

## **Appendix C: Citizens' questions and concerns in letters and e-mails received by WSDOT and Washington State Patrol and gleaned from published letters to newspapers**

WSDOT has received many letters and e-mails from the public asking about cable median barrier during the past few years. While the largest number of public comments have focused on cable median barrier on I-5 in Marysville, citizens across the state have weighed in.

To contrast, many of the public comments about cable median barrier addressed to the WSP were in the form of phone conversations. A search of WSP correspondence archives found only one e-mail regarding the use of cable median barrier.

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**Information addressing these comments can be found in chapters 1 and 3 and Appendix A.**

### **People want cable median barriers**

Letter to WSDOT

There is a barrier with a special type of wire that is being deployed in our areas that is less costly than concrete and can be a bit less intrusive. Since people continue to cross over grassy medians no matter what the standards for highway construction are, you have to put up the wire barrier.

*Pat Genchur, Jan. 17, 2004*

Letter to WSDOT

There is a strip of I-5 between Mayton and Centralia that has had an excessive amount of fatality accidents due to the lack of barrier between northbound and southbound. Since I last wrote, there has been an additional three or more deaths. Please take note of this concern and put some of our tax dollars to work in this area to save lives.

*Tamara Hodgins, Chehalis, March 29, 2004*

### **WSDOT Response Excerpt**

*Cable barrier is one of the tools we have used with success around the state to help prevent cross over collisions. Our engineers strive to choose the right barrier for each highway location. We consider a wide variety of factors for each location when deciding which type of barrier will best protect drivers. These factors include amount of traffic, collision history, traffic speeds, curves, installation and maintenance cost, available median and shoulder space, grade and median slope, characteristics of each type of barrier, environmentally sensitive areas, drainage and more.*

### **Parent thankful for median barriers**

The (Everett) Herald, June 13, 2005

In 1997, my son (then 18) and his brother (then 16) were in his 1975 Mustang, traveling southbound on I-5 when they got into an accident just south of the 116th Street overpass. If those cables were not there, my sons would have crossed the median into northbound traffic. But they didn't because the cable barriers stopped his Mustang at 70 mph.

*Cindy Cutright, Everett*

### **People feel cable barriers do not provide adequate protection**

Letter to WSDOT

Why did you install such a cheap system to separate traffic on I-5 between Marysville and Mt. Vernon? Those steel ropes don't stop a thing when it hits it. Put in some 2500 blocks of concrete or barrier that would stop a car from crossing over. If it's a test site, well, it failed.

*Steve Routt, Arlington, Dec. 16, 2004*

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**Many people have concluded that cable median barrier is ineffective or defective after hearing about collisions on I-5 in Marysville. They generally express concern about the barrier's ability to catch or hold a vehicle and ask WSDOT to install a barrier that they believe is more substantial. Information addressing these comments can be found in chapters 1, 2, 3, 4 and 5 and appendices A and D.**

## Getting There: Safety of cable barrier on I-5 is questioned

Seattle Post-Intelligencer, Jan. 24, 2005

Q: After seeing reports of a fiery collision last month on Interstate 5 north of Arlington, Roger Los was troubled about the cable guardrail in the freeway's grassy median.

"In the past few months I have seen two cars caught in the wire in that very same location, and that's in only perhaps 10 or so trips," he recently wrote to Getting There. "On those occasions, the steel cable barrier seemed to work, but I have a hard time imagining that they are as effective as (metal) barriers would be."

**A: There are no immediate plans to replace the cable barrier with a solid variety. Dave McCormick, the state Transportation Department's regional maintenance and operations administrator, said the cable type is the right one near Smokey Point. "In this area, where drivers are going at very high rates of speed, cable barrier is best because it's flexible and gives," McCormick wrote. "If a driver were to hit concrete at 80 mph, the impact would be extremely severe.**

## Cable barriers are flawed technology

The (Everett) Herald, June 5, 2005

Who believes that a couple of 1.5-inch cables will stop a 4,400-pound missile traveling at 60-70 mph?

*Tom Richards, Marysville*

## Stop with excuses and fix the problems

The (Everett) Herald, June 8, 2005

How many more fatalities do we need before the state Department of Transportation changes the cable barriers on I-5 between Marysville and Smokey Point? Not to mention the speed limit? Quit blaming the drivers, State Patrol, quit making excuses, DOT, and do your job. Now, not later.

*Tamara Williams, Marysville*

## How many must die before state acts?

Letter to WSDOT

The (Everett) Herald, June 16, 2005

We have had two horrific crashes there recently that could have been avoided, had there been concrete barriers in place, instead of the cable barriers. Please, Washington Department of Transportation, do something about that stretch of road. Don't just drop the speed limit, but put a solid barrier there.

*Greg Easterling, Lynnwood*

Letter to WSDOT

As an engineer, I wish you to take action on correcting problems of the cable barriers north of Marysville on Highway I-5. The cable barriers are not adequate for the safety needs at that point and better measures must be taken before further loss of life and property occur.

*Jim Brooks, Lake Stevens, Feb. 15, 2007*

Letter to WSDOT

The cable barriers are not adequate or safe and some additional precautions must be taken. There was a death last night and a history of many accidents at that point. Maybe some signs about staying to the right except for passing would help!

*Terry Platz, Marysville, Feb. 15, 2007*

The Seattle Times, Snohomish County opinion, Feb. 21, 2007

Cable barriers that were intended to contain motor vehicles are simply a joke! That was sadly proven Tuesday with the SUV that crossed over through two sets of cable barriers and struck the tour bus head-on, killing the SUV driver and badly injuring the bus driver. Just to the south, between Marysville and Everett, the barrier consists of "Jersey wall" sections. I would bet there have been very, very few excursions into the opposite lanes where the Jersey wall forms the barrier.

*Bruce Elliot, La Conner*

Letter to WSDOT

I don't know of any rational engineer who supports this kind of barrier...Was there no design review of this project?...

*DMH, Buckley*

#### **WSDOT Response Excerpt**

***Safety is an utmost priority and we strive to engineer our highways to keep drivers as safe as reasonably possible. Unfortunately, none of the barriers we use can protect every driver in every situation. Occupants of vehicles striking cable barrier are less likely to be injured or killed than those striking concrete barrier or guardrail. This is partly because cable barrier is far less likely to redirect an errant vehicle into a second vehicle in the collision. Statewide, cable barrier successfully restrained 95 percent of errant vehicles without involving a second vehicle. In comparison, only 67 to 75 percent of crashes with W-beam guardrail and concrete barrier successfully restrained errant vehicles without involving a second vehicle.***

#### **Thoughts on a state proposal to reduce speed limit north of Marysville**

The (Everett) Herald, June 27, 2005

Sixty-nine people weighed in with spirited comments on the state Department of Transportation's plan to reduce the speed limit from Marysville to Smokey Point. On July 1 the speed limit will be lowered from 70 mph to 60 mph. Here is a sampling of what Herald readers think about the idea:

Keep the speed limits up north where they are. If you've got to change them, increase them. In fact, increase them everywhere or remove them all together.

*Robert E. Widener Jr., Marysville*

But the speed limit is not going to stop vehicles from crossing over the cable barrier. To me the cable barriers are not working as well as a concrete barrier would.

*Linda Waterstreet, Marysville*

Although I like to get where I'm going as quickly as the next guy, the 70 mph speed limit is a hazard. It will not solve the accident problem in regards to vehicles crossing the median into oncoming traffic. That will require something larger than reduced speeds and a two-foot post with wire strung across it. I'm voting for trees, concrete, hills or something more substantial.

*Karla Alexander, Arlington*

Letter to WSDOT

I do not know if you or any of your staff had any input on the absurd speed limit reduction from 70 to 60 MPH, from Marysville to past Smokey Point. I am aware of a major traffic accident last year. However, when I saw the "new median" that was put in along that stretch of 1-5 a few years prior, I thought at the time "How Stupid."

*Gary Baye, Mount Vernon, July 7, 2005*

Letter to WDOT I am very concerned about I-5 travel from Marysville to Smokey Point. Cars are flying over the wires into oncoming traffic and killing innocent people. It think the speed limit should be lowered to 55 or 60 and put shrubs in the median like Oregon does on I-5.

*Phyllis Meacham, Everett, June 22, 2006*

#### **WSDOT Response Excerpt**

***Speed is one of the leading causes of collisions, but the speed limit reduction on I-5 in Marysville and frequent emphasis patrols by WSP are making a difference. During the second quarter of 2005, with a 70 mph speed limit, 18.4 percent of all drivers traveled above 75 mph. During the third quarter of 2005, after the speed limit was lowered to 60 mph, 13.2 percent of all drivers traveled above 75 mph. In addition, the number of drivers traveling at speeds above 90 mph near the Smokey Point rest area dropped 20.5 percent, from an average of 78 drivers per day to 62 drivers per day during the six-month study period.***

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**Many drivers felt installing concrete median barrier on I-5 in Marysville was the only way to prevent deadly cross-over collisions.**

#### **Concrete barriers are the only option to stop cross-over collisions in Marysville**

Letter to WSDOT If this accident had happened just one mile north where the "shredder" wire barriers are, there would have been multiple deaths. My family drives this road several times a week and we fear for our safety.

