BEFORE THE HEARING EXAMINER

CITY OF SEATTLE

In The Matter of the Appeal Of:)	
)	
THE BALLARD COALITION)	
)	
Of the adequacy of the Final)	Hearing Examiner
Environmental Impact Statement,)	File X-17-004
Prepared by the Seattle)	
Department of Transportation)	
for the Burke Gilman Trail)	
Missing Link Project)	

VERBATIM TRANSCRIPTION OF AUDIO RECORDING OF PROCEEDINGS

--oOo--

VOLUME I
(Pages 1 through 254)

NOVEMBER 27, 2017

--oOo--

Heard before Ryan Vancil, Deputy Hearing Examiner for the City of Seattle, 700 Fifth Avenue, Suite 4000, Seattle, WA 98104

APPEARANCES:
--oOo--

HEARING EXAMINER:
RYAN VANCIL

FOR THE APPELLANT THE BALLARD COALITION:
PATRICK J SCHNEIDER, ESQ.
Foster Pepper
1111 Third Avenue, Suite 3000
Seattle, WA 98101
(206) 447-2905
Pat.Schneider@Foster.com

JOSHUA C. ALLEN BROWER, ESQ.
DANIELLE N. GRANATT, ESQ.
Veris Law Group
1809 Seventh Avenue, Suite 1400
Seattle, WA 98101
(206) 829-9590
Josh@VerisLawGroup.com
Danielle@VerisLawGroup.com

FOR THE RESPONDENT DEPARTMENT OF TRANSPORATION
ERIN FERGUSON, ESQ.
Seattle City Attorney
701 Fifth Avenue, Suite 2050
Seattle, WA 98104
(206) 684-8615
Erin.Ferguson@Seattle.gov

TADAS A. KISIELIUS, ESQ.
Van Ness Feldman LLP
719 2nd Avenue, Suite 1150
Seattle, WA 98104
(206) 623-9372
Tak@vnf.com

A P P E A R A N C E S
(Continued)
--oOo--

FOR CASCADE BICYCLE CLUB:
MATTHEW COHEN, ESQ.
Stoel Rives LLP
600 University Street, Suite 3600
Seattle, WA 98101
(206) 386-7569
Matthew.Cohen@Stoel.com

--oOo--

CHRONOLOGICAL INDEX
--oOo--

--oOo--

EXHIBIT INDEX
--oOo--

--oOo--

Page 6

NOVEMBER 27, 2017
MORNING SESSION
--oOo--

THE HEARING EXAMINER: A call to order this Monday, November 27, 2017, hearing before the Seattle Hearing Examiner. My name is Ryan Vancil. I am the Deputy Hearing Examiner for the City of Seattle, and I'll be presiding in today's proceeding. To my right is Alayna Johnson, legal assistant for the Hearing Examiner's Office.

And I'd like to start with asking the party representatives to introduce themselves beginning with the City.

MS. FERGUSON: I'm Erin Ferguson on behalf of the Seattle Department of Transportation.

MR. KISIELIUS: Tadas Kisielius with Van Ness Feldman on behalf of the Seattle Department of Transportation.

MR. COHEN: Matt Cohen, Stoel Rivas for the Cascade Bicycle Club.

MS. GRANATT: Danielle Granatt, Veris Law Group for the Ballard Coalition.

THE HEARING EXAMINER: And could you state your last name again, please?

MS. GRANATT: Granatt.

Page 7

THE HEARING EXAMINER: Thank you.

MR. SCHNEIDER: Pat Schneider on behalf of the Coalition.

MR. BROWER: And Josh Brower on behalf of the Coalition.

THE EXAMINER: The matter being heard today involves the appeal of the Ballard Coalition by the -- of the Final Environmental Impact Statement, the Missing Link portion of the Burke Gilman Trail. The Hearing Examiner file number for the appeal is W-17-004.

The authority for the Hearing Examiner to hear and decide this matter is pursuant to Chapter 2505.680 of the Seattle Municipal Code. The hearing is recorded. Please make sure that there is only one individual speaking at a time, and speak clearly. You don't have to speak directly into a microphone, but you do need one within the vicinity of where you are speaking.

The order of procedure we'll go through is with opening statements. The parties are not required to do opening statements, but you may do those. We'll first hear from the Appellants, then Department, and Intervenor, then there's presentation of evidence, witnesses, and exhibits,

Page 8

chief-in-case by the Appellants, followed then by the Department and Intervenor. There's an opportunity for rebuttal. We've reserved that for if we need it later next week, but we can certainly address that this week if we get into it with time.

Finally, there's closing arguments. The parties have discussed doing that in writing, so that we can use our time wisely. Prehearing conference order has indicated we're going to be using a timer. I don't know if I even put it in the order, but we've all discussed it in the prehearing that we will be using a timer. Right now, I had -- if we divide it exactly, 19 hours aside. I'm going to plan on 18 hours aside so that we have time to absorb for objections, Hearing Examiner questions, et cetera. So that's right now what we're planning. And I did get a chess clock, so that we do have those. I've never used it for chess and probably never will, but now I have a new acquisition for the office.

Each witness will testify under oath or affirmation. There'll be an opportunity for cross-examination following each witness. And, of course, at the end of the record for the hearing, I'll issue a written decision. Each party will get

Page 9

a copy of that decision and the decision will include information on how to appeal. Please make sure that you have no water or food in the hearing room. Cell phones need to be turned off at this time.

Further note on the timing. What I will do, so the parties know what -- I do want to avoid us checking on the clock too much. And so, what I'm going to propose to do is unless the parties want something more, if you think it's needed, I'll propose to let you know where the time is tomorrow at noon. We're here for the appeal. It's going to take at least that long, so we can wait that long to know exactly where we are with time. And then let the parties know at the beginning of each day where we are with time. If there's an essential need for it, that's -- I'm happy to check where we are with things, but it's a little bit of math on my part. So I'm not keeping down to the minute where we are, and I don't want us to be distracted by that time keeping. I'm much more interested in hearing the chief-in-case -- case-in-chief.

All right. Are there any procedural questions or matters that we need to address,

Page 10

housekeeping before we get started from any of the parties?
MR. COHEN: Your Honor --
THE HEARING EXAMINER: Mr. Cohen?
MR. COHEN: I'm a Type 1 diabetic, and I may find it necessary to nibble something during the course of the proceedings. I'll be as discreet about it as possible.
THE HEARING EXAMINER: Okay.
MR. COHEN: But I do --
THE HEARING EXAMINER: We've made accommodations for that before, and that's fine. Thank you for bringing that to my attention.
MR. COHEN: Thank you.
THE HEARING EXAMINER: Probably the main thing is make sure you're not crinkling things, I guess --
MR. COHEN: Yeah.
THE HEARING EXAMINER: -- in the microphone and that. All right.
MR. KISIELIUS: Mr. Examiner, we have just two items.
THE HEARING EXAMINER: Yes.
MR. KISIELIUS: One is just following up on the time. Appreciate the clock and just

Page 11

wanting to double-check on the math. Mostly just out of an interest of making sure there aren't any surprises where we get to Thursday when we're running out. So with 36 hours, that's over the course of the week given the time for start and stop allows for about six hours between lunches and breaks throughout the week. And so, just wanting to make -- see how that's going to be navigated with your keeping of the time. And again, I'm sorry for getting too precise there, but it's just --
THE HEARING EXAMINER: Right. I mean, and I may -- I'm terrible at math. That's not my -- that's why we have this clock. So if I've missed it in some way, I welcome the parties to bring that to my attention. The way I figured it was we are starting at 9 today. We are running through 5. Each day from here, Tuesday through Friday we're starting at 8:30. There was a little bit of time by -- with that. Also, then factored in an hour-and-15 minutes each day for lunch, then with another half-hour each day for two breaks. So that's what I've factored in to come up with 18 inside.
MR. KISIELIUS: If that was the intent, I think, and again, I'm a lawyer not a mathematician, but I got -- I had 42 for the

Page 12

entirety of the week including starting a half-an-hour early total. And so, with an hour and 15 for lunch, that's seven-and-a-half there. No. Excuse me. Six --
THE HEARING EXAMINER: You're roughly -- I don't have my math in front of me, but that sounds about right what I did.
MR. KISIELIUS: Six and then another half hour each day is another two-and-a-half. So eight-and-a-half -- 42 minus eight-and-a-half, I get 34 -- 33-and-a-half divided by 2. It's about 16 rather than 18.
THE HEARING EXAMINER: Okay. So it's a lot less than what I thought. Is that right? Does anybody else want to check that --
MR. BROWER: Does that count against them?
THE HEARING EXAMINER: -- while we can? When they start -- does anybody else want to check that, because I encourage you to do your own math.
MR. BROWER: We're fine.
MR. KISIELIUS: I was just mostly trying to avoid surprises if --
THE HEARING EXAMINER: I think that's

Page 13

-- yeah, we do need to decide that up front. So 16-and-a-half then. Do I hear 17?
MR. COHEN: I would like 17.
THE HEARING EXAMINER: All right.
MR. KISIELIUS: And the one other item we just want to raise had to do with the final exhibit lists where the Coalition filed a revised version last week that still preserved many of the general categories of exhibits that we understood your order to be asking them to strike. So given the wording of the order, however, we understand that the Examiner's not going to entertain exhibits that aren't specifically listed. And we intend to object. So we don't feel the need to do anything else. We just wanted to ensure that was consistent with your --
THE HEARING EXAMINER: That would be -- that's what I expected, and we can address that as items come up.
MR. KISIELIUS: Thank you.
THE HEARING EXAMINER: All right, then. Let's get started with opening statements. And let's hear from the Appellant.
MR. BROWER: Good morning, Mr. Examiner. My name is Josh Brower, and I'm one

Page 14

of the lawyers representing the Coalition in this matter. Thank you for the opportunity to make a brief opening statement.

The thing about this opening statement, I'm reminding myself to go back to the fundamental treatise that provides the guidance on SEPA. Professor Settle's Legal and Policy Analysis of the Washington State Environmental Policy Act. For many of us who went to law school in Washington, we learned land-use from Professor Settle. Professor Settle lays out the fundamental purpose of an EIS, teaching us that SEPA strives to avoid an abominable degradation and works to preserve and enhance environmental quality by requiring local government actions be based on sufficient environmental information and be in accord with SEPA's substantive policies.

An EIS is supposed to provide sufficient information for a local government to make an informed and reasoned decision. An EIS is supposed to include clear concise statements that impartially describe a proposal's significant impacts, describe an environmental and preferable alternatives, and include mitigation measures that lessen a proposal's significant impacts.

Page 15

But none of that happened here in this document. This is the fourth hearing in this Odyssey-S proceeding that has spanned over nine years of litigation. In 2011, SDOT, which has always been and remains both the project proponent and its own (indiscernible) agency prepared another DNS for itself, again, concluding its project will not have significant impacts based on a 10-percent level of design.

In 2011, Examiner Watanabe agreed holding 10 percent was sufficient. Judge Rogers disagreed and held that a "10-percent conceptual level of design was insufficient to disclose the project's significant impacts." In 2012, SDOT rushed a revised DNS for the project based on a 20 to 30-percent design for the Shilshole Segment. At that level of design, Examiner Watanabe agreed with the Coalition folding the project would create significant adverse traffic hazards and ordered SDOT to prepare the EI -- EIS at issue here. In preparing EIS, SDOT undesigned the project from the 20 to 30-percent level of design already held factually and legally to be sufficient to prove significant impacts by Judge Rogers and Examiner Watanabe back at the 10-percent level already held

Page 16

to be insufficient.

Judge Rogers retained jurisdiction over this matter to enter a final order determining whether or not SDOT complied with a second order of remand. He did that because SDOT and the Cascade Bicycle Club asked him to retain jurisdiction.

The evidence we will present this week will prove the following: The Coalition did what SDOT did not do. We hired the engineers and did the analysis SDOT could have and should have done in the EIS. Our engineers concluded this trail will be unsafe and actually create traffic hazards, not eliminate them. These experts will tell you the Missing Link is an unsafe side path that will create numerous conflict points based on contraflow trail users. These are people who will be riding against the flow of traffic. Contraflow trails are universally regarded as being two to three times more dangerous than riding with the flow of traffic.

You will hear evidence that the Missing Link will create traffic hazards that are not disclosed in the EIS yet easily could have been disclosed. You will hear evidence that the Missing Link will force truck drivers to make unsafe movements to get into and out of driveways they

Page 17

frequent nearly every day. You will hear from our parking expert, an expert who used to work for SDOT and who helped create SDOT's parking methodology for this very project. He will tell you this project will create significant adverse parking impacts based upon the correct methodology.

You will hear from our economist, who will tell you SDOT's methodology was flawed. And we will confirm what SDOT's own consultant confirmed that the Missing Link will cause significant adverse economic impact to maritime and industrial businesses located in Ballard.

And you will hear from business owners and operators and from organized labor, all of whom will confirm to you that the Missing Link will make it impracticable or impossible for them to remain in business. You will hear that the men and women who work in this area and who depend on their professional licenses will lose their jobs and their livelihoods.

Also, people can save 16.2 seconds of time riding on the most direct route. 16.2 seconds is how much longer it takes to ride the MARC and Emory Route compared to SDOT's preferred alternative. 16.2 seconds. In the end, the

Page 18

adequacy of the EIS comes down to SDOT saying "trust us." We can design this safely. The evidence will show, however, there is no study anywhere proving SDOT can design any way the 2 to 3 times increased hazard from the contraflow movement. There is no study or evidence to show how the trail will operate safely and (indiscernible) conflict points and traffic hazards it will create.

The evidence also will show that for the Cascade Bicycle Club, this is about New Ballard versus Old Ballard. Cascade wants this area to be redeveloped with incompatible uses that will drive the existing businesses out of business, so that they will give up the litigation and go away.

As to SDOT, the evidence will show SDOT intentionally underdesigned the Missing Link, and averted that the 10-percent level of design to hide, not disclose, the adverse impacts from the trail. SDOT instructed its consultants to remove language from the EIS that would have disclosed the significant impacts from the Missing Link including using language about traffic hazards and the economic impacts. SDOT instructed its consultants to add favorable statements that the Missing Link will make this area safe for vulnerable trail users

Page 19

even though there is no support for those statements.

SDOT will present its trail expert to show it can design the trail safely. Its expert, however, lives in Virginia, makes his living telling jurisdictions around the country they can safely design trails, has a conflict of interest because his firm is working right now on the design of the Missing Link. So he gets paid to actually help build this trail.

He spent all of one hour driving around the study area, never got out of the car, never talked to any businesses, never talked to any trail users, and that's what his opinion is based on. SDOT's common mantra in this case is that it can and will safely design the trail outside of the EIS process. That mantra violates Judge Rogers's order and the Rule of Reason which is the standard by which the adequacy of the EIS must be judged.

SDOT in its written statement uses the word "deference" over and over and over again. It keeps saying "deference," because SDOT is not wanting to look at what it took out of the EIS, and what it either intentionally or incorrectly omitted from the EIS. Going back to Professor Settle, he

Page 20

explains the Rule of Reason correctly. While some deferences do, courts review the adequacy of an EIS de novo. The true measure of adequacy is whether or not an EIS included all of the information and the analysis that could reasonably have been included. As Professor Settle explained, "The real reason is a broad, flexible, cost-effectiveness standard."

Here, this means SDOT was required to obtain and include all of the information in the EIS on significant, adverse impacts essential for City decision-makers to make an informed choice amongst alternatives; information that it could have reasonably have obtained. This includes information both about alternative routes and alternative trail designs. Not surprisingly, SDOT's EIS for its own project concludes that there will not be a single -- not a single significant adverse impact form the Missing Link. Not one. Nothing. Nada. Nothing in this document says there will be a significant impact.

But that's not what the evidence will actually show. In the course of discovery, we obtained the first draft of the Economic Considerations Report prepared by SDOT's consultant ECONorthwest.

Page 21

In a first draft, ECONorthwest concluded there will be significant adverse impacts from the Missing Link. To quote from its report, ECONorthwest said, "Significant impacts result from interference of the business operations of industrial properties into pedestrian and bicycle traffic. This interference may result in decreased profitability and in extreme cases, result in some industrial users going out of business." Industrial users going out of business. But none of this -- none of this made it into the EIS because SDOT instructed ECONorthwest to rewrite its report which it did to two -- through two other versions.

The final Economic Considerations Report, which is only in the draft EIS and is not in the final EIS, concludes businesses will adapt. The EIS is woefully inadequate. Thank you.

THE HEARING EXAMINER: Thank you. The City?

MR. KISIELIUS: Mr. Examiner, we've filed a written statement for our opening remarks. We -- it -- we'd request the opportunity to defer and make a brief introductory statement at the beginning of our case.

THE HEARING EXAMINER: Certainly.

Page 22

MR. COHEN: And I'll reserve my opening statement as well.
THE HEARING EXAMINER: Okay.
MR. COHEN: Thank you.
THE HEARING EXAMINER: Thank you. Then we proceed back to the Appellants.
MR. SCHNEIDER: The Ballard Coalition calls Vic Bishop.
Mr. Examiner, perhaps before we begin we can get everyone to turn to the correct volume of the exhibits. Mr. Bishop's individual documents that he prepared are numbered individually. But for convenience at the hearing, we lumped them altogether in a single exhibit which is in Volume 1 at A-310. So if we could all turn to that I think it would be most beneficial. And it's under Tab A-310.21.
And we are going to be projecting some of the materials that Mr. Bishop created on your television. And I think it might be helpful if Mr. Bishop can stand here and point at things he wants to call your attention to. So can we use a portable microphone when we get to that point?
THE HEARING EXAMINER: I believe so.

Page 23

Let's make sure the technology is working for that. We didn't test it in advance, but I'm not sure.
MR. SCHNEIDER: Okay.
THE HEARING EXAMINER: -- we have batteries and that type of thing.
MR. SCHNEIDER: We'll be hopeful.
THE HEARING EXAMINER: Okay. All right.
MR. SCHNEIDER: Mr. Bishop, would you give us your full name, please?
MR. BISHOP: Victor H. Bishop.
THE HEARING EXAMINER: Mr. Bishop, do you swear or affirm that the testimony you provide in today's hearing will be the truth?
MR. BISHOP: I do.
THE HEARING EXAMINER: Thank you.

VICTOR H. BISHOP,

a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. SCHNEIDER:

Q Mr. Bishop, explain -- well, have you testified previously on behalf of the Ballard Coalition?

A. Yes, I have.

Page 24

Q. And were you the expert witness who testified during the hearing -- the last hearing in front of Hearing Examiner Watanabe?

A. Yes, I was.

Q. And were you engaged and asked to perform a -- an analysis for this hearing?

A. Yes.

Q. Can you -- before we get to your analysis, can you give us your educational and professional background, please?

A. Okay. I am a civil engineer, graduated from the University of New Hampshire in 1962 and then graduated with a Bachelor of Science of civil engineering. And then in 1966, I graduated from the University of Washington with a Master's Degree in transportation engineering.

Q. Okay. And what did you do after you got your Master's Degree in transportation engineering?

A. Well, my first job was with Boeing. I spent 10 years as a traffic engineer for the Boeing Company developing the Everett Site -- 747 site. It was 708 acres of woods when I showed up, and 10 years later, before I left, we had pulled out an airplane out of the building.

Q. Give us the overview of your employment

Page 25

history after you left Boeing then.

A. Well, I claim to be one of the first 100 of the 30,000 people that were laid off at Boeing in 1968. And as a consequence, I joined as a second employee of the firm that I ultimately ended up owning 10 years later, and owned and operated for 37 years. It was called Transportation Planning and Engineering, Inc.

I sold that company in 2005; worked for 10 years for the firm that bought my firm and then retired in 2007.

Q. And since you retired have you continued to work in the -- in your field?

A. Periodically, yes.

Q. And what are you doing currently other than testifying on -- at this hearing?

A. Well, this year I got involved and evaluated some traffic data on the freeway system of the Puget Sound region, I-5, 405, I-90, and 520 and dug deeply into traffic data on a daily and peak hour and HOV and general purpose to evaluate the various routes.

Q. And you currently undertake any volunteer activities?

A. Yes.

Page 26

Q. And what are they?
A. I'm sorry. I am -- five years ago I was appointed by the City of Bellevue Counsel to Bellevue Transportation Commission. And this last June I was elected by my peers as chair of the Bellevue Transportation Commission. I'm in my first year of my second term. It's term limited, so I've got three more years on that. I'm also the -- been a board member for a long time of the Eastside Transportation Association, and this year I'm chair of the Eastside Transportation Association. I'm also the president of my local homeowner's association West Lake Sammamish Association, which dominantly is in existence because of the transportation issues.
Q. Over the course of your career have you worked for public agencies?
A. Yes. As a consultant, and briefly, in one summer as a student -- graduate student for SDOT -- Seattle Department of Engineering at the time I think it was called.
Q. Can you give us an example of work you've done for the State Department of Transportation?
A. Yes. As a consultant I work for, of course, whoever would hire me. And the State, from

Page 27

time to time, did so and wanted me -- specific things that my firm did -- found out of was the design of traffic signals, prepare the plans and specifications for a contractor to build traffic signals. Everyone was contracted by the State of Washington to do some of that about in the '80s. Also, was contracted by the State to do a planning study for the non-interstate highway system in the Olympic region of freeways of the WSDOT, which meant 167 -- SR-167 from Auburn down to Puyallup, 512 from Puyallup to I-5, and SR-16 from I-5 to Gig Harbor across the Tacoma Narrow Bridge, and the big question was -- and this was in the early '90s, when are we going to need to do HOV lanes on these non-interstate systems. And I spent two years doing that planning study for the DOT.
Q. Have you been involved in the development of regulations or model regulations?
A. Yes. I have.
Q. You explain to us?
A. During the decade of the '70s, the National Highway Traffic Safety Administration had a traffic safety grant that they put out for jurisdictions around the nation. My firm was -- had one of those traffic safety grant

Page 28

projects going virtually all the time for the decade of the 1970s with one jurisdiction or another including the City of Seattle. And one of those -- the Traffic Safety Administration had 14 different aspects of traffic safety that they were interested in. And about seven or eight of those were traffic engineering elements and it was new developments. There was law enforcement. There's education. There's a -- vehicle stuff as well. But one of those elements was traffic rules of the road -- traffic laws.
And so, I developed the Traffic Code for four or five jurisdictions: City of Bellevue, City of Bellingham, City of Yakima, and City of Ellensburg and the City of Seattle. I spent three years in the late '70s working with the -- Seattle's Traffic Engineering or Division developing the Traffic Code for the City of Seattle which was about the Bellevue City Council in 1979, I believe it was.
Then subsequent to doing those individual city traffic codes, I was retained by the Municipal Research and Services Center which is the Association of Washington City's legal group. We maintained a model traffic ordinance, and they asked me to go through that and bring it to a level that

Page 29

could be adopted by the legislature as a model traffic ordinance for all jurisdictions in the State of Washington. And we -- and so I did that, and I did so, and that is now current -- I think it's in the -- it's in the WAC -- Washington Administrative Code that is routinely been adopted by reference by most of the jurisdictions in the State of Washington as the Rules of the Road in the Traffic Code.
Q. In addition to writing the -- an earlier version of the City of Seattle Traffic Code, have you done other projects for either SDOT or its predecessor the Seattle Engineering Department?
A. Yes. Yes.
Q. Give us an overview of that.
A. I had been contract -- again, there was a similar design contract. I think it was mostly focused in the east -- East Lake Corridor, two or three signals along that corridor I designed. Put my own name on the plan sheets. I also was retained by the engineering department to develop a plan for a bike trail around Lake Union. This was, I think, in the mid to early '80s. I spent a couple of years. Had an employee who was a real expert and a Cascade Bicycle Club member, and so we focused on how to get a bike lane around Lake Union. Got

Page 30

deeply involved in the West Lake Corridor issues. I failed miserably at that time, and it's been rectified since they took the tracks out and redid the parking lot. So that's helped a bit.

Q. Are you currently involved in any bicycle infrastructure issues other than this case?

A. Well, yes. The -- my commission at Bellevue Transportation Commission in 2009, the commission before I was on -- a member of it developed a city-wide bicycle/pedestrian plan. Four or five years went by and city didn't do too much about it, and so that issue came back to the Commission's attention.

Two years ago in working with the staff, we developed a pedestrian bicycle rapid implementation plan, which would work towards -- it had some bicycle accessibility in the City of Bellevue. That became a significant portion of a proposed transportation levy, which was proposed to the voters in 2016 and it did pass in November of 2016.

And then, so in the last year there's been planning efforts, and, indeed, some implementation of some bicycle facilities in Bellevue. Currently looking at a demonstration

Page 31

project for taking some lanes out in downtown Bellevue; thinking about bike lanes through Bellevue.

Q. When you were engaged by the Ballard Coalition, you were asked to review the Environmental Impact Statement that the City had prepared?

A. Yes.

Q. And did you, as a result of your review, prepare some documents which are put together under Tab A-321 or A-310.21?

A. Yes.

Q. Before we talk about them specifically, I would like you to go through and just identify in the -- give us a very brief overview of what each document is. So the first document in that exhibit behind that tab is called Driveway Turning Movements. What is that?

A. This is a list of all the driveways along the proponed alternative, which is the -- and only on the south side or the water side of the alternative. And it lists the individual driveways, identifies who they are, whether or not they were included in the EIS or FEIS, and then the last several columns are about the type of trucks that

Page 32

are used by each of those individual driveways.

Q. And what did you do to prepare the information that is summarized in this Driveway Turning Movement Chart?

A. Well, I did a combination of things including talking to probably a third of the individual owners of the driveways/businesses this summer. And then, referring to my notes from previous years working on this for the rest of them, to identify what kind of trucks, what size of trucks and some idea of the frequency of the trucks that go in and out of those driveways.

Q. So between the conversations you had with business owners or operators this summer and your prior conversations before the last hearing, how many of the business owners or operators have you actually spoken to?

A. Probably about 75 percent. Probably two-thirds or three-quarters.

Q. Okay. We'll come back to that, but what is -- the next set of documents are large hold-out diagrams. Can you give us an overview of what these are and then how they were prepared?

A. So these are the diagrams of what we call the AutoTURN swept paths of various trucks at

Page 33

individual driveways making specific turning movements in or out to the left or to the right. The first page is just a key map. And there is seven sets of figures here from one through seven.

Q. So we'll come back to the --- each --

A. Right.

Q. -- Mr. Bishop, but these are all -- is it fair to say these were all or all but perhaps the last couple of pages output of the AutoTURN Software?

A. Yes.

Q. Okay. So then following all of the large fold-out pieces of paper or all but the last one, we come to a document, I believe it's -- just so we're all on the same page. It's a document that is actually A-310.21 page 40. What is that, please?

A. This is the bottom-line summary of all of the AutoTURN documents, and summarizes the portion of the length of the trail by various segments that are either a driveway, this physical driveway with itself, an intersection and width itself, or the length of a so-called incursion zoning related to each or most of the driveways and summarizes that in terms of percentage of the overall length.

