September 29, 2017-1:40 p.m. DAY 42 49 Donovan Street AFTERNOON Session ONLY Concord, New Hampshire
\{Electronically filed with SEC on 10-16-17\}

IN RE: SEC DOCKET NO. 2015-06 Joint Application of Northern Pass Transmission, LLC, and Public Service Company of New Hampshire d/b/a Eversource Energy for a Certificate of Site and Facility.
(Hearing on the merits)

PRESENT FOR SUBCOMMITTEE/SITE EVALUATION COMMITTEE: Chrmn. Martin P. Honigberg Public Utilities Comm. (Presiding as Presiding Officer)

Cmsr. Kathryn M. Bailey Public Utilities Comm. Dir. Craig Wright, Designee Dept. of Environ. Serv. Christopher Way, Designee Dept. of Resources \& Economic Development William Oldenburg, Designee Dept. of Transportation Patricia Weathersby Public Member Rachel Dandeneau Public Member

ALSO PRESENT FOR THE SEC:
Michael J. Iacopino, Esq., Counsel to the SEC (Brennan, Caron, Lenehan \& Iacopino)

Pamela G. Monroe, SEC Administrator
(No Appearances Taken)
COURT REPORTER: Susan J. Robidas, NH LCR No. 44
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\} I N D E X
Samuel Johnson
Kenneth Bowes
Nathan Scott
Lynn (Farrington) Frazier John Kayser
EXAMINATION
Cross-examination by Ms. Pastoriza
PAGE
4
Cross-examination by Dr. McLaren 38
Cross-examination by Mr. Ahern64
Cross-examination by Mr. Palmer 90
Cross-examination by Mr. Thibault 98
Cross-examination by Ms. Schibanoff 103

I N D E X (CONT'D)
EXHIBITS
PAGE
JT MUNI 295 Exception Request 7 (Rev 1) 7
APOBP 53 Exception Request Plan 40
APOBP 47 Photograph 47
APOBP 48 Photograph 48
APOBP 3 Ahern Prefiled Testimony 76
NAPO-BP 36 DOT Permit Package, 108 12/7/16

NAPO-BP 37 DOT Exception Request 109 No. 36

NAPO-BP 43 Exception Request No. 52114 (Rev 1)

NAPO-BP 44 Exception Request 155115
NAPO-BP 31 Photograph 119
NAPO-BP 46 3/22/17 Letter to 122
Franconia businesses
from Mr. Fortier
NAPO-BP 47 Exception Request No. 70123
(Rev 1)
NAPO-BP 34 Photograph
125
NAPO-BP 37 Exception Request 36 plan 126
NAPO-BP 38 Photograph of Little 127 Schoolhouse Restaurant