*Laurel Christiansen, Sept. 29, 2005*

I have been watching pictures of the bus crash this morning on southbound I-5 near Smokey Point. The pictures I've seen on the news depict a prime example of why we need concrete barriers in the median along I-5.

*Beth Hill, Sept. 29, 2005*

Letter to WSDOT

I see you are using the cable barrier more and more and yet I have not seen it stop one vehicle from going through it. In fact if a cement barrier would have been used it would have saved lives. This barrier has taken so many lives because this state is cheap and won't use the barriers that hold.

*Spirit Rose, Dec. 2, 2005*

Letter to WSDOT

I heard on the radio recently that the WSDOT paid out \$2,000,000 in claims in connection with a horrible accident on one of our freeways involving the somewhat recently installed cable barrier system. This should never have happened, I worked for CalTrans all those years ago, when they were first introduced. After a number of terribly awful accidents, they were removed and the experiment terminated.

*David H. Boyle, Chehalis, Dec. 22, 2006*

Letter to WSDOT

How many more people have to die before Washington State decides to put Jersey barriers on I-5 between Marysville & the Canadian border? It seems like a no-brainer to me.

*James Larsen, March 16, 2006*

Letter to WSDOT

My husband just called me and told me of an accident he had JUST gone past on Hwy 410. He stated that once again a car had went through or over those fantastic cable barriers, that we as tax paying people, have paid to install. The car went head-on into on coming traffic.

*Dave & Sandy Moore, Thursday, Oct. 12, 2006*

Letter to WSDOT

The corridor of Interstate 5, Marysville north, is ridiculous, to say the least. ... Cement the whole damn place! Buffers are worthless to moving traffic. No one gives a damn about some dirt and a little bush. But, as another person blasts through the worthless cable barriers today, for whatever reason, could have been easily prevented with...cement.

*Anonymous, Feb. 13, 2007*

Letter to WSDOT

So much for your stupid cable barriers on I-5. Now an SUV blows right through them and hits a bus. You need to figure out how to keep traffic moving and get some better road engineers to figure out that cables are not going to stop this thing from happening. Raised cement barriers are the only answer.

*Carol Granese, Camano Island, Feb. 13, 2007*

Letter to WSDOT

How many more people are going to die before this state realizes cable fences do not hold cars? Please put up the cement barrier from Marysville to Arlington.

*Tommie Bleisteiner, Feb. 13, 2007*

Letter to WSDOT

Please, please, consider replacing the cable barriers dividing all freeway lanes in the state with "Jersey" barriers. I am sickened at how many fatalities have occurred on the I-5 stretch north of Marysville.

*John R. McLane, Lynnwood, Feb. 13, 2007*

Letter to WSDOT

The I-5 cable barrier has once again failed and caused another death and yet more uncontrolled grid-lock in north Snohomish county. Put up a concrete barrier.

*John Forsberg, Marysville, Feb. 14, 2007*

## Commuters can't feel safe with cables

The (Everett) Herald, Feb. 15, 2007

The cement barriers between traffic between 4th Street in Marysville and Everett appear to do a better job reducing cross-over accidents than cables.

*Kelli Garber, Stanwood*

Letter to WSDOT

The existing wire barriers provide little protection and in many areas there is no barrier between north and south Interstate 5. I would like to propose that more substantial barriers be placed between I-5, possibly cement barriers.

*Kristin M. Richardson, Everett, Feb. 17, 2007*

## They do not work in that area of freeway

The (Everett) Herald, March 2, 2007

Being personally connected to the most recent "cable barrier" fatality, I find recent comments very insensitive. The victim had a medical emergency, which was not caused by his driving behavior or negligence. The barriers may not have caused his death, but concrete barriers may have saved his life and may have kept the bus driver from sustaining serious injuries.

*Susan Gregerson, Edmonds*

## WSDOT Response Excerpt

***Occupants of vehicles striking cable barrier are less likely to be injured or killed than those striking concrete barrier or guardrail. This is partly because cable barrier is far less likely to redirect an errant vehicle into a second vehicle in the collision. Statewide, cable barrier successfully restrained 95 percent of errant vehicles without involving a second vehicle. In comparison, only 67 to 75 percent of crashes with W-beam guardrail and concrete barrier successfully restrained errant vehicles without involving a second vehicle.***

## Bumper to bumper: The great barrier debate

The Seattle Times, March 12, 2007

Q: Are concrete highway dividers better than cable barriers at saving lives? Bill Habenicht, of Woodinville, is inclined to think so. "You never hear about cars smashing through the concrete barriers, ever, whether they are the permanent ones, or the moveable ones used in construction zones," he said. Wouldn't concrete barriers solve head-on collisions once and for all?

***A: State Department of Transportation spokesman Travis Phelps says the agency this year analyzed more than 9,000 collisions around the state involving concrete barriers, steel guardrails and cable median barriers. The results of the analysis, he said, showed that more than 80 percent of drivers who collide with cable median barriers walk away uninjured. "Comparatively, drivers who collide with concrete and steel guardrail walk away uninjured only 59 percent of the time," he said. He reasons that concrete and steel are more rigid, and more often bounce vehicles back into traffic, which increases odds of colliding with a second or third vehicle.***

## The Feb. 13, 2007 collision proved cable median barrier doesn't work

Letter to WSDOT

In light of what happened again today on the stretch of I-5 just north of the Marysville exit, I can't believe the DOT isn't going to finally take some reasonable action and put up concrete barrier in the median of that section of freeway. Barrier just doesn't cost that much.

*Patricia Eddy, Marysville, Feb. 13, 2007*

Letter to WSDOT

The D.O.T.-installed cable barriers have yet failed again. As a veteran law enforcement officer in Snohomish County, I am tired of these fatal and/or serious car crashes. Your D.O.T. engineers may crunch numbers and use scientific principles to tell you that cable barriers are the answer, but the physical evidence tells a different story.

*Dave Bilyeu, Mill Creek, Feb. 13, 2007*

The cable barriers in the I-5 median in Marysville are clearly not sufficient. We need to inspire the DOT to come up with a new solution that will prevent vehicles from crossing the median that is 100% effective...

*Paul Anderson, Everett, Feb. 13, 2007*

Letter to WSDOT

We just had another deadly accident along the I-5 corridor near Marysville today. When will we get median dividers that will prevent these accidents? DOT has put extra cables to try to stop the head-on collisions, but as shown in today's accident they don't work.

*Patricia Kanno, Marysville, Feb. 13, 2007*

Letter to WSDOT

How many more deaths do there need to be before you (the DOT) decides that perhaps the cables aren't working? I have kids and it scares me to death to think that a car could so easily cross over the cables and take us all out because of the cost of a concrete barrier.

*Kathy Moody, Arlington, Feb. 13, 2007*

Letter to WSDOT

I thank the incompetents in your dept for causing another death in Marysville I-5 on Feb. 13. Your bureaucracy does not want a concrete barrier in that area under any circumstances. Unless you're too dense, you should be ashamed.

*Dennis Wojciak, Marysville, Feb. 14, 2007*

Letter to WSDOT

I am appalled that the state continues to install those median cable barriers after it has been proven many times that they don't work. When are you going to just admit they don't work & put in the cement medians, like you should have done in the first place!!

*Maurice E. Kendrick, Mount Vernon, Feb. 14, 2007*

Letter to WSDOT

Failure of your new double cable barrier to prevent a catastrophic cross-over accident on 02/13/07 near Marysville on I-5 hopefully has you concerned. I believe it is time for the state to quit gambling with our lives and install a proper wider shoulder/concrete jersey barrier system through this stretch of I-5. I realize that your statistics say the cable system works in other parts of the state but this recent incident shows that it continues not to work here even with a double system.

*David Cook, Arlington, Feb. 14, 2007*

Letter to WSDOT

The channel 5 news reported a statistic of your cable barriers preventing 96% of vehicles from breaking them. I would like to know what the percentage rate is for breaking those concrete barriers? Why weren't concrete barriers placed in the meridian in the first place?

*Jodi Smythe, Silvana, Feb. 14, 2007*

Letter to WSDOT

I was one of the thousands stuck in traffic Tuesday evening when a fatal traffic collision closed northbound I-5. It is obvious that cable barriers on the section of I-5 between Marysville and Smokey Point are not effective, in spite of what the Department of Transportation maintains. Perhaps in other areas they are effective, but not here.

*Robert Davis, Stanwood, Feb. 15, 2007*

Letter to WSDOT

The primary purpose of the barriers is to prevent vehicles from crossing the median and striking traffic in the opposite direction of travel. It has been shown repeatedly that wire rope cable barriers have not worked in a number of accidents on I-5 in the Marysville area.