Q. And then if we turn the page, there is a

Page 34

three-page document. Again, just -- what's the brief overview of that?
A. Okay. This document summarizes my analysis of the various alternatives with respect to a methodology of evaluating the appropriateness of a two-way side path referenced by the Chicago Land Bicycle Federation Tech Sheet Number 1. There's a first page that talks about what the rating system is. The second sheet says what the results were, and the third sheet shows it graphically the same results.
Q. Okay. And beginning on page 44 of this exhibit, there are three documents. The first page is Exclusability Study for Elevated Trail Section. Can you just briefly explain what that is?
A. This is a technical report prepared by the CTS Intervenors, a structural engineering firm that we retained to evaluate the feasibility of potentially putting a bike bridge on a portion of this trail length. And shows the results of that, the economic -- the cost and some figures showing various -- the elevation of the piers and where the columns are located on the following pages.
Q. And then, Mr. Bishop, if you could turn to page 053, which is the last page behind this Tab.

Page 35

What, in overview terms, is that document?
A. This is a summary of some of the data associated with parking in the study area, and it represents data from the final EIS total parking unit and parking lost, and some of the information about where it's lost and the unionization of some of that space.
Q. Okay. Then I'd like to go back to the first page in -- behind this tab, please, which is the chart called Driveway Turning Movements. So, Mr. Bishop, let's go through this column by column. So the first column says Driveway Number. What is reflected there?
A. This is the -- how we've identified the various driveways and there's a code within this that says that if the drive -- if the number doesn't have a letter designation after it, it was included on one of the figures in the draft DIS. And if it does have a letter that designation after it, it's a driveway that is there, but was not included in the draft DIS and the tables were identified and evaluated --
Q. So --
A. -- driveways.
Q. So, for example, going down a few rows,

Page 36

we've got driveway 17, 17A, 17B, 17C, and D.
A. Correct.
Q. So applying what you just said, does that mean that driveway 17 was discussed in some manner in the EIS but the others were not?
A. That is correct.
Q. And when you say that a driveway was actually referred to in the EIS, in what way?
A. Well, it was included on the table of identifying driveways. I think virtually all of the ones that don't have a letter designation had traffic volume accounts included in the final EIS. And there's some -- there's videos available of those traffic counts. I think they counted most of those -- they counted those by using video tape. I'm not sure they were in the EIS, but it was available. And I think there was some evaluation of the traffic flow at those driveways.
Q. Okay. And so, moving over to the third column, that's where you have the heading is originally included in the FEIS. And at the very bottom you have a total Y equals 11. N equals 29?
A. Yes.
Q. What is that?
A. Well, 11 of these 40 driveways were

Page 37

included in the FEIS and 29 were not identified as driveways.
Q. I think the second column Business Owner User is self-explanatory. But moving then to the right of the column that identifies whether they were included in some manner in the EIS or not, the first column is Passenger Car. The last column is Lowboy, Low truck long. What do each of those columns reflect?
A. So the question of the incursion zone and whether trucks can easily get in and out of the driveways is very dependent upon the type of truck and vehicle that is using the driveway. So the first column shows that all of the driveways would have passenger cars going in and out of them at one time or another. And, in fact, because passenger cars could do that, we did not do the swept turn analysis of passenger cars. If a -- any truck can fit through it, a passenger car can.
The second column is called Single Unit Truck. That's a relatively small delivery truck 30 feet long and again, most of the driveways have a small truck use them. And so, all but 6A, which is just a parking lot that -- and then, 12C, which is technically a driveway, but it's a closed-gated --

Page 38

hardly ever gets used, and it's got some grade issues. It's difficult to get a truck in and out of, so they don't use it for that purpose.

The third column is whether the 40-some odd trailer truck --

Q. Now before you talk about that, what is YWB40 in the next column is WB-67. What are those names?

A. Oh, that's a designation by this Ashville, the Association -- American Association of State Highway and Transportation Officials have identified this issue of how you think about trucks. And so, they've identified several categories of trucks, and this is their designation. WB40 is a fairly standard semi-trailer truck that makes deliveries. And WB-67 -- and there's several others in-between -- between 40 and 67. But the WB40 is actually the smallest semi-truck and WB 67 is the largest semi-truck. WB-67 has a -- what's called a box. The trailer is 50 feet -- 53 feet long, and the overall length is, I think, 67 feet.

These two types of trucks have a single articulation. It's a fifth-wheel kind of thing, so the tractor turns and there's one point that turns. And so, the trailer follows in a different path than

Page 39

the front wheels. And so, that's what creates this swept path concept is that the -- it's wider than just the truck width itself.

Q. Okay. And so these --

A. And then --

Q. -- let's head for a moment to the AutoTURNs on the pages that follow.

A. Yeah.

Q. Do those Auto -- does the AutoTURN software then use the standard designations of WB-40 and the WB-67?

A. Yes.

Q. And so forth?

A. Right.

Q. Okay. And so, explain the difference between the blue boxes and the grey boxes for us, please.

A. Well, the blue boxes are the -- got a designated truck and for a particular driveway if -- and so, the further you go to the right the bigger the truck that uses that driveway. And if you get to the point where it gets to be very grey box, then our conclusion is that size truck doesn't use that driveway or at least on a very frequent basis.

Q. So using -- and is the information in

Page 40

this chart all based on your communications with the business owners or operators?

A. Yes.

MR. SCHNEIDER: Mr. Examiner, just a point of how you'd like to proceed. I can obviously offer these documents as I go. I can offer them in a lump sum. I can offer them before witness discusses them. Since I haven't heard any objections, I guess I'll just what comes naturally, or would you -- is there a method you would?

THE HEARING EXAMINER: My only concern mostly, I mean, if there's an admissibility question, I'm sure Counsel will raise the objection. My concern is how we're going to do the numbering system here. I see the notebooks, and I see that we're not going in order in the notebook. So --

MR. SCHNEIDER: Right.

THE HEARING EXAMINER: -- did you have a thought on how you're proposing to do that?

MR. SCHNEIDER: Well, I guess, again, I'm not anticipating an objection to admissibility on the documents in this packet. If I'm correct in that assumption, I would just wait and then when I'm done with it -- testimony and after there's been a chance for voir dire for cross-examination, offer

Page 41

them. Is -- does that make sense?

THE HEARING EXAMINER: It does. I just -- maybe for purposes of getting on the record in lieu of an objection sort of our understanding and stipulation on this is some of these documents Mr. Bishop did not prepare. One of the Coalition's other witnesses, Mr. Kuznicki did. To facilitate the efficient presentation of witness testimony, we've agreed to stipulate to the authenticity of these documents to allow Mr. Bishop to testify to them on -- with the understanding that they plan to call Mr. Mr. Kuznicki, so that we can ask him questions about the creation of the AutoTURN diagrams.

MR. SCHNEIDER: Yeah. And my understanding is the concerns go to weight, not admissibility, so then I guess we're not directly answering your question. And I -- we are going to be leaping around among the volumes. There was a lot of -- it simply wasn't possible, given the time limits, to put them in the order they were going to be used. So I think it's really whatever makes it easiest on the Hearing Examiner. But this will be the first document that we offer and then we'll have another major document today that our next witness

Page 42

will discuss. And then, after that I think it becomes -- we're going to be going from volume to volume of documents.
THE HEARING EXAMINER: Well, we'll have to label them by number as we go, so this will be Exhibit 1. I think we'll try to -- two categories of exhibits. So we'll do Appellant's and Respondents. We'll lump the Intervenor's in with Respondent. So we'll have a single list of exhibits from Respondents.
MR. SCHNEIDER: So will it be A-1 or just 1?
THE HEARING EXAMINER: A-1.
MR. SCHNEIDER: A-1.
(EXHIBIT A-1 IS MARKED FOR IDENTIFICATION)
THE HEARING EXAMINER: And what I'm going to ask you to do, since you have your own numbering system so that we can keep track of A1 and where that is, and which notebook et cetera, is tell us which notebook and your exhibit number as you come to each document.
MR. SCHNEIDER: Yes. We'll do that. Thank you.
THE HEARING EXAMINER: All right. And that way we can track that, and I'll know which one

Page 43

we're talking about.
MR. SCHNEIDER: Okay.
THE HEARING EXAMINER: Thank you. And I understand the stipulations that you've all reached with each other as far as admissibility and as long as you're copacetic with that, that works fine with me.
MR. SCHNEIDER: I'm sure we'll find out if we're ever not.
THE HEARING EXAMINER: All right.
BY MR. SCHNEIDER:
Q. So, Mr. Bishop, going back to your -- the first page of this exhibit A1 now, did you then do or have done at your direction an AutoTURN analysis for each of these driveways?
A. Yes. I did.
Q. And comparing what you did with what's in the EIS, how many of these driveways did the EIS do an AutoTURN analysis for?
A. They got the number four or five. I can look it up. It's right in here. You want me to?
Q. Well, I tell you what. Why don't you explain what you're looking at right now?
A. In the FEIS -- this is the Appendix A AutoTURN Analysis of the final EIS.

Page 44

Q. So why don't you tell us which of the driveways on your charts the city did an AutoTURN analysis for?
A. Okay.
Q. And, Mr. Bishop, if it's going to take you awhile, maybe we'll come back to this after the break. I just want to be mindful of efficient use of time here.
A. So I -- driveway 17D on my chart --
Q. Is that D as in dog?
A. D as in dog is -- it's a little confusing as to whether that's a driveway or a street. It's actually 26th Avenue Northwest at Market Street. And the issue there is that it's actually a -- there is a public street right of way there, but it's only 20 feet wide and normal streets are 50 or 60 feet wide. And so, on this first drawing in the FEIS on the -- on Figure A2, it shows a truck leaving 26th Street, turning right. And so that's an AutoTURN evaluation in the IS for that driveway or that street.
Q. And what sized truck did the city use?
A. That was a WB-50 truck, which is a little smaller than a 67; little bigger than the 40.
Q. Okay. And you did a WB-67?

Page 45

A. Yes.
Q. Is that because -- why did you use the WB-67?
A. Because in discussing with the businesses in that area, that's the biggest truck that they use.
Q. Okay. So 17D was -- there's an AutoTURN in the EIS.
A. Right.
Q. What's the next driveway?
A. Let's see. A3 does not involve driveways. It's just a street. And A4 is the same street intersections. A5 is the same intersections. A6 is the same intersections. And then, A7 and A8 both look at individual driveways. A7 is -- looking at -- A7 is looking at my driveway 12B, and 12B is a Hat & Marine CSR Marina driveway. And this one is looking at a WB-50 truck during right in and right out.
Q. And you did an AutoTURN for three bigger trucks than a WB-50?
A. Yes. And 12B we did the WB-40, then it's the WB-67, and then they have special -- they have special trucks that come in. This is the big marina on the waterfront along the ship canal. And this is

Page 46

one of the few, if not the only marina that has swingers and equipment to take very large boats off of trucks and put them in the water. And so, if there's a boat that comes to Seattle from across the country, it very often shows up at this particular marina and they turn in and out of that driveway. And because of the boats tend to get very large, as big as they can get on the boat, the trucking industry has come up with what they call a Lowboy. A flat-bed truck that's very low to the ground so they can get more height under the bridges and get a bigger boat on their truck as well as other loads.

So there are two designations of Lowboy trucks. One is a relatively short version and then essentially it's the same truck. It's -- the Lowboys can be extended to get a longer boat on. And so, if they have to extend it they do. And it takes up more room to turn. If they don't have to extend it, they don't. So the Lowboy short is in its shorter length and a Lowboy long is in its longer length. And they both use this driveway.

There is times when they're out to here and at times of Seattle Boat Show it's a concentrated time of year. And other times of year there's other trucks that come in and out.

Page 47

Q. So, Mr. Bishop --

A. And then, also on A8, this is -- this is my driveway 9 -- 9D. 9 and --

Q. D as in dog?

A. D as in dog. 9 is a -- it's identified as a single-unit truck similar in size to what's called here a cement truck, which is not correct, but it's a concrete truck. Right into driveway 9 and right out of driveway 9D.

Q. So you've identified four driveways that the city did AutoTURNs for: 17D, 9, 9D, and 12B. Is that correct?

A. Correct. I guess figure 9A does another couple of turns. 9A in the final EIS does another -- does a left turn into driveway 9 and a left turn out of driveway 9D.

Q. So, Mr. Bishop --

THE HEARING EXAMINER: May I ask one clarifying question, Mr. Bishop? In your -- when you started, you indicated that on your chart the driveway turning movements there's a column originally included in FEIS. And you told all the ones that were and told all the ones that were not. And I thought that you were saying, and maybe this is -- something changed in the EIS, but I -- you

Page 48

said some -- the ones that were not included have the letter indication. Is that right?

THE WITNESS: Right. Right.

THE HEARING EXAMINER: So what do you mean that they were not included? Were they included at a later date or?

THE WITNESS: Yeah. They -- I think the AutoTURN addition in the EIS was after the --

THE HEARING EXAMINER: Okay.

THE WITNESS: -- initial evaluation.

THE HEARING EXAMINER: So this is after that?

THE WITNESS: So it wasn't included in the -- I believe the Number 9 for Sound and Bay was intended in the IS to be all the driveways of sound. Turns out there are five driveways for Sand and Base -- Sand and Gravel. And that's why there's a 9, a 9A, 9B, 9C, 9D.

THE HEARING EXAMINER: So were ultimately some of those then included at some point or?

THE WITNESS: Yeah. This 9D was included in this AutoTURN as an AutoTURN thing. It wasn't included in an -- in a --

BY MR. SCHNEIDER:

Page 49

Q. Okay. So, Mr. Bishop, I'm not sure we're responding to the Examiner's question. So I want you to explain. You've identified four driveways where the AutoTURN movement was done.

A. Yeah.

Q. But your third column refers to 11 driveways that were included in the EIS. So how were the others that they didn't do AutoTURNs for included in the EIS?

A. Well, they're identified on the figure really, in the final EIS about driveways. And they were identified with traffic volume counts. I think both peak hour and daily in the EIS.

THE HEARING EXAMINER: And the others were not?

THE WITNESS: And the other 29 were not.

THE HEARING EXAMINER: Okay. Thank you.

THE WITNESS: Didn't have counts involved.

BY MR. SCHNEIDER:

Q. So again, just to be clear, four driveways with AutoTURNs, 11 that were addressed in some fashion and 29 that weren't discussed in any

Page 50

way?
A. Well, actually 28, because 9D was discussed with the AutoTURN.
Q. Okay. All right. So let's turn the page then to the Key Map which we have up here also on the computer screen. And your driveways on the Driveway Turning Movement Chart, am I correct in understanding that the first driveway is the driveway as one I will call the western end and the last driveway is at the eastern end, and the other driveways are -- move sequentially --
A. Right. Correct.
Q. -- west to east?
A. Correct. Correct.
Q. Okay. So explain, using the Key Map page 002, explain what we're seeing here, please?
A. Well, this is a key map of the preferred alternative. This is totally focused on the preferred alternative. And so, this is a key map of the route of the preferred alternative and where it says Figure 1 on the Key Map, there is another blow up of that area of the preferred alternative that shows the individual driveways and some of the information that we're talking about. And the same for each additional figure 2, 3, 4, 5, 6, and 7.

Page 51

Q. So, for example, the --
A. It doesn't cover the entire length. It just covers the length where there's driveways that we did AutoTURN on.
Q. Okay. So if we turn the page then to the first figure after the Key Map, is this a blow up then of the area that is in Figure 1 on the Key Map?
A. Yes.
Q. And we actually have -- well, we have one figure for Figure 1A and it's got a lot of color on it. So I want you to explain the color. But before doing that, let's step back for a moment and explain the AutoTURN software and the relationship between the pink and the blue swaths on this page to the truck size in your Turning Movement Chart.
Q. Okay. Well, on Figure 1-A in the lower right corner --
MR. SCHNEIDER: And if this would be a good time, I think, to see if our -- if our portable microphone is working.
THE HEARING EXAMINER: Okay.
BY MR. SCHNEIDER:
Q. So can you step up, Mr. Bishop?
THE HEARING EXAMINER: I have been informed we don't know that they -- well, they don't

Page 52

have batteries and we don't know if they were installed when we got a new computer. So that's not an option.
MR. SCHNEIDER: Okay. Then --
THE HEARING EXAMINER: You want --
MR. SCHNEIDER: Mr. Bishop, I'm going to --
THE HEARING EXAMINER: You want to switch Counsel chair and have him sit up here, that would be close enough for the microphone.
MR. SCHNEIDER: Sure. That would be very helpful.
THE HEARING EXAMINER: Unfortunately the cord doesn't go across the table. I don't think we can get them quite that far.
MR. SCHNEIDER: You want to sit here?
MR. COHEN: Sure.
BY MR. SCHNEIDER:
Q. Okay. Mr. Bishop, I'm going to ask you to sit here and use the laser pointer. And if you can point at -- I'm going to refer to this as Figure 1-1A, which is your number in the lower right-hand corner.
THE HEARING EXAMINER: So before -- let's get this figured out. Mr. Schneider, so I can

Page 53

make sure your voice is getting picked up, too.
MR. SCHNEIDER: I will -- it stretches. Okay.
THE HEARING EXAMINER: Mr. Bishop, can you take this microphone and move it close to you? Just pull it as close as you can. And if you want to, you're going to be looking at that a lot, so you might want to flip it over the other -- there you go. That should work.
BY MR. SCHNEIDER:
Q. Okay. So, Mr. Bishop, using the laser pointer, explain to us --
A. I can't get that to show up on the screen.
Q. All right. Well, then do your best to compromise between --
A. Shows up on the wall.
THE HEARING EXAMINER: It does show up on the wall.
MR. SCHNEIDER: All right. We don't have a long physical pointer, do we?
THE WITNESS: I mean, it sort of shows up, but if I get it just right, it shows up, but that's going to not be comfortable.
BY MR. SCHNEIDER:

Page 54

Q. All right. So, Mr. Bishop, do your best to compromise between being close to the microphone and letting us see what you're pointing at.
A. All right. So in the lower left -- lower-right corner on all of these figures there's a truck shown. And there's identification of what truck type that is. That's the design vehicle profile for this particular truck. This is a single-unit truck, SU-30, and it gives some data. There's the pointer. It gives some data on some of the characteristics of that truck. It's eight feet wide. There's a length and there's an angle -- on the steering angle. That has to do with how sharp the driver can turn the wheels on the front of the truck.
And so, this figure only looks at SU-30 at specific locations. Because it gets kind of complicated, we decided that it would be useful to separate inbound vehicles from outbound vehicles by color. So the pink represents trucks turning into the driveway and the blue represents trucks turning out of the driveway. We've identified each of the driveways and two-ways. One we've colored them in yellow on the south side and then given them a designated number.

Page 55

And we start out here with 1A, 1B, 16, 17 on this drawing. Now the difference -- that's -- looks a little confusing, but why do we go from 1A to 1B to 16 and 17? Well, that's because the EIS identified 16 and 17 on a diagram in the EIS, and they basically started on one of the other alternatives and used this street -- not 54th and counted driveways along the south side of Not 54th in Shilshole and then another way and then they came back and did other ones. And that's why we got some oddball numbers around.
Q. So, Mr. Bishop, for those who weren't here at the last hearing, what is Not 54th?
A. Not 54th is the street that goes from 30th behind the Lockspot Café and behind these buildings and pops out over on 24th. It's undeveloped. It's a public street. It's a public right of way. Vehicles use it but it's basically dirt. It's -- you can't even call it gravel. It's dirt. And yet, this is Northwest 54th and this is called 54th when you get down there. So we call this Not 54th.
Q. And is that a common name in the neighborhood?
A. I think it is, yes.

Page 56

Q. Okay. So the colors -- the inbound in pink and the outbound in blue, are those what is referred to as swept paths?
A. Yes. These are the swept paths, in this case, of the single-unit truck turning in and out of the particular driveways.
Q. Okay. And how -- how are those swept paths generated? What information did -- is provided and what does the computer program do?
A. Well, first of all, it's a computer program, and it's a CAD-based program. So we needed to have a CAD drawing to do it on. And so, we obtained from the city the base drawing for the trail -- proposed trail that's -- was prepared by one of their consultants at -- as a CAD drawing. It's -- AutoTURN is a third-party software that's specifically used for design of intersections and driveways to be able to see how various trucks will be able to turn and turn around through various intersection configurations. So it's specifically designed to look at how trucks are going to flow in and around driveways and intersections.
Q. So we have some other colors here.
A. Yes.
Q. Please explain those.

Page 57

A. The yellow is reflected at -- particularly on the south side of -- those were driveways that were shown on the CAD drawing. But on the north side, we concluded that there was some interaction of truck activities of drivers getting in and out that whether or not there's a driveway on the other side of the street is a factor in the evaluation of how you -- how a truck driver gets in and out. So we chose to identify and show the driveways on the other side of the street just as an indication that they exits. And that's what the yellow marks are on the north side of the -- of this diagram.
The green pieces are the trail crossing the driveway. The grey along is the proposed driveway itself. The -- excuse me --
Q. So pick up where --
A. No -- proposed trail itself to a side path. And the deeper red at selected locations is what we defined as an "incursion zone." And that's a U-Turn and an incursion zone is the area where the swept path crosses a curb. And we have a good example here. Well, yes. Let's --
THE HEARING EXAMINER: I'm going to ask you just for swept path. How are you spelling

Page 58

"swept"?
THE WITNESS: S-w-e-p-t.
THE HEARING EXAMINER: Swept.
THE WITNESS: Swept. Yeah. Look at driveway 16 and the inbound vehicle pink turning right into that drive. In order for that truck to make it into this driveway right here, he's got to turn such that the swept path crosses the curb back here. And at that point we drew a perpendicular line across the trail and called that then the incursion zone for that driveway.
BY MR. SCHNEIDER:
Q. And so, what is the relationship between the route of the trail and the curb? What is in-between the proposed trail and the curb?
A. Well, it varies. But fundamentally it's a buffer -- typically minimum of five feet on most of the trail, but in some places it's five feet plus some parking. And that shows here is the parallel parking on this section of -- on Market Street that in addition to the buffer, there's some parallel parking. So there's -- it's wider than the buffer. The buffer is just identified as a buffer. It could be any number of different things. Could be concrete. Could be asphalt. Could be grass. Could

Page 59

be whatever the city chooses to design when they ge there. But it's a space separation between the traveled way on the public street and the trail -- edge of the trail itself.
Q. So in another way of expressing would be that the incursion zone reflects the length of the trail where some portion of the truck will be in the buffer between the trail and the street?
A. Yes. Yes. So that -- so like in this example at 16, the right-turn vehicle will have to turn early enough in order to make it through the driveway so that it consumes that additional red space of the trail as being what I call an incursion zone and, therefore, has some different characteristic of safety than the rest of the trail.
Q. So you referred, Mr. Bishop, to the fact that there are four driveways where the EIS did an AutoTURN analysis. Do those AutoTURNs show incursion zones?
A. No. They don't.
Q. What do they show instead?
A. Well, there's a warning zone that's identified in another figure in the final EIS, but it -- that's not shown on the AutoTURN figures, I don't believe.

Page 60

Q. And what's the difference between the incursion zones that you have depicted and the warning zone on that other chart?
A. I really don't know. There's no definition of the warning zone in the FEIS. There is a diagram on one of the figures that has a swept path -- not in the same way as this one does, but it has essentially a swept path. But it doesn't give any definition as to what they mean by warning zone.
In my incursion zone, at least on that one example, would be slightly bigger than a warning zone slightly longer than the warning zone. But there's no definition in the EIS as to what warning zone means.
Q. So are the incursion zones shown on your AutoTURNs are they generated by the software itself?
A. The point -- no, actually. The software does not generate that. The software generates the point where the swept path crosses the curb and then Transpo translated that into a dimension on the trail.
Q. And who is Transpo?
A. Transpo is the firm that we hired to do the -- had the software and did the technical work of developing the swept path drawings.

Page 61

Q. So --
A. And they're identified here on the Transpo Group.
Q. Mr. Bishop, there are some hash marks there. Immediately to the left of driveway 17, those are hash marks. What are they?
A. Well, I think I know what they are. That -- that's -- they were marks that were part of the City's CAD drawing that was presented to us and they sure look like relocated parking stalls to me.
Q. Is the area presently used for parking?
A. Yes. Yes, and you can see the vehicles parked under the area where the trail will be in that particular photo. And so, this appears to be just the relocation of some of those stalls further south.
Q. So on the right-hand extremity of Figure 1-1A, the trail and the street curve and the street changes from 54th Street to Market Street. Is that correct?
A. Yes.
Q. And is the Market Street that is depicted on this CAD file is that the Market Street that is out there today?
A. Well, it's the same physical space, but

Page 62

it's oriented differently. This is a three-lane section instead of a four-lane section with parking. So -- and this -- in that lower right portion, there's one lane westbound where the words "Northwest Market Street" is identified. And there's a two-way left turn lane. And then there's one lane eastbound. And then there's a parking lane here and they don't indicate what they're doing on the north side.

Q. So --

A. Doesn't look like there's room for any parking on the north side.

Q. So is Market Street today as we sit here four lanes or three?

A. It's four.

Q. So what is shown here is a change to the number of lanes on Market Street?

A. That's correct. Yes. That's the proposal. That's the DIS --

Q. And then --

A. -- FEIS proposal.

Q. -- I'm going to walk up again and leave the microphone for a moment. I've pointed to four boxes at the immediate right-hand portion of this Figure 1-1A. What are those boxes?

Page 63

A. Well, they're parking stalls. That's where you would park, parallel park along Market Street and the front of the Trident Seafood Retail Building.

Q. Okay. So, Mr. Bishop, what you've described here in terms of the legend, the colors, does all of that hold true for all of the AutoTURNs that follow?

A. Yes.

Q. Okay. So before we leave this page then, this is an SU-30 truck showing in and out movements. Are the SU-30 trucks capable of making these movements in this location with the trail as proposed?

A. Yes. They are, but in one case, you have to cross the center line in order to make it work. And that's at driveway 16. The blue exiting truck in order for him to get out, he's got to cross -- fully cross the center line into the opposing traffic, in westbound traffic for him to be able to get out and continue to the west.

Q. And is that a safety issue?

A. Yes. That's a -- potentially a safety issue, absolutely. The other trucks at 1B they can get in and out and stay within the lane. And this

Page 64

is a significant thing. We have a set of drawings that says that when this title here "Within Lane," that means within the lane that they're turning into. And like this blue one is turning into the westbound lane, and then we have another set of drawings that says using a variable pavement, and that means that they have to cross the center line and use the pavement on the other side of the center line in order to get out.

Now in this case, we -- well, this demonstrates that we've identified that if there's a two-way left-turn lane or a left-turn lane adjacent to the turn lane then that's available for the truck to turn into. And that's shown here on 17. This truck, blue one turning left out, he has to turn out into the -- into the space that's actually transitioning and he doesn't actually cross the center line. He doesn't cross the edge of the line on the westbound lane in order to make it out. So we say that's within the lane.