NAPO-BP 35 Campton town page "mile 130 map," NP Sheet 114
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
layout as the primary source of documentation when that is available. The second source would be the historic layouts, as they've been laid out over the past several hundred years and as we've discussed in the past. And then the third would be the prescriptive identification of the right-of-way. We also discussed a lot of nomenclature and things that they would like to see on the maps, as far as the markings and/or other things pertinent to the survey.
Q. So, given that that's standard surveying procedure, why wasn't that done when you had your first survey in?
A. (Johnson) Effectively, that was done that way. We've been able to get more information from the DOT archives that will enhance the product that we've put forth.
Q. You had the information from DOT archives around 2014, and you went to the archives during your first surveyor trip. So why has it taken that documentation so long to work its way into the survey?
A. (Johnson) It's not that it's taken so long to
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
get into the survey, it's the way we labeled or described such documentation and then the actual dialogue with the DOT as to how they wanted to see those documents put together.
Q. So you're saying you had the road layouts and you simply didn't put them on your survey?
A. (Johnson) No. We put what we believed were the appropriate road layouts on the survey. We just didn't necessarily label them correctly or put enough information on to satisfy the DOT's requirements.
Q. Were the road surveys labeled at all on your survey layouts?
A. (Johnson) In some places, yes, in some places, no.
Q. Could you point me to a location on your survey where they were noted?
A. (Johnson) $I$ do not have that information in front of me here.
Q. Okay. So, Mr. Bowes, I'm showing you part of your testimony from May 31st, 2017, Day 10 Afternoon Session, Page 70, which involves your description of Eversource's expertise with cables and utility obstructions. You
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
stated that Eversource has experienced working on projects involving more cables than this project. Is that true?
A. (Bowes) Yes. In fact, since we last testified as a panel in this docket, I've sited two other underground projects.
Q. During your testimony, you also stated that Eversource has experience working on wider and deeper excavations than this project.
A. (Bowes) Yes. In fact, the two that $I$ just mentioned, one is a six-conductor project and one is a three-conductor, but with four, one spare duct bank for total conduits.
Q. You also stated that Eversource has experience working on projects involving more obstructions and more congested areas than this project.
A. (Bowes) Yes. In fact, these two projects are just that as well.
Q. So I'm showing you what is identified as No. 3 of Joint Muni 295, which is Exception Request 7, Revision 1, which is the area for Main Street, Plymouth. Showing you two of the plans you submitted in that exception
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
request. Would you consider this area to be less congested than other areas that Eversource has experience working in?
(Witness reviews document.)
A. (Bowes) Yes.
Q. So in this area, $I$ counted 103 conflicts for which you are requesting exceptions from DOT's Utility Accommodation Manual. Does that number sound correct?
A. (Bowes) I don't know. But I'll accept that number.
Q. Is it fair to say that you are unaware of the existence of each of those obstructions when you proposed to bury the route under Main Street, Plymouth?
A. (Bowes) Specifically, I would agree with that. I mean, obviously we knew that there were water, sewer and other utilities potentially in the roadway. But specifically, I would agree with that.
Q. Is it fair to say that you were unaware of the location of each of the obstructions when you submitted the permit application to the Department of Transportation in October 2015?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
A. (Bowes) Yes, $I$ don't believe we'd done any utility survey at that point.
Q. And were you unaware of the existence in location of these obstructions when you testified before the Site Evaluation Committee in May and June this year?
A. (Bowes) The specific location, again, I would agree.
Q. So now I'm showing you what has been marked as No. 4, Joint Muni 295, which is the first two pages of Exception Request No. 7, Revision 1. You asked for an exception request to be allowed to bury the line over existing utilities on Main Street in Plymouth; is that right?
A. (Bowes) Yes.
Q. And the utilities on Main Street are similar to the type of obstructions you stated Eversource had vast experience dealing with.
A. (Bowes) There are some of them, yes. We've also typically experienced gas and the telecommunications as well.
Q. Have you worked on any large projects without knowing the existence and location of
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
obstructions in the proximity of a route before and during the planning process?
A. (Bowes) Yes. In fact, the normal course of business is to go through and get a siting certification and then go into a development and management period where the final design is completed and a permit is issued by the DOT. So it's a very normal course of action.
Q. Might not your choice depend on what you find or don't find underground?
A. (Bowes) So I would say yes. But to be more specific, I could address -- if you have a more specific question, $I$ could answer it more completely.
Q. In Exception Request Revision 1, Page 2, you
also stated that, quote, "This trench width and additional offsets necessary for construction would likely require either complete road closures or result in significant traffic impacts, including extended duration of construction within roadway to allow for sheeting, installation and removal and extensive excavation due to the depth and width of the trench."
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

So when Lynn, formerly Farrington, testified there would be no road closures or significant traffic impacts in Plymouth, it meant there would be no road closures if the Department of Transportation granted this exception request?
A. (Bowes) I would say yes. I'll answer, and I think Lynn is in agreement with that.
Q. So are there other areas on the route where you stated there would be no road closures that are dependent on getting an exception request from DOT?
A. (Johnson) So, first, I believe that there is a road closure in Plymouth where construction goes around the traffic circle. That has been part of our plan from the beginning. But in either sense, the answer is no. For the remainder of the Project, if we don't get an exception granted, it means that we have to dig deeper and take longer to get through certain areas. It does not mean that we would require road closures.
A. (Bowes) And maybe to elaborate, the use of
So are there other areas on the route where

[^0]Q. So at this time, the exception request for Main Street has still not been approved?
A. (Johnson) I'm sorry. Could you repeat that?
Q. At this time, the exception request for Main Street has still not been approved?
A. (Johnson) That is correct. We are waiting for additional survey information to resubmit the request.
Q. So you have made an exception request for Main Street because there are culverts, storm drains, catch basins, railroads, guardrails and utility poles that need to be avoided?
A. (Johnson) Correct.
Q. In the event that the Northern Pass Transmission Line is constructed in the road, you maintain that this would not be an obstruction to future utility siting or maintenance?
A. (Johnson) So I think Mr. Bowes answered that this morning. There are provisions as part of the construction that would minimize impacts.
Q. So is it your position, then, in the event that Northern Pass is buried, all of the
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
municipal utilities above and under the road should be considered obstructions; yet Northern Pass will not be an obstruction?
A. (Johnson) Again, I think we addressed that this morning.
Q. I would like to focus on the exception request in Franconia. I'm showing you the permit application submitted on December 8, 2016, for the SHEB Estate Bypass. So the exit area work space shows a right-of-way at four rods. Yes?
A. (Johnson) I'll take your word for it.
Q. And the building at the edge of the right-of-way, you can see it butts right up against it?
A. (Johnson) Yes.
Q. All right. Next one. And this is Exception Request 117 for the same area. According to the plans submitted with this exception request, the plan shows the right-of-way at three rods; is that right?
A. (Johnson) It's a possibility, yes.
Q. You see the building that's farther away.