*Lenny Moore, March 3, 2007*

### **WSDOT is misusing taxpayer dollars by installing a second run cable median barrier in Marysville**

What the state needs to do to prevent the type of horrible accidents that have occurred over the past six months is to spend enough money on proper barricades between north and southbound I-5, throughout the region, not just in urban areas.

*Elisabeth Cummins*

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**Several drivers noticed the low tension cable median barrier lying on the ground during construction of the new cable median barrier system on I-5 in late 2006 and on SR 410 after the barriers were struck by a vehicle.**

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**Drivers expressed concern about the severity of injury to which motorcyclists would be subjected if they encountered the cable barrier system while they were travelling at high speed. Information addressing these comments can be found in chapter 4.**

Letter to WSDOT

I would like to know how much concrete costs. It must be expensive. Otherwise those cable barriers that separate the carriageways through Marysville would have being replaced with concrete ones. I am scared for my family.

*Joseph Henderson, Feb. 13, 2007*

Letter to WSDOT

This is absolutely outrageous that this type of accident has happened yet again on I-5 just north of Everett. How much is the cost to put better barriers such as concrete ones?

*Shelley Weyer, Everett, Feb. 13, 2007*

Letter to WSDOT

The new Marysville cable is only there for looks, it will not stop anything. Why did we waste tax paying money on a useless system? If the charter bus would have been full there would have been several more deaths and injuries that is for sure.

*Kent Townsend, Stanwood, Feb. 14, 2007*

Letter to WSDOT

Why can't we have wood post with metal railings or cement barriers? How many more need to die to realize the cables are a joke. Spend our money on better barriers and not lawsuits.

*Steve, Feb. 14, 2007*

Letter to WSDOT

In my opinion, cable barriers are about 90% effective – Jersey (cement) barriers are about 99% effective. Question you have to answer to yourself: Is the loss of life and property worth the savings when cable barriers are installed?

*Joe Moore, South Bend, Feb. 24, 2007*

Letter to WSDOT

How many people have died in the last couple years where the cable barriers in Marysville are used? You spend tax dollars to add to them and people have since died.

*A.T., Arlington, March 20, 2007*

Letter to WSDOT

You spend tax dollars to add to them and people have since died. Obviously they don't \*\*\* work. Instead of spending hard working citizens money on these \*\*\* investigations Just fix the \*\*\* dam problem.

*Arlington, March 26, 2007*

Letter to WSDOT

I think we can all agree that the cable barriers are ineffective in prevent cars from crossing into oncoming traffic. I would think that after paying out \$9 million dollars for the accident on Dec. 18 (2005?) where the 18 year old was killed, the state might try to avoid a similar lawsuit and instead use a proactive approach to saving lives by putting in a concrete barrier.

*William Parks, March 26, 2007, Seattle*

Letter to WSDOT

DOT should stop being cheap with cables and use a barrier wall.

*Linda Duenow, Bothell, Feb. 20, 2007*

***WSDOT engineers are looking at the circumstances of the crash very carefully. Our initial review of the incident indicates that none of the barriers we use could have prevented this tragedy. The Washington State Patrol investigation should yield more information and we continue to assist them in every way we can.***

***It appears that the vehicle that crossed the median on Tuesday was moving with enormous force. When it hit the second row of cables, two roughly 1000-foot-long strands of the cable median barrier were actually torn from their end fasteners. This suggests that the speed or angle of the vehicle might have been much in excess of what the system is designed to protect against. We will have a detailed discussion with the manufacturer of the barrier about this.***

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**Some felt the cables were too low to engage taller vehicles like trucks and SUVs.**

**Cable median barriers are too low to engage vehicles**

Letter to WSDOT

If you look at the height of the cable barrier system at the location of the crash-southbound lanes, - it will be lower than roadway. While most of the cable barrier system is up on or near the shoulder of the road, the part where the crash was, is considerably lower as in down the ditch, from the level of the road.

*Marguerite K. Gipson, Camano Island, Feb. 14, 2007*

Letter to WSDOT

I would like you to consider the height of the cable barriers on I-5. I was looking and thought that if that SUV was to come across the wires are at wheel level, not bumper or higher. For a car they are high enough, just not an SUV or semi.

*Nicole Perkins, Everett, Feb. 15, 2007*

Letter to WSDOT

My message is concerning the cable barrier problem on the freeway in Marysville. In driving along if you look at the barrier you will see that it is not very high. In many places the barrier is in a swale. If the average car were to become airborne for whatever reason it would go over the top of the barrier. If they would just add about 2 more feet of cable to the top of what is already there, then the barrier would probably work. Lowering the speed would help but I doubt many would obey.

*Ernalee Munday, Marysville, Feb. 24, 2007*

Letter to WSDOT

My complaints are with the way that WSDOT leaves murderous aberrations during construction, and of course the complaint about the cable barriers not working when they are in a ditch.

*Wendy & Stephen Grace, Mukilteo, Feb. 26, 2007*

Letter to WSDOT

What you have with low-wire barriers under certain conditions is precisely the equivalent of a planned multiple-rollover event under the following conditions: 1. Vehicle traveling in the fast lane at highway speeds or above. 2. Vehicle for one reason or another begins to move onto shoulder.

*Mark Yeast, April 2, 2007*

Letter to WSDOT

My daughter was killed in a car accident in Aug. 2006. The accident happened on the Highway 101 West in Phoenix, AZ. No one knows exactly how it happened, but the part of the road she was on is higher than the opposite lanes. The median where the cable barriers are is below the road surface. It did nothing to prevent her car from crossing into oncoming lanes. My concern is that these cable barriers are not what we need.

*Joan Knutson, Seattle, March 9, 2007*

Letter to WSDOT

The barriers they use in New South Wales (Australia) appear more sturdy than those used on I-5. They are also taller than those used by WSDOT.

*Mark Beales, Mill Creek, March, 26, 2007*

**Person felt striking a solid barrier was better than colliding head-on with another vehicle**

When the crossovers occur, in my opinion, it's a far more destructive accident when the impact carries inertia at 120 mph than similar effects I've seen on I-5 when someone hits the barrier and then bounces back into traffic at 60.

*Mike Carpenter, Stanwood, Feb. 19, 2007*

#### **WSDOT Response Excerpt**

***Cable barrier absorbs some of the force of impact and is most likely to stop a vehicle without crashing into another vehicle. Vehicles that hit concrete barrier or guardrail are more likely to rebound vehicles back into traffic and involve other vehicles. Statewide, cable barrier successfully restrained 95 percent of errant vehicles without involving a second vehicle. In comparison, guardrail and concrete barrier successfully restrained only 67 to 75 percent of crashes without involving a second vehicle. The risk of injury increases when a second vehicle is involved.***

#### **Wrong installation, not design, at issue**

The (Everett) Herald, Feb. 23, 2007

To an objective observer, the jury still appears to be out. The state claims they are very effective in other areas. They have worked on the stretch of freeway in question in Marysville, although "successes" aren't reported. The known reported failures have apparently been due to incorrect installation rather than design. Driving will never be completely safe, and I hope a better solution is developed before we irrationally reject cable barriers out of fear.

*Gary W. Lang, Everett*

Letter to WSDOT

Thank you for insisting on an independent evaluation of the repeated failures of the cable barrier system. In my opinion, there is no acceptable reason for using so-called "barrier" systems that repeatedly fail, given that W-beam guardrail has been successfully used along hundreds of miles of our highways for decades.

*Keith L. Kessler, Feb. 27, 2007*

#### **Person wondered if cable median barrier was designed to stop large vehicles**

Letter to WSDOT

Are cable barriers designed to stop large buses and tractor trailers?

*J. Harle, March 5, 2007*

Letter to WSDOT

My thought is that something visual i.e. they use in construction areas at the shoulder might be done and not too costly for that length of freeway. Then in the median, between the two existing cables and keeping the cables, add another structure.

*Mary Peterson*

#### **WSDOT Response Excerpt**

***While no barrier can keep drivers safe 100 percent of the time, cable barrier has successfully stopped large semis in on I-5 in Bellingham and SR 516 in Des Moines.***

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**Several drivers asked WSDOT to place trees or gravel in the median to prevent cross-over collisions.**

#### **WSDOT should fill medians with gravel**

Letter to WSDOT

As a professional truck driver with over 25 years experience, I have to wonder how a median filled with pea gravel or something similar to the material used in many emergency escape ramps on the downhill side of mountain passes would work in conjunction with the cable barriers.

*Mark Turner, Feb. 24, 2007*

Letter to WSDOT

When you drive around this country, you see what has been done for trucks and cars on steep down grades. There is an off ramp of sand to slow them down. Why can't we?

*Milo and Marilyn Lowe, March 11, 2007*

Letter to WSDOT

The median could be filled with deep gravel that would be far enough off the traffic lanes to still have a shoulder.