Q. So let's turn the page then, if we could, to your Figures 2-2A and 2-2B. So explain the difference between 2-2A and 2-2B.

A. Well, 2-2A is "Within the Lane" and 2-2B is the same figure "Within Available Pavement." So

Page 65

again, this -- they're both the -- well, let's see. Go back to 2-2A. 2-2 -- yeah. This is 2-2A "Within the lane." So this is a WB-67. So you can see this is a 53-foot box that I mentioned and an overall length of -- well, it's the 67 feet. So this sized truck does not use driveway 17A and B, so we don't show anything there. So the only thing we're focused on is 17D. And this is the driveway for -- this is the 26 Avenue Northwest intersection/driveway.

And so, what this is showing is a right turning WB-67 turning right into that driveway has to use the full driveway width that's shown in the FEIS. Now it's interesting that the driveway width shown in the FEIS is three times as wide as the public right-of-way on 26. 26 is a 20-foot wide right-of-way. This is the one that's got that. And that's why they're all pushed to the west is an attempt to get them into the public right-of-way.

But -- and you can see on the photo underlying the pink, there's a perpendicular white car. That's because that's private parking. That's private property and the owner of that private property leases the spaces between the public right-of-way down through the street as private parking.

Page 66

To my knowledge, in talking to the owner of that property, they had -- they are not aware that the City's intending that their property's going to be (indiscernible) by trucks coming in and out of that driveway using their private property.
Q. So --
A. Not necessarily their trucks.
Q. So you've been talking about driveway 17D --
A. D as in dog.
Q. -- Mr. Bishop, and that's one of the driveways where the city did an AutoTURN but it used the WB-50, the smaller truck?
A. That's correct.
Q. So to the right of driveway 17D, there's a red incursion zone shown?
A. Right.
Q. Now let's turn the page, please, to 2.2B. There is no incursion zone on this one. Can you explain the difference, please?
A. Yes. Here's the difference between staying within lane and within available pavement. This is identified within the available pavement. And the blue truck comes out is allowed, in this instance to swing to the left, use the total

Page 67

available pavement up to the top of the curb line up there, and then swing his truck back in and he can get back into his lane. And so, he can turn sharper that -- by doing that, so he's got enough pavement to use so he can turn sharper so that his -- in this case there's no incursion zone in that spot for the truck within the available pavement.
Q. So does what you've just demonstrated for us the difference between 2-2A and 2-2B where there is an incursion zone if the truck stays within lane. There isn't if the truck uses all of the available pavement, in other words, crosses over --
A. Right.
Q. -- the center line. Does that difference hold true throughout? And by that, I mean, if the trucks is within available pavement there will be either smaller or no incursion zones?
A. Yes. Yes. That's consistent.
Q. But if the truck actually stays on its side of the street, then the incursion zones are there or are bigger?
A. Yes. And in some cases, even if they go across the street there's an incursion zone, but it would be smaller.
Q. Are you saying sometimes even if they

Page 68

leave the pavement?
A. Even if they stay within the pavement, the -- there will be some incursion zones, but they'd be smaller than if they stayed within the lane. I think we'll see that in the later one.
Q. Okay. So I want to direct your attention very quickly to this area right there. The area above -- the area above the incursion zone where you show the blue swept path for an outbound turning movement, what is the truck doing at that location?
A. Well, the cab of the truck is up on the top line, the right -- the left-hand side of the cab of the truck is up there, and the -- as he swerves around the corner, the rear wheel in the back corner -- back right corner of the box of the truck is following a line that's the lower line.
Q. And so, what is the rear back wheel of the truck riding -- driving over at that point?
A. Well, he's over -- he's up on the sidewalk or on that landscape area or whatever it is and dropping off a curb.
Q. And in order for the truck to make this movement, the blue movement, do you show it starting at the extreme left-side of the street/driveway?
A. I do in this case. And that's the case

Page 69

in all the driveways and it's the case in this street because the street's only 20-feet wide, so he's way over -- way over to the left anyhow.
Q. So in order to make the movement within the lane, he basically has to be on the wrong side of the driveway to commence the movement?
A. He is on the left side of the driveway, but the driveway's not -- I mean, the 20 feet's not wide enough really to have trucks go two directions anyhow, so we put them on the left side.
Q. All right. Why don't we then turn to Figure 1, which is immediately after 2A and 2B. And so, why does the numbering go to Figure 1? What is -- what are we seeing on this?
A. Well, this is introducing another concept. This section of Shilshole was not a part of one of the alternatives that was in the draft EIS. And the section that I'm talking about is from the southwest corner of 24th and Market to along the south side of Shilshole to a spot -- well, between 6B and 7 about in this location right there -- was not included as any one of the -- in any one of the alternatives that was in the draft EIS. So here's the reason why. The draft EIS had a Shilshole south and the Shilshole south alterative came along the

Page 70

south side of Shilshole and turned at this location. He stayed parallel to the tracks and came along on Not 54th.

Shilshole North went along the north side of Shilshole and went all the way up to Market, turned, and came across and went on the south side of Market. So this south side of Shilshole, to mean 24th and the space between 6B and 7 really wasn't included nor evaluated in the draft EIS's.

Q. So what we see here on Figure 1 is -- reflects what's in the final EIS? The CAD drawing for the final EIS?

A. Yes. Yes. The heavy lines that -- along the side of the street, that -- those are the city's CAD drawings, 10 percent CAD drawings of the proposal.

Q. So, Mr. Bishop, directing your attention to the hash lines that are immediately to the right of the intersection of 24th and Market, is that an intersection?

A. Yes.

Q. And does that intersection exist today?

A. Well, sort of. The right-of-way's there. There is no definition. It's totally wide open. You can see that there's parking along the building

Page 71

along 24th in existing conditions. This is all public right-of-way but there's no curbs. There's maybe some faint lines that get worn out and it's pretty wide open. The proposal, of course, putting the trail along the south side of Shilshole wants to define that intersection. And so, this is how it's shown on the 10-percent drawing that was used in the draft and final EIS.

Q. So let's turn the page then to Figure 1A. So is this showing largely the same area but with the addition of AutoTURNs?

A. Yes. It is.

Q. Okay. And we're seeing pink, so these are inbound vehicles?

A. These are inbound vehicles and this is a WB-67. This is the large box truck single.

Q. Okay.

A. Semi-trailer.

Q. Okay. So I think you're depicting three movements here. So why don't we take them in order beginning with the truck going eastbound on Market and making a right turn. What do we see?

A. So this -- the underlying black lines and arrows show how the city proposal would reconfigure the lanes on Market Street. And so, we configure it

Page 72

to be a right-turn lane, a thru-lane, a left-turn lane, and a thru-lane in the opposite direction. In order for -- and this is one of the locations where the city didn't do an AutoTURN at this intersection in a different truck. And they found the same thing. In order for a large truck making a right turn around that corner, they can't do it from the right turn lane. It's too tight. So they have to be in the thru-lane to make a right turn, and they have to do that across the right-turn lane and -- which means it -- there may or may not be a vehicle in that right-turn lane. And so, they have to be very conscious and aware of what's going on there in order to make a right turn so they don't cut off or run into -- squeeze a right-turning vehicle.

Q. And is the right-turning vehicle able to stay within the street right-of-way outside the curb line?

A. Well, as the turn is being made, as the cab is going across the opposite direction, left-turn lane. So here's Shilshole coming up going to turn left and go this way. If there's a vehicle stopped at that stop bar, then this truck can't make its right turn because he'd run into that vehicle or run over the curb on the other side. We've got it

Page 73

set up, so if he misses the right-hand curb and runs into the pavement on the oncoming left-turn pocket. So he's got a lot of things going on there in order to figure out how to make his right turn and make it around the corner.

Q. So, Mr. Bishop, what are we seeing right here in terms of curbs and truck movements right at the point where the pavement curves around from eastbound Market to southbound Shilshole?

A. Well, that location is a unique location for this entire project and almost unique for the city. This is showing essentially a double curb around that corner. And maybe the best way to describe it is these little trapezoidal places, those are wheelchair ramps. There's two of them in each corner. There's one on the trail. They stop at a -- what's described as a standard curb, I think, six inches high. And then they slope down to the cross-walk area. But that's describing a radius of the turn that the city has decided is too large a radius for most of the vehicles that go around that corner.

And the City's concept is to slow down the vehicles going around that corner, so they aren't speeding around that making that right turn.

Page 74

So they've created this unique design that has a second curb around that corner, and it's shown by the by the small line that's 10 to 15 feet out from the end of the wheelchair ramps, and it's up there. And that's defined as a different pavement type. There's actually -- there is one other location in Seattle where that is done and it's at the south end of the Ballard Bridge at Nickerson. And in that case, they used a kind of a -- stamped the concrete that looks like cobblestone and a different kind of curb that's mountable. And the concept of that is have it available for big trucks to have their swept path go up onto that apron. I call it an apron between the real curb and the full curb out further. This is a concept that we've developed and used quite routinely here in the last couple of decades on roundabouts, small roundabouts, intersections where we, instead of putting a signal or a stop sign we put a roundabout, and we put a landscape island in the middle. And then outside of that landscape island you put an apron and then the pavement. And most of the vehicles go around in the pavement, but the trucks can't make it around that island, so we've got this apron on the inside -- it's on a roundabout where there are no pedestrians. And it

Page 75

allows us to make this roundabout much smaller and it works better and it's smaller and it's safer that way. But it's safer if it's smaller. So as the concept has been developed using the roundabouts, and it works quite well, but the whole concept of roundabouts is that no pedestrians and no bicycles on the island part of a roundabout. In this case, we're talking -- and they're doing basically left turns on a roundabout. You're going around to the left, because they're always on the driver's side on the inside. This is an application of the same apron concept on a right turn. Right turn has got all kinds of additional issues going on not the least of which is the blind spot of trucks and their mirrors not being able to see to their left -- or I'm sorry, to their right. The -- and sight behind them, so what we're inviting here is trucks turning from the wrong lane, the thru-lane, across the thru -- right turn lane, turning around the corner in an area that we've invited disabled and bicycles and pedestrians in this -- mixed -- I think they call it a "mixing zone." It is a mixing zone for a couple of reasons. One is that on Market Street, the bike path is thought of as being an exclusively bicycle facility because adjacent to it along the buildings,

Page 76

along Market Street, there's a wide sidewalk. So there's a pedestrian facility adjacent to the buildings, and then there's a bicycle facility, and then there's a buffer, and then there's maybe some parking. But when you get to the corner of Market, the bicycles and pedestrians have to mix together, get in the same space, and from then on all the way to the east end of the proposal is a mixed-use facility, which means you've got both pedestrians and bicycles and roller skaters and whoever else -- non-motorized people use the trail.

So right here is that transition zone from having different kind of facility. There are bike lanes on 24th, and so there are bike boxes on both sides of 24th and so there's an expectation that bicycles will use the signal and get around the intersection and go off to other places. So this is an extremely busy spot with multiple users: pedestrians, bicycles, disabled, vehicles and trucks amongst the ones I can think of. So that I see is a very, very significant, unique system that is barely mentioned in the EIS. It is identified in a Figure that there is a mixing zone. There's no indication that there's any hazards associated with it. And it's just there, incredibly unique, so...

Page 77

Q. Is this an accurate summary of what you're saying the truck has to do that is out of the ordinary? The truck has to turn from this -- from the thru-lane rather than the right-hand lane. It has to turn through a portion of the left-hand turn lane for people driving up Shilshole, and the rear wheels of the truck have to climb over the apron or the mountable curb in order to make the turn at all?

A. Yes.

MR. KISIELIUS: Objection, Mr. Examiner. That -- there was a lot of testimony in that question. If you could ask the witness to explain rather than providing him the answer in the form of the question -- his own witness?

MR. SCHNEIDER: All right. You think it was a fair attempt to summarize the testimony that we had just heard? There was nothing I said that hadn't been said by the witness.

THE HEARING EXAMINER: His testimony speaks for himself -- for itself, so that's sustained.

BY MR. SCHNEIDER:

Q. All right. Mr. Bishop, let's go to what happens if a truck is moving westbound on Market approaching the intersection from the other

Page 78

direction.
A. Well, okay, so we're talking now -- we're talking about the pink vehicle westbound. He gets into the left-turn lane. There's only a single left-turn lane. In order to make it into the narrow throat of the lane he's turning into, he has to turn to his right first. I got that right? He's got to swing up and come around. He also encroaches on that apron, and -- but before he does that, he encroaches on the thru-lane. The westbound thru-lane on Market. And then, he also encroaches on the exiting left-turn lane from Shilshole. So this is designed to be -- and this is a new design. This was designed to be a new -- a very tight location for a truck to be making that maneuver. And he's going to miss in one way or another. He's either going to -- he's going to interrupt that thru-lane, or he's going to interrupt this left-turn lane, or he's going to encroach into the mixing zone or maybe all three in order to make that right -- that left turn. And then when he gets down here he's -- and we haven't talked about this truck coming down. But when it -- some of these trucks that are making a right turn are wanting to come down and around on Not 54th. And in order to make that right turn,

Page 79

they have to use the full width of the available pavement. So they have to wait until there's no car at this stop sign. That's the stop sign, stop bar. And this truck that wants to make that turn has to wait until there's no vehicle in that queue waiting to get out in order to get -- for him to make his right turn in, so same things happens for the left turn coming in.
Q. Mr. Bishop, going back up to Market Street, does -- do the lanes on either side of the intersection line up with one another?
A. Well, no. That's another whole issue. What we're talking about here is we put a straight line between say the right-hand edge of this thru-lane, across that intersection, it lines up directly with the opposing left-turn pocket. You see that here. This westbound thru-lane runs straight into the left-turn pocket. This eastbound thru-lane will run straight into the west -- opposing left-turn pocket. That means, that in order to make that work, they've got to -- there's got to be transition across the intersection. And there's state and city standards that talk about how sharp you can make a transition and this design violates those standards.
Q. So what is the --

Page 80

THE HEARING EXAMINER: We'll stop there and we'll come back at 11.
(Recess taken.)
THE HEARING EXAMINER: All right. We're turn it back on the record with Appellant's witness, Mr. Bishop.
BY MR. SCHNEIDER:
Q Mr. Bishop, we were talking about the lane off-set through the intersection of Shilshole and Market. Is there -- are there standards for how much offset is allowed?
A. Yes. The City -- City of Seattle Right-of-Way Manual had a lot of standards in it, and when it -- and it -- but it also refers to this State of Washington -- Washington State Department of Transportation standards when there aren't things that are related. And WSDOT has a specific standard about how much you can move a lane across an intersection, and it's related to speed. But -- and so, it's a *TAPO rate related to speed. And at 25-miles-an-hour, which is what the speed is on Market Street. It's not posted, but the legal speed limit, that's a rate of 11 to 1. And it is 110 feet across the intersection, so you can move over 11 feet at 11 to 1. But then, WSDOT has a limit on the

Page 81

amount that you can move over, and it says not to exceed six feet.
So in order to meet that standard you have to start line tapers well in advance of the intersection, making other changes in the geometry of the intersection in order to make that work. And then, therefore, you can't get all the lanes that are shown at the intersection. So the 10-percent design of the FEIS just shows it this way. And this way doesn't meet the standards, and the standard is you can't move a lane over more than six feet as you cross the intersection --
Q. How much are --
A. -- and this is 11 feet.
Q. And then could you discuss the third inbound movement here the one of a truck going -- what we'll call north on Shilshole and then turning left into the new intersection?
A. Yes. The way it's depicted here the left-turn truck uses both the thru-lane and the left-turn lane basically straddling the line between the thru-lane and the left-turn lane in approaching the intersection. And as he turns through that intersection, he basically, again, he has to wait until there's no traffic on 24th down in this area,

Page 82

because he's going to consume the entire width of the way that's designed to have a throat to accept the truck turning in from that direction.

Q. So let's turn the page to Figure 1B which shows outbound movements. And can you run through the outbound movements depicted here and what they show about the truck's ability to navigate?

A. Sure. So starting on Not 54th, the outbound vehicle's making a left turn to get himself lined up on 24th approaching Shilshole there's a stop sign here, the width of the side, crosswalk. If he's going to make the left turn, he can stay within his lane, but he's long enough so that he's going to hang out on the inbound lane after he makes this. If he had to stop here and wait for traffic on -- or bicycle on Shilshole or on the path, he's going to be hanging out into the inbound lane pavement width. Coming up to Market Street, if he's going straight, he committed. He can get in the right-turn lane. He can go straight and that works. Everything else doesn't work. He may not -- if he's going to make a left, he's going to consume both lanes coming out. He's going to swing way wide. He's going to cross over the curb on the north side of the -- in this case, in order to miss this corner

Page 83

of the left-turn pocket, he's going to climb the curb on the north side of Market and drive across into that wheelchair space and into the driveway that's just to the north of that intersection.

If he's going to -- if he -- essentially he can't make a right turn. We've got him showing it -- physically possible if he consumes 100 percent of the wide throat of Shilshole at Market. The draft EIS concedes and this is one of the turns that they do show out of turn even with the WB-50 going around this corner that's going -- making this right turn there from Shilshole to Market. The way they depicted it, they didn't show going way over here. They -- rather they showed him staying within this which meant that he gets 10 or 15 feet up until the sidewalk on the north -- excuse me, on the southeast corner. There's signal poles. There's signal cabinets. There's all kinds of hardware -- physical hardware that says he can't do that. So they concede in the EIS that that right-turning vehicle just can't do it. He's got to go -- he's got to find another way around.

If he's coming out here out of Not 54th and making a left and then making a right turn to go down Shilshole, you physically can do it. It uses

Page 84

100 percent of the pavement width on 24th, and 100 percent of the pavement width on Shilshole. Getting back into his lane 100 feet or so down the street. I think that covers them all.

Q. So, Mr. Bishop, the issues that you've identified using Figures 1A and 1B, you think those issues together constitute a reasonable likelihood of more than a moderate adverse impact on traffic safety?

A. I do.

Q. Are the issues that you've been talking about other than the inability to make a right-hand turn from Shilshole or 24th onto Market, are they identified in the EI -- in the text of the EIS so that a reader would be aware of them?

A. No.

Q. Let's turn the page then to Figure 3.1A, please. And I want to move through these quickly now in the interest of time. These show the -- within lane movements on driveways 6B and 7. Is that correct?

A. 6B and 7, correct, yes.

Q. For a WB-40?

A. For a WB-40 which is a typical at these driveways and they can turn within their lane and

Page 85

stay within the lane without crashing the center line, but they do have incursion zones as shown on red on either side of each of those driveways 6B and 6-7 -- and 6B and 7.

Q. And so the outbound truck movements shown in blue for vehicles going right on Shilshole, where do the vehicles line up in the driveway itself?

A. Well, they -- the question is the full width of the driveway because that's legally where they would leave the driveways. You can -- they could go out on the left-hand side and make the right turn and so it's basically they're at the most advantageous way of getting out of the driveway and staying in the lane -- Shilshole. And so, you end up with the incursion zone shown in red for the outbound trucks and also for the inbound trucks.

Q. So turning the pages then 3.1B shows within available pavement and then turning the page again to 3.2A and B, are those showing the same driveways with a larger truck?

A. Yes. 3.2A is a larger truck. So this is the WB-67. The other one was the WB-40. And so, out of 6B, you can see that -- and there are W -- this is the Seattle Public Attorney's driveway, the old Yankee Doodle Restaurant. And so, there are

Page 86

large trucks that go in and out of that driveway and you can see that the -- it's a relatively narrow driveway and so the incursion zone gets really -- very large here.

Q. Let's turn the page to Figure 4.1A.

A. Okay. So now we're back to single-unit truck within the lane and at all of these driveways, the trucks can -- a single-unit truck can turn in and out and stay within the lane with some incursion zones shown --

Q. So --

A. -- on several of the driveways.

Q. Mr. Bishop, were you out there on Shilshole when a video was taken by Mr. Kuznicki?

A. Yes. I was, yeah.

Q. And was there -- was -- can you identify where that video was taken? Is it on this Figure 4.1A?

A. Yes. There's videos of this driveways 9D and also of 9. There's an entering video of a truck coming into driveway 9. And there's an exiting vehicle coming out of 9B and making a right turn.

Q. And it -- was there a truck making, in the video -- that we'll see later in the video making a parallel movement parallel to the trail?

Page 87

A. There was. Yes.

Q. And we'll -- again, we'll come back to it, but can you point out where the location of that parallel movement was?

A. That was right -- right here. Right -- this is a railroad car. This is a railroad car of -- delivering either ash or cement. We haven't talked about the difference between cement and concrete, but cement's the powder that goes into concrete. Concrete's the mixture of the powder and water and gravel and sand. Mix it up. That's concrete. So these trucks are cement trucks bringing the powdered cement into the plant. And so, they go along here, turn into this driveway and go parallel and park here and then pump with a -- with a blower the powder into a silo in the plant.

THE HEARING EXAMINER: I understand your description. Can you describe the location where you're pointing at --

THE WITNESS: Okay. That's between --

THE HEARING EXAMINER: -- just for purposes of the record?

THE WITNESS: Sure. That's between driveway 9A and 9B.

BY MR. SCHNEIDER:

Page 88

Q. Mr. Bishop, are there parallel parking areas depicted on 4.1A and are they affected by the AutoTURNs, by the swept paths?

A. Well, yes, they are. There's -- you can see several on the north side of Shilshole in this location. They are not impacted here, but there are some also shown on the south side between -- in the same space between 9A and 9B. They identify one, two, three stalls there, and up between 8 and 7 there's some stalls. And there's a couple between 10A and 10B. So you can see at 9A the swept path of the -- in this case, the single-unit truck coming out, turning right in blue, crosses -- runs into a car that might be parked in that parking stall. And the same thing is true for the right turn into 9B. It -- the swept path cuts the corner of the parking stall that's identified in the draft EIS -- in the final EIS.

Q. Let's turn the page to Figure 4.2A. Are these showing the same intersections with a larger truck?

A. Yes. This is the WB-40 truck. And so, here there are larger incursion zones. This is within the lane. They all can do it within the lane, but they extend the incursion zone more.

Page 89

Q. And 4.2B shows the same driveways with a larger truck within the available pavement?

A. 4.2B -- not up yet. There. That's correct. So you can see the -- like for the truck going into Marina Cole Marina, 10B, this pink one crosses over the center line and lines up better with the driveway. And that results in -- at that driveway by using the full width of the pavement. He doesn't have any incursion zone.

Q. Let's turn the page to 4.3A. What are we seeing here?

A. So this is the large box truck, WB-67, going into 9A which is a common turn and out of 9D, which is also a common turn, and then into 11 and out of 11. And then, this over here at Hat and Marine at 11B, that's another situation where that particular industry has very large pieces of equipment coming in on large flat-bed trucks. And so, they come in and park parallel to the building up between 11A and 11B and then using actually the driveway of 11B. And they take forklifts out and take the equipment off the truck and bring it into the building.

But the point is, in this respect is that the swept path of that truck coming into these now

Page 90

defined driveways and then parking parallel to the building and then getting out of -- you can see the outbound path in this one -- attempting to use driveway 11A. He can kind of get out, but there's a whole lot of incursion zone there.
Q. Good. Turn the page to 4.3B. Same intersections within available pavement?
A. Right, and showing the same thing. You can get out of 9D with available pavement and get around space between 9D and 9 -- 10. That comes important in another subject. And coming in there's less incursion zone into 9 -- driveway 9. And the same going on at 11. The incursion zones are smaller if you use all the pavement.
Q. Turn the page to 4.4A.
A. So now we're down to a concrete truck. Concrete truck is not a wash -- a AASHTO standard truck. So we had to -- had -- and the software allows the technician to create its own truck. It changes dimensions of the truck that's used. And so, these are the dimensions that we used for a concrete truck. And that's our figure of what it looks like. The concrete trucks enter on -- from both directions into driveway 9. They go around the back of the facility. If the road's here, come up

Page 91

here and wash, and then leave from 9D. And they mostly go to the right, but they also go to the left, because these concrete trucks serve all over Seattle including the northwest part of Seattle.
Q. Turn the page to 4.5A.
A. And those are all staying within the lane.
Q. So it -- do we --
A. Now this is the cement truck. Now this is a different trailer/truck configuration. There's three articulation points here. There's one under the rear wheels of the tractor. There's one at the hitch point at the back of the first trailer and then there's one underneath the front axle of the trailer underneath. So this truck actually, even though it's longer, tracks better because of the additional articulation points. It doesn't have as wide a swept path. In this configuration, we've -- we're -- in some cases --
MR. KISIELIUS: Mr. Examiner?

THE WITNESS: -- where the video is going to

show --

Page 92

MR. KISIELIUS: If I can interpose an objection here. The screen changed in the middle of his explanation. I think the underlying -- I just want to make sure the record's clear as to which one he's talking about.
MR. SCHNEIDER: Well, he's --
THE HEARING EXAMINER: He should be addressing --
MR. SCHNEIDER: It went back from 4.5B to 4.5A and that was because it inadvertently jumped ahead.
MR. KISIELIUS: And that's fine. I just want to make sure he was answering the question as to the one that's up on the screen now compared to the one that was up before.
MR. SCHNEIDER: All the questions should have been about 4.5A.
MR. KISIELIUS: And for the record, it's the same truck.
MR. SCHNEIDER: Yeah. Just within pavement or within lane.
THE WITNESS: Right. So here, that truck -- they have two different ways of delivering that powder. Some of it's cement and some of it's

Page 93

fly ash, and sometimes they park in front like I was demonstrating before between 9A and 9B. And sometimes they come in around at the back and unload from the back. It's the same truck, different product doing different things. And so, they do have to come in these driveways and come out as well as come along in the front.
BY MR. SCHNEIDER:
Q. Okay. So, Mr. Bishop, we've seen a lot of diagrams now. Figures 4 through 4.5B if we turn the screen here all showing the same driveways with different size of trucks that actually use those driveways?
A. Correct.
Q. And the City did an AutoTURN for one of these driveways using one truck? Is that correct?
A. Yes.
Q. Driveway 9D?
A. Yeah. 9D, right. This one.
Q. So actually, my question should have gone through 4.6A, which is the last figure showing these same driveways. Let's go to 5.1A, the next diagram. So what section are we showing here?
A. Well, this is the single-unit trucks within the lane in area 5, and showing single-unit

Page 94

trucks going in and out. What's -- one thing that this figure shows that is not shown anywhere else is this AA line. That's a section that we have a diagram of that shows the pavement intersection. And this shows the location of where that section is when we get there --

Q. Okay.

A. -- right opposite Hat and Marine -- just to the west of driveway 11C.

Q. And, Mr. Bishop, if we turn to the last figure -- last fold-out figure in these AutoTURNs, it's got a Figure 1 on it. Is this the --

A. That's the cross-section AA identified: Shilshole Avenue cross-section AA. And this shows in a section and this is the plan view on the top.