And if you measure using the underground
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
points that are 100 feet apart...
So on what information did you base this change of width of the right-of-way?
A. (Johnson) That would have been the research that was done as we prepared the original survey report.
Q. Why wasn't it in the original SHEB sheet then?
A. (Johnson) Yeah, they're completely different times. That information was provided, as Mr. Scott has said, when he was doing the initial assessment back in the summer of 2015.
Q. So what layout refers to that three-rod section?
A. (Johnson) I'd have to go back to the records to find it. But I'm certain we can.
Q. So how far do you continue -- how far does that right-of-way continue in your assessment of the layout? What are the bounds of it?
A. (Johnson) Do you mean length of miles along the road?
Q. Yeah.
A. (Johnson) Again, I'd have to go look at the \{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
details of this particular section.
Q. So you have right-of-way information that you're using to incorporate into your exception request, but you're not making it available for us to use to look at the rest of the route.
A. (Johnson) It would be the survey report that was prepared and given to everybody earlier this year.
Q. That was rejected.
A. (Johnson) Agreed. But the basis of that isn't going to fundamentally change. It's the way that we're describing and then referencing all of the things, including what historic layouts were used.
Q. So if I were to take your survey, which I believe has no width on it, and lay it over the permit plans, I would understand what you consider to be three rods?
A. (Johnson) So, the permit plans, as you've noted, were clearly done with a four-rod layout. The information has been updated through research to prove that it's a three-rod layout. As we develop the
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
alignment going forward and submit to the DOT for approval, that will show a three-rod layout, and the alignment will be contained within that three-rod layout.
Q. So you have no material to give us showing the bounds of that three rods right now.
A. (Johnson) We are creating that survey report right now. And as we discussed earlier, it will be ready in six to eight weeks.
Q. So is the three-rod width based on the 1839 layout?
A. (Johnson) Again, I don't know. But I can certainly find out.
Q. So if most of Route 116 in Franconia is now known to be three rods, would that increase your estimated construction time?
A. (Johnson) I believe Route 116 is four rods. But it wouldn't change our construction whether it was three rods or four rods.
Q. Would it increase traffic delays?
A. (Johnson) No.
Q. So if your original survey was basically correct, but you simply failed to cite what you were using for the widths, then why are
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
there SGC and BL Companies surveyors out there now, as they told me, trying to see evidence in the ground and figure out the right-of-way width on 116?
A. (Johnson) So as I mentioned earlier, a lot of what we're doing is tightening up the survey, if you will. There are certainly lots of monuments and/or iron pins that weren't -that they did not find or weren't able to locate the first time they were out. They're going back to make a concerted effort to see if they can find those particular monuments or pins. You know, it's hard to estimate property by property how many of those there are. They found a significant number while they were out there in the places that they expected to find them. They are going out again now to do further refinements, if you will.
Q. Is it normal practice to hire a survey team and need to send them back out again a year later to look at their route?
A. (Johnson) Absolutely.
Q. Okay. So this is Page 9 of the transcript
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
for the afternoon of Day 6, May 1st, 2017. So, during his testimony, Mr. Scott was asked the question, quote, "So, wherever you can be off the road, and still within the right-of-way, is where -- is the goal for the open trench, correct?"

And your answer was, "There's a variation on that. That's definitely what the DOT is requesting. However, we are putting in requests for variance where we know that we would be killing trees."

Next I'd like to review the Department of Transportation's letter dated December 2nd, 2016. On Page 2, No. 15, it states, quote, "Anticipated tree cutting/taking should be shown on the plans," end quote.

So in my review, $I$ saw only a few exception requests that mentioned trees. Have you submitted exception requests for all locations where tree clearing would occur?
A. (Johnson) I think, as we mentioned earlier this morning, we have not. And those would be the 3.7 miles we identified on the table
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

answer would be, only those that have been approved by the DOT would be ones that you could look at.
Q. And in the end when you submit areas that will be cleared, are we to assume those areas will