*Raymond E Huff, March 30, 2007*

#### **WSDOT Response Excerpt**

*Adding a layer of gravel in the median might be appropriate on truck runaway ramps, but would not be appropriate in the median of a freeway. Gravel on truck ramps is designed to be increasingly softer as the truck travels up the ramp. This prevents the wheel wells from immediately sinking into the gravel and flipping the vehicle over. There is not enough space in the median and no guarantee which way a vehicle will enter the median for us to design and implement a similar system on I-5.*

#### **Earth berms will stop cross-over collisions**

Letter to WSDOT

I have an idea that would be pretty effective at stopping cross over traffic accidents on the stretch of I-5 north of Marysville. The idea is to build an earth berm with cement guard rails along each side of it, and build it high enough, so it would be effective stopping large vehicles also.

*Don Bakker, Feb. 26 2007*

Letter to WSDOT

I don't know if this idea will work concerning the I-5 stretch of freeway near Marysville or not but since the wire dividers haven't worked would it be feasible to make a dirt mound barrier between the freeway lanes?

*Lynn Self, April 9, 2007*

#### **WSDOT should consider installing a skate park inspired barrier**

Letter to WSDOT

I was thinking wouldn't some barrier like they have in skate board parks work better. Could the same sort of thing be used for vehicles?

*Zera W. Oglesby, March 1, 2007*

#### **WSDOT Response Excerpt**

*Although none of the barriers we use can protect every driver in every situation, we look for the right barrier for the location to stop the vehicle from going into the opposite lane without rebounding back into traffic. The suggestion of installing a skate park style ramp/barrier median might change the trajectory of a skateboard, but would not meet the intent of the barriers to prevent crossover accidents.*

#### **People suggest that WSDOT plant trees in the median**

Letter to WSDOT

My suggestion is to leave the cables as they are and plant thick fast growing hedges in the median.

*Phyllis Meacham, June 4, 2005*

Letter to WSDOT

Plant trees in the median to prevent head-on collisions.

*Archer Wirth, Sept. 9, 2005*

Letter to WSDOT

A solution to the problem of cars crossing the median in western Washington, would be to plant trees where ever possible. Trees not only work better than fences, but cut down on headlight glare.

*Calvin Ellis, Feb. 25, 2007*

#### **WSDOT Response Excerpt**

*WSDOT uses barriers in highway medians to reduce the risk of crossover collisions. Median barriers prevent vehicles from crossing the median and entering opposing traffic. Trees of sufficient diameter can prevent most of these collisions, but result in a large number of fatalities. Median barriers are designed and crash tested to minimize injuries to the occupants of the vehicles that strike them... Across the United States, vehicles running off the roadway and striking trees or shrubs is the leading cause of fatal collisions. WSDOT uses a more forgiving barrier system when there is a need to provide cross-over protection.*

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**Several drivers noticed the low tension cable median barrier lying on the ground during construction of the new cable median barrier system on I-5 in late 2006 and on SR 410 after the barriers were struck by a vehicle.**

### **People noticed cable barriers on the ground**

Letter to WSDOT

I have noticed that for about a month on Interstate 5 between Exits 200 and 208 cable barriers have been down... What happened to cause the barrier to go down? Was it from traffic accidents and vehicles crashing into the cable barrier? ...Why has it taken so long to repair the cable barriers? Who is responsible for repairing barriers (cable, concrete and metal) after a traffic accident which damages or loosens the cables? ...Where is the cable produced that the state uses for the barriers and who does the state purchase the cable from?

*Sen. Val Stevens, 39th Legislative District, Jan. 19, 2007*

Letter to WSDOT

I would like to submit info about the I-5 accident today, the 13th of February, that closed the interstate. KING 5 reported the barriers were faulty, however, I would like to report different facts! The barriers were OK until the snow and ice storm we had a month or so ago. These cables were not repaired as of last week

*Jason Griswold, Graham, Feb. 13, 2007*

Letter to WSDOT

Regarding the cable barriers on the freeway, on SR 410, the cable barriers on the eastbound lanes are not maintained correctly. Some are off the posts and they are not tight. They appear to be a hazard and wouldn't work properly in an impact.

*Roy Ruffino, Federal Way, Feb. 15, 2007*

Letter to WSDOT

The cables on 410 are pointless as they are hanging on the ground, not connected, sagging or are not even there. I don't know what happened to them as we don't have that many accidents on 410... The DOT most likely does not have any idea what's going on with these barriers. Just because they install them, does not mean they work nor does it mean they can't, don't or won't come loose in a storm. Just because they are "supposed" to work, does not mean they do work.

*Cheryl Laurendeau, Bonney Lake, March 7, 2007*

### **WSDOT Response Excerpt**

***Crews installed a second run of cable median barrier on I-5 in Marysville, and relocated and reinstalled several sections of low-tension cable median barrier along northbound I-5. This work required portions of the northbound cable median barrier to be temporarily taken out of service. However, drivers were not in any danger. Crews previously installed a run of high-tension cable median barrier along the southbound lanes of I-5 to stop any cross-over collisions that may occur during construction.***

***Collisions involving cable median barrier are often unreported because many of the vehicles are able to drive away from the scene. WSDOT maintenance crews frequently patrol highways looking for damaged barriers. They are typically able to repair damaged sections of cable median barrier in less than one day.***

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**Drivers expressed concern about the severity of injury to which motorcyclists would be subjected if they encountered the cable barrier system while they were travelling at high speed. Information addressing these comments can be found in chapter 4.**

### **People expressed concerns about motorcycles and cable median barrier**

Letter to WSDOT

I hope that they (cable median barrier) are temporary and that standard guard rails are installed. As a former motorcyclist, they scare me to death...

*Victor Davis, Kent, July 21, 2006*

Letter to WSDOT

I was wondering if there were any studies showing the survivability of motorcyclists who come in contact with the new cable barriers; or more important, all of those posts sticking up?

*Joe Roman, Nov. 15, 2006*

Letter to WSDOT

I think that the Department of Transportation is not doing a good job of providing safety for the motorists because of the highway cable barriers. It may be an inexpensive way to provide a temporary fix, but if a motorcyclist hits them they will be mincemeat...

*Larry Benfield, Centralia, Feb. 15, 2007*

These are death traps for motorcyclists. A rider could be decapitated, or sliced in two just by coming in contact with them.

*J. Robert Wohlers, Chehalis, Feb. 23, 2007*

#### **WSDOT Response Excerpt**

***We have analyzed collisions that involve motorcycles hitting median barriers. Motorcyclists are relatively unprotected. Motorcycles don't have many of the safety features that are found on cars such as seat belts and airbags. This makes motorcycle travel riskier than automobile travel. Consequently the injury rate when motorcycles hit barrier is much higher than the rate when automobiles hit barrier. We found that, regardless of what type of median barrier motorcyclists struck, there was no significant difference in injury severity.***

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### **Some felt drivers should be held accountable for losing control of their vehicles and crossing medians.**

#### **Drivers are at fault and not the barrier**

Letter to WSDOT

The cable was just placed there for more safety, and when the operator is demonstrating lack of common sense it is not the cable...the driver was operating his vehicle off the highway: contrary to the rules of the road.

*Lyle Woodfield, Spokane, March 16, 2007*

Letter to WSDOT

The state is not at fault with the so-called "defective" cable barriers. Drivers are responsible for their actions that caused a collision, not the state Department of Transportation.

*Lyle Woodfield, Spokane, March 7, 2007*

#### **State Patrol must be properly funded**

The (Everett) Herald

It's time to stop blaming the cable barriers on I-5 for accidents and focus on the real issue: reckless drivers. I see them every day and it's a miracle there aren't many more accidents. If you want someone to blame, then focus your energy on the governor and state legislators, they are the reason for the accidents because they refuse to properly fund the State Patrol. So instead of spending my \$2 billion surplus on more failed transportation projects, how about spending it on law enforcement?

*Rudy McDaniel, Feb. 28, 2007*

#### **Suing the state is suing fellow citizens**

The (Everett) Herald

Why is it people are suing me over the issue? As a taxpayer, the money they want comes out of my pocket. I would say to take down those cable barriers that are doing no good, and replace them with a sign reading "Use highway at your own risk." That would put the responsibility of entering the median, or avoiding those who do enter, in the driver's seat, where it belongs.

*Nelson Cobb, Snohomish, March 22, 2007*

#### **A person requested lower speed limits on I-5 in Marysville**

Letter to WSDOT The problem that I see is the speed limit. I would really like to see the speed limit be set at 55 miles per hour in certain areas of I-5.