Q. And explain what we're seeing here.

A. So this is a fairly complicated figure, but the grey is the existing concrete of pavement of Shilshole Avenue. It's 24-feet wide. It was laid down 10 or 15 years ago, pitted shape, heavy-duty concrete pavement for the truck route that it was designed to handle -- pavement design. It's all about trucks. So the grey is the existing concrete shown both on the plan view up here and on the section down here at the bottom. And --

Page 95

Q. So what is the black then?

A. The black is asphalt pavement. Different kind of pavement.

Q. And --

A. And some of it's existing and some of it will be redone. And the point here is that like on the -- that in order to get the trail and the buffer between the tracks away from the tracks enough so that there's enough distance to do something to protect the trail from the tracks, you have to push the buffer and the proposed -- and the pavement to the north. And so, it gets -- so that the vehicle going westbound is half on the old pavement and half on new pavement. And this is the buffer.

And we've depicted that with a barrier in between, which is reassuring in the EIS. It's not designed -- doesn't say what kind of buffer, what kind of barrier. Doesn't say where the barrier will be, but it says that the buffer might have a barrier in it. And it also talks about a fence between the railroad track -- railroad cars and the bicycle path with a two feet between the fence and the trail and two feet between the trail and the barrier. Really, there isn't room enough in the five-foot wide barrier to -- or five-foot wide buffer to meet the

Page 96

City standard of two-feet from the edge of the trail to a barrier and three feet from the edge of the traveled lane and the barrier. So I'm not sure what kind of barrier they've got in mind when they talk about putting a barrier in the buffer.

And then they want a standard varied curb has a two-foot wide footprint on the bottom. There's a standard that says a barrier needs to be two-feet away from the edge of the trail, and the standard that says it -- the barrier needs to be three feet from the edge of the roadway. And if the barrier itself is two feet, that takes seven feet, not five. So there aren't -- they haven't developed a design enough -- it's only 10 percent to be able to tell where the barrier might be put, so I can't really comment on that. But I don't see how they can put a barrier in when there's only five feet.

Q. What is shy distance?

A. Shy distance is the distance between the edge of the pavement and a physical obstruction of whatever type including a barrier.

Q. So the two feet and the three feet you've been referring to are those shy distances?

A. Yes.

Q. And can barriers themselves create safety

Page 97

hazards?

A. Yes. Yeah. At the ends -- particularly at the ends of the barriers where you're stopping -- if you run into them -- you go onto the ends.

Q. When you testified at the prior hearing, did the -- were the plans sufficiently developed for you to see where the barriers were, what they would be, and where the ends of them were?

A. Yes.

MR. KISIELIUS: Objection. Mr. Examiner, we're getting into a design that's not what's at issue in this proceeding.

MR. SCHNEIDER: One of the issues in this case is the percentage of design. And last time there was a design where these things were identified. This time there's a design where it isn't. This hearing is a direct result of Anne Watanabe's decision that there were hazards at a 20 percent to 30 percent level of design. So I think the issue of the level of design needed to do the EIS is very much a part of this hearing.

MR. KISIELIUS: And the question --

THE HEARING EXAMINER: So I'll make a ruling. I understand that the direction the Appellant is going is trying to create some type of

Page 98

contrast as to what's been done and they're using an older example of that. That example's not at issue here. They can raise it as an example, but it's not material as to whether that's what's at issue or not as far as the project. But they're trying to use it as an example to give us something to compare what's been done and what hasn't.

MR. SCHNEIDER: If I can articulate the way I see it, the issue is whether -- a fundamental issue in this case is whether the design is at a level that allows the environmental impacts to be identified. And so, if we -- if that is an issue here, then I think I understand the distinction you're drawing. And we don't need to go into this anymore, but I can phrase the questions in those terms.

THE HEARING EXAMINER: Well, the other project's not at issue, but I understand you trying to come up with something to compare this one to is all I'm hearing you do. Is that correct or are you?

MR. SCHNEIDER: Well, I -- the intent is to demonstrate that this design is not at a level that enables a traffic engineer to identify hazards.

THE HEARING EXAMINER: So are you going to do that by stand-alone describing this or

Page 99

are you going to describe other projects as well?

MR. SCHNEIDER: No, we're -- well, I don't -- we are going to -- our next witness in particular is going to go into this at length, Your Honor, describing what the standard best practices are for environmental review of projects of this sort. And, again, to me, this is the fundamental issue in the case. So I guess I'm not understanding really what the objection is.

THE HEARING EXAMINER: Well, if you're going to discuss a project design from another aspect of this project or iteration of this project, what's at issue is this project, this design.

MR. SCHNEIDER: I understand.

THE HEARING EXAMINER: And I guess I thought what you were doing was just using the other as an example. If you're not doing that, I guess I don't know why you would -- we would be getting into it. But -- because it's not the same design. It's not the design that's at issue before us today. You used a past design as an example.

MR. SCHNEIDER: And I understand what you're saying. I guess I'm not sure where we're not going with it. So, is my question objectionable or should I?

Page 100

THE HEARING EXAMINER: If it's just an example, no.

MR. SCHNEIDER: Okay.

THE HEARING EXAMINER: And if you're trying to do something more with it as introducing whether this is a standard that -- whether that met the standard or not shows that this one -- I don't see that it does that. But I don't mind you discussing it, but it's not probative as to whether this design is adequate or not.

MR. SCHNEIDER: Okay. Thank you. I think I understand. Thank you.

BY MR. SCHNEIDER:

Q. So -- well, Mr. Bishop, let's go back to -- yes, let's go back to where we were and I want to briefly just go through the rest of the AutoTURNs. And then I want to get to your summary documents. So I think we were on 5.1A and you described the cross-section. And, again, this is for a SU-30.

A. Yes.

Q. And let's turn to 5.2A then. What do we see here?

A. So now we've jumped to a larger vehicle to the WB-40 that also uses these -- some of these driveways, but it's still within the lane -- turning

Page 101

within the lane. And so, particularly at driveway 12 and 12B there is some significant incursion zones shown for vehicles turning and staying within the lane.

Q. Okay. 5.2B is then within available pavement.

A. Yes.

Q. Let's move on to 5.3A, and what are we seeing here?

A. Size 3A is the same with a larger truck, WB-67, and it also has the added demonstration of the truck that's coming in at the Hat and Marine parallel to the building using driveway 12 to enter, driving along the -- between the --

Q. Use the pointer to show what you're describing?

A. So coming into driveway 12 and essentially driving along the railroad tracks to park in front of driveway 11B parallel in just a long truck -- 67 feet long so they can unload and unload and then drive it back out through driveway 11A. There's significant incursion zones associated with getting out at some point and getting in. It's more -- this incursion zone on 12 is really -- is the large truck making a right turn out and staying

Page 102

within lane.
Q. Okay. And 5.3B is within available pavement?
A. Right. So they can do it and not have as large an incursion zone if they cross the center line and use all the pavement available.
Q. Let's turn to 5.4A. What do we have here?
A. 5.4A, this is now the Lowboy truck, the bigger trucks that bring the boats in. A couple of differences, some of these boats that they haul on these trucks get way wider than a typical truck load. Typical truck is eight-and-a-half feet. Some of these boats get to be up to 15 feet wide. Now if it's 15-feet wide, then they have to have, of course, a special permit and trailing -- lead car and trailing car and all kinds of flashing lights and stuff that says you got a really wide load. But they do end up coming in and getting in and out of this driveway. And this is the -- 12B is the driveway that they do. They can get in there and turn around and get back out. So this is a short Lowboy, getting in the driveway 12 and out, staying within the lane. There is a left-turn pocket. What is that -- I think that's 17th Street up there, so

Page 103

they transition into a left-turn pocket and we've included that as being within the lane. So it's shown that way on this -- but the extra width is shown wider and they're only single lanes there and they're 12-foot lanes. So a 15-foot wide truck is just going to by definition be outside of the pavement.
Q. 5.4B.
A. 5.4B shows the same thing utilizing all the pavement. So in that case, they can actually get out of this driveway without any incursion zone in and out.
Q. And 5.5A?
A. So here we got the long -- this is the Lowboy long. Now we've extended the trailer to get a longer boat. And so essentially, it extends the incursion zone now even within the lane. And let's see. I think 5.5B, yeah, has a -- has -- still has an incursion zone but shorter.
Q. And 5.5B is within available pavement?
A. Yes.
Q. And then, 6.1A.
A. So this is just moving further along the corridor. We've got the driveway 13 is Shilshole. This is actually still Shilshole, but it's after

Page 104

your left through an intersection at 46. This is where the trail crosses the railroad tracks, how that does that there. Talk about a WB-40 which most of these driveways use, and this is within the lane, and there's significant amount of incursion zones shown in red there.
Q. And how about 6.1B?
A. And 6.1B, same truck using all the pavement and less incursion zone.
Q. 7.1A?
A. So 7.1A is over here at Ballard -- this is a small truck coming in and out of 13H.
Q. Okay. 7.2A.
A. 7.2 is a little bigger truck. Small WB-40 semi-truck using all those driveways. Now this is an unusual situation here at Ballard Insulation. Ballard insulation has a loading dock out on the street side of the building. It's actually in the public right-of-way. And then this -- this driveway has a slope that goes down in and so there -- they have a floor of this Ballard Insulation that's at street level and then when you get down below there's another level below and there's loading docks down there at below level. They -- to make deliveries to that loading dock,

Page 105

they drive in and back into the loading dock parallel to the building, and if it's a single-unit truck they stick out into their own driveway a little bit.
If it's a semi-trailer they block their own driveway but -- when they do that so they're -- don't do it very long, but they do do it. And then, that truck has to get out -- find a way to get out. And he basically comes out there. I don't depict that in this case, but that's an operation that happens at Ballard Insulation.
Q. And is there room between the building and the proposed trail for that operation to take place?
A. Yes. There is in this proposed. In this -- in the EIS in the final -- they moved the trail far enough north so that a truck can back in and not encroach on the trail itself --
Q. And how much --
A. -- as they're parked there.
Q. -- room is there to -- for a truck of this size to maneuver in in that area?
A. Well, basically the right-of-way line is the edge of that Ballard Insulation building, so public right-of-way comes down there. And so, that

Page 106

truck can get in, pull in in the public right-of-way and back into the loading dock parallel to the building.
Q. So the Bowman Refrigeration building on the left, what are we seeing there?
A. Well, that's a building that -- that's a refrigeration company that has trucks that come in and out. They can -- the way this is depicted is driving in and driving out. That's not quite right. They really wouldn't be coming along here. They'd have to come along here and make a right turn in and go up here and then back into the loading dock and then drive out. So it would be the blue here would be their dimension driving out, and that's what's driving the incursion zone that's shown in here.
Q. All right. And 7.2B?
A. So 7.2B is showing that a WB-40 basically can't turn out of Bowman to the right. They're going to go up into the private property on the north side in order to get out. So you just can't do that. On the other driveways they can do it and have smaller incursion zones.
Q. So let's turn the page then. What are we seeing here?
A. So this is a summary of all of the

Page 107

driveways, the streets, and the incursion zones all on one sheet. And they're stripped. And there's two sets of these. One is identified at the bottom as turning maneuvers within the lane, and then the other one is turning maneuvers within available pavement. So you can kind of get a summary of the sum of all the green driveways, the cross-paths intersections like here at 30th and over here at 14th, and here at Shilshole, and here at 24th. Those are all added up as either an intersection with or driveway with or incursion area.
Q. So we have two summary sheets then that reflect what we've been looking at with the detailed AutoTURNs that we've just gone through?
A. Right. This is a visualization. You can see where they are and then I've got a table that puts them all together.
Q. All right. Then I'd like you to turn, please, to past -- yes, to this document, which I think is two pages long. What are we seeing here?
A. So this is a table that summarizes it -- all of the turning truck path information. And we break it -- I've got it broken down. This is all about the preferred alternative, again, and it's four segments of the preferred alternative

Page 108

identified between 30th and 24th, between 24th and Vernon Place, between Vernon Place and 46th, and then between 46th and 11th. And then the fifth line is a summation of all of those four segments.
And the first column is -- just identifies the name of the segment. The second column is the length in feet. The third column is the length of the driveways within the segment in feet. And then the next one is the percent of the total length of the trail that's driveways. And then the next column is the roadway intersection crossings in terms of length and feet, percent of crossing of the total length.
And then, there's two sets of columns on the right side, one of which is within available pavement and one's within the lane. And we talk about the incursion zone length, the incursion zone percent, and then a summation of the percentages of driveways, intersections, and incursion zones: first set within the available pavement, and the second set within the lane.
And so, the bottom line of this is the lower-right corner of that table that says 35 percent of the length of the entire route is either in a driveway an intersection or an incursion zone

Page 109

or more than a third of the total length is in what I find to be kind of hazardous locations.
Q. And how about the two segments, three and four above that with the percentages of 46 and 54 percent?
A. Well, these are the intense industrial areas and so they have an even higher percent -- almost half of -- over half of the length within those intense industrial zones are either driveways, street crossings, or incursion zones. And then, if you go down within available pavement, those numbers go down a bit. It's only a quarter of the length, 26 percent of the total length that is in that situation. And they get down under 40 percent in the industrial areas. But those are huge numbers. My point is that those are big numbers. The percentages are very, very large numbers in terms of the proportion of this bike trail that's in one of these danger areas.
Q. And so, does -- did all the AutoTURNs we've been looking at in your summary of them on this page, do you think that this condition that you've described constitutes a reasonable likelihood of more than a moderate adverse impact on safety?
A. I do. Yes.

Page 110

Q. Would you -- can you summarize for us why you think that's the case?
A. We've got a mile and a -- almost a mile-and-a-half, 1.4 miles of trail and a third of it is in an area that a -- the -- all types of bicyclists are invited to come and use this trail. And whether we're talking about the strong and fearless type bicycle who's commuting and got his head down and going as fast as he possibly can all the way down to the families with kids that come in on the weekend and they're all week long. You're -- then you're inviting a wide range of bicycle users into something that is called "safe" by the City. And designing a system that's got more than a third of the total length that's in an area where everybody has to be really on their toes: the truck driver, the vehicle driver, the pedestrian, and the bicyclist in order for them to negotiate their multiple users. That is universally, in our mind, just the -- an amazing level of danger to this path -- type path -- two-way side path.
Q. And before we leave this page, Mr. Bishop, the box in the lower left-hand corner, what does that show us?
A. Well, that's another subject. That's the

Page 111

parking -- parallel parking along the segment of -- along -- in Shilshole in the mid-section. There were nine parking stalls provided, I think it is. And five of those are involved in incursion zone one way or another, so there really aren't nine stalls. There's only four.
Q. Let's turn the page to the next document, Side path Grading System for Evaluating Safety. Is this a document you created?
A. Yes.
Q. And explain -- the subheading is Chicagoland Bicycle Federation, so forth. Can you explain what's going on here -- what we're seeing?
A. Well, this is a method of thinking about how many driveways and side -- and intersections are okay to be thinking about in terms of danger on a two-way side path. And so, almost 20 years ago, this Chicagoland organization who was looking at how to do bike trails and paths in Chicago came up with a rating system of rating alternative corridors based upon the number of driveways and intersections that were along that particular corridor and doing it in terms of a point system per mile of length of the side path.
This is a system that I don't think it

Page 112

was particularly scientific, but it was the best they could come up with and it seems to be that nobody's come up with a better system because I can't find any other rating system that does any better. Essentially what they're saying is that -- well, it's historically been well-known that riding a bicycle on a sidewalk is really dangerous, and you should not do that. And there's all kinds of sight-distance issues, and there's collisions occur at driveways when you're riding a bicycle in the wrong direction on the sidewalk.
And when they do -- instead they call it a two-way multipurpose side path. It's essentially a sidewalk only it's got a -- it's a little higher design, but it's still -- it's crossing driveways and streets and it has bicycles going in both directions, particularly bicycles at speeds of 15 to 20 miles an hour. And the situation comes up that if you've got a bicycle going contrary to the traffic, if you're exiting a driveway as a vehicle and you're going to turn right, and you're going on to a two-way street, all you have to think about, if you're only thinking about vehicles is the vehicle coming from your right. You don't have to think about the vehicle coming -- I'm sorry. The vehicle

Page 113

coming from your left. You don't have to think about the vehicle coming from your right on the other side of the street. You're going to turn into that lane. And so, you look for a gap to your left and you go.
Now if you have a sidewalk or a side path, you've got the added factor that now you've got other activities going on. But the natural driving behavior is you look right, you look left, you look right, and you go. And all too often there's a bicycle coming along coming from the right and you didn't see him, and you pull out and there's a collision. It's 11-to-1 ratio according to one piece of information I have that says that that particular event there, if a vehicle coming out and turning right crossing to one path it's 11 times more hazardous than all the other seven maneuvers that show up there like a vehicle turning to the right and a bicycle coming from the left. In that situation, the natural thing is for the driver to be looking left and looking for a gap in the vehicle traffic and he sees the bicycles, and so that's a safer maneuver than the opposite. And the same is true with coming and going out. There's seven different or there's eight different conflict

Page 114

directions. One of them stands out hugely as being far more hazardous than the other seven and it's that right turning out with a bicycle coming from the right.

Q. So, Mr. Bishop, the situation and the risks you've described, how are they then reflected in the --

A. So Chicagoland said, okay, let's count up the driveways and let's assign a point system based upon the activity in those driveways and crossings. And they basically divided driveways into residential driveways and commercial driveways and they gave one point for a residential driveway; two points for a commercial driveway. And then they said, okay, well, we've also got streets that we're going to cross, so let's talk about how busy those streets are, and they picked a daily volume of traffic on those streets at 1,000. So if you're under 1,000 average daily traffic, it's two points just like a commercial driveway, and if it's over 1,000, it's four points. So that's the first page of that. Top of the first page is the point system.

And then, the Chicagoland people said, well, let's add up the points and evaluate -- have some evaluation criteria. And on the first page,

Page 115

the top lines in the heading says, you know, if your points per mile is somewhere between zero and eight, not a bad place to put a two-way side path. You don't have very many driveways, but you want to be careful about it. If you're between 8 and 16, you need to pay attention and look for alternate ways and look for alternatives to do this. And then, if you're over 16, it just says it's not a good place for a two-way side path. You ought to look for another way of doing it.

Q. So did you then --

A. 16 is the threshold that they came up with.

Q. And so, let's turn the page. Did you then apply Chicagoland methodology to the preferred alternative for the Burke-Gilman Trail --

A. I did.

Q. -- and the other alternatives?

A. I did.

Q. Explain what we see here on page two.

A. So on page 2, the top box which is bigger has the data for the preferred alternative broken down into the four segments. And then, a total at the bottom of those four segments. And then, the four boxes below is for the total of the other

Page 116

alternatives that were in the EIS. So we've got the first box is just identification of the segments. The second column is the points per mile, which I'll get back to. The third column is the length of each segment. And that's where the 1.42 miles comes in for the preferred alternative.

The points for each -- calculated for each segment, the number of driveways, number of commercial driveways, the number of minor streets, and the number of major streets are identified. The points column is calculating the one, two, or four points from the previous page per segment length and then applying the length and you've got the points per mile.

And so, the first segment between 30th and 24th is -- comes out at 50. Remember the threshold is 16. The second column is 35. The third segment is 90. And the fourth segment is 80. You add those all together and average them out for the whole length and it comes out 66.

Q. And so --

A. Well, 66 is like four times the maximum threshold that the Chicagoland people thought was appropriate.

Q. And let's turn to the third page then.

Page 117

Is this a graphic representation of the numbers on page 2?

A. It is if we can get it. There it is. So the red -- the vertical red lines are the various alternatives. The one on the left is the preferred alternative. And then there's the Shilshole North, the Shilshole South, the Ballard Avenue and the Leary Avenue. And the results of the Chicagoland analysis that I did and then I highlighted in the side path score points per mile, the preferred alternative 66 and again, down in the green is the low risk one from zero to eight, the yellow is the moderate risk from 8 to 16, and then above 16 is high risk side path score -- side path not recommended. And we're four times as big on all the alternatives: the preferred alternative as well as the four that were in the draft EIS. That just tells me that the whole concept is really risky. Really, it's inappropriate in my mind because of this and the incursion zone stuff that we're even talking about a two-way side path through this highly industrial area with driveways and heavy trucks and all the activity that's going on on this major truck street that the City of Seattle has identified and honest and -- to keep conflicting

Page 118

activities away from. That's probably the truck -- major truck route designation. We've got these truck routes and we're going to protect them as truck routes.

Q. So, Mr. Bishop, the information, the danger of the two-way side paths that you've been describing is that acknowledged anywhere in the EIS?

A. No. Not that I'm aware of.

Q. Let's turn the page, please, then to a series of exhibits. I think there are three of them involving the elevated trail section.

A. Okay.

Q. So again, what do we have here and what was your role in preparation of these documents?

A. Well, my role was to -- in my review of what was going on along the route, I was aware that the side path concept on the Chicagoland thing was just so bad. We've got to come up with an alternative. And well, you know, what about doing some grade separation? Could we even do it here? And in one sentence in one paragraph the multi-page FEIS just blows that off and says, no it's not feasible. It's unreasonable. It costs too much and we can't do it, and just eliminated it as an alternative to even discuss in the EIS.

Page 119

And I looked out there and I said, well, you know, if you want to do a grade separation, you got to get it up in the air. Do we have some place -- within some place where we can get up in the air and not block driveways? And I found out, well, yeah. You could. There's a couple places that you can get up and another place you can get down and there's almost a half-a-mile in between. And so, we contacted and hired a constructional engineering firm called a CTS and asked them to do a little feasibility study as to what kind of grades would it take and what span lengths of a concrete structure might fit and how did -- is it even feasible to have the discussion about whether or not you could do a bridge along here. And the answer's yes. You could do that.

About 2400 feet long, a little less than a half-a-mile and the estimates that are represented in there it'd be around $13 million to be able to do that. And it's -- that would give you a 12-foot wide bridge with a foot on each side for rail and total width of 14 feet, because of the bridge rail. The bottom part of the slope would be a filled between two retainer walls, but it could be fit in and it could work. And it might be in the $13

Page 120

million range, and that would be in one of the critical high industrial areas. It would eliminate a lot of the truck access issues.

Q. So is the feasibility study trail as proposed is it high enough to allow the trucks to move underneath it?

A. Yes. The interstate highway system is designed for a minimum height of 16-and-a-half feet from the pavement to the bottom of the bridge, and so that's what was selected here. And then there's a five-foot depth of the structure itself. So it puts the surface of the bridge 21-and-a-half feet above the ground.

Q. And is there room within the existing right-of-way for such a structure to be built?

A. Oh, yes. Yes. I mean, it -- the trail has got -- trail liner is 12 feet wide, so that's what we -- and this proposal is to put the structure exactly in the same footprint as the City's designed trail, but put it up in the air.

Q. And let's just quickly go through the pages and just give us a very quick summary of what we're seeing here.

A. Okay. So this is driveway 7 which is the Stimson Marina driveway and 22nd is to east of that.

Page 121

The elevated trail would start here at the ground. There'd be a 120 -- 190 feet of retained fill up at 5-percent grade to get to an abutment that's sitting right here at 22nd.

At that point you'd be -- let's see. I think it's at 5 percent, you're 10 feet above the ground, so you're about four or five feet off the ground underneath at the abutment. You start with the bridge and go for 125-feet span to the east. There would be column one, column two, column three, column four with 125 foot spans. Column five is there. Six is a critical one. That's the one between these two driveways.

This is driveway 9D and driveway 10. It's too long to go from this side of 9B to this side of 10A. So we needed to put a column between those two driveways and there's a fence line right there. So it's 125 foot on that side and 115 feet. These spaces are such so that when you get these -- this column in the right spot so it doesn't get hit by a truck. And basically, it was kind of strategically locating these column locations so they avoid the swept path of the trucks in the driveways. But you can get that in with 100 and -- I think one of them gets to only 110-feet span

Page 122

length and up to 125.
And then on the west or on the east end, on 10, 11, 12, 13, and 14; now here, it starts going down. This is the driveway. This is the one with the Lowboys. So you got to be above -- you got to have the clearance under this one. But this is the driveway, 12A that's passenger car only. So you don't need to have vertical height over on this driveway but you do this.
So you start going down here and by the time you get up to -- I'm sorry. I've got the wrong two driveways. Not 12 and 12A. It's on the next page. It's 12B and 12C. And you start going down here in the above for a pick-up to go under at this location. This is the abutment on the other end and then another 190 feet of retaining fill to come down to grade by the time you get to this driveway.
Q. Now --
A. That overall is about 24 -- a little over 2400 linear feet.
Q. Okay. And would this elevated structure span the driveways that the biggest trucks are using?
A. Yes. It would.
Q. So let's turn to your last document,

Page 123

Mr. Bishop, which is entitled Parking Evaluation. First of all, what experience do you have doing parking studies?
A. Well, over the years as a consultant doing mostly private development work, parking issues came up. Is there enough parking and some of those were in Seattle. So I did a number of parking studies for a variety of commercial developments.
Q. And did you review the parking report in the EIS?
A. Yes. I did. Yeah.
Q. And what -- give us in general terms your response to what is said in the parking study in the EIS.
Q. Well, the fundamental thing about parking is location. It's location, location, location. It's all about where the spaces are in relationship to where they want to go. And the standard thing in any parking study is if you just make the study area big enough you can solve any parking problem because you just ask the people to walk further. And eventually, you can find enough empty spaces so they'll -- they can walk to them and if you carefully design your study area to be big enough, you don't have a parking problem.

Page 124

In this case they defined the study area encompass all five alternatives. And so, they used the same study area for the Leary and the Ballard alternative as they did for the preferred alternative, summed up all the available on-street and off-street parking, and added all those up. In this table I've got the top box is related to just the part of Shilshole from Market to 45th. And that's right up here. So this is the portion of the overall program. And then this is one is at the bottom part is 100 --
THE HEARING EXAMINER: Mr. Bishop, can you describe that orally?
THE WITNESS: Sure.
THE HEARING EXAMINER: So the -- for the record?
THE WITNESS: The bottom part is F-I -- FEIS data related to the parking supply and it's from Table 5.5-3 in the Parking Discipline Report. And we'll talk about that first. So like I said, they divided all the available spaces into on-street and off-street. On-street is 3,086 and off-street within that study area is 730. So that adds up to 3816.
And so when you put in the preferred

Page 125

alternative, you take some parking. And so, the on-street preferred alternative parking goes down from 3,086 to 2742. And the off-street parking doesn't reduce at all, so you add those up and subtract them out. So you lose 344 stalls in the very large parking study area. And the EIS, Final EIS makes the statement as well. It's only 10 percent loss of parking that they can find another spot. There's plenty of empty spaces around. If you go far enough you can find them and it's okay. No problem. And they just kind of blow off the parking thing as if it was a non-issue. You go to the top of the Table and get focused on where the parking loss is, you find that the -- under the existing conditions, there's 454 parking spaces along that street segment.
BY MR. SCHNEIDER:
Q. Is this along Shilshole?
A. Along Shilshole between Market and 45th. 454 stalls there and the preferred alternative reduces that down to 155. So 299 of the 344 stalls that are lost are in this one short segment of Shilshole. That's 66 percent of the parking that's there. So two-thirds of the parking for those marine businesses that have employees coming in from

Page 126

all over the City that come and park for their businesses, virtually all of it in the public right-of-way is lost to the trail.

