/california/losaltos/book-kids-give-thanks)



An enlightening look at what other cultures eat around the world when they are around the world.

**Did You Know #Petalu Famous Military Comedian Maximilian Uriarte?**  
(/california/petaluma/did-you-know-petaluma-has-famous-military-comedian-maximilian-uriarte-0)



You may not know him, but you saw him on the side of the road.

**Heading To DMV Monday? You Won't Be Alone**  
(/california/dixon/heading-to-dmv-monday-you-wont-be-alone-0)



The day of Thanksgiving is among the busiest times of the year. But you can avoid the traffic with other options.

TOP NEWS USA

**90-Year-Old Arrested Feeding Homeless Railroad Protesters**  
(/florida/sarasota/90-year-old-arrested-feeding-homeless-railroad-protesters-0)

Opponents of Fort Lauderdale's ban on feeding the homeless gathered Saturday to express their displeasure with the new law.

"This is a difficult time for our men and women in blue, and the whole city joins them in mourning the loss of these heroes."

--City News Service

View as slideshow



Tara Wallis

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#BREAKING cement truck crash #BeverlyHills 1 dead. On Loma vista Dr- same area where another crash killed @LAPD ofcr

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(https://www.lowermybills.com/lending/home-refinance/index.loan?pkey1=&pkey2=&pkey3=&sourceid=lmb-37630-63469&moid=65624&utm\_source=taboola&utm\_medium=referral)

1 Dirty Little Secret To Eliminate 15 Years Of Mortgage Payments

LowerMyBills

(https://www.lowermybills.com/lending/home-refinance/index.loan?pkey1=&pkey2=&pkey3=&sourceid=lmb-37630-63469&moid=65624&utm\_source=taboola&utm\_medium=referral)

(http://www.frontdoor.com/photos/step-inside-ron-burgundys-swanky-bachelor-pad?affiliate=blocker&omnisource=SEM&c1=RSS\_Taboola&c2=Taboola&c3=RSS&c4=Step+Inside+Ron+Burgundy%27s+Swanky+Bachelor+Pad)

Step Inside Ron Burgundy's Swanky Bachelor Pad

HGTV FrontDoor

(http://www.frontdoor.com/photos/step-inside-ron-burgundys-swanky-bachelor-pad?affiliate=blocker&omnisource=SEM&c1=RSS\_Taboola&c2=Taboola&c3=RSS&c4=Step+Inside+Ron+Burgundy%27s+Swanky+Bachelor+Pad) (http://drive.odometer.com/click.php?net=tab&lst=www.odometer.com/car-care/4667/13-ways-dumb-people-destroy-cars&drv=4667-tde)

13 Ways Dumb People Destroy Cars

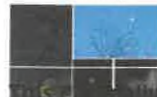
Odometer

NEW Monkey Tampa Bay (http://tampabay.com/story/monkey-loose-tampa-bay)



The Tampa Department hunt for a primate roaming the streets

UFO Update: Craft Was Concord, Boscawen (/hampshire/concord-ni update-craft-was-seen boscawen)



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Woman Asked to Rem 'Disruptive' Pig From P (/connecticut/milford/ really-cant-fly-woman remove-disruptive-pig)



A woman, pig onboat emotional to remove because it disrupting

My Kids (/california/alameda/k please-dont-help-my-k



I am not si whole feet kids, beca lazy to get them clim



**Surface Haulage Accidents...**



**...Ways to Prevent Them**



MSHA's investigations of surface haulage accidents reveals two key points:

- I. *Certain types of accidents occur over and over.*
- II. *There is a "fine line" between fatal and non-fatal accidents.*

We can use this information to help target safety measures that will prevent future accidents.


**I. Certain types of surface haulage accidents occur over and over.**

- Trucks going over dump points;
- Vehicles /persons being run over by large trucks;
- Miners getting caught in conveyors; and
- Haulage trucks going out-of-control...


**This presentation focuses on truck accidents.**

Common factors in accidents where trucks go out-of-control include:

- ➡ Steep Grades...
- ➡ Defective Brakes...
- ➡ Overloading...
- ➡ Driver Error...




Example of a fatal haul-truck accident: The operator of this 170-ton capacity haul truck was killed when his truck went out of control as he descended an 8-percent grade.