*Richard Freeman, March 1, 2007*

#### **WSDOT Response Excerpt**

***In 2005, WSDOT reduced speed limits from 70 mph to 60 mph on the most congested part of I-5 through Marysville. Washington State Patrol troopers have been conducting emphasis patrols to enforce the new speed limit. These efforts are making a difference and we have seen a reduction in collisions at this location.***

***Speed limits are not the only safety measures we have taken along I-5. We work with law enforcement agencies to stop aggressive and impaired driving. We have installed rumble strips to help keep drivers alert if they veer out of their lane towards the shoulder or the median, improved and straightened curves, widened highway shoulders, improved medians and installed median barriers.***

## **Officials debate cable barriers**

*The (Everett) Herald, Feb. 15, 2007*

*Excerpts from an e-mail exchange Wednesday between Rep. Mike Sells, D-Everett, and Transportation Secretary Doug MacDonald.*

Despite reassurances and tests regarding cable barriers, the death on Tuesday north of Everett on I-5 certainly undermines my faith in their ability to keep autos from crossing over into on-coming lanes. I have received a number of angry e mails this morning regarding the accident, and concerns from constituents regarding the safety of that stretch of highway. I know that Rep. McCoy has contacted your office, and I would echo the concerns that he has also expressed.

*Mike Sells, State Rep, 38th Legislative District*

The statistical demonstration of the value of cable median barrier is overwhelming. I'll have information on that to you this afternoon. The circumstances of this event yesterday need to be thoroughly examined and they will be. We'll keep you in the loop so that you have the tools you need to respond to constituents. Please remember that there is no barrier system available to us for installation at any reasonable cost that will give 100% indemnity against vehicle crossovers when the speed and the mass of the vehicle is high enough.

*Doug MacDonald, Secretary of Transportation*



## **Appendix C2:** A selection of recent newspaper reporting and opinion

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### **It catches you like a large rubber band**

So far, the barrier has taken plenty of hits and gotten torn up a bit. But by intentionally sacrificing itself, the system has done a huge favor for those motorists who haven't been able to keep their vehicles out of the median: Nobody has been killed.

*Columbian (Vancouver, WA), Dec. 30, 2002*

### **Police Report: Two women injured severely in crash on I-5 at fairgrounds**

Detloff was driving a 2000 Chevrolet Cavalier southbound on Interstate 5 in the area of the Clark County Fairgrounds at 10:10 p.m. when she crossed the centerline, drove over the median and through a cable barrier. Her car then crashed into a 2002 Suzuki sport-utility vehicle driven by Marilyn Anderson, 54, of Woodland.

*Columbian (Vancouver, WA), Sept. 4, 2003*

### **Deaths, delays on the roads**

A 67-year-old Oregon man was killed on I-5 about 10:15 a.m. when his southbound Subaru Legacy veered across the median and crossed a three-cable barrier about a mile south of the Smokey Point interchange.

*The Herald (Everett, WA), Nov. 1, 2003*

### **New interstate barriers designed for safety; County installs cables to curb injuries, head-on crashes**

On a rainy evening last November, the driver of a 1993 Subaru station wagon swerved off Interstate 5 near Maytown, crossed the freeway's grassy median and plowed into a minivan. To reduce such "crossover" crashes, and in hope of preventing more deaths and injuries, the state Department of Transportation will use a different type of barrier than area motorists are used to seeing on state highways. And the time to install cable barriers has arrived in Thurston County.

*Columbian, Aug. 21, 2004*

### **Fatal crash fuels debate over cable guardrails**

Cable barriers like the one in the grassy median of Interstate 5 in Marysville are meant to stop vehicles from careening into oncoming traffic. But critics, including at least one State Patrol trooper, say they frequently don't work. As proof, Trooper Lance Ramsay points to Monday's crash in which three members of a Marysville family were killed when a pickup pulling a fifth-wheel trailer crossed the median, plowed through the cable barrier and slammed into two oncoming vehicles. Killed were Darrell Knapp, 41, Sandra Knapp, 42, and their 6-year-old son, Noah. "They (the cables) have stopped some vehicles from going through, but there are other vehicles going through," Ramsay said. "If you have one vehicle that goes through, that's one too many."

*Seattle Times, June 1, 2005*

### **Steel cable barricades focus of deadly I-5 crash**

For the second time in five months, state traffic officials are investigating whether safety cable barriers that divide I-5 in Marysville work. The scrutiny comes after a Marysville family was killed Monday when a southbound pickup hauling a 30-foot recreational trailer crossed the median and crashed into family's car and several others. Investigators believe another southbound vehicle braked hard in front of the pickup truck, causing the driver to hit the brakes and lose control. Darrell Knapp, 41, and his wife Sandra Knapp, 42, died at the scene. Traffic officials say the cables are less likely to cause injuries when struck, because they absorb the impact. "We have felt that the cable barriers are the right solution for I-5. Hundreds of accidents have been avoided since we installed them," said Doug MacDonald, secretary of the state Department of Transportation.

*The Herald, June 1, 2005*

### **Driver in fatal crash was in wrong lane**

The driver of a pickup hauling a fifth-wheel trailer was driving illegally in the left lane before he crossed the median and hit oncoming cars last month, officials said Monday. The Knapps, of Marysville, were northbound when an Olympia man reportedly lost control of his southbound pickup and 30-foot trailer, the State Patrol reported. The man veered to the left, through a steel cable barrier and into oncoming traffic, according to the patrol. "He shouldn't have been in that lane" because his vehicle weighed between 12,000 and 18,000 pounds, Ramsay said.

*The Herald, June 21, 2005*

### **I-5 cable barriers fail to stop deaths**

Something is happening along I-5 north of Marysville that is causing cars and trucks to cut across the median separating the northbound and southbound lanes. Too often, the vehicles are blasting through the 30-inch-high steel cable barriers the state Department of Transportation has installed to prevent head-on crashes. People are dying. The cable barriers are being blamed. Attorneys for some of those who have died say they are preparing to sue the state. Out-of-state experts have examined the cable barriers near Marysville and have raised questions about their placement in the median, said Mike Nelson, an attorney for the Holschen family of Bothell. State officials say that I-5 near Marysville is undergoing a transformation from a rural highway to a congested urban interstate. More growth - new outlet malls, big-box stores and housing developments - in the area means more traffic and more accidents. To counteract the congestion, the state last week reduced the speed limit from Marysville north to the Smokey Point exit from 70 mph to 60 mph.

*The Herald, July 3, 2005*

### **Man whose daughter was killed in crash ready to take on state**

John Holschen was in a war zone thousands of miles away when a fiery crash ended his daughter's life in Marysville. He's now fighting a battle to get the state to re-evaluate the use of cable barriers along interstate highways. His daughter, Megan "Marijke" Holschen, 18, died in a Dec. 15 crash that also severely injured his wife and younger daughter. Two young sons also were hurt. He said a firefighter told him that a cement barrier might have prevented a sports utility vehicle from crossing the median into the path of his family.

*The Herald, July 3, 2005*

### **Reduced I-5 speed working, early results show**

A reduced speed limit on I-5 north of Marysville is working, but it's too early to know how well, state officials said Tuesday. To ease congestion and reduce the potential for serious accidents, the state Department of Transportation lowered the speed limit from 70 mph to 60 mph from Marysville to Smokey Point on Friday. Transportation Department officials say they plan to use the information to help them decide what to do with the cable barriers that separate northbound and southbound I-5 from Marysville to the Highway 530 exit at Arlington. Six years of accident data show the cable barriers work 91 percent of the time along that 10-mile stretch of road. An analysis by The Herald found that's true except on three miles of freeway near Smokey Point, from Milepost 205 to Milepost 208. There, the cable barriers failed to work in one out of five accidents, according to state records.

*The Herald, July 6, 2005*

### **Cable barrier talk goes public**

Have questions about cable barriers that are designed to prevent head-on collisions on I-5 north of Marysville? Sen. Mary Margaret Haugen, D-Camano Island, is hosting a meeting on the topic. A closer look showed that between Milepost 205 and Milepost 208, the barriers failed to stop cars in the median 20 percent of the time. Crashes there ended four lives between 2000 and 2004. Haugen, who drives that section of freeway often, said it appears that heavy congestion and too many speeders contribute to the dangerous situation.

*The Herald, July 7, 2005*

### **Fix sought for I-5 cables**

How can a cable barrier in a ditch prevent a vehicle from crossing through the I-5 median into oncoming traffic? That was the question John Holschen asked a panel of experts that gathered in Marysville on Monday night to talk about the spotty safety record of cable barriers that run along the I-5 median between Marysville and Smokey Point. "To the lay person, it appears the barrier may be misapplied in the (location) where a vehicle came through and struck my family," Holschen said. Holschen was among about 50 members of the public who gathered to hear some of the state's top transportation and patrol officials discuss the safety of cable barriers. They heard the state plans to have a full report on that investigation by fall, a report that state Secretary of Transportation Doug MacDonald promised would be used to propose a remedy.

*The Herald, July 19, 2005*

### **Public provides call to action on I-5 barriers**

An SUV cruising at 70 mph doesn't seem like a fair opponent for a trio of penny-sized cable lines. But for I-5 medians through Marysville, these cords are the only defense against a vehicle veering toward oncoming traffic. Residents seeking to protect drivers from deadly crossover accidents along I-5 expressed their concerns over that defense system Monday evening when state Senate Transportation Committee Chairwoman Mary Margaret Haugen hosted a meeting on the subject. A cable barrier, when functioning properly, is the best tool to corral vehicles in the median. Concrete barriers and steel guardrails can cause serious damage upon impact and often deflect cars back into traffic. Cables, which cost less than the other options, have worked properly in the vast majority of cases, snaring more than 90 percent of the cars that go into the median along the 10-mile corridor through the Marysville area. When they fail, however, the result can be tragic, which is unacceptable.