Now the parking study also has some utilization data, a significant amount of -- they went out and did a fairly extensive parking study at various times of day and then on weekends and weekdays and peak periods and by hour how many people are parking and when.

And so, I was able to go into the appendix of the Parking Report and in that top table say 2017 Weekday Parking Utilization from Appendix B of the Report and go up and down by north sides and south sides. So of the 454 stalls, 300 of them were actually used and 300 is 194 percent of the remaining stalls after they get done. So it's 194 instead of 155. 155 is the number of stalls that they said that would be available after they got done developing the preferred alternative.

So they're losing like 145 stalls, space for 145 of their employees and the people. And I defined -- so in that small area that's a -- in my mind, that's a significant reduction in parking and it's something that ought to be talked about and discussed and identified in an environmental impact

Page 127

statement that is intended to identify impacts.

Q. So let me direct your attention to the text below the chart, the one that begins Section 5.3.2 of the FEIS. So what does the SEIS say about -- excuse me, the FEIS say about -- conclude about the significance of this loss of parking?

A. Well, accorded in the Parking Discipline Report, it says quote "Overall, the loss of approximately 345" -- 44, excuse, me, "on-street parking spaces represents approximately 11 percent of the on-street parking supply in the study area." And it goes on to say, "The loss of parking would not be considered a significant adverse impact (emphasis added) because of the parking loss is spread throughout the preferred alternative can be absorbed in other on-street or off-street throughout the study area although drivers may need to travel further and is consistent with City planning goals relating to street space prioritization."

Q. So do you think that's an accurate statement that the parking loss is spread throughout the preferred alternative?

A. No. It's very concentrated.

Q. And does the last paragraph then reflect your conclusion based on the analysis you did in the

Page 128

first text box at the top of the page?

A. Yes.

MR. SCHNEIDER: Mr. Examiner, I think I need to formally offer the documents we've been talking about, which I understand are Exhibit A1, which are in Volume 1 under Tab A310.23 of our documents. So I do make that offer at this time.

MR. KISIELIUS: And the City has no objection provided that again, the stipulation was that Mr. Kuznicki would be available to answer some detailed questions about the AutoTURN analysis that he prepared.

THE HEARING EXAMINER: Exhibit 1 is admitted.

(EXHIBIT A-1 IS ADMITTED.)

MR. SCHNEIDER: Thank you. And then that concludes our direct testimony from Mr. Bishop.

THE HEARING EXAMINER: Thank you, Mr. Bishop. I have a couple questions.

We're going to go until 12:30, so you guys will have an opportunity to get started as well.

EXAMINATION

BY THE HEARING OFFICER:

Q. I want to make sure I understand your

Page 129

term "incursion zone." And I can see from the illustrations provided, it seems like there might be a few ways this is used. I want to make sure I understand how you've defined that. Is it when the truck goes into the buffer zone crossing the curb or into -- outside of the driveway area? Is it --

A. Yes.

Q. -- more -- is -- it's like the whole list of things outside of that green driveway?

A. Right. But it's where the truck path in worst case crosses the curb line between the travel way and the buffer zone.

Q. But also the buffering?

A. Yeah. Including in the --

Q. Not just the travel zone, right? You said the "travel zone." I want to make sure that it's if you're -- it's looks to me like sometimes it's not just the travel zone, but also the buffering.

A. Well, it's the extent of where it crosses the curb line. And so we said, okay, this is a place that a bicycle -- bicyclist traveling along the bikeway -- two-way side path needs to be really aware of what's going on. It's danger zone.

Q. Okay. So incursion zone does not include

Page 130

areas where the swept path goes into the buffer area because the bicycles are not in that area?
A. Well, we define the limit of the incursion zone as the -- where the swept path crosses the curb out there on the other side of the curb on the street sidewalk. Yes, because a bicyclist coming along here needs to be aware that there could be a truck coming along.
Q. Okay. So it's the travel area where the bicycles go --
A. Yeah.
Q. -- and the buffer. Is that right?
A. Yes.
Q. If the swept -- okay.
A. I think the answer's yes.
Q. It looks like it is up there. I just want to make sure that's what you're saying.
MR. SCHNEIDER: Mr. Zimmer, if you don't mind, perhaps turning to this cross section would help if Mr. Bishop wanted to explain it using this if that would be helpful.
THE WITNESS: I don't think that's helpful.
MR. SCHNEIDER: So using the -- that isn't?

Page 131

THE WITNESS: Well --
BY THE HEARING OFFICER:
Q. Let's go back to the last one. I want -- I guess there's a specific one I'm trying to figure out. Is there's spots where the swept path of the truck does not go into the proposed trail but it does go into the buffer. Is that part of the intrusion or --
A. Like on --
Q. Well, that -- actually the one you're showing there it clearly goes on to the trail itself. If you go straight to the right of that --
A. This one.
Q. -- of 14 --
A. Yeah.
Q. -- and if you're looking at the exit, the pink --
A. That's the entrance right there.
Q. Oh, entrance. Okay. So the entrance is coming in.
A. Right.
Q. It does not look like to me on the far left that it goes onto the path, but it does go into the buffer there.
A. Yeah. Yes.

Page 132

Q. So that --
A. And it's this point where it crosses -- starts to cross --
Q. So that's still an incrusion (sic) zone. Is that correct?
A. That line -- line.
Q. Okay. That's just what I wanted to clarify.
A. Yep.
Q. You said the concrete truck was better turning than what? I don't remember. I don't know which truck you were referring to. It might have been the --
A. Well, the --
Q. -- cement truck?
A. -- cement truck is better turning than the box -- than the WB-67. I think that's what I was referring to, the cement truck.
Q. You were specifically referring to the concrete truck.
A. Well, the concrete truck turns --
Q. Because it has multiple axises. Which one is it turning better than? I didn't catch what you said. I thought it was the cement truck.
A. No, it was the cement truck that has the

Page 133

multiple articulation points.
Q. Okay.
A. And it's -- that turns better than both the WB-67 and the WB-40.
Q. Right. Okay. But not necessarily the concrete truck?
A. Not -- no.
Q. Okay. In your summary you indicated the -- approximately 35 percent -- and I'm trying to make sure that I understand what that figure represents. There's incursion zones, but I believe you also included street crossings in that. Is that correct? Or is it --
A. And --
Q. -- just incursions?
A. No. It's all three. Driveways --
Q. Driveways, --
A. -- street crossings, and incursion zones --
Q. Okay. That's --
A. -- adds up to the 35 percent.
Q. Thank you.
THE HEARING EXAMINER: I don't have any further questions, so go ahead and -- if you've got a couple questions just ask those and then we'll

Page 134

break at 12:30.
MR. KISIELIUS: Can't promise I'll get through them all, but --
THE HEARING EXAMINER: I'm sure you won't.
CROSS-EXAMINATION
BY MR. KISIELIUS:
Q Mr. Bishop, my name's Tadas Kisielius. I'm going to be asking you some questions on behalf of the City.
A. Okay.
Q. I want to start where Mr. Schneider started with you on your work history. So I heard you say you had retired in 2007. What was the date of the last EIS that you worked on in a professional capacity?
A. Well, certainly before 2007. I think -- I'm trying to remember. I think I talked about this in a deposition. I think the last real one that I worked on was for King County. And I think that was within after 2000. In the range of 2000, 2003, something like that.
Q. And you had described your work on multi-use trails or bicycle trails. I think you had mentioned one for the City around Lake Union.

Page 135

A. Yeah. Yes.
Q. And I heard you describe some work more recently on behalf -- in your role with Bellevue Transportation Commission. And to clarify on that, in your role as a transportation Commissioner are you actually preparing the analysis or the work?
A. No.
Q. So you're reviewing it?
A. Yes.
Q. Okay. And other than those two, have you worked on any other bicycle trail projects or multi-use trail projects?
A. Yes. Yes.
Q. How many?
A. Half-a-dozen.
Q. Half-a-dozen?
A. Something like that. I did the first City of Bellevue non-motorized transportation plan in the late '70s. I think that was one of my traffic safety grant projects where we reviewed the entire city for bicycle and pedestrian and equestrian trails and came up with a plan.
Q. When was your -- when was the time frame of those half-a-dozen?
A. I think in pushing into the '80s -- late

Page 136

'70s, early '80s. Part of that was Safe Walk to School Route studies. Those were specifically traffic safety grants where we were able to go into a school district and identify dangerous places around elementary and middle schools and coming up with the safest route for kids to walk to school. So that was --
Q. Is it your testimony that you did a half-a-dozen consistent with your testimony when we took your deposition?
A. I don't remember.
Q. Did -- let's just pause there.
Did any of those involve environmental review under SEPA?
A. No. I did a city-wide City of Britton exercise twice about six or eight years apart.
Q. But in terms of the actual planning for and designing of a trail rather than general planning documents have you done any of those?
A. It was always an element of pedestrian bicycle stuff in most of our design work and most of the intersections have got some element of that involved. So, you know, have claim to have 250 intersections around the western Washington that's got my name associated with them in the design and

Page 137

the signal, and there's always pedestrians and often bicycle stuff associated with that.
Q. And here, I'm asking specifically the permitting and design of a bicycle trail as a project itself. Have you done those?
A. No.
Q. Okay. I'd like to ask you about your role with respect to the AutoTURN analysis, the results of which you just testified to. Can you describe again your relationship with Transpo? Were you relying on their work?
A. For the technical implementation of the software, yes.
Q. And you're relying on their representation of what's depicted there --
A. Yes.
Q. -- per your testimony?
A. Yes.
Q. On those pages, the pictures of the trucks that appear on each one, call them a design vehicle. What does that mean to you, design vehicle?
A. That's the, in this instance, that's the vehicle that was used in the AutoTURN software for a particular application we were making.

Page 138

Q. Okay. Does it have any sort of a connotation or meaning to you beyond that -- the term "design vehicle"?
A. In terms of AutoTURN?
Q. In any capacity.
A. Well, I suppose you're getting to the question of when you design a transportation facility you design it for something. And one of the things you design it for is the vehicle that is being assumed to be on the facility that you're designing it for. And so, that would be one way of thinking about a design vehicle is what's the worst case or what is it you want it designed for? Looks to me, like in this case, it's not designed to handle almost any large truck that you could identify as a design vehicle. It was designed to accommodate possibly some of these, but not to design so that I -- one of the few truck routes that the City of Seattle has particularly in the part of the City that you would accommodate the trucks that you expect to have on that route. And so, that's why I don't understand why the WB-50 was used in the EIS when, clearly, WB-67s are commonly used and other -- and even larger trucks and the Lowboys.
Q. Let me -- let me follow up on that

Page 139

though. I think you said, you used the phrase "worst case." So does the design vehicle that you used with -- was used on the AutoTURN analysis represent the worst case?
A. Yes. And in my AutoTURN analysis it does.
Q. And did you think about --
THE HEARING EXAMINER: Think we'll stop there.
MR. KISIELIUS: Okay.
THE HEARING EXAMINER: We'll return at 1:45. I wanted to try to clarify for the parties. We had an objection that I didn't fully rule on earlier, and want to make sure that I'm clearer on that to the degree I can be. I overruled the objection. The issue was, as I understood it, whether the Appellants were starting to delve into designs from previous iterations from the other Environmental Impact Statements and review that's been done. I overruled it because I don't mind some touching on that. Clearly it's part of the history, so if we go on that. But I can't give you a clear black and white line rule where that's not going to be how we want to spend our time. Clearly that -- those designs are not at issue. I hope that comment

Page 140

helps somewhat. I -- it may be a bit more helpful than what I gave earlier.
MR. SCHNEIDER: Thank you.
THE HEARING EXAMINER: All right. We'll retire and come back at 1:45. Thank you.
(Lunch recess taken.)
--oOo--

Page 141

NOVEMBER 27, 2017
AFTERNOON SESSION
--oOo--
THE HEARING EXAMINER: And we're back on the record. The Respondents have cross-examination of Mr. Bishop.
And, Mr. Bishop, you're still under oath.
CROSS-EXAMINATION (Resumed)
BY MR. KISIELIUS:
Q Mr. Bishop, as we discussed if at any point you find it easier to refer to the exhibits up there, I'd invite you to do that.
A. Okay.
Q. If you need to switch, we'll accommodate that. Where we left off, we were talking about design vehicles. Does the frequency with which a vehicle uses a driveway figure into your assessment of whether it should be a design vehicle for that driveway?
A. Yeah. Yes. It does.
Q. And what kind of frequency would you need in order to be considered a design vehicle?
A. Well, if it's a vehicle that don't go in regularly in, I guess it's the driveway it's -- in a

Page 142

normal course of business that that would be a designer vehicle that I want to use for that driveway.
Q. Mr. Bishop, I'm going to hand you a copy of your deposition transcript. I'd like to ask you, is that consistent with the testimony that you gave under oath earlier?
A. Okay.
Q. Could you please turn to page 13 -- excuse me page 17? And they're grouped in pages of four. I'm looking at lines 13 and 14. I'm going to ask you the same question. You had testified that the frequency is not really a criteria --
A. Well, let's see.
Q. It doesn't happen.
A. I'm on page 17 that includes pages 62 to 65.
Q. I apologize. I'm looking at the page numbers of the smaller reproduced --
A. On the smaller page.
Q. -- so page 17 of the transcript. They're in the upper right-hand corner of each of them. I'm looking at lines 13 and 14. When I asked you that question, you testified that this frequency is not really a criteria. It's -- doesn't happen.

Page 143

And I heard you say something very different this time. So I'm wondering which is it? Is frequency a criteria or not?
A. I think if it happens once a year, it probably isn't a criteria. If it happens regularly at a business, it's a criteria.
Q. So your testimony now is -- the testimony that you gave under oath before is -- we should just ignore?
A. I said that my thought was is it's not the frequency that does it happen. Is what it says there. Yeah. And, you know, I'm not thinking about ever in the life of the project, but with some level of frequency.
Q. Some level of frequency? So is it your testimony that all the ones that appeared on your chart that's at the first page of 310 -- I guess it's Exhibit 1 now -- Exhibit 1 happened with -- what was it, some frequency?
A. Some level of frequency. Yeah. This is what the business owners say that they have come in and out of their driveway.
Q. And where along that line does it cross to where you need to consider it? Some frequency, what does that mean? That sounds a little vague to

Page 144

me?
A. It would be hard to define, I suppose. I guess I'm back on -- well, if it happens once a year. You know, if the Lowboys only showed up at CSR Marine once a year, that probably would not be something you have to worry about. But in their normal course of business and part of what they do they have the Lowboys come and go, something you ought to be thinking about when -- in the design of the access to that facility.
Q. So -- and is it correct that you interviewed the business owners of these facilities for to get their --
A. Yeah. Well, either owners or operation managers or dispatchers or people who were familiar with the business.
Q. And what guidance did you give them in terms of the frequency that they should be thinking about when determining?
A. I probably didn't give them any guidance. I just asked them what kind of trucks come in and out and what are the biggest trucks?
Q. Okay. But you didn't ask them to consider only ones that appear with some frequency?
A. No.

Page 145

Q. Let's talk a little bit about another topic you raised before we broke for lunch. You were talking about the difference between designing for a vehicle and accommodating a vehicle. Can you describe what that means to you? The differences between those two concepts: designing for a vehicle and accommodating a vehicle?
A. So for me, if you're going to design a driveway for a commercial operation that is fronting on a designated truck street -- truck arterial, it seems to me that you should be designing the intersections in your new design and the driveways, so that it would accommodate the size of trucks that regularly use that street and those driveways.
Q. I think you just answered the question of which you think if relevant here. I guess I'm asking if you know the distinction between what it means to design an intersection for a truck versus what it means to accommodate that truck at an intersection.
A. Well, you got -- to accommodate means that you that -- I mean, it is lawful for a truck to cross the center line. So in my mind, an accommodation means that you are going to assume that the truck is going to regularly cross the

Page 146

center line. Use the other side of the roadway. Use all the tote width of either the public street or the driveway that they're going into. And that's accommodation.

To design for it is to assume the multiple traffic flows in all directions and have to be maintained and a truck can get in and around into the intersection without interfering with the other traffic in the intersection. That would be designing for. To accommodate it -- says, well, it's good enough to let them wait and hold up traffic, then let everybody else get out of the way, so then I can physically make it through the space. That's accommodation.

Q. And do you agree that the design in the EIS accommodates truck movements?

A. No. Not -- no. I showed several examples where they don't accommodate. You have to go outside of the roadway to --

Q. Outside of the roadway?

A. Yeah. Like up at Market and 24th. There's a left-turn truck that has to get outside of the roadway.

Q. Let's focus on the driveways. Do you agree that the driveways can accommodate trucks?

Page 147

That the design shown will allow the driveways to accommodate the trucks?

A. Well, the limited design in showing the 10-percent level, in most cases there is -- actually, I think there was one case where you can't make a right-turn out of one of the driveways up on Market and stay in the roadway. But mostly it accommodates the trucks if you go on the opposite side.

Q. I'm going to ask you a couple questions about incursion zone that's shown on the documents, and I think the Examiner had asked you a couple of questions that may have clarified this, but is it, just to make sure I'm understanding it, is it correct to say that the area shown in an incursion zone exceeds the area of the trail that a truck would actually cross?

A. Yes. It gets into the buffer zone adjacent to the trail.

Q. And so, where does -- what's the far boundary of that incursion zone? How do you measure that far boundary?

A. It's the curb line between the buffer and this here street.

Q. But what about the curb line?

Page 148

A. It's where the swept path crosses the curb line.

Q. And the truck then enters the street?

A. Then it enters the street, bounds over the curb, and enters the street. Yeah.

Q. And you just drew a line?

A. And then I went perpendicular to that point. Drew a line along the trail. Yes.

Q. Okay. I heard you say a couple times in your testimony that we defined, or we called it the incursion zone. Did you create that concept?

A. In collaboration with Transpo.

Q. For purposes of this exercise?

A. Yes. Yes.

Q. Okay. Is it -- are you aware of any design standards or regulations or guidelines that talk about the incursion zone in the way that you've defined?

A. I've not.

Q. For purposes of this specific issue, the issue of conflict of trucks leaving and entering driveways with non-motorized transportation, have you analyzed that? Have you analyzed existing conditions to identify whether or not that conflict exists today?

Page 149

A. Well, there are all kinds of conflicts along Shilshole. Sure. Yes. I haven't analyzed it, but I've observed it.

Q. Okay. So when you said that the AutoTURN analysis that you're testifying to demonstrated to you more than a -- a likelihood of more than a moderate impact, was that in -- did you compare it all to what that existing condition was?

A. Well, existing condition doesn't put contraflow bicycles along those driveways. It's about the contraflow of the bicycles on the two-way side path that's the whole issue in my mind. You're now introducing this worse case contraflow bicycle all along an extremely busy commercial arterial.

Q. I guess I'm asking -- I understand that.

A. And that does exist today. Right now the few bicycles or the bicycles right along Shilshole, you know, ride with the traffic. So they're -- the contraflow doesn't exist.

Q. And pedestrians? What's your understanding of pedestrians under existing conditions?

A. In some places there's sidewalk and a lot of places there is no sidewalk.

Q. And so, is your understanding of an

Page 150

existing conditions that there are -- I think you just used the words "Few bicycles that use it today." Is that your understanding of existing conditions?
A. Well, I don't know. I haven't -- let's see. I'm trying to remember. I think there's some data in the EIS that talks about bicycles, and you can infer from some of the turning movements how many bikes there are on those -- along there by subtracting one intersection from another. And you can say, okay, well, there's this many that's going along this section.
Q. Have you done any work yourself to assess the bicycle -- the amount of bicyclists or pedestrians along that corridor? And have you done any work yourself to then assess potential conflict with truck movements?
A. No. I did review the projected numbers that are -- that's in EIS. And they had a set of numbers to the east on the trail and another set to the west, and they're largely different. And there was some projections as to what might show up on the trail itself.
Q. Okay. You had used -- in your testimony you had talked about an 11-to-1 ratio according to

Page 151

one piece of information you had. What was that one piece of information? Do you recall?
A. That's a Department of Transportation Design Standard Chapter 10.10 something. I don't recall. It's -- I thinks -- I think it was submitted as an exhibit. Submitted as a disclosure document.
Q. Okay.
A. I don't recall the number off the top of my head. But then, of course, there's the Seattle Right-of-Way Manual that specifically refers to the WSDOT Design Manual. So there's a connection there. It's not just WSDOT. It's Seattle must use the WSDOT design standards.
Q. Let's talk a little bit about your parking analysis. You had said that, in answer to Mr. Schneider's questions, you had done work for commercial developments on parking analysis for commercial developments?
A. Yes.
Q. And did any of those involve an EIS?
A. Actually, I think one of them did. Yeah. I know, at least the SEPA. It might have been an EA or, you know. It might not have been a full EIS, but it was involved in a SEPA. And it was a --

Page 152

excuse me.
Q. I want to be very specific. I'm talking about an EIS that includes an alternative.
A. I don't think so.
Q. Okay. I'd like to ask you a couple of questions about your evaluation. And first -- I think you have the notebook there in front of you, but on page 40 of Exhibit 1, that's the one where you summarize the incursions zones, and the percentage within the incursion zones, and there's a separate table at the bottom that talks about the parking spot turning maneuvers conflict with?
A. Yep
Q. Those five spots that are shown there, are those -- let me step back. On the Table above, I think you distinguished between the within available pavement and within the lane. My question is, is the Table below showing what happens if the trucks stay within available pavement within available lane?
A. I believe that that's within available lane.
Q. Okay.
A. That's the more restrictive.
Q. And do you know what the answer would be

Page 153

if they stayed within available pavement?
A. I don't. I could sort through it and figure it out, --
Q. That's okay.
A. -- but I don't have that on my head.
Q. Then on page 53, which I think talks more about parking, I just want to ask you a couple questions. There's two Tables shown there and I'm focusing on the top one of the two. Can you tell me where you derived that information from?
A. Yeah. It's from the Parking Study in EIS.
Q. So this all based on that analysis? You didn't do any separate parking counts?
A. No. No.
Q. Do you know whether the Noble Parking Supply includes unregulated parking?
A. Well, I had time figuring out whether.
Q. Is that no?
A. Yeah. There's unregulated parking between in the railroad track area all along Shilshole. I don't think that that does include the unregulated parking, although the EIS says that the unregulated parking area will still be available.
Q. So is your -- I'm sorry -- I don't know

Page 154

that I got the answer there? Is that you're not sure, or that you don't think it includes it?
A. I don't think it includes it.
Q. Okay. And what about -- I'm going to ask the same question about the -- when the preferred alternative parking supply?
A. Same thing. I mean, they're under the same criteria.
Q. Okay.
A. Whether they're included or not, it's the same situation.
Q. Let's turn to the bridge concept. I just want to make sure I'm understanding. Did you compare what is depicted on the bridge concept design with the swept path analysis? Did you ensure that the swept path wouldn't encroach on any of the supporting columns?
A. Yes. Yeah. I looked at that. And that one column, number 6, is the critical one. And -- which is the one between driveway -- and let's see -- between driveway 9D and driveway 10. That's between the -- so, trucks have to cross the center line in order to get around that column if they're making a right-turn on it. Certain trucks have to make a right-turn to get out of the driveway 9D.

Page 155

They have to cross the center line and use the available pavement. They can't do it without -- and stay in their lane. And that center in that one on that white column, --
Q. Is that the only one?
A. -- I think that's the only one.
Q. And then, you -- I wanted to speak clear on your testimony. Did you assess whether the height of the structure would restrict the access for any of the vehicles that you reviewed under the AutoTURN analysis at each of those driveways?
A. It would not. It would not restrict the access.
Q. Let's focus on the -- well, let's focus on the design. Does this design include any access points beyond the beginning of the end that are depicted? Can you get on in the middle somewhere?
A. Oh, on the --
Q. On the bridge.
A. On the bridge? No. No. And it's -- you get on one end or the other.
Q. And so, that doesn't include any extra stairs, or elevator, or anything like that?
A. No. Not -- no. You can always add those things if that's what someone would like to do.