The contract truck driver had 22 years of experience. At the end of a 4-mile long haul, he was descending this grade to the dump point just around the curve. It was his fifth haul of the shift.



A witness reported that as the truck was descending the grade it appeared to be going at an excessive rate of speed and flames were coming out of the rear wheels. The truck failed to make the curve to the right and left the road at the point where the white truck is parked facing the camera.



This is a close-up view of the area where the truck left the haul road...



The truck went over the wall and ended up here. The victim was not wearing a seatbelt. The accident investigation revealed that the electrical retarder had failed to operate because of a problem with the contacts between the brushes and the commutator.



The accident investigation also revealed that there was no braking effort available from the front service brakes because of a leaking seal. The rear service brakes were found to be capable of providing 78 % of their design braking capacity.



In summary, this fatal accident occurred because the truck's retarder system was defective and the inadequately maintained service brakes could not provide enough braking force to stop the truck.



This is the site of another fatal truck accident. The truck was hauling mine waste on a haul road with six switchbacks. The grade of the road varied from 9 to 19 percent.





The accident occurred at a point where the grade was near 19%. The road was wet and the victim had reporting "spinning his wheels" on the way up. On the return trip the empty truck skidded off the road, as shown above.



The accident investigation revealed that the front brakes were inoperative and there was no braking force from the right rear brake.



The conclusion on this accident was that the deficient and uneven braking, combined with speed too fast for the wet and steep-road conditions, resulted in the truck leaving the haul road. The victim was not wearing a seatbelt and was thrown through the windshield.



This fatal accident occurred on an 11% downgrade. The accident investigation found that there were problems with the brakes and the truck was overloaded.

- Three of the six service brakes were found to be providing no braking force; a grease was found on the brake linings. The other three service brakes had brake drums which exceeded their allowable thickness.
- The truck was loaded to the point where it exceeded the truck manufacturer's maximum recommended gross vehicle weight by over 30,000 pounds.



A fatal accident occurred at this mine when a scraper was hauling overburden up this ramp. The ramp was 320 feet long at a grade of 17%. The ramp runs along the top of a high wall.



The mine uses a left-hand traffic pattern in this area. As the scraper neared the top of the ramp it stalled and rolled backwards.



The scraper went over the highwall at a point where there was virtually no berm for a distance of about 65 feet.



The scraper operator was 38 years old and had 4 years of experience. He was wearing the seatbelt.



The accident investigation revealed problems with the scraper's brakes. The braking capacity was diminished because the pushrods were out of adjustment and there was no lining-to-drum contact on two of the wheels.

## II. Fine Line ...

- The investigation of mining accidents repeatedly demonstrates that there is a "fine line" between fatal and non-fatal accidents...
- Consider the following examples...



In this case a water truck went out of control while descending a 1000-foot long section of haul road on a 10% grade. The truck missed a curve at the bottom of the grade and ran across this field. This could have been a fortunate circumstance, but unfortunately...



...the water truck crashed into a ravine that ran through the field.



The truck driver was 37 years old with one year of driving experience. He was not wearing a seatbelt.



The accident investigation revealed that the truck's front brakes had been removed and the rear brakes were defective. Rear brake problems included a severe air leak, oversized brake drums, and excessive pushrod stroke.



The point here is that if the truck hadn't run into the ravine - if the truck had lost its momentum rolling through the field or otherwise been brought to a controlled stop - the operator may have survived this accident unharmed.



When a fatal accident occurred at this site, it was only the second time that the victim had driven down this haul road and the first time in the particular model truck. The road had an 18 % grade.



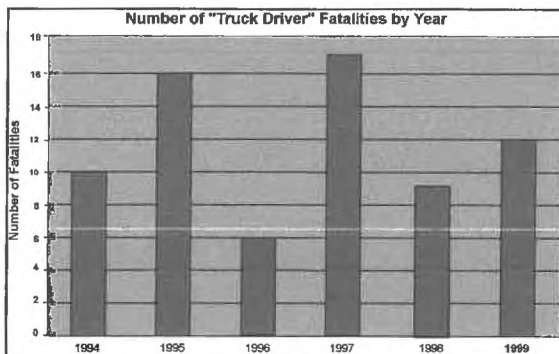
Three runaway-truck escape ramps had been constructed on the steep grade as a safety measure.