*The Herald, July 20, 2005*

### **2-hour traffic backup follows crash on I-5**

Traffic was backed up for two hours on Interstate 5 near Marysville yesterday after a crash blocked all northbound lanes. A car heading southbound near 88th Street Northeast went out of control shortly before 1 p.m., breaking through the median's cable barriers and hitting a vehicle in the oncoming lane.

*Seattle Times, July 23, 2005*

### **I-5 barrier focus of damage claim; Should traffic divider be cable or bulkhead?**

The question of whether cable barriers should be replaced with concrete in separating the lanes of freeways in Washington state may be decided in court. That's the intent of a \$15 million damage claim filed Wednesday with the state Department of Transportation as a result of a fatal collision near Smokey Point in Snohomish County. John Holschen, whose family was involved in one of the accidents, says part of the intent of the claim he filed is to have cable barriers replaced with "Jersey barriers," or concrete bulkheads, which are widely used on other stretches of freeway, including I-5 just south of the accident scene.

*Seattle Times, July 23, 2005*

### **State to invest initial gas-tax money in cable barriers**

Regardless of whether the 9.5-cent tax hike is repealed, the safety devices will be doubled. The new state gas tax may be repealed this fall, but before it goes away, it will pay for the state to double its use of controversial cable barriers used on busy roads to keep cars from colliding head on. The state will use \$3 million to \$5 million of that money to install 54 miles of cable barrier in the middle of freeways and highways across the state, including a small area in Snohomish County.

*The Herald, Aug. 12, 2005*

### **For top critic of I-5 cables, life is a war**

John Holschen knows how to prepare for battle. Since a fiery Dec. 15 crash that killed his teenage daughter, Holschen has been quietly campaigning against the state's use of cable barriers along a stretch of I-5 north of Marysville. His criticism has grown louder in recent weeks after the state Department of Transportation announced it is puzzled that cables haven't prevented wrecks like the one that took Holschen's daughter. State engineers are studying the matter, but are also convinced cable barriers are saving lives by stopping the overwhelming majority of vehicles that swerve into the median, transportation department spokesman Stan Suchan said. No median barrier, whether cables, concrete or steel guardrails, will prevent death in every traffic accident, but each has its strengths, Suchan said.

*The Herald, Sept. 4, 2005*

### **Smokey Point bus accident snarls I-5 traffic**

A metal guardrail installed just a day earlier likely stopped a shuttle bus from plowing into oncoming traffic on I-5 in Smokey Point Thursday morning. The accident happened on a section of freeway that has come under scrutiny following a series of fatal crossover crashes. The accidents have raised questions about the state's use of cable barriers instead of guardrails. No cable barriers were involved in Thursday's crash. The bus rammed through a concrete barrier and into a newly installed guardrail. The nose of the 40,000-pound bus pushed into the guardrail on the northbound side of the freeway, coming to a rest in the median.

*The Herald, Sept. 30, 2005*

### **Cable barrier report delayed**

A study on a stretch of I-5 in Marysville won't be released until the end of the year in order to give officials time to do a thorough review. The state report was supposed to be released by the end of September, but now that date has been pushed back to the end of the year "so we get it right," said Jamie Holter, a Department of Transportation spokeswoman.

*The Herald, Nov. 7, 2005*

### **State finishing barrier study**

A year after a deadly crash, questions remain about I-5 cable barriers north of Marysville. It was one year ago today that a cable barrier in the middle of I-5 failed to prevent a fatal crossover crash near Marysville. Megan Holschen's death triggered a yearlong look at whether the freeway barrier was working as intended along 10 miles of I-5 from Marysville to Smokey Point. To that end, the state Department of Transportation is wrapping up an investigation into why three miles of cable barrier in the Smokey Point area failed to stop cars from crossing the median 20 percent of the time. Cable barriers work much better at other locations.

*The Herald, Dec. 15, 2005*

### **Deadly I-5 crash results in a fine**

More than a year after Juliann Odom crossed the median on I-5 near Marysville and slammed into a Chevrolet Suburban, killing a Bothell woman, police have cited her for second-degree negligent driving. John Holschen said he and his family hope the state will continue pursuing the facts. "If there is more to it than meets the eye, and if this young lady needs help and the public needs protection from this behavior in the future," it's important to get answers, he said. The Seattle attorney said he doesn't know why Odom lost control of her vehicle, but pointed to the cable barriers. "Instead of being stopped by the cable barriers, she was allowed to go through," he said. "We contend that the cable barriers were defectively installed."

*The Herald, Jan. 6, 2006*

### **Cable barrier safety report due out soon**

An analysis by The Herald found that cable barriers installed in the I-5 median along 10 miles of freeway near Marysville failed to stop cars from crossing the median 20 percent of the time between mileposts 205 and 208 from 1999 to 2004. Three high-profile crossover accidents over the past year on that 10 miles of freeway led the state Department of Transportation to launch a study on whether the barriers are safe and what, if any, changes need to be made. The state expects to release its report by the end of this month.

*The Herald, Jan. 6, 2006*

### **Woman fined \$538 in 2004 fatal crash**

More than a year after a fiery three-vehicle crash on Interstate 5 left a teenager dead and her mother and sister badly injured, one of the motorists has paid a \$538 fine for second-degree negligent driving. A passenger in the Suburban, Megan Holschen, 18, of Bothell, died in the crash, and five others including Odom were hospitalized. Holschen's sister and mother were the most severely injured.

*Seattle Times, Jan. 7, 2006*

### **Cable fix for I-5 on fast track**

Why cable barriers? The state Department of Transportation will install a second stretch of cable barriers along I-5 in Marysville, saying it will be more effective than ripping out the existing cable barrier and putting up concrete barriers or guardrails. In a study to be released today, state engineers analyzed 11,457 median barrier crashes between 1999 and 2004 and found that people hitting cable barriers, excluding those in Marysville, were seriously hurt or killed less often than when they hit concrete barriers or guardrails. The cable barriers are designed to flex and catch vehicles, and are less likely to send vehicles rebounding back into traffic than fixed barriers. From 1999 to 2004, no fatal crashes happened involving cable barriers except in Marysville, where there were five, according to the state. Another barrier will be added in Marysville after engineers found that the placement of the current barriers allows cars to slide under the cable, resulting in more crossover crashes and fatalities than in other areas with cable barriers.

*The Herald, Jan. 20, 2006*

### **2nd cable barrier expected to swerve-proof I-5 median**

After studying 18 cross-median collisions during the past six years on a stretch of Interstate 5 near Marysville, the state Department of Transportation has announced it will spend \$2.5 million on a second cable barrier in the area. The 10-mile stretch of I-5 has become known for accidents where one car crosses the median, somehow making it past a cable barrier, and collides with oncoming traffic. The problem of cars nosing under the barriers occurred with southbound sedans. When they reached the bottom of the ditch, their front suspensions were compressed, putting the front bumper of the car under the cables, the study says.

*Seattle Times, Jan. 25, 2006*

### **Second I-5 cable barrier to be built; Study shows risky Marysville stretch**

After studying 18 cross-median collisions during the past six years on a stretch of Interstate 5 near Marysville, the state Department of Transportation has announced it will spend \$2.5 million on a second cable barrier in the area. The 10-mile stretch of I-5 has become known for accidents in which one car crosses the median, somehow making it through a cable barrier, and collides with oncoming traffic. The department released a report Friday that indicates the majority of vehicles that went through the barrier did so by plowing beneath the cables, which are at the bottom of a ditch, and lifting them over the top of the car, according to the report. To correct the problem, engineers will put 10 more miles of cable barrier before the bottom of the ditch on the southbound side of the freeway to block cars before they can reach the existing barrier, (Dave) McCormick said.

*Seattle Times, Jan. 26, 2006*

### **The long journey home; A violent crash caused by another driver's recklessness leaves a Woodland man with chronic pain and a changed life**

Near Milepost 8, (Rogelio) Camerena loses control, his car sliding off the pavement and into a grassy median. The low-slung sedan shoots across a shallow ditch, straight for a steel cable barrier installed by highway crews a few years before. Designed to snag vehicles and prevent deadly head-on collisions, the waist-high fencing has been added to Oregon and Washington stretches of I-5 that had seen horrific accidents. Law officers praise its worth. This wreck proves to be a spectacular fluke. Somehow, inexplicably, the small Honda has sheared through the cables and is hurtling right at him.