Page 156

Q. Would that do to the cost?
A. Add to the cost, of course.
Q. Do you have a sense of order of magnitude would it take to add an elevator?
A. No. I don't. But it's --
Q. Have you assessed whether there's room within the existing footprint to actually construct that?
A. I don't think there is. No. There's -- essentially there's 12 and 2 on the railroad and 5 on the road side, and you got 17 feet. And if you got a 14-foot structure in there somewhere, you probably don't have room to add. You might be able to cantilever the platform out over the top and swing it down around underneath somehow. I don't know, but not in a logical way.
Q. Did you assess any sight distance impacts that might occur with the construction of columns in the proximity of the driveways?
A. I don't think -- the columns are 4-foot diameter columns, and there's room in there, so in my opinion that would not be a problem. That would not introduce an additional problem.
Q. Beyond parked cars, you don't view that as being a problem at all? I mean, parked cars, I

Page 157

think, have sometimes have been referred to as a sight distance issue when it's parks in your driveway, so you don't think a column would be?
A. Well, parked cars are longer and have much -- it's kind of -- a column's kind of like a tree; nothing bigger than a tree. But, you know, trees become a sight distance problem when they're all lined up and you can't see between the various trees. But these columns aren't that close together.
Q. Okay. Let's talk about the cost estimate. I believe in the Exhibit it refers to a $300-per-square-foot estimate?
A. Yes.
Q. Can you tell me what that comes from?
A. Yes. That's a -- I'm going to have to go back to -- that's identified in the report by CTS. It's the WSDOT bridge Design Manual Appendix 12.3-A1.
Q. And do you remember at all looking at other comparable projects in the area to derive at a cost per square foot in your work for this?
A. I wouldn't necessarily call it a comparable project, but the Thomas Street Bridge -- bike bridge was one that came to mind. It crosses

Page 158

over Elliot down at Thomas Street, and crosses over the Burlington Northern Railroad tracks, and connects a park on the waterfront with a commercial area to the east.
Q. Do you recall what that cost was per square foot in that facility?
A. Well, we tried to get at that and the best we could -- way we could do it is I think we got a total project cost for that structure, and a length, and a width and we multiplied it out. I think it was in the 1100 linear feet of lengths or a thousand feet; something like that. Anyhow, it calculated out to over $800 a square foot.
Q. So what do you attribute that difference between the 300 and 800?
A. Well, a lot of it is the way Seattle does things. A part of it has got to be with having to deal with the Burlington Northern Railroad. The Santa Fe -- Northern Santa Fe Railroad you getting whatever easements and rights to cross over their track. Part of it's got to do with -- I'm sure that the -- I don't know for a fact, but I'm quite sure that the span over the railroad tracks is longer than 125 feet. Span is -- the life of the span of the structure is quite -- dramatically impacts the

Page 159

cost of the structure.
The original stairway on the Thomas Street Bridge that goes down on the west side of Elliot Avenue, there's some -- there's a view platform at a right angle over by the park that's not -- that's extended. So there's a whole bunch of elements that go into that structure that I don't think would be necessary at this structure. You might want to add -- somebody might decide they want to add to the structure, but they don't have to.
Q. So that access point you think is not necessary here?
A. No.
Q. Okay.
A. No. I mean that was going over -- crossing an arterial at Elliot, and that was an ability to get up and down and to get over the railroad tracks from Elliot without having to go 600 feet the other direction and to get up on top. I mean, that's a totally different orientation of the travel. In this case, what this is talking about basically bicycles longitudinally along the side of one road as opposed to the other one, who's crossing.
Q. And that's your understanding of the

Page 160

objective of this project?
A. Yep.
Q. Okay. Can I -- and this might be obvious from the design drawings, but just to ask you to clarify. If the design concept here still shows the other improvements to the rest of the street, in other words, the rest of the street is still going to have to shift north. Is that right?
A. This concept was to use footprint that the proposal had required. And that footprint of the proposal is to shift to the north, so the answer is yes, that's the thought.
Q. Bear with me for just one second.
MR. KISIELIUS: The City is finished with questions. Thank you, Mr. Bishop.
I don't know if --
MR. COHEN: I have a few.
CROSS-EXAMINATION
BY MR. COHEN:
Q Mr. Bishop, I'm Matt Cohen from the Cascade Bike Club. And I really do have just a few questions for you.
A. Okay.
THE HEARING EXAMINER: Mr. Cohen, I'm sorry. Could you either move forward or move your

Page 161

mic towards you either way?
MR. COHEN: Yes. Thank you.
THE HEARING EXAMINER: It's a little -- about five or six feet is difficult.
MR. COHEN: Thank you.
BY MR. COHEN:
Q. You testified this morning that the Transpo firm did all of the AutoTURN modeling that you testified about? Is that correct?
A. Yes.
Q. All right. Who did you work with at Transpo?
A. Well, Scott Kuznicki was the project manager and Bryce Kinney. I think Bryce Kinney was the -- his engineer there and then there was a CAD operator that worked for Bryce. So it's really three people there that were involved.
Q. Was most of your interaction with Mr. Kuznicki?
A. Well, I met several times with the team in the office, so they were all there, so I interacted with all three of them.
Q. Are you personally familiar with the AutoTURN program?
A. From a management point of view. I don't

Page 162

know how to run it, but I, you know, I managed AutoTURN for 25 years in my business.
Q. So you have run the program?
A. No. I've hired other people to run the program.
Q. So I'm interested in where Transpo got the input parameters to run that program? So for instance, --
A. From me.
Q. From you? Okay. So you gave then the information on the size of the trucks?
A. Right.
Q. Applying each driveway?
A. They actually field inventoried a lot of the additional driveways that have a letter designation on them on my list that were not included in the EIS, and, therefore, some of which were not included on the CAD drawing. CAD drawing is not necessarily consistent with the EIS in terms of the driveways. There were some included and some not.
Q. Okay. So you might be anticipating my next question, but I want to finish this one first.
A. Okay.
Q. Who specified the size of the trucks that

Page 163

were going to be modeled for each driveway?
A. I did.
Q. You did? And that information came from your interviews with the business owners?
A. Yes.
Q. Okay. Who specified the number and location of the driveways?
A. Well, we identified every driveway we could find.
Q. And where did you find that information?
A. Well, some of it was on that CAD drawing, and some of it was on Google Earth photos, and some of it was field inventory.
Q. Field inventory?
A. Yeah.
Q. Meaning your field observations?
A. No, no. Ms. Hirschey did a field inventory of all the driveways on all the alternatives, and that included some of the driveways on her alternative that we did the AutoCAD on on the south side.
Q. So did Ms. --
A. So she kind of confirmed what Transpo did in terms of identifying where the driveways are.
Q. Did Ms. Hirschey identify driveways that

Page 164

both the CAD drawing and Google Earth did not show?
A. I don't know. You'll have to ask her.
Q. So who provided the information on the driveways to Transpo?
A. Either the City through the CAD drawing or Transpo's investigation on their own in a field inventory or through the Google Earth photo inventory.
Q. So when you testified this morning about the number of driveways that are not accounted for in the EIS, that wasn't based on your work?
A. It was based on the work that I coordinated with Transpo. Sure. So I call that my work, yes.
Q. It's your work if Transpo provided you with that information?
A. Yeah. Because I asked them to.
Q. Uh-huh. What about the information on the width of the driveways that were modeled? Where did that come from?
A. I believe Transpo did not change the width of any of the driveways shown on the City's CAD drawing. And I believe that those predominantly attempt to represent that existing condition of the interested driveways on the way. Though the one at

Page 165

26 is a clear example of that not being the case. There's no 50-plus-foot-wide driveway at 26. There's a 20-foot street that comes out, and that's where the driveway is. So that's an exception. But I think most of the come off of somebody surveying and they're represented in the CAD drawing that the City provided.
Q. So correct me if I'm wrong, but didn't you testify this morning that most of the driveways that you analyzed were not included in the EIS?
A. No. They are included in the Table in the EIS that identified driveways, so therefore I had analysis associated with them. Some of the 29 that were not in that category were indeed on the AutoCAD file -- drawing, albeit not analyzed.
Q. Uh-huh. And where did Transpo get information about the width of the driveways that were not on the AutoCAD drawing?
A. I think they either field measured them, or measured them off the Google maps. You can do that. You'll scale it.
Q. Do you know where they got that information?
A. No.
Q. Where did the information come from on

Page 166

the boundaries of the incursion zones?
A. Well, one boundary is the edge of the driveway. And the other boundary is, as I've said five times, is where the swept path crosses the curb line of the -- between the center lanes and the buffer zone.
Q. You referred to a scoring methodology for bicycle path risk that you -- that was created by the Chicagoland Bicycle Federation?
A. Yes.
Q. You recall that testimony?
A. Yes.
Q. And essentially you took their criteria and applied it to the preferred alternative?
A. Well, all alternatives: preferred alternative and the other alternatives as well.
Q. And did you run those criteria on the current existing condition?
A. Yeah. I know side paths are within the scope of the limits on existing conditions, and that whole criteria is about two-way side paths. So I'm not there, so we made an existing condition to do it on.
Q. So those criteria apply exclusively to two-way side paths?

Page 167

A. Yes.
Q. Okay.
A. Yes.
MR. COHEN: No further questions.
(Break in audio recording.)
THE HEARING EXAMINER: Okay. Let's go back on the record. We do have some problems with the technology, so if it comes up again I'll let you know and we'll have to stop. But let's just proceed with what we have.
MR. SCHNEIDER: Did we lose some testimony?
THE HEARING EXAMINER: We did not get some of the testimony recorded.
MR. SCHNEIDER: Do -- can you give me a sense of where we need to repeat?
THE HEARING EXAMINER: We would have to --
THE ASSISTANT: It stopped at 2:21.
THE HEARING EXAMINER: 2:21 --
MR. SCHNEIDER: That's a while ago.
THE HEARING EXAMINER: Which I -- about 20 minutes. I don't see how we could repeat it, really.
MR. SCHNEIDER: Well, I just want to

Page 168

make sure we're not creating an appeal issue. I mean, there are -- is case law to the effect that a missing recording is fatal. So I obviously don't want to repeat the testimony, but I think we have to.
MR. KISIELIUS: I think we have to.
THE HEARING EXAMINER: We would have to at least repeat Ms. Hirschey's testimony as to her background. So we have that. I don't know when that started. When did that start?
THE ASSISTANT: 2:21 was when you began with redirect of Mr. Bishop.
THE HEARING EXAMINER: So we could do the redirect. I got the answers to my questions, so that's a few minutes of that. Do you have your redirect questions for Mr. Bishop?
MR. SCHNEIDER: Well, I apologize. I just want to make sure we're not creating a mistake that's going to come back to haunt us if we don't do --
THE HEARING EXAMINER: Well, we have two options. We can either just forge ahead and not have that on the record, the recorded record, or we can repeat it. And the only way to fix that is to do it now.

Page 169

MR. SCHNEIDER: Yeah.
THE HEARING EXAMINER: So, and I honestly -- it's not that much time. So it'd be better to redo it now and that would be my preference unless someone objects to it.
MR. KISIELIUS: We have no objection, Your Honor. I was just going to offer a suggestion at least for a lot of Mr. Schneider's redirect was spent rereading pages that have already been transcribed. An option here would be just to simply enter those two pages of the deposition transcript and that would eliminate at least the need to reread that again.
THE HEARING EXAMINER: Uh-huh. Yeah. I appreciate the suggestion. That would be fine.
MR. KISIELIUS: We'll provide those pages when we have a minute.
THE HEARING EXAMINER: Would you, Mr. Schneider, would you look at your notes and make sure that that's going to cover all the questions you asked on redirect?
MR. SCHNEIDER: The -- I think the other topic we covered, Mr. Examiner, was the comparison of the City's warning zone and its environmental document with the incursion zone. So

Page 170

maybe we should briefly recall Mr. Bishop to go over that issue again?
THE HEARING EXAMINER: Uh-huh. Okay. Thank you, Ms. Hirschey. If you can just step aside, and we'll bring Mr. Bishop back.
Mr. Bishop, you're still under oath and we're going to do some redirect.
MR. SCHNEIDER: And if I may, if I don't get an objection, I'll just try and be efficient here. For example, you followed up with some questions, and maybe I can just see if we all agree on the pages that Mr. Bishop identified.
REDIRECT EXAMINATION
BY MR. SCHNEIDER:
Q But, Mr. Bishop, I think I asked you before the recording stopped or I guess after the recording stopped to compare your incursion zone with the City's warning zone. Can you do that for us again, please?
A. Well, it might be best then to look at Figure 1-8 in the EIS, which is the one that was identified showing the warning zone.
Q. And I think you said that was on page 121 in the FEIS?
A. 121. Correct.

Page 171

Q. And so, the -- in this figure there's different shades of grey and tan. There's a flag that identifies a driveway crossing warning zone on the upper side of the truck turning out and you can see the green paths of the truck turning out. And the -- in this instance, actually, the green wheel of the right wheel of the truck turning out crosses the curb line in a shorter distance than the warning zone shown on this figure. So my incursion zone would be a few feet shorter in this instance. And I couldn't figure out what was defining the length of the warning zone, so in utilizing CAD would like to use the technology and it can identify -- if you identify a point you can pick distances and add them up really easily. So we picked the spot where the truck wheel or the swept path crosses the curb line. So in this case it would be a little bit shorter than the warning zones shown there.
Basically, it's the part of the trail that's adjacent to the buffer zone or parking area of whatever is there between the trail and the roadway that might have a truck going through the buffer.
Q. So, Mr. Bishop, I think the Examiner also asked you where in the EIS is the list of driveways

Page 172

that you compared or that you used in determining which driveways the EIS talked about.
A. Yes.
Q. And you identified Table 5-2 in the Transportation Discipline Report on page 5-4 and described that as a list of the driveways for all of the alternatives? Is that accurate?
A. That's of the Transportation Discipline Report not the parking one. Okay.
Q. Again, page 5-4.
A. 5-4, yes. And there's a corresponding figure that shows physically these locations on a map. And I should be able to find that. It's back in the --
Q. Well, Mr. Bishop, in the interest of time, let's just stop there. I think the table was what you testified about last time.
A. Yes.
MR. SCHNEIDER: And then, if we can agree then, that as part of the redirect I had -- Mr. Bishop and I read from his deposition transcript beginning on page 17, line 4 through page 18, line 10.
MR. KISIELIUS: And we would just offer the cover page and those two pages as

Page 173

something --
THE HEARING EXAMINER: That will show and that will be adequate.
THE WITNESS: So I found it. It's Figure 4-1.
MR. SCHNEIDER: Okay.
THE HEARING EXAMINER: And that --
THE WITNESS: It's go the --
THE HEARING EXAMINER: -- that will be Exhibit 2, the deposition.
(EXHIBIT 2 MARKED AND ADMITTED INTO EVIDENCE.)
MR. KISIELIUS: Okay. And it will just take a little time to get that.
THE HEARING EXAMINER: That's fine. I don't need it now. And I think that --
Mr. Schneider, is that everything we had for redirect?
MR. SCHNEIDER: I think it is. Yes.
THE HEARING EXAMINER: Okay.
MR. SCHNEIDER: Yeah.
THE HEARING EXAMINER: So, thank you again, Mr. Bishop.
Ms. Hirschey, we'll ask you to return. And just pretend that didn't happen.
So please state your name and spell

Page 174

your last name for the record.
MS. HERSHEY: My name is Claudia S. Hirschey, spelled H-i-r-s-c-h-e-y.
CLAUDIA S. HIRSCHEY,
a witness, having been first duly sworn, was examined and testified as follows:
DIRECT EXAMINATION
BY MR. SCHNEIDER:
Q Ms. Hirschey, we -- you've been through this once, but because of the malfunction of the recording equipment, I want you to give us a succinct version of your background. How long have you been a transportation engineer?
A. Well, my undergraduate degree was a B.S. in mechanical engineering from the University of Washington in 1980. And then, I received a Master of Science in civil engineering from the University of Wyoming in 1985 while the coursework was in transportation engineering and traffic engineering.
Q. And I believe you testified you've been the owner of Transportation Consulting Services for the last six years?
A. Six years.
Q. Yeah. Give us the overview of who you worked with before then, please.

Page 175

A. I began a career with the Washington State Department of Transportation: was there for three years. Then I (indiscernible) on Stage 2M and Jacobs for two years, David Evans and Associates for 11 years, where I had significant project management experience. *Heffering Transportation for six years, and then Transportation Consulting Services, my own firm, for six years.
Q. And describe for us, please, how many NEPA, SEPA reviews involving transportation that you have been part of.
A. Well, I'd say I've worked on over 32 NEPA, SEPA transportation elements where I've prepared the methodology, the analysis and the documentation. 12 of those were major NEPA/SEPA projects. Six of those had major pedestrian, bicycle, and safety project elements where a predesign occurred in coordination with that transportation analysis.
MR. KISIELIUS: Mr. Examiner, I'm going to interpose an objection here. The witness appears to be reading from a statement and witness's testimony's supposed to be from recollection first, not from a written statement. Accept that she needs notes to refresh her recollection, she's entitled to

Page 176

do that under ER.612, but that's only if she can't testify from recollection first.
THE WITNESS: Oh, okay.
MR. KISIELIUS: And we're then entitled to review what she uses to refresh her recollection.
MR. SCHNEIDER: Well, again, we were trying to be efficient by going quickly, but if you want to review her notes, you're certainly welcome to. And it will slow things down a little bit, but that's fine.
THE HEARING EXAMINER: Sustained.
MR. SCHNEIDER: You want to see her notes?
MR. KISIELIUS: I would, yes.
MR. SCHNEIDER: Okay.
THE WITNESS: I have an extra copy.
MR. SCHNEIDER: If you like, we'll offer it -- enter it into the record. Okay.
BY MR. SCHNEIDER:
Q. So, Ms. Hirschey, looking to your notes only as necessary, can you pick up where you left off, please, and summarize for us the SEPA/NEPA projects that have involved pedestrian or bicycle safety?

Page 177

A. Well, I estimate that there were six of those projects and I've developed a summary of three projects, for example --
Q. Okay.
A. -- if you'd like.
Q. And I think, again, but for the malfunction, you've -- were describing for us a Kirkland project for Sound Transit. Can you give us, again, a succinct version of the work you did on that, please?
A. Okay. So for the Sound Transit Kirkland projects I was project manager of both. The NEPA EA and the transportation team and transportation analysis. We began the project studying alternative locations for direct -- best direct access through the Kirkland corridor and I-405 using the Federal Transit Administration or FTA's alternatives analysis process. And we narrowed that to a preferred location where we began developing alternatives that were evaluated for direct access. As I recall, we cleared with the direct access on I-405, which is where the bus stops -- leave stations, relayings, and stops, and an elevator platform at an arterial overcrossing. It included that element plus a transit center to the east and

Page 178

Park & Ride to the west with bicycle and pedestrian improvements to connect to those facilities. Involved a lot of discussions -- a lot of discussions with DOT in order to develop a pedestrian -- more pedestrian and friendly environment in the vicinity of an interchange than normal DOT standards at the time would have allowed for.

Q. So I think in your testimony that didn't get recorded, you referred a 30-percent design. So explain to us what the level of design means perhaps using this project as an example for purposes of environmental review. Why was that project at a 30-percent level of design and how did the designer and the environmental reviewer interact?

A. So the 30 percent -- we worked towards 30-percent design on this project and many others in order to define the project footprint. For example, we're defining the lane widths, the shoulder widths, the number of turn lanes, the length of turn lanes; all that affects the footprint that's achieved. And it also -- in transportation obviously affects how the intersections will operate if they're signalized intersections it all affects how we phase the signal and the amount of green time we give to each phase.

Page 179

So, for example, a -- say a turn lane needs to be -- we think as traffic engineers it should be 300 feet long and say it intersects with a driveway that's really high volume and we think that's an undesirable condition, or it can even impact, say, a Class A wetland. We may want to shorten that turn lane, and when we shorten the turn lane to avoid an impact, we're redesigning the entire intersection, maybe changing signal phasing, which changes the resulting level of service analysis. And we go through an iterative process with all of the elements of the environment in review constantly, and our transportation design being constantly updated as we work through each of these analyses.

Q. So what can you tell about the impacts of a project at 30-percent design that you can't tell at 10-percent design?

A. It depends on how the project team defines their 10-percent design, but I'll just give some more typical examples. For example, at 10 percent you may know you can achieve 10 to 12 foot lanes, but at 30 percent you might be able to define that we can achieve 10-and-a-half-foot lanes or 11-foot lanes. In that example, on a major truck

Page 180

street or major transit street, the standard is 11-foot lanes, so you would know -- we typically know by 30-percent design confidently what design standard you can achieve. And at 10 percent, you probably haven't quite achieved the level of confidence. You're still talking about ranges of design.

Q. And you've reviewed the EIS in this case and the plans and the level of design they're at?

A. Yes.

Q. And how would you characterize the level of design used in this EIS?

A. I would characterize it as 5 to 10 percent.

Q. And how common is it for you in transportation projects and in SEPA/NEPA review to achieve a 30-percent level of design?

A. Most of the projects that I have worked on achieve 30-percent design.

Q. And can you give us a couple of other examples of SEPA/NEPA or transportation projects that you've worked on where 30-percent design was -- what was achieved during the environmental review?

A. Another project that I managed was this managed Park & Ride lot for Sound Transit. Again,

Page 181

we went through FTA's alternatives analysis project evaluating alternative locations for the Park & Ride; narrowed that through screening and methodology to one location. And then, began designing the project and preparing any NEPA EA AND SEPA. With that project we had an opportunity to provide a local -- using a driveway for the Park & Ride. At the back of that we had the opportunity to provide a connection to a neighborhood providing key pedestrian bicycle access for a neighborhood as well as by developing that local roadway at an adjacent intersection, we were able to eliminate a dangerous left-turn lane. That, again, and there was some significant and interesting natural environment issues that also got involved with a design iteration process. But we had a new signalized intersection. We had closing a left-turn movement and a new roadway involved with the Park & Ride.

Q. And have you achieved 30-percent level of design in the environmental review for agencies other than Sound Transit?

A. I have worked on WSDOT, W-S-D-O-T projects doing similar work.

Q. So have you been engaged to do the transportation element of yes, EIS projects,

Page 182

transportation projects where the work where you have done would be comparable to the work that was done in this case?
A. Yes.
Q. Okay. So I'd like you to describe the process that you go through and compare it to what was done in this case. So what's the first step in doing the SEPA/NEPA review for a transportation project from the engineer's point of view?
A. From the engineer's point of view is to look at a couple of things. Number one is the scoping document, so that we understand what are the issues of concern for all those participating in the scoping, which is typically some level of public involvement, all the agencies that would be involved with review of the NEPA/SEPA, and then decision-makers because ultimately we'll bring a recommendation to the decision makers. So when I look at all that, I develop the study methodology for transportation to define the data collection and the analyses such that it will answer the questions that were raised during scoping and will answer the questions that we anticipate decision makers will have about the project in choosing the preferred alternative.

Page 183

Q. And can you tell from reviewing the EIS in this case whether -- what you described is what happened?
A. I would say, no, and I could give a couple examples.
Q. Please.
A. Well, one of the examples is that the -- both the Shilshole alternative, Shilshole South, Shilshole North and then the preferred are all on Shilshole Avenue, which is a major truck street, major industrial street. And so, obviously, the industrial community is very concerned with the movement of their trucks and the safety of that truck movement and the interaction with bicycle and pedestrians. And then, there needs to be a legitimate comparison of the conditions across each alternative to provide decision makers with information they need to compare alternatives.
Q. So what information do you think, based on your experience, should have been collected here that wasn't about -- to allow the comparison of alternatives?
A. Based on the -- well, based on my professional opinion as well as the research conducted, it's really all about the level of

Page 184

conflict between bicycles, pedestrians, vehicles, and trucks with the level of conflict and potential risk and severity of a collision much, much greater for the trucks. So I was actually asked to -- if I could come up with a methodology to evaluation safety, so it ultimately ended up very focused on the number of conflict points for a multi-use path and the type of traffic passing through each of the conflict points.
Q. So at the request of the Coalition, did you prepare a report?
A. Yes. I did.
Q. Okay.
MR. SCHNEIDER: And, Mr. Examiner, the report is in Volume 2 behind Tab A311.16.
If we could all turn to that, please.
THE HEARING EXAMINER: I have Volume 1 of 10.
MR. SCHNEIDER: Yeah. We're providing it.
THE HEARING EXAMINER: Okay.
THE WITNESS: I like my own notes better, but I like numbers better than talking, too.
THE HEARING EXAMINER: And can you give me that number again? Volume 2?

Page 185

MR. SCHNEIDER: Yes. It's A-311.16
BY MR. SCHNEIDER:
Q. Now, Ms. Hirschey, your report is a thick document. It consists of 19 pages of your text. Is that correct? And then, the rest of it are exhibits and attachments?
A. Yes.
Q. Okay. So explain for us in general terms before we turn to the content of the report what you did -- what information you gathered that is not in the EIS to prepare this report.
A. Primarily the information I gathered was an inventory of each of the driveways along each of the alternative alignments and, in addition, identify -- because we only had driveway volume data at select driveways and only along Shilshole. So for each of the driveways on the Ballard alternative and the Leary Way alternative, I made a -- in the field made a qualitative assessment as to the type. So whether or not it was residential, commercial, industrial, and I estimated in -- via my notes if it had a heavy industrial use or a light industrial use, and veritable along Leary Way was a number of driveways that were basically abandoned, no longer in use.

Page 186

Q. So is it fair to say then that you walked all of the alternatives and personally inventories the driveways?
A. Yes.
MR. SCHNEIDER: So, Mr. Examiner, again, I can wait and offer the report after it's talked about and we're going to be spending the next hour or two talking about it or I can offer it now, however we want to proceed.
MR. KISIELIUS: And I think our only -- I guess this is going to be for the Examiner's preference. Our only objection is what are included as attachments. And there are a lot of studies and guidelines, which, in our experience the expert testifies to and provide the relevant information -- relevant evidence as the expert's understanding and communication with the Examiner, not having the record filled with hundreds and hundreds of pages of studies that aren't specific to this project.
That said, we saw what was in there as we have reports and studies listed in ours. We're prepared to go either way, but this is the first point, at which, if those studies are entered, we're going to be similarly entering a lot of studies that we think are relevant. And I just want to leave

Page 187

that to the Examiner to decide what the record should include.
MR. SCHNEIDER: Well, I think the Evidence Rule for expert testimony, you know, allows the foundation for the witness's testimony to be made part of the record. I think it would be best to have whatever documents that the experts relied upon made part of the record by both sides. Just offering documents that aren't, you know, being used as the basis for an expert's opinion, I might take issue with that. But to the extent either side has an expert that is relying on studies or documents, I suggest they ought to be part of the record.
THE HEARING EXAMINER: It's a broad invitation, and without even knowing what you're talking about it's very difficult for me to make a general ruling as to what type of attachments will be allowed in with an expert's exhibits. I agree with Mr. Schneider that if it's supporting their testimony and something they relied on that gives it much more probative value than it would otherwise. But we've all seen reports that have been relied on that we're wondering why we're all talking about it in a particular hearing.
So I can't give a definitive ruling on

Page 188

any of that right now. You know, one of the other problems we have is our large exhibits coming in with lots of attachments instead of separating them out. So we can also separate out --
MR. SCHNEIDER: Well, then my practical suggestion would be I won't offer it at this time. We'll go through and talk about it and then we can see if we have objections at the end.
THE HEARING EXAMINER: That will be fine. The only thing I need is some reference so we could -- if we can refer to it now as Appellant Exhibit 3, A-3 just for the record, that's when you offer it it's not a problem.
(EXHIBIT A-3 MARKED FOR IDENTIFICATION)
BY MR. SCHNEIDER:
Q. So, Ms. Hirschey, I want to use your report as the impetus for asking you questions. And, obviously, you're not going to read your report to us. You're going to explain my questions, so -- or explain your answer to my questions.
So I want to direct your attention to the second paragraph. And could you explain for us what issue you're identifying there with the EIS document that you reviewed?
A. I'm not sure what you're -- in the second

Page 189

paragraph?
Q. Yes. The second paragraph at the introduction and background. For example, the last -- second to the last sentence talks about a general conclusion not being supported by analysis. Can you just give us --
A. Okay.
Q. Explain what the issue with the EIS was that you're identifying in this paragraph?
A. So as I mentioned prior, the primary concern is the conflict and the level of severity of the conflict and the volume at conflict points. And the FEIS and the methodology in a safety portion where they define methodology, I believe it's the first bullet says that "there will be an analysis of conflict points." And the next mention of safety in that analysis of conflict points is in the conclusion section for each alternative providing qualitative statements about the conflict, but no. So then, what's missing in between is there is no quantification or analysis -- specific analysis of conflict.
Q. And so, maybe it would be helpful at this point to turn to attachment 2 of your exhibit, which is very close to the end.