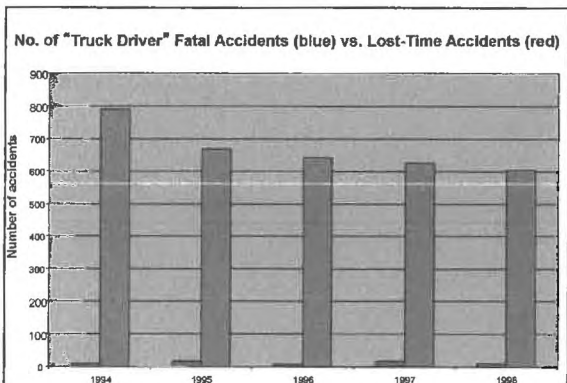
The victim apparently had jumped from the truck and was found about 200 feet below the second escape ramp. The truck went into a ditch and ended up on its side near the third escape ramp, which can be seen to the right of the truck. This ramp was 350 feet below the second ramp.



The 20-ton capacity truck was found to have been loaded to about 45 tons. In addition, the driver apparently was not adequately trained on the operation of the truck and the escape-ramp safety features.



This graph shows the number of truck driver fatalities each year. The fluctuation likely reflects the increased emphasis on surface haulage safety that occurs when the number of truck accidents rise. But these variations also result from the fact that sometimes - even with very similar sets of accident circumstances - in one case a minor is seriously or fatally injured, while in another the minor may receive only minor injuries. Safety measures - as shown in this presentation - can be taken to prevent accidents and to increase the likelihood that when an accident does occur the consequences will not be as serious.



A goal of surface haulage safety must be to continue the trend of decreasing the number of lost-time accidents and to incorporate measures to reduce the seriousness of any accidents that do occur.

Design Features to Improve  
Surface Haulage Safety



Steep grades can reduce or eliminate a driver's margin for error, especially if there is a lapse in equipment maintenance or if a truck is overloaded.



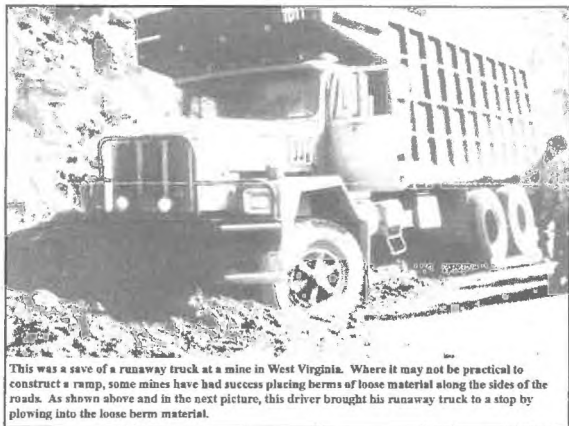
Where grades are steep, provide measures to control a runaway truck - such as berms that a truck can plow into, or escape ramps. Such features don't take the place of good maintenance, proper truck loading, and a sound driver training program, but they provide a form of safety insurance.



Here's an example of an escape ramp. The ramp is still under construction in this picture, but in the first year after it was completed, a runaway truck was saved on the ramp.



An example of a runaway escape ramp at a copper mine in Utah. A bed of loose gravel is used on the ramp to help bring a runaway truck to a controlled stop.



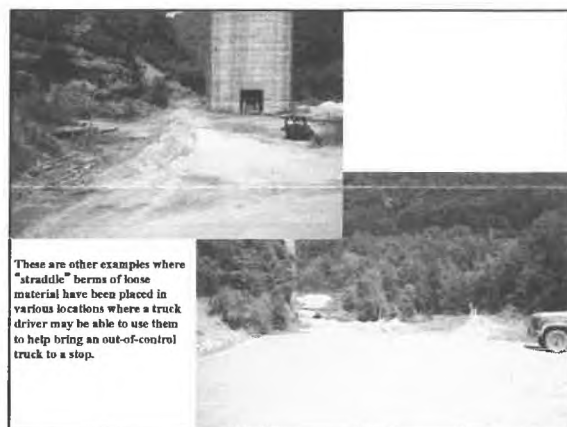
This was a save of a runaway truck at a mine in West Virginia. Where it may not be practical to construct a ramp, some mines have had success placing berms of loose material along the sides of the roads. As shown above and in the next picture, this driver brought his runaway truck to a stop by plowing into the loose berm material.