*Columbian, Feb. 12, 2006*

### **Collision on Interstate 5 kills 3 people**

Three people were killed, including a young Bellevue man, and another was severely injured Thursday when a southbound car crossed the Interstate 5 median and collided with an oncoming car. The accident occurred about 4 p.m. at Bow Hill Road, north of Burlington. The state Department of Transportation plans to install a cable barrier at the site the first week in April. Cable barriers have been controversial in Marysville because several vehicles have broken through them.

*Seattle Times, Feb. 17, 2006*

### **Site of fatal crash on I-5 scheduled to get barriers; Narrow median seen as factor in accident - 4-mile stretch was scene of 31 wrong-way collisions over five years, DOT says**

A four-mile stretch of Interstate 5 near Burlington, Skagit County, has been the scene of 31 wrong-way collisions in the past five years, according to a state transportation official.

None had resulted in a fatality until Thursday, when three people were killed in a collision involving a southbound Geo Prizm that crossed over the grassy median and struck a northbound Chrysler PT Cruiser. The state Department of Transportation plans to install a cable barrier at the site the first week in April.

*Seattle Times, Feb. 18, 2006*

### **Around the Eastside**

Expect lane closures during the next two weeks as the state Department of Transportation begins installing a new cable barrier on Highway 522 in the Bothell-Woodinville area to help prevent crossover and head-on accidents.

*Seattle Times, Feb. 18, 2006*

### **Speeders ignore lower limit**

Speeding has increased on I-5 north of Marysville six months after the state lowered the speed limit from 70 mph to 60 mph. However, fewer people have been involved in accidents or are driving faster than 100 mph along the 6 1/2-mile stretch to Smokey Point, according to the state Department of Transportation.

*The Herald, March 1, 2006*

### **Cable barrier project to close some lanes**

Expect lane closures during the next two weeks as the state Department of Transportation begins installing a new cable barrier on Highway 522 in the Bothell-Woodinville area to help prevent crossover and head-on accidents.

*Seattle Times, March 5, 2006*

### **Briefs**

A Lake Forest Park man was in stable condition Wednesday in a Wenatchee hospital after a roll-over accident on Interstate 90. Frank Martin, 82, apparently fell asleep at the wheel about 11 a.m. Tuesday and drove off the interstate about 12 miles west of Moses Lake. His 2006 Ford Ranger pickup flipped over a cable barrier and rolled once.

*Tri-City Herald, July 15, 2006*

### **New set of I-5 barriers coming**

Officials believe a second set of stronger cables near Marysville will reduce deadly crossover accidents. State engineers concluded that adding a second set of cable barriers would keep most cars from crossing the median and slamming head-on into oncoming traffic. Megan Holschen's father, John Holschen of Bothell, said Tuesday he is withholding judgement about the second set of cables. He wants to know more about how they will be installed and tested. "Bottom line, considering (the state's) track record, I'm going to continue to monitor (the cable barriers) and see if the state possessed the common sense it lacked when it installed the first ones," he said. "If it doesn't, it will be time to mobilize the populace."

*The Herald, Aug. 30, 2006*

### **Cars can squeeze beneath barriers**

Rachel Ashleman feels lucky to be alive. She swerved left. Her car entered the grass median, where a three-wire cable fence should have lassoed it to a stop. Instead, her Subaru wagon sped under the barrier and continued into the oncoming lanes, where it was nicked by an oncoming vehicle. Ashleman's car spun to a stop on the far side of the freeway, in the grass. Except for bruises and small cuts, the Shoreline native was unhurt in the Labor Day accident. But the incident shows the state has yet to solve a longtime safety problem in the freeway between Arlington and Marysville. Five people have died in crossover crashes there in the past three years. In Arlington, the main hazard is a slope near the cable barrier. Richard Albin, an assistant state highway-design engineer, acknowledged that the fence location at Arlington -- close to the ditch -- "isn't the optimum place to put the barrier. That's why we're going to the second run."

*Seattle Times, Oct. 2, 2006*

### **Suit over fatal I-5 crash settled for \$9 million**

A \$9 million settlement has been reached in a lawsuit over the death of a young woman in a fiery crash that was blamed partly on incorrectly stalled cable barriers on Interstate 5, a lawyer says. Survivors of Marijke Holschen, 18, of Bothell, will receive \$2 million from the state Transportation Department. The driver who was blamed for the crash, Juliann Odom, 24, of Bellevue, is responsible for the other \$7 million, said Michael E. Nelson, a lawyer for the family. No criminal charges were filed. Odom was issued a traffic citation and last January paid a \$538 fine for second-degree negligent driving.

Meanwhile, an investigation by The Herald in 2005 showed the cable barriers were not working as designed in a 3-mile stretch of the freeway north of Marysville, failing to stop vehicles from crossing the median 20 percent of the time.

*Seattle Times, Dec. 14, 2006*

### **DOT settles in I-5 barrier case**

The State Department of Transportation will pay \$2 million to settle a claim with a family whose 18-year-old daughter was killed when a vehicle broke through an I-5 cable barrier near Marysville and hit their Suburban head-on. The settlement in the case resulting from the December 2004 accident is the first of its kind, said Mike Nelson, attorney for John Holschen, the father of Marijke Holschen, who was killed in the accident. The \$2 million will be added to \$7 million from the insurance company of the motorist who crossed the median, Nelson said. Most of the money will go into trust funds, he said.

*Seattle Post-Intelligencer, Dec. 14, 2006*

### **\$9 Million Settlement Reached in Fiery Crash**

A \$9 million settlement has been reached in a lawsuit over the death of a young woman in a fiery crash that was blamed partly on incorrectly stalled cable barriers on Interstate 5, a lawyer says. Survivors of Marijke Holschen, 18, of Bothell, will receive \$2 million from the state Transportation Department. The driver who was blamed for causing the crash, Juliann Odom, 24, of Bellevue, is responsible for the other \$7 million, said Michael Nelson, a lawyer for the family. The settlement did not include any state admission of fault, said William Henselman, the Transportation Department's risk manager.

*Seattle Post-Intelligencer, Dec. 14, 2006*

### **Suit over fatal I-5 crash settled for \$9 million**

A \$9 million settlement has been reached in a lawsuit over the death of a young woman in a fiery crash that was blamed partly on incorrectly stalled cable barriers on Interstate 5, a lawyer says. Survivors of Marijke Holschen, 18, of Bothell, will receive \$2 million from the state Transportation Department. The driver who was blamed for the crash, Juliann Odom, 24, of Bellevue, is responsible for the other \$7 million, said Michael E. Nelson, a lawyer for the family. "We're definitely pleased a settlement has been reached," John Holschen, the dead woman's father, told The Herald of Everett.

*Columbian, Dec. 14, 2006*

### **DOT to pay \$2 million in death claim**

Marijke Holschen was killed when an out-of-control vehicle hit the cable barrier on Interstate 5 and landed in oncoming freeway traffic. The state Department of Transportation (DOT) will pay \$2 million as part of a \$9 million settlement of a claim brought by the family of a woman killed in a cross-median collision on Interstate 5 where a cable barrier near Marysville failed to stop a sport-utility vehicle from plowing into oncoming traffic. John Holschen, Marijke Holschen's father, said the settlement with the state marks the start of "phase two" for the family. Holschen would like to be included in cable-barrier discussions with the DOT, he said. "The first step to me is to stop installing these types of barriers until I can be convinced that they're being installed in places where they will work," he said.

*Seattle Times, Dec. 22, 2006*

### **I-5 cables' delayed fix criticized**

Sections of a cable barrier in the I-5 median in Marysville have been lying flat on the ground since October. Commuters who regularly drive along the route, including State Sen. Val Stevens, want to know why. "How long does it take you to get out there and put it back up?" asked Stevens, R-Arlington. Dave McCormick, who's in charge of the state's cable barrier program, said construction crews have been taking mile-long stretches of the barrier out of service so that sections of the median with steep slopes can be leveled out.

*The Herald, Jan. 24, 2007.*

### **State Patrol targets drivers with lead feet; Speed traps set to emphasize safety**

Wednesday, the State Patrol worked an undercover speed trap on a stretch of highway where more drivers reach speeds above 90 mph than almost anywhere else in the state... The stretch of I-5 north of Marysville has received attention for high-speed crashes after several cross-median head-on fatality collisions. The Department of Transportation studied the problem and determined that cable barriers in the area were failing to stop cars, in part because of high speeds.

*Seattle Times, Jan. 25, 2007*

### **Driver dies after SUV breaks past I-5 cables**

A 64-year-old Everett man was killed and a woman was seriously injured in a fiery crossover crash Tuesday on I-5 along the same stretch of highway that's been the focus of litigation over failures of the median's cable barrier. About 3 p.m., a southbound sport utility vehicle crossed all lanes of traffic, shot across the grassy median and plowed nearly head-on into a northbound charter bus about a quarter-mile south of the 88th Street NE overpass, according to Washington State Patrol trooper Kirk Rudeen. Deadly crossover crashes in 2004 and 2005 in the same area - along with public criticism - compelled the state to study the effectiveness of cable barrier systems. The state believes that cable barriers are an effective way to prevent deadly crossover accidents. A cable barrier is designed to "catch" a vehicle and absorb the impact, unlike solid median barriers.