Page 190

MR. SCHNEIDER: Do you have a copy?
BY MR. SCHNEIDER:
Q. And I'm sorry. The version I'm using doesn't have the specific page numbers, but we'll get those. It's the -- it's these pages.
THE HEARING EXAMINER: Conflict diagrams?
MR. SCHNEIDER: Yes. They are pages 210 and 211.
BY MR. SCHNEIDER:
Q. So when you talk about conflicts, can you explain what you mean when it comes to this particular project and what we see on these two pages 210 and 11 that are attachments to your report?
A. Okay. To be -- I'll just begin with page 210. And what I drew upon there was from F -- Federal Highway Administration -- FHWI's website of typical intersection and analysis of conflict points. Each intersection is very unique and it can get complex. So I just started with somebody else's example.
There are three types of conflict points at -- there are crossing conflict points. So each conflict point is a potential interaction between

Page 191

vehicles be it non-motorized or motorized vehicle. So the types are crossing, and there's a merging conflict point where two vehicles can basically merge into each other or side-swipe and then a diverging conflict point.
So what the -- this sort of general intersection example is showing -- originally it showed a one-lane bicycle -- the conflict points for one direction of bicycle travel through the intersection. And then, the red markup is the -- additional conflict points for the contraflow movement. It does not include the conflict points for all the turning movements a bicycle might make at that intersection. And the green dots are the conflict points that would occur for pedestrians. So if you could just envision a pedestrian going from left to right or west to east across a crosswalk, there will be right-turning vehicles and left-turning vehicles, and thru-vehicles that all are creating potential conflict point which is a way of assessing risk for that pedestrian.
Q. So on the left, there's a solid circle that says "Conflicts Unique to Bicycles" and then an open circle "Conflicts in Common with Motor Vehicles." Explain that distinction, please.

Page 192

A. Where are you reading? Oh. Oh, on the -- okay. The solid dots are where two bicycle movements have their own potential conflict point. So you can see from the -- what would be the west, a bicycle movement going north and then a bicycle movement that would be in the lower right corner and going north would have a potential conflict point. And then the open circles are where the conflict points for the bicycles interact with vehicles.
Q. So again, just so those of us who aren't traffic engineers can understand that, what is a conflict unique to bicycles? Does that mean there isn't a motor vehicle involved or what?
A. Yes. Yeah.
Q. And so, this would be well with the --
A. Well, no. No. There would be a bicycle or a vehicle, but it's because it's a conflict point for a bicycle going through the intersection.
Q. Okay. Well, we may come back to that. Let's turn -- what's the next page, then? It says "Representative Driveway Intersection Conflict Diagram."
A. Yes. So what this one is is a typical driveway which is very easy to translate this condition to all the driveways, whereas the

Page 193

intersection can be -- have all kinds of complexities. So what occurs here, the vehicles -- the circles with vehicles in them are showing the vehicle conflict points and the orange versus red stars are showing the conflict points of one of them is pedestrian movement and one of them is a bicycle moving with a vehicle. So in a (undiscernible) direction bicycle flow across a driveway you have four conflict points, two for pedestrians and two for bicycles, and then in the contraflow direction you have another four at a driveway --
Q. So --
A. -- in addition to the vehicle conflict points that occur with every driveway.
Q. So how many additional conflict points does a two-way bicycle path introduce to a driveway intersection?
A. Either it introduces four additional -- four in addition to the one way.
Q. And so would that be four additional conflict points at each driveway?
A. Yes.
Q. So let's turn back to your report. At the top of page 2, the second paragraph, you refer to the clear risk factors of contraflow bicycle

Page 194

movements. What are you talking about there, please? I'm referring to the second line of the first big paragraph.
A. Okay. So the clear risk factors of contraflow bicycle movements documented in existing research. There's a number of documents I've summarized in the report that describe how the contraflow movement looks more -- creates a much more complex decision-making process for drivers leaving the driveway. So, for example, as a truck or a vehicle leaving a driveway along the Shilshole alignment, that vehicle must look to see that there are gaps between bicycle and pedestrian flow coming from two directions as well as there's a gap to enter the roadway between vehicular volumes in two directions. So it's a two-step thinking process: where do I have available gap to cross both the driveway and enter the traffic stream. So the level of complexity is quite a bit higher than for one direction of bicycle flow.
For the vehicle -- another example is where the -- a vehicle making a turn from the roadway into the driveway when it's a left turn. So if you imagine on Shilshole, where a vehicle is facing westbound, wants to do a left turn to the

Page 195

south, they're crossing oncoming traffic and the pedestrians and bicycles in the contraflow direction. For them to look for them, they're turning their head more than 90 degrees to look back behind them in an unusual condition, so that they can cross the oncoming traffic plus cross the two-way bicycle path when the coast is clear to make that movement. And then, additional -- so a lot of the research says -- discusses appropriate conditions for two-way bicycle trails as one where there are few driveways and minimal conflicts. And then, additional research points to the accident rates with two-way bicycle facility versus single-direction bicycle facilities.
Q. Okay. So let's go down the page then, page 2 of your report. You have a heading that says "Safety Factors: Findings from Research."
A. Can you direct me? I'm lost as we go -- part 2. What page?
Q. Page 2 still.
A. Oh, okay. Sure.
Q. The heading on two. So can you summarize for us the findings from research that are set forth in this section of your report? And we may turn back to some of the attachments that you referred

Page 196

to.
A. Okay. So one of the primary reports I relied upon is the -- is from the National Cooperative Higher Research Program, acronym NCHRP, Report 500 entitled "Guidance for Implementation of the AASHTO Strategic Highway Safety Plan, Volume 18: A guide for reducing collisions involving bicycles prepared in 2008. And in that it cites a higher level of crossing-path crashes, well, it cites the percent of bicycle via motor vehicle crashes that were crossing versus parallel and other. It also provides, which is later in the report, guidance on when to -- appropriate conditions for considering a two-way bicycle path.
Q. So according to that National Cooperative Highway Research Program Report 500, what percentage of crossing-path crashes were involved bicycle motor vehicle crashes?
A. That was 57.5 percent.
Q. And then what were the other percentages?
A. 35.5 percent were parallel-path crashes and 7 percent other.
Q. So I think we can all visualize what a crossing-path crash is. What's a parallel-path crash?

Page 197

A. That could be where both bicycles going in one direction and a vehicle in the same direction and say the vehicle, be it passenger car or truck is kind of errant, and so it kind of moves within the lane and it may cross over into a bike lane. Or if it's a shared condition, no bike lane, no buffered bike lane, they may -- there are crashes that occur when they bump into each other in parallel.
Q. So the next document you referred to at the top of page 3 is called Why Can't We Be Friends? Summarize that document for us and what use you made of it in your report.
A. Well, the primary focus of the research was to look for availability of bicycle versus vehicle and truck accident data. In that report I summarize what they summarized for three different sources of historical accident data.
Q. And is that report prepared by the University of Washington?
A. Yes.
Q. And again, what -- summarize for us the -- what that report told you.
A. Okay. So they summarized a report of bicycle with motor vehicle crashes from 2002 to 2008 in Ohio and found that the pickups, vans, minivans,

Page 198

and semi-trucks accounted for approximately 23 percent of the crashes and the likelihood of a severe injury increased by 141 percent at intersections if the vehicle involved is a van. And at non-intersections the severity was 100 percent if the vehicle involved was a semi-truck. So basically saying, the severity is much higher for larger vehicles.

Q. And are larger vehicles, in fact, involved in a higher percentage of fatal crashes according to this report?

A. Yes.

Q. And what's the percentage for that? I'm now referring to your second bullet point.

A. Okay. Either this was a bicycle safety study in New York City evaluating large vehicles, trucks and busses. Trucks and busses were implicated in nearly a third of fatal crashes while the vehicles were only 5 to 17 percent of the daily traffic. So you have a higher rate of fatal crashes resulting from the larger vehicles.

Q. Okay. And what does the third bullet point tell us?

A. Was a New Jersey study result that identified that death or serious injury was almost

Page 199

twice as likely on a truck route than a non-truck route. And that would be, again, due to the volume of trucks.

Q. And then you talk about a couple of more articles on that page that talk about the increased risk from two-way cycle paths. Is that correct?

A. Yes.

Q. And summarize what those studies concluded.

A. Well, there is a study called the Risks of Cycling. A lot of people refer to it and discuss it where -- oh, what did that one say? It basically -- that report discussed the higher risks involved with the contraflow movement that occurs with a two-way cycle path. And that --

Q. And --

A. -- there was approximately twice the number of accidents on a two-way cycle track than single direction.

Q. And you refer to a report from the City of Boulder?

A. Yes. And that one was published in May 2016. And one thing I'll add is that it's -- there's kind of a paucity of information with regard to safety bicycle facilities. The bicycling in the

Page 200

U.S. is growing really rapidly, and so we don't have seen into it we're lacking data.

In addition, we don't have near the volume, so you can't have these big global pictures on data. However, I was very intrigued by the City of Boulder, Colorado report because it's recent: May 2016. There are a very high level of bicycle usage in that town, and many, many bicycle paths. And in that report they found that accidents in the -- where bicycles are traveling in the contraflow direction were three times that of bicycles traveling in a single direction.

And so it's -- my point is with Boulder, it's based on a quite a large volume of data compared to other sources we have.

Q. And then, what is your last bullet point on that page reflect?

A. Well, it reiterates the issue with bicycle-motor crashes and two-way cycle paths being more dangerous.

Q. But does *Dr. Saynan from the Helsinki study have a conclusion about whether a two-way bicycle path is safer or more dangerous than having cyclists ride in the street?

A. His opinion at that time was the two-way

Page 201

cycle -- bicycle path was more dangerous than even riding in the street in a single direction.

THE HEARING EXAMINER: Mr. Schneider, let's take a break --

MR. SCHNEIDER: Okay.

THE HEARING EXAMINER: -- for 10 minutes.

(Recess taken.)

THE HEARING EXAMINER: Thank you. We're back on the record with Ms. Hirschey and the Appellant.

BY MR. SCHNEIDER:

Q. Ms. Hirschey, I think we're on page 4 of your report.

A. Okay.

Q. Can you just summarize for us briefly what the first two bullets points on that page tell us?

A. So where I have number 1 and number 2? Oh, no at the top of the page?

Q. Yeah.

A. Okay. Again, it points to an evaluation of crash data that shows the fact, that when bicycles crash with large vehicles they're much more likely to cause severe -- those crashes will much

Page 202

more likely result in severe injury or death to a bicycle and that occurs at any speed. One of our safety strategies is to keep speeds slow to reduce deaths, but when it involves a large truck, it's at any speed.

Q. So the -- right in the middle of the page there's a sentence that begins, "Industry Design Guidelines." What are summarizing for us there?

A. What I'm summarizing are the resources found that provide direction on how to select appropriate alignments for a two-way multi-use bicycle path. So the first one is from the National Association of City and Transportation Officials, or NACTO, which is kind of the go-to document for a lot of bicycle designers called Urban Bikeway Design Guide.

And those bullets summarize the conditions -- well, they're guidelines for conditions. So for number one is: "On streets with few conflicts, such as driveways or cross-streets on one side of the street." And later on, I quantified the number of driveways that there are for each alternative and the no build condition.

The second bullet: "On streets where there is not enough room for a one-way cycle track

Page 203

or both sides of the street. On streets where contraflow flow bicycle travel is desired" -- sometimes that occurs on one-way streets, or some other condition to connect bicycle facilities, on streets where more destinations are on one side thereby reducing the need to cross the street."

Then I went to City of Vancouver Transportation Design Guidelines; all ages and abilities cycling routes. City of Vancouver -- excuse me, and British Columbia, and just summarized their Rule Number 10 in their guidelines. And it says, "Design intersections thoughtfully to reduce conflicts, increase visibility and provide clear directions of movements." So I'm focusing on the language that says to reduce conflicts.

And then, I did have a conversation with the City of Vancouver engineer responsible for their bicycle design program. And he also directed me below to the Massachusetts DOT Bicycle Design Guidelines, as well as, bicycle planner in Minnesota directed me to Massachusetts DOT as well. Oh, and I might add that in the -- in my conversation with the City of Vancouver, and he sent an email summarizing our conversation, the City of Vancouver, British Columbia no longer does two-way cycle tracks in

Page 204

their city.

Then at Massachusetts DOT, Separated Bike Lane Planning and Design Guideline, which I mentioned a number of agencies pointed me to that. I summarized one bullet from their guidelines: "minimize exposure to conflicts." And it states, "In urban areas the majority of crashes between bicyclists and motorists occur at intersection driveways that are often related to turning or merging movements." And then, finally, because it's brand new and was adopted only in November, it's SDOT's new Streets Illustrated, but they also describe guidelines for two-way cycle tracks and the need to reduce conflicts.

Q. And then, your -- the last paragraph on that page, what is reflected in that statement on your part?

A. I'd been asked over and over if I could find any examples of bicycle facilities in industrial areas with heavy truck volumes. And there had been a number of just anecdotal examples brought forward to me. And in each case, when I investigated the example it was not comparable to this condition at all. So therein lies a challenge in how to design a safe bicycle facility in this --

Page 205

along Shilshole Avenue as we don't -- we're not finding any examples where it's done elsewhere, likely because it's not a good place to put bicycle and pedestrian facilities.

Q. So what -- so you say you couldn't find a comparable example. What did you do to try and find a comparable example?

A. I called various major cities, so again, the City of Vancouver. There had -- someone had -- I'm not going to be able to call -- recall every street name. But there was a -- someone had sited an example in the City of Vancouver of a bicycle facility through an industrial area, and I talked to the engineer there, and he pointed me to where it was on Google. And it looked similar, except for the fact that that project created a viaduct, and the bicycle and pedestrian facility was on the viaduct. And so, they were separated from the industrial activity at street level.

A lot of people have sited the Seawall Trail in Vancouver. That particular facility is, as it describes, is against the seawall. And so, there's no driveways on the sea side. And on the upland side is -- for a lot of it it's a grassy area and the industrial area is quite a distance from the

Page 206

bicycle itself. So there's literally no driveways on either side of that trail.
Q. And did --
A. There's other examples.
Q. Did you talk to people in other cities, and if so, which ones?
A. I talked to City of Minneapolis. They do have one. They had one example of a bike -- buffered bike lane in industrial area. However, it was very different in that the area was all flat. It was light industrial, so there was quite a long sloping area grassy, until you got to the light industrial buildings away from the road. So it was -- it's probably a hundred yards or so where the industrial activity was from the street in that condition.
Q. And other cities?
A. I had a conversation briefly with Washington discipline. Didn't find examples that were comparable.
Q. So based on the conversations you had and your review of the literature, --
A. Oh, and at CalPortland.
Q. CalPortland?
A. Yeah. Yeah.

Page 207

Q. Did you find a trail anywhere in the country -- a two-way side path that has the kinds of conflicts that Mr. Bishop described in his testimony?
A. I haven't --
MR. SANDERS: I'm going to object to the question. She's just testified to calling four or five cities, and now we've had a question asked if she found anywhere in the country based on those conversations.
MR. SCHNEIDER: The question was broader than that based on her research and her conversations, and I'm asking whether she found any. And if you want a -- that seems to be an objection to the weight of the question or the answer, but not to the appropriateness of the question itself.
THE HEARING EXAMINER: I agree. It's overruled. I -- if she's found that in the country, maybe she's called four cities that's in the context at this point.
THE WITNESS: That's what I found, you know, I -- yeah.
THE HEARING EXAMINER: Called 50 cities in a different then --
BY MR. SCHNEIDER:

Page 208

Q. And again, the question was, based on your review of the literature and your conversations, did you find a comparable facility anywhere in terms of conflict?
A. I haven't yet found one.
Q. And why did you choose the cities you chose: Vancouver, Portland, Minneapolis and Washington, D.C.?
A. They're all considered bicycle cities that -- they're cities that are kind of on the forefront of developing bicycle facilities, and have higher level of bicycle use in their cities.
Q. Okay. So turning then to the last paragraph in your report above heading Number 3. Explain what you are telling us there?
A. So what I'm explaining there is the fact that large trucks have very large blind spots. There's a very, very large blind spot to the right and behind a large truck. So this would affect --
Q. Well, specifically I'm referring to where you're talking about developing a quantified analysis?
A. Oh, the paragraph above. Sorry. To me, what we're trying to do is determine -- provide information to decision makers and determine a

Page 209

difference between alternatives. What I attempted to do is take some of these design guidelines about conflict, what we know about operating characteristics of large vehicles, and prepare a quantified analysis of conflict and level of risk between each of the alternatives. Is that what you're looking for? Or not?
Q. Yes. And is there any such quantified analysis in the EIS?
A. No.
Q. So what did you do then to develop -- describe for us what you did to develop that quantified analysis?
A. Should --
Q. Just in general terms.
A. Okay.
Q. It would help to put in on the table, that's fine.
A. Oh, I see. No, no, no. I can do it generally. What I did was a brain-storming effort using research to think through what are all the possible safety factors we might consider in designing or developing a trail facility. So it would be number of signalized intersections, number of unsignalized, number of driveway crossings by

Page 210

type be-it residential, commercial or heavy industrial -- number of driveway crossings for the contraflow movement. One could also look at the user's perception of personal safety. I can't remember what all I came up with. And there's others I came up with, but they weren't really determinant here. Oh, the lane limits and the width of the facility itself, and the width of the buffer, and whether or not they met standard would be a safety factor --

Q. And before we turn --

A. -- and sight distance.

Q. Before we turn the page, your -- the second to last paragraph there, you say -- you have a sentence that says four lines down: "Large projects such as those developed by WSDOT and Sound Transit -- or Sound Transit typically developed designs to the 30-percent level, so that the impacts can be sufficiently disclosed." Again, how many projects have you worked on where that was done?

A. I've worked on 12 major NEPA/SEPA projects and that's where that approach was taken.

Q. And later in that same paragraph, you said -- you have -- the second to your last sentence says, "The DEIS and FEIS appear to rely on counts;

Page 211

set the level of design approximately five to ten percent." So why do you characterize it as five to ten percent? I mean, what about it gives -- leads you based on your experience to put it at that level?

A. Well, the City produces -- Vic Bishop testified CAD drawings, so there are lines on paper that are overlaid with aerial photographs to show the design relative to the existing condition. But there's -- it's not, as he pointed out, it's not taken far enough to fully design -- to fully understand the impacts, for example, at Market Street and 24th, to fully understand the impacts at select more complex driveways and whether or not there needs to be a right-of-way take to provide for the safe movement -- for the movement of truck across driveways.

Q. Okay. And before we turn the page, in your review of the literature, did you find a study anywhere that concluded that two-way cycle paths are not more dangerous than one-way facilities?

A. I didn't find that. No. I'd like to provide one more example as I think of it for the level of design is any FEIS -- I think it's figure -- it's a Figure 1-3 shows the cross section for

Page 212

various segments along the preferred alternative. And in each case, on Market Street it says lane widths from 10 to 12 feet. On Shilshole, two different -- I think there's a segment that's 10 to -- 11 to 12 -- no, 10 to 11 feet et cetera. While in each case they only provide a range for the lane width, so they haven't -- to me it appears they haven't taken the design far enough to be specific. And on those streets the standard is 11 feet. So we actually don't know when they get into further into design if that lane width would be 10 feet or 11 feet.

Q. And one width being below standard, and one meeting standard?

A. Correct. In the below standard at 10 feet would be more appropriate. It's a design dimension we use on neighborhood streets to keep traffic slow, but inappropriate for major streets where large trucks need a little more flexibility to stay within the lane.

Q. So turning the page then to your Table 1, there's a lot of information here, and we're not going to walk through it cell by cell. But if you can explain to us in general terms what you did here, and then I'm going to direct your attention to

Page 213

a couple of specific rows.

A. Okay. So for all those safety factors that I prepared, the safety factors are listed in the left-hand column, and it goes on to two pages. The -- there's a very, very brief summary of what the analysis is for that safety factor and in the text of the document it will have a paragraph for --

(Audio ends.)

THE HEARING EXAMINER: And I honestly have no idea how we will address this. I haven't had this problem in a hearing before. So I think we'll just couple it through and keep going for the day. But we may have to have tech tell us how to fix it, or if they can fix it. And it may interrupt our hearing schedule, but for now we've got an hour left to the day, so we'll keep going. In this last time when we caught it, we lost one minute. And so, your transition to Table 1 -- I'd suggest restarting that.

MR. SCHNEIDER: Okay.

THE HEARING EXAMINER: That's probably more time than necessary, but I'd rather be safe than sorry.

BY MR. SCHNEIDER:

Q. So again, why don't you begin again,

Page 214

Ms. Hirschey, by explaining for us what information you are presenting to us in general terms in Table 1. And perhaps it would be best to start with the first two columns.

A. Okay. So having thought through all I could think through of various safety factors you would want to consider for a multi-use bicycle path. I took the key factors and those are in Column 1. Column 2 is a very, very brief, if you will, bullet point of that safety analysis. The methodology for that safety analysis is described in the text of the report. And then, there's a column for the preferred alternative and each of the other alternatives in the EIS in columns for the alignment for a no build condition.

So the first two rows are examples of quantifying the number of signalized intersection crossings and the number of unsignalized intersection crossings.

Q. And here you're drawing a distinction between intersections and driveways? Correct?

A. Yes.

Q. Okay. And then, so we -- the first two rows are about intersections. Is the remainder of this page and the following page, is that all about

Page 215

the driveways then?

A. The driveways summary is in-between the two grey bars. So you can see that below the first two rows I put a grey bar and it's -- in the center you see numbered driveways. And then, all the driveway analysis goes down to the next grey bar about three-quarters of the way down --

Q. Okay.

A. -- and it gets into different safety factors.

Q. Well, why don't we spend a moment with each row? Again, without looking at the numbers, just explaining what's in that row. So under the heading "Driveway Conflicts" explain the first one.

A. So the first one is the driveway use, and I quantified the number of each type of driveway for each alternative. So for each alternative: the number of industrial driveways, commercial/residential, any old loading docks or garage -- industrial garage doors, abandoned driveways of the total number inventoried, and then the total reported in the FEIS. Yeah. So that's -- a safety factor in that -- that's what a bicyclist or pedestrian will encounter -- the number of those types of driveways that they would encounter using

Page 216

that alternative.

A. So near the beginning of your testimony, you said that you'd walked all of these alternatives and looked at each of the driveways. Are all driveways created equal? And by that are there distinctions between the industrial driveways on Shilshole and those on Leary, for example?

A. Yes. Well, the industrial driveways on Shilshole are very active and most of the -- what you would call industrial on Leary are very low use or abandoned or maybe used -- it appears like it could -- it's a really old facility, so maybe there's a delivery once a week. But they were -- when I drove by they were closed and not in use, so they weren't active like they are on Shilshole.

Q. Then the next row "Driveways with contraflow movement." What did we learn there?

A. Well, because of the findings about the increased risk of the contraflow movement, I tallied the number of driveway crossings for each alternative that would be in the contraflow direction.

Q. And so, obviously, if we take the preferred alternative column and compare it with our 39-such contraflow movements, and compare it to the

Page 217

no build alternative for the preferred in Shilshole south alignment, there are zero contraflow movements there? Correct?

A. Correct.

Q. So --

A. So the project's introducing those contraflow movements or the alternative.

Q. So going back for a moment then to your conflict diagrams, how many additional conflicts with this proposed project create at each of those 39 driveways?

A. It's an additional four conflict points in the contraflow direction.

Q. So if we multiply 4 by 39 and get 156, that would be the number of additional conflict points?

A. Yes.

Q. And is it fair to say, based on your review of the literature -- well, what does the literature say about the danger of each of those conflict points for the contraflow?

A. Well, each of those are two to three times as dangerous.

Q. So again, if you want to compare the no build alternative with the preferred alternative in

Page 218

terms of conflict points, you would take 39 and multiply it by 4 and then to add in the risk factor of two to three times?
A. Yes. So I specifically in this analysis chose not to do -- create any methodologies that weighted or provided a points system, because it just becomes non-transparent. I thought I'd just stick to the raw data.
Q. So let's move then to the -- below the next hard black line "Driveway Vehicle Use." Explain that to us, please?
A. What I --
Q. Well, first of all before we get to that, your next row is: "Total Number Of Driveways Encountered On A Round Trip." Explain that for us?
A. So what that analysis recognizes is that the no build condition will have driveway conflict points for bicyclists going one direction, as well as, the conflict points that driveways go in the other direction. It won't have the contraflow conflict points, but, yes. So, for example, no build on Shilshole, you have the conflict points. If it was a buffered-bike lane, for example on Shilshole, going east bound, and when that bicyclist returned home in the evening or returned on their

Page 219

trip, they would have the conflict points from the north side of the roadway. There are a few more -- there are more driveways in the north side than the south, so in that condition there would be more conflict points.
So then what I did was say, well if -- for any individual bicyclists who's traveling one direction and returning, they actually -- their exposure to conflict points are the conflict points in one direction and plus the contraflow conflict points in the other direction. So I made it apples to apples comparison between absolute number of conflict points in the no build to these alternatives. And then, you would add on the concern about the contraflow movement.
Q. Okay. And then, the next row "Driveway Vehicle Use." What are we learning there?
A. What I did there was summarize the number of driveways. It was passenger car/single-unit truck, and then I lumped together driveways with tractor-trailer trucks. So for the preferred alternative, it's says there are only three driveways with only passenger car use. There are 15 driveways where the largest truck is a single-unit truck. And there are 23 driveways where the largest

Page 220

vehicle is a tractor-trailer truck. So you can see as you go across, so number of driveways with tractor-trailer truck movements are 23 for the preferred alternative, 29 for alternative 1 Shilshole South, and then it drops off to four for number 2, two for number 3, and five for number 4.
Q. And why is that significant: the tractor-trailer trucks versus passenger cars, for example?
A. Well, I view that as a level of -- when you consider the conflict points, it's a much higher level of risk for a bicyclist or a pedestrian to cross those types of driveways.
Q. Because of --
A. In comparison with the other driveways on the alternatives.
Q. And does that take us back then to the literature you described about how dangerous trucks are?
A. Yes.
Q. All right.
A. And what literature says about it -- design guidelines in various agency documents about reducing conflict points.
Q. And then, explain the next row for us

Page 221

please?
A. So the next one was taking those number of conflict points -- there are 17 total per driveway with the contraflow movement, and 13 total per driveway with single direction of travel.
Q. So that reflects your testimony earlier about four additional conflicts for contraflow?
A. Yes. Yes. So what I did was quantify -- if you look at the preferred alternative column , for those driveways that only had passenger car use, no large trucks, there were 51 conflict points where a passenger car passed through that conflict point. For driveways where there was a single-unit truck involved as the largest vehicle, there were 255 conflict points for that alternative where a single-unit truck passed through the conflict point. And then, for the preferred alternative there were 391 conflict points where a tractor-trailer truck passed through that conflict point.
Q. So the three totals that you just described, the 51 for passenger cars, the 255 for SU-30s, and the 391. So are those numbers cumulative? Would you add them up or are they -- is there some overlap between them?
A. No. You could add them up, but, no.