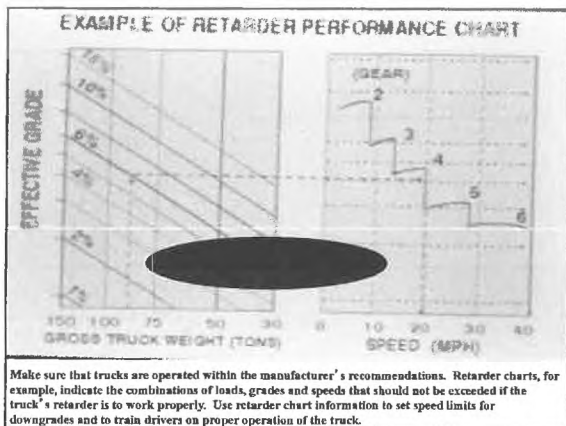
The driver stayed in the truck and was not injured.



Here, loose material is placed in a "sawtooth" pattern to provide the driver with the opportunity to straddle the berm. Since the stopping power is limited, the driver must get into the berm as soon as he or she realizes there is a problem and before the truck picks up too much momentum.



These are other examples where "straddle" berms of loose material have been placed in various locations where a truck driver may be able to use them to help bring an out-of-control truck to a stop.



**WARNING** (Example only)

DO NOT DESCEND GRADE AT SPEEDS GREATER THAN LISTED, WHEN VEHICLE IS LOADED AT MAXIMUM GWV.

| GRADE % | SPEED MPH |
|---------|-----------|
| 12      | 0         |
| 10      | 16        |
| 8       | 23        |
| 6       | 28        |
| 4       | 34        |

Install decals in truck cabs with simplified retarder chart information. This reminds the driver - at a glance - of the retarder performance characteristics of that particular truck.

Provide signs on steep sections of haul road indicating the actual grade of the road in percent.

Combined with the retarder information decal in the cab, these signs help provide the truck driver with the information needed to operate the truck safely.

Match berm height to conditions and consequences.

Where the chances or the consequences of a truck leaving the haul road are more severe, use larger berms. For example, the chances of a truck leaving the haul road may be greater if you have a curve at the bottom of a grade; the consequences may be greater where a road runs near a pond. Construct larger than axle-height berms in the more critical areas.

Even though the water was only 10 deep, the truck edged up on its side and the operator drowned. The lessons here were that roads should be adequately widened on curves and substantial berms should be provided where equipment travels near ponds.

Here's another example. In this accident a 40-ton capacity truck was returning empty to the pit. The truck was descending this 10 percent grade and negotiating the curve when a mechanical problem with the truck caused it to continue turning to the right where it plunged into a pond.



The accident investigation revealed a defective gear selector control cable, which apparently caused the truck to be shifted into reverse instead of 1st gear. Apparently the truck stalled and the emergency steering became depleted. The pond was 42 feet from the road and was not bermed.



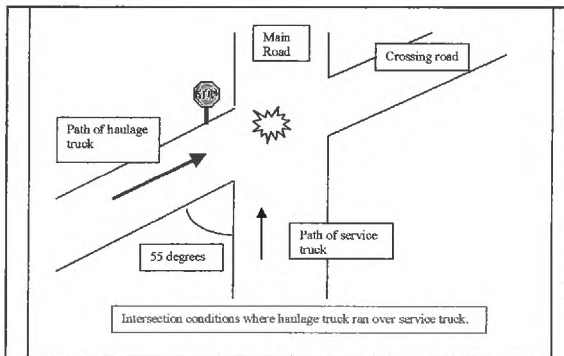
In this fatal accident the truck was backing up past this pond when the rear wheels got too close to the edge. No berm had been provided. A berm should serve the three functions of providing a good visual indicator of the edge of a drop off; impeding equipment from going over the edge; and keeping the weight of the equipment back a safe distance from the potentially unstable edge of a drop off.



As larger trucks are used, haul roads need to be widened to provide the drivers with a reasonable margin for error. A good safety rule is to provide clearance of at least half the truck width on each side of each truck. This means that for two lanes, the haul road should be at least 3.5 times the width of the largest trucks.



In this fatal accident a haul truck pulled out to cross an intersection and ran over the utility truck.



This was the layout of the intersection. A "drive left" traffic pattern was used. Note that this intersection layout - with the crossing road intersecting at an angle of about 55 degrees - would have made it more difficult for the haulage truck driver to see traffic approach the intersection from his right side.