*The Herald, Feb. 14, 2007*

### **Fatal collision near Marysville was at site of previous crashes ; SUV breaks through newly installed I-5 barriers**

A year and \$2.4 million later, the terrible cross-median collisions north of Marysville were supposed to be history. But only weeks after the state Department of Transportation installed a second row of cable barriers along a 10-mile stretch of Interstate 5, a sport-utility vehicle on Tuesday afternoon broke through both rows of barriers and collided head-on with a tour bus. "We're going to be taking a look at what happened," Transportation spokesman Travis Phelps said. "Until we know more, there's not much more I could be telling you." Phelps said Tuesday that there were 34 accidents last year in which a vehicle or vehicles collided with the cable barriers north of Marysville. Of those, only one crossed through.

*Seattle Times, Feb. 14, 2007*

## **1 Person Killed In Fiery SUV, Bus Crash on I-5**

One driver was killed and another was injured Tuesday when a sport-utility vehicle crashed into a charter bus on Interstate 5 and burst into flames, the State Patrol reported.

*Seattle Post-Intelligencer, Feb. 14, 2007*

## **Failure of I-5 barriers investigated ; Recent upgrades | Governor seeks answers after crash killed driver**

What caused a vehicle Tuesday to rip through two sets of cable barriers on Interstate 5 near Marysville, leaving one dead and another injured as well as miles of highway backups, will take weeks to determine, say state transportation officials. Gov. Christine Gregoire wants an answer to that question after recent steps to improve safety along the stretch of I-5 appear to have failed. Only weeks ago, the state Department of Transportation installed a second set of cable barriers along a 10-mile stretch of highway near Marysville at a price of \$2.4 million. Tuesday, Clifford Warren, 64, of Everett, broke through both sets and collided with a charter bus. "A couple of things are clear at this point from the collision," said Dave McCormick, an assistant regional administrator for maintenance and operations with the state transportation agency. "This involved tremendous forces, and when you have that great of a force against any barrier system, it may not prevent a vehicle from rolling over or penetrating."

*Seattle Times, Feb. 15, 2007*

## **Fatality puts new focus on I-5 cable barriers**

*Gov. Chris Gregoire and local legislators are asking hard questions about cable barriers in the median of I-5 in Marysville after another fatal head-on accident. An Everett man died in a fiery crash Tuesday when his sport utility vehicle crossed all the southbound lanes near 88th Street NE, breached two cable barriers and slammed into a northbound charter bus. The bus driver was seriously injured in the crash. Gregoire on Wednesday told the head of the Washington State Patrol that she wants a report on Tuesday's fatal crash "as soon as you know anything."*

*The Herald, Feb. 15, 2007*

## **Crash victim died on impact**

The victim of Tuesday's fiery crossover crash on I-5 died of injuries from the force of the collision, officials said Thursday. Clifford Warren, 64, sustained fatal blunt-force injuries to his head and body, according to the Snohomish County Medical Examiner's Office. His death has been ruled an accident. Washington State Patrol detectives expect it will take months to reconstruct the crash that took Warren's life and shut down northbound I-5 through Marysville for hours. All the cables, posts and turnbuckles that hold the cables on the post are being collected and their locations cataloged as part of an investigation into the accident. Gov. Chris Gregoire on Wednesday asked the State Patrol for a report on the crash as soon as possible. Gregoire specifically noted that Tuesday's tragedy occurred where the state installed additional cable barriers to prevent similar deadly accidents.

*The Herald, Feb. 16, 2007*

## **Crash victim remembered as devoted family man**

Less than a month ago, Cliff Warren retired from his longtime sales job in Snohomish. At 64, he was looking forward to having more time to spend with his wife of 43 years, his daughters and the four grandchildren he adored. Warren was southbound when witnesses said his Nissan Infinity sport utility vehicle crossed all lanes of traffic, breached two sets of cable barriers in the median and collided with a charter bus. "Cliff was unfairly taken from us when his vehicle traveled across the freeway and was not stopped by the barrier system installed by the state," the family wrote.

*The Herald, Feb. 17, 2007*

### **Talk targets I-5 safety**

Shortly after his daughter was killed in a crossover crash on I-5, a Bothell man sat in a public meeting and asked state transportation officials to explain how a cable barrier strung in a ditch could be expected to stop a vehicle from plowing into oncoming cars. On Saturday - just two years later - some of the same transportation officials likely will field similar questions and hear similar concerns at a town hall meeting. Haugen invited officials from the state Department of Transportation and the State Patrol to discuss cable barriers on I-5 between Marysville and the Stillaguamish River during the last part of her town hall meeting.

*The Herald, Feb. 23, 2007*

### **Governor orders review of cable barriers**

Gov. Chris Gregoire on Friday called for an independent review of the states use of cable median barriers. She said a fatal crossover accident in Marysville on Feb. 13 prompted her to ask for the outside review. The accident, which killed Everett resident Cliff Warren, was the eighth crossover fatality along 10 miles of cable barrier in Marysville since 2000. Gregoire directed the state Department of Transportation Secretary Doug MacDonald and the Washington State Patrol Chief John Batiste to coordinate the review.

*The Herald, Feb. 23, 2007*

### **State omitted local crash data from cable barrier report**

If you attended a state Senate Transportation Committee meeting in Olympia earlier this month, you would have heard a glowing report on cable median barriers. In that report, state transportation officials told Sen. Mary Margaret Haugen and others that cables stop 96 percent of all vehicles that strike the barrier from crossing over into opposing traffic. The committee was told that people involved in cable barrier median accidents were expected to die or be injured 18 percent of the time. In contrast, striking concrete or steel guardrails was shown to be much more dangerous, causing injuries or death in 41 percent and 42 percent of accidents respectively, members of the committee were told. The Feb. 8 report left out 10 miles of cable barrier on I-5 in Marysville, which had four fatal crossover accidents that killed seven people during that span. "We feel that they are working (around the state) and we are investigating what happened in Marysville," (Dick) Albin (WSDOT) said.

*The Herald, Feb. 24, 2007*

### **Gregoire orders review of freeway cable barriers; Median safety eyed | Vehicle went through 2 sets in fatal crash on I-5 near Marysville**

Gov. Christine Gregoire has ordered an independent review of freeway cable median barriers following a fatal accident Feb. 13 on Interstate 5 near Marysville. A vehicle ripped through two sets of cable barriers and collided with a charter bus, leaving the driver dead and another person injured. Just weeks earlier, the state Department of Transportation (DOT) had installed a second set of cable barriers along a 10-mile stretch of highway near Marysville. "It is critical that we all continue to work together to make investments in the state highway system that enhance safety for Washington citizens," Gregoire said in a letter to DOT Secretary Doug MacDonald and John Batiste, chief of the State Patrol.

*Seattle Times, Feb. 24, 2007*

### **Gregoire orders independent probe of cable barrier use**

Gov. Chris Gregoire on Friday ordered an independent review of the state's use of cable median barriers. Her decision was driven by the Feb. 13 fatal crossover accident that killed Everett resident Cliff Warren. He was the eighth person to die in a crossover fatality along the 10 miles of cable barrier in Marysville since 2000. "I'm looking forward to this independent study," said Sen. Mary Margaret Haugen, D-Camano Island, chairwoman of the Senate Highways and Transportation Committee. Haugen has scheduled a town hall meeting on cable barriers at 2 p.m. today in Stanwood.

*The Herald, Feb. 24, 2007*

### **Crowd grills state leaders on I-5 cables**

Alan Ringen came looking for answers, but he left haunted by the same, familiar questions. Ringen, 51, was among roughly 70 people at Stanwood Middle School on Saturday who listened as state transportation officials discussed the most recent fatal crash involving cable barriers in the median of I-5 near Marysville. "This is the same dog-and-pony show we went through in Marysville," said Ringen, a Marysville resident. "It's the same smoke and mirrors, and people are still dying."

*The Herald, Feb. 25, 2007*

### **Woman files claims in cable-barrier deaths**

A Marysville woman whose parents and young brother were killed after a truck breached cable barriers on I-5 says it's time to hold the state responsible for failing to protect her family. Fawn Ringen, 23, said Friday she is in the process of filing three claims against the state on behalf of her parents, Darrell and Sandra Knapp, and her 6-year-old brother Noah. "It's my time to fight," Ringen said.

*The Herald, March 11, 2007*

### **State hires outside expert to investigate use of cable barriers**

An independent expert was hired Monday to help the state figure out whether cable barriers are being used properly, including along a deadly stretch of I-5 in Marysville. Since 2000, eight people have died in cross-median accidents along a 10-mile stretch of freeway near Marysville that is equipped with cable barriers. Gregoire said she's not so certain cable barriers alone are to blame. "When I look at the last accident in Snohomish County I am not convinced, and I admit that I am no expert, that it is not about the geography of where that cable barrier is located," she said.

*The Herald, March 20, 2007*