Page 222

Yeah. They're more demonstrative by vehicle size.
Q. And so, what is that difference here? What do you, as a traffic engineer, take away from that number of 391 conflict points with tractor-trailer trucks?
A. Well, given it's a risk analysis in my opinion. It's given the level -- given the severity and the increase frequency of severe and fatal accidents occur between bicycles and trucks, it's a level of exposure to that severity of accident that a bicyclist would encounter for that alternative.
Q. And then, let's drop below the next grey line. What do we find down there?
A. Additional safety factors, the first one being arterial land width. As I mentioned, the arterial lane widths go from a low of 10 to a high of 11 or 12. On higher volume streets with larger vehicles including buses and trucks, the lane width is important because the larger vehicles can at times do off tracking.
Q. And off tracking is a synonym for leaving the lane?
A. Yes. In this case if you -- if all the bicyclists are in that multi-use path, obviously you're not sharing the lane with a truck. But as

Page 223

the lanes narrow in arterial, the consideration, when you get very narrow, is actually the vehicle conflict assuming all the bicyclists are in -- on the multi-use facility.
Q. But is that an appropriate assumption in your opinion? Will all bicyclists leave Shilshole and ride the path?
A. Given -- well, if you look at the intersections through the volumes, they also include the -- at each intersection approach it also includes the bicycle volumes. And so, there are bicycle movements throughout this neighborhood with various origins and destinations. So they're going to need to leave the multi-use path. So they -- if their destination is north bound on 17, for example, they may never get on the multi-use path. It just depends on the individual bicyclists and what -- how they view the efficiency of their trip on the multi-use path.
Q. So let's --
A. There's also the condition where a Sunday, with -- it will likely become crowded. Burke-Gilman Trail has become very crowded in many other segments. The high-speed skill bicyclists may choose to stay on the roadway.

Page 224

Q. So let's assume that some of the bicyclists do choose to use the roadway and some are attracted to this two-way side path. In terms of conflict points then, if the two-way side path is added, you would have both the conflicts from those in the street added to the conflicts created by the cycle path. Is that accurate?
A. Yes. Yes.
Q. So in the first row there "Arterial Travel Lane Widths For The Preferred Alternative" you say below standard. What is that based on?
A. The -- it's Figure, I think, in FEIS-3 that shows the cross sections and shows the range of lane width. So it's not yet specific, it's says 10 to 11, or 10 to 12 for each cross section.
Q. Okay. And 10 would be below standard?
A. Yes.
Q. And let's turn the page then. What do we see on the next page in the first row "Truck Tracking At Driveways"?
A. This is basically a summary statement of the work that Vic Bishop presented this morning.
Q. So explain what we see then under the heading in the column "Preferred Alternative."
A. Well, I summarized -- hang on a second, I

Page 225

haven't looked at this for a while. So this is the more restrictive condition that Vic spoke of this morning as to the number of driveways; the number of driveways where the truck can complete the turning movement within the lane. It's simply a different way of summarizing.
Q. Okay. So you, based on Mr. Bishop's testimony, you've listed the number of vehicles at these driveways that cannot complete the turning movements --
A. Yes.
Q. -- within the lane?
A. So what I should augment, is that as a safety factor, yes, that type of condition occurs in urban areas where trucks -- they have to position themselves the far left of a lane, or even encroach on a lane to their left in order to complete, for example, a right turn movement, as Vic said. Or vehicles leaving a driveway will position themselves to the left-hand side to stay within the lane, or they'll choose to cross the center lane. All those types of movements where they can't stay in lane are a safety factor. They're worth considering as a risk element, because they're not staying in the lane. It doesn't mean it doesn't occur every day,

Page 226

but it's -- has a certain level of safety consideration.
Q. Then the next row is called "Driveway Sight Distance." What can you tell us there?
A. Well, what's important is to -- that vehicle movements leaving a driveway or entering the driveway have adequate sight distance such that if they complete their maneuvers before -- so they have sight distance to complete a maneuver before a collision. What occurred here was that, in the DEIS there were a number of driveways that didn't have adequate sight distance, but then they design was modified. In the FEIS, they produced driveways with sight distance.
Q. Okay. And so, did that driveway sight distance information factor into your conclusions?
A. Not when the consideration is the FEIS alternative only. Yeah.
Q. And then, the last row is barriers. Explain that for us, please?
A. Again, it evolved, because it began with a look at the draft Environmental Impact Statement where the alternatives had barriers that were close to the trail and imposed a safety hazard. But as the design presented, and the FEIS shifted the

Page 227

position of the trail relative to the street and they were able to eliminate the barriers that were potential hazards.
Q. So --
A. I just included a complete mistake, because it was originally a safe -- it was -- for completeness sake, I looked at it once, and I thought I'd just continue to look at it through the FEIS.
Q. Did -- you heard Mr. Bishop's testimony that there are references to barriers in the FEIS, but not as to a specific locations?
A. Correct. Yeah.
Q. And would you agree with his testimony that a barrier can actually create safety issues once it's designed in a specific location?
A. Yes. Depending on the location they're often hard objects that could be hit by a bicycle pedestrian.
Q. Okay. So let's turn the page then to page 8 of your report. The section is 3.1 and you called it "Operation Safety Factors." So what is an operational safety factor? Later on, in 3.2 you talk about geometric safety factors. So what's the difference between the two?

Page 228

A. For the -- I grouped them for the operation safety factors it's an analysis of -- it's a grouping of safety factors that consider all the movements both non-motorized and motorized vehicles are making. And the geometric, the second grouping, is more about the design.
MR. SCHNEIDER: So again, I'm not going to go through this obviously paragraph by paragraph, Mr. Examiner. I'm assuming at some point you will have the luxury of reading it. So I'm going to skip over some paragraphs here.
BY MR. SCHNEIDER:
Q. But I would like to begin by drawing your attention to the last paragraph on page 8 where you refer to -- your second sentence says, "Large trucks with large blind spots are considered a higher risk factor to bicyclists." And I'd like you to turn, please, to one of the -- your Attachment 3 to your report which is on page -- it begins on page 213 of your report. And can you explain what we're seeing here on pages 213 to 214?
A. So I found these graphics from City of Orlando, and they have a webpage dedicated to educating bicyclists as to safety concerns that they should be aware of when they're in the vicinity of

Page 229

large trucks. So I thought they were just very, very good graphics to demonstrate. On page 213 shows the truck blind spot for a large tractor-trailer truck. Could be a WB-67 with 53-foot container. And you can see from the orange shading where that blind spot is. And so, if you can imagine all the -- the description that Vic Bishop gave this morning about the swept vehicle path that's made, that blind spot to the right of the truck extends beyond that swept vehicle path and creates it's own path of blind area for the truck driver.
Q. Okay. So the entire area in orange is an area that the truck driver can't see?
A. For their right turns.
Q. Okay. And let's turn to page. What's on page 214?
A. That graphic presents to any type of user path, you know, other vehicles, bicyclists, pedestrians, the areas you don't want to be in because of the blind spots for the trucks, so...
Q. So is "no zone" on this graphic equivalent to blind spot then?
A. Yes.
Q. Is there information available,

Page 230

Ms. Hirschey, about cyclists crashing into the sides of large trucks?
A. You can Google such accidents and see conditions where that's occurred and see news articles where that's occurred.
Q. Okay. And, in fact, did the Seattle Bike Blog recently have an article about that phenomenon?
A. Yes. They were addressing -- I think what you're referring to is they were addressing the condition where bicyclists get pinned under a truck, and the truck may not even be aware that they've been pinned under the truck. There was a recent example this fall up in Shoreline, where a 14-year old got -- with a classic right hook turn we call it, from a truck, was pinned under the truck and had severe injuries. So I think what they were advertising in that bicycle blog was treatment that a lot of cities are starting to encourage -- and I don't know if any are regulating yet -- panels they can put along the side of a truck to help prevent that -- getting pinned under the truck. But I would say that that type of mitigation -- yes, it's helpful to reduce the severity of an accident, but it doesn't compensate for designing a trail where you have that high level of risk of that type of

Page 231

accident.
Q. Okay. So speaking of that issue, let's turn to the top of page 10. What are you telling us there? You were referring again to that?
A. Yes. This is describing the safety factor of contraflow conflicts. And that National Cooperative Highway Research program report number 500 that I've sited a number of times listed these three conditions where you would implement a contraflow lane. So condition one is where safety is improved because it reduced conflicts.
Q. And the information that demonstrates that that is not the case here is your chart -- your Table 1?
A. No. But let me give you one, for example. On the Shilshole segment, the no build would have conflict point in one direction -- 41 driveways. The no build on the north side has, I think, 56. When you put the trail entirely on the south side you have 41 driveways, but you have 41 in the direction of travel and then you have 41 conflict points in the contraflow direction. So there's a slight reduction of conflict points, but 50 percent of those are conflict points with a much higher accident rate. So I would say safety is not

Page 232

improved because of reduced conflict points in that condition.
Q. Okay. And how about factor two?
A. Factor two, there are no or very few intersecting driveways, alleys, or streets on the side of the proposed conflict lane. Well, that's -- you don't quantify very few, but there's many more than very few driveways on the side with contraflow lane.
Q. And then, your first sentence after that says, "The two-way multi use trail alternatives are in direct conflict with one and two." Is there anything you want to add to what you've already explained about why you arrived at that conclusion?
A. I don't -- I haven't found any quantified way to say that there is improvement because of reduced conflict points. Or it's an appropriate -- for any of the guidelines found that the -- it's an appropriate place to implement a two-way trail.
Q. Let's turn the page to page 11 please. And what are you saying in the first paragraph? It's page 11 of your report, page 012 apparently of in terms of the red numbering of the exhibit; the paragraph that begins "Of note."
A. This topic gets into two subjects. One I

Page 233

described recently where the level of exposure to any bicyclists is the outbound and the return trip. Not just the number of driveways crossed by the -- where the path pavement crosses the driveways. And then, second of all it speaks to -- I believe this is where I'm speaking to another level of analysis desirable would be in order to compare alternatives would be actual volume data for movements in and out of the driveway by driveway. So you could wait -- you could summarize all of the movements through these conflict points and in the contraflow direction and compared by alternative. But we don't have that level of data in the EIS. I hope I'm explaining myself.
Q. So what --
A. So --
Q. -- what data is not in the EIS that would have been helpful in determining the safety of this trail and the effect not only on the bicyclists, but on the businesses? What data would you have gathered if you had been doing the CIS?
A. I would have gathered driveway volume data by vehicle type at all of the driveways. Because there's a number of driveways in the other alternatives that are very low volume. And we're

Page 234

not able to multiply the vehicular volume against the number of conflict points and compare a cross alternatives. We're also not able to compare by day of week, or by hour of the day, or by season which would be very important. So for example, during the summer season when families would have -- be on vacation or parents would have time off with their children. There may be a peak bicycle condition in summer months on the trail at the same -- during the day time hours at the same time where commercial or industrial volume is the highest. But we don't have that level of data to be able to do that kind of analysis.

Q. And do we have that -- do we have hour by hour data for either bicyclists or trucks?

A. In understanding the way volume data is typically collected, I believe there is available. But I haven't looked at it for the driveways where SDOT collected driveway volume data that would be available by hour. But there is not bicycle data by hour. The only bicycle data in the EIS is at each end, so at the locks and at Fred Meyer end. Well, and then at the intersection turning movement counts their bicycle data, but they did not show existing use or forecasted use by segment at the driveway

Page 235

approaches.

Q. Okay. So going down to driveway delay the heading -- the second heading on that page. What point are you making there?

A. So to -- the way to explain the driveway delay as a safety factor is that as volumes increase on the two-way multi use path, which everyone expects it will, and we're attracting -- by creating a two-way path you're attracting the users to the facility. So volumes will increase and over time volumes on the street always increase incrementally. That vehicle either entering the driveway or leaving the driveway has that complex decision I previously described where they need to determine if there's available gap to cross the two-way path, as well as enter the street which has two-way vehicle volume. As volumes increase on both those facilities, they'll be fewer and fewer available gaps to complete their maneuver. And drivers tend to then, when they're exposed to that condition day in day out over time, they tend to choose shorter and shorter gaps to complete their maneuver. And then, you become closer and closer to a dangerous situation where someone is cutting it too close and it becomes an accident.

Page 236

Q. So in the next paragraph you have a sentence right in the middle that says, "Driveway delay was estimated -- and in here I think we're talking about truck delay -- was estimated for the p.m. peak hour. However, truck volumes are lower in the p.m. peak hour than mid-day." So what are you telling us there?

A. The methodology in the FEIS to estimate driveway delay was based on the p.m. peak hour which is the typical hour for most of our traffic analysis when you're thinking about intersections. But if one were to -- getting back to what I said in the very beginning, if one were to design the study methodology and collect the data and do an analysis to answer the questions that arise during scoping by the public or interested parties or agencies, the delay of concern at industrial driveways would be during their working hours. The p.m. peak hours in this area 5:00 to 6:00 -- the p.m. peak hour represents the highest afternoon hourly volume on the street, which occurs 5:00 to 6:00 p.m. But that's when the industrial activity has slowed down and non-existent because their activity is during the day.

So they analyzed what's described in the

Page 237

EIS as "analyzing delay" as if the crossing of the trail and the driveways in intersection. That's fine. But the volumes they used and the hour that they analyze is 5:00 to 6:00 p.m., and that may not represent conditions during the peak of industrial truck activity, and it may not represent the peak of summer conditions. It also doesn't represent -- we wouldn't be able to quantify this, but there is a condition where when the -- as volumes increase and that maneuver becomes more difficult to pull out into the street, if truck could not determine as they're crossing the bicycle path; it didn't have clearance to enter the street, they'll be stopped across the trail. So then there would be -- well, that would be a delay to the trail users.

Q. So I want to direct your attention to the second to last sentence in the second to the last paragraph under "Driveway delay." You say, "Analysis of driveway delay, as presented by p.m. peak hours intersection level of service, does not disclose the impacts to businesses during peak periods of business activity." So there are you referring to safety or you referring to economic impacts of businesses?

A. Actually both, because if you think about

Page 238

that summer condition where industrial activity is at its peak during the day and there will be higher --

MR. KISIELIUS: I'm going to object here. We're shifting from transportation and traffic impacts which -- for which, Mr. Schneider sets up foundation. And now she's testifying or about to testify about economic impacts to businesses, and I don't think has the -- she hasn't demonstrated any qualification to talk about that.

MR. SCHNEIDER: She is about to testify about delay to the trucks. She's not going to offer any testimony about what that delay might mean to the bottom line of the businesses, but she's certainly competent to testify to delay. And later we're going to hear her testimony about people who are making inferences about economic impacts based on that delay. So I'm laying a foundation for the subsequent testimony by people who are competent to testify about those issues.

THE HEARING EXAMINER: So I'll ask you to rephrase your question to her then, because you did mention the economic impacts and she indicated she could answer that. So if that's not what you intended her to speak to, then I'd like you rephrase

Page 239

the question, and I'll sustain the objection.

BY MR. SCHNEIDER:

Q. Then to go back to where we started. Are you talking about delay impacts to the businesses, or safety impacts to the trail users, or both?

A. Maybe be a little more fundamental, I'm talking about quantifying delay in our intersection level service methodology used in the industry. I don't know if you are familiar, but we go "A" through "F" for how well things are operating. Fundamentally, that's a calculation of average vehicle delay, and then, summarized by the number of vehicles that pass through the intersection. So that's a number we can provide for any given hour of the day or different volumes in different intersection traffic control. And as I mentioned in terms of safety, delay at these driveways is a concern because of shorter and shorter available gaps to cross the trail and enter the traffic stream.

Q. Okay. And is any of the data to do that analysis in the EIS other than for the peak hour when the industrial activity is stopped?

A. It's not presented in the EIS, no.

Q. So your next heading is "Motorized

Page 240

Vehicles. And if you turn the page to page 12, you talk -- you start talking about the 85 percentile. Can you -- 85th percentile. Can you explain that to us please?

A. Yes. For when we begin a transportation analysis like this, we often consider what is the 85th percentile speed, which it can be different than the speed limit. So the 85th percentile speed is a speed at which 85 percent of the vehicles are at or below. And if we think there's a concern, either from our own professional observation or anecdotally, or during scoping, we would go out and collect data on the 85th percentile speed. In this case I'm not particularly concerned with 85th percentile. There could be vehicles going faster during low volume conditions at night, but in general I'm not concerned with it. So it's here for thoroughness, and because it's what all traffic engineers look at. "Let's do a check about the 85th percentile speed." If it were an issue we would want to do -- evaluate sight distances: stopping sight distance, entering sight distance at the 85th percentile speed to achieve safety versus the posted speed limit.

Q. Were you involved in work as a traffic

Page 241

engineer on another bicycle facility and bicycle trail in Seattle where you did examine 85 percent?

A. Yes. There was. I worked on the west -- I could read my notes, but --

Q. Marginal.

A. -- West Marginal Way Bike Trail and that -- it was a while ago -- there's was a Missing Link there called the Duwamish Link I believe. And it was a feasibility study to look at implementing the bicycle path between Marginal Place at the north end and Southwest Idaho Street at the south end. The trail, because of the position of the railroad tracks between those two points on the east side of the street, the trail needed to cross at west Idaho Street. Our typical signal warrants would not have warranted a traffic signal at that location except for the condition of bicycle and pedestrian crossings and available gaps.

So in that case, we knew that we needed to collect the 85th percentile -- needed to collect traffic data. Excuse me, we needed to collect -- let me back up. I did an inventory of conditions along that segment. We did video-data collection of bicycle and pedestrian volumes. And then, we collected data on the 85th percentile speed and

Page 242

found that it was in fact eight-miles-per-hour over the speed limit; which in that stretch is quite fast. So when we used actual data versus the posted speed and considered the volumes that would be crossing the trail, which we looked at existing from video data, quantified that and created a forecast by working with SDOT and Pete *Lagerwey. We were able to quantify the fact that there were not available gaps for the pedestrians and bicycles. Were not height of quantity of available gaps for pedestrians, bicyclists to safely cross the street there and were able to install a traffic signal for their crossing.

Q. So moving on then, your next heading is "Geometric Safety Factors." Up to now we've been talking about the operational ones. So what points are you making here under the heading "Arterial Travel Lane Width?"

A. Couple points -- that we don't know actually what the final arterial lane width is yet from the level of design and whether or not it -- they'll meet standard or not. And then, a safety factor involved where you're on an arterial street serving trucks, and buses, and general-purpose traffic with below-standard lane widths.

Page 243

Q. So in the last paragraph on that page you refer to a construction scene. What point are you making there?

A. If you can visualize one of the last charts that Vic Bishop put up there where he showed the concrete pavement section and then the added asphalt pavement? And how the -- with the preferred alternative, all of the lanes shift north. So then, what --- and let me back up a little bit. So the existing condition on Shilshole with 24 feet of concrete has a line -- a construction line down the center, so they were constructing concrete panels. There's a seam down the center that gets striped as well, but in -- during the winter and inclement conditions, drivers actually are using the construction seam for guidance; sometimes inadvertently. I mean, they don't know they're doing that, but it helps guide them.

So with the roadway alignment shifting to the north, there will be a construction seam that's in the middle of the lane, versus the center lane. Normally you have a center construction seam and a seam at the edge of the pavement. In this condition, it's going to be in the middle of the lane. And so, that's a concern during dark

Page 244

conditions, inclement weather that a vehicle could be inadvertently following a construction line rather than a stripe for their guidance.

Q. So let's turn a couple of pages. I think you've referred already to much of the discussion that we're skipping over. And I want to go to the heading at the bottom of page 14, "Litigation Safety Factors." Explain in general terms what you're saying there.

A. Well, the FEIS in discussion of alternatives, in particular the preferred alternative, talked about mitigating safety concerns with signage, with warning signs with that warning zone painted on the trail as the bicyclists approached the driveway paint across the driveway. There could be a whole myriad of safety mitigation measures. There could be those large mirrors. There could be gates. There could be even where a truck triggers a bell or a whistle. It could be all kinds of things. But fundamentally, safety mitigation doesn't change the fact that the original design may be an unsafe condition. It can only alleviate so much the underlying safety concerns. Another way of saying it is that the more we have design safety mitigation into a facility, the less

Page 245

we've actually chose an alternative that's fundamentally more safe than another alternative.

Q. Based on your review of the literature, did you find any study anywhere that demonstrated that the increased risk of contraflow movement, the two to three times additional hazard you described, that that could be mitigated by design? Is there any literature that demonstrates that?

A. Mitigated by design --

Q. That the design could remove that additional risk factor?

A. No.

Q. So on page 15, then you have your heading for "Results." And can you summarize then, please, your opinion about whether the -- first of all about whether the EIS adequately identifies the traffic hazards that this proposed facility will create? Well, first of all, let me ask another question first.

Do you have an opinion, Ms. Hirschey, based on everything that's in your report, about whether this proposed two-way bicycle facility will create a reasonable likelihood of more than a moderate adverse impact on traffic safety?

A. Let me back a little bit by saying

Page 246

because it's in EIS, we're comparing alternatives. And the EIS did not have adequate information for decision makers to compare those alternatives, in my opinion, in terms of safety. In terms of the preferred alternative that was selected -- what's the terminology? So the terminology -- there's a SEPA terminology about more than a moderate --

Q. A reasonable likelihood that the proposed trail will have more than a moderate adverse impact on traffic safety.

A. In my opinion, it would have more than a moderate impact to traffic safety, because over time as volumes increase, we have this greater level of exposure to -- through the conflict points. We have the greater risk factor of the contraflow lanes, and you layer upon that the 94 percent of all accidents are human error. So over time with this level of conflict, this level of risk, and the number of users, ultimately there will be an accident. And, like, you know, it will be with a truck and it will be severe.

Q. You said that there isn't enough in the EIS to compare alternatives among one another. Is there enough information to compare the safety of the no action condition with the preferred

Page 247

alternative?

A. For me, no, because so far there's not adequate research to be able to compare driveway conflict points where the bicyclists are in the lane. We haven't -- neither myself nor the EIS has conducted research on that condition, which is what's out there now.

Q. So you testified quite a bit about the additional conflict points and the increased hazard from the contraflow movement. Is any of that disclosed in the EIS?

A. None of that is. And not -- definitively not in a quantified way.

Q. Is there any acknowledgement in a qualitative way that contraflow bicycle trails are more -- two to three times more dangerous than single flow?

A. No. There just general statements about conflict.

Q. The FEIS asserts in multiple places that the two-way trail will be safer than the existing conditions. Is there any data or analysis in the EIS to substantiate that assertion?

A. No. I should say no for the preferred alternative. For example, there could be another

Page 248

alternative, such as a protected bike lane with a buffer on each side of the street, that may improve safety compared to the no build.

Q. You're referring now to an alternative that isn't included in here?

A. Right. We could come up with more alternatives and -- but I'm just talking about the preferred in this case.

Q. Or any --

A. Yes.

Q. For example, and correct me if I am wrong, what you're saying is a single-way bicycle path on either side of the street?

A. Yes.

Q. There's data to supports its safety?

A. Yes. Yes.

Q. I want to go through -- I want to briefly identify the additional exhibits to your report that we haven't talked about and have you just explain what use you may have need for them. So the first one is this NCHRP report 500 that you mentioned a number of times. And that begins on page 23. And, for example, I direct your attention to -- well, why don't you just describe what use you made of the evidence and if there are any portions of it you

Page 249

want to direct our attention to?

A. Well, I made use of the types of crash -- crashes that occur between -- and reasons for crashes between bicyclists and vehicles. I made use of their guidelines as to appropriate conditions for implementing a two-way multi-use path. And of note on page 26 -- is that the page? Yes, it was. They were called attributes upon which it's appropriate to implement a two-way bicycle lane. And they're actually drawing upon City of Portland's criteria or guidelines, and those I had sited before in our discussion.

Q. Such as the safety is improved because of use conflicts and so forth?

A. Yes. Yes.

Q. And then on page 27, what is that document?

A. This is a research document at the University of Washington. I relied on their summaries of crash data between bicycles and large trucks. The research involved other, kind of, sociological issues between bicyclists and trucks, but I relied on the crash data.

Q. And then turning over to page 76, what do we have there?

Page 250

A. I believe we arrived at the City of Boulder.
Q. It's the page before that.
A. 76? That's the study from Helsinki, Finland. That's sited quite frequently by the bicycle community.
Q. Okay. And that includes the -- can you read the first sentence of the second paragraph of that abstract, please?
A. In that case it says, "In the city of Helsinki, the number of injury causing bicycle accidents per kilometer travel is five times higher than for motor car traffic and three times higher than for bus driving."
Q. And the first sentence of the next paragraph?
A. "A recent study in Helsinki showed that it is safer to cycle on streets amongst cars than on our two-way bicycle paths along streets."
Q. Okay. And then page 77, that's the Boulder Report you've talked about?
A. Yes.
Q. And you can turn to page 78, please. What information is provided there based on their experiences in Boulder?

Page 251

A. Well, the two -- the text at the top describes that crosswalks are the most common location for motor vehicle collisions involving a bicyclist, and that includes both marked and unmarked. That again, it basically points to accidents occur where there are conflict points. And then, each of the diagrams shows the portion of accidents that occur. They demonstrate that 58 percent of bicycle collisions occur within a crosswalk, and then additional reports of bicycle accidents.
Q. And what is the last text paragraph in that page that was based on Boulder's experience?
A. Boulder found that collisions involving bicyclists that go against the flow of traffic were nearly three times as common as those with the flow of traffic. And then, that's the diagram on page 79.
THE HEARING EXAMINER: And we'll stop there, Mr. Schneider.
Tomorrow we'll reconvene at 8:30.
I apologize to the parties that we've had recording problems. We have not, to my satisfaction, had those fully eradicated. I don't know if it's going to happen again. We have not had

Page 252

tech show up. So what we do have is a call into them. It's possible they're going to show up when they do.
And so, if that's at nine o'clock tomorrow we will stop, so they can at least look at it and make sure that we don't get stopped again by the lack of recording. Otherwise, I thank Ms. Johnson for dealing with the issue ad hock. What I would -- one question I have is do the parties have a little bit more time tomorrow evening? I am willing to stay until 5:30. Ms. Johnson will have to leave at 5:00, but I could stay another half-an-hour to make up for some time that we lost today through recording, et cetera.
MS. FERGUSON: I have to confirm with our witnesses, but Counsel is available.
MR. COHEN: Yes.
THE HEARING EXAMINER: All right. So we'll make that an option. And then lastly, I just want to touch base on timing. I think we discusses in the beginning it's 16 hours plus a side. We really need to look at probably expecting about 15 hours then, because I need some administrative time to just deal with things like recordings, and asking you questions, and this type of discussion that

Page 253

we're having right now. So I'll try to split that time as best we can, but for your planning purposes that's really what you should --
MR. BROWER: Your Honor, do you want to give us a progress report?
THE HEARING EXAMINER: I'll give you that tomorrow at noon.
MR. BROWER: Okay. Thank you.
THE HEARING EXAMINER: Okay. Thank you, all. We'll see you tomorrow.
(Proceedings adjourned.)
--oOo--

CERTIFICATE

STATE OF WASHINGTON)
) ss.
COUNTY OF KITSAP)

I, the undersigned Washington Certified Court Reporter, hereby certify that the foregoing transcription of audio proceedings was transcribed under my direction;

That the transcript is a full, true, and correct transcript to the best of my ability; that I am neither attorney for nor a relative or employee of any of the parties to the action or any attorney or financially interested in its outcome;

IN WITNESS WHEREOF, I have hereunto set my hand and 9th day of December 2017.

/s/ Cynthia A. Kennedy, RPR

NCRA Registered Professional Reporter
Washington Certified Court Reporter No. 3005
License expires November 16, 2018