Here's the actual intersection. The main road runs from left to right across the front of the picture. The haul truck would have approached and stopped near the right side of the picture.

This shows a haul truck stopped at the intersection.

Notice in the insets below how the driver has a difficult time seeing to the right side.

Intersections should be laid out keeping this right side blind spot in mind. Avoid intersections at angles of less than 90 degrees to the truck's right side. Layout intersections to provide the drivers with as much sight distance as possible.



Several accidents have occurred in recent years where haul trucks were struck by trains.



At this crossing, a 44 year old driver was killed when her truck was struck by a train. She had 15 weeks of experience.



The accident occurred at 1:40 p.m. Other workers heard the train whistle, but the victim did not stop her truck at the crossing.



Drivers should keep these points in mind concerning railroad crossings:

- It can take a train a half mile to come to a stop from 30 mph;
- Trains can come at any time.
- Never attempt to beat a train to the crossing - it's easy to underestimate the train's speed.
- Always stop, look and listen at railroad crossings.



Another concern at railroad crossings - like at any type of intersection - is to ensure that the drivers have adequate sight distance down the tracks. Also avoid situations where trucks leaving mine property and waiting to enter a highway may become backed up and be sitting on the tracks. If this situation can't be avoided, train the drivers about the dangers and provide warning signs.





A fatal accident occurred in at this site involving a 10-ton welding truck. The welding contractor was leaving mine property around midnight. He came down this 10 percent grade to a "T" intersection. Note the skid marks coming across the intersection.



The skid marks were 125 feet long and led through this berm and over a highwall.



The truck fell 160 feet to a bench. Although the rear brakes were found to be defective, a factor in this accident may have been the victims unfamiliarity with the mine roads while driving after dark. The use of road side reflectors may help in this type of situation.

As shown to the left, road side reflectors are a common safety feature on public highways.

- Road side reflectors can provide similar safety benefits on mine roads. They would be helpful for new employees and visitors on the property. And they would benefit older drivers since our ability to see at night diminishes as we age.
- Different colored reflectors could also be used on each side of the road to act as a reminder on "drive-left" properties.




Suppose a tire salesman sees this sign as he enters mine property and drives on the left side as he makes his way to the maintenance shop. As he gets back in his truck after spending a couple of hours at the shop will that salesman remember to drive left as he leaves the property? Make sure there are sufficient signs for this type of circumstance - especially when unusual right-of-way rules are used on the property.



Several fatal accidents have occurred in recent years involving water trucks. This one occurred as the water truck rounded a curve while descending a 7 to 9 % grade. The victim's regular job was in quality control and he only occasionally drove the water truck.

The water truck was about half full at the time of the accident and the tank was baffled from front to back. A witness reported that the truck appeared to be "going too fast" as it rounded the curve. The victim was not wearing the seatbelt and the rear brakes were found to be defective.




Avoid water-truck accidents by ensuring that: water trucks receive preventive maintenance just like production equipment; water tanks are baffled to control the effects of the water movement in the tank; and water-truck drivers are properly trained on operating the truck.

### The Importance of Driver Training...

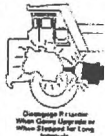
- In **29 %** of the surface haulage fatal accidents from 1994 to 1998, the victim had less than one year of mining experience.
- In **40 %** of these accidents, the victim had less than one year of experience at the mine where the accident occurred.

### OPERATOR HANDBOOK

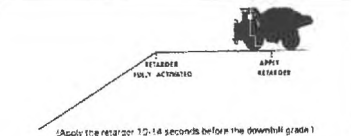


#### 300 SERIES HD REAR DUMP


In order to use the retarder effectively and efficiently, before the grade is descended, the transmission must be in the proper gear range and the converter in direct drive lockup. The retarder pedal should be depressed 10-14 seconds before the grade is descended to allow enough time for the retarder to become fully activated. The retarder is most effective when fully activated just before the grade is descended. Also, it might be necessary to accelerate.



As part of the training program, it is important that drivers become familiar with the operator's manual for their truck. The excerpts shown here, for example, illustrate an important safety feature of the braking system of this truck.



### Keys to preventing truck accidents:



- **Systematic preventive maintenance on equipment;**
- **Effective driver training and supervision;**
- **Good haul road layout and road maintenance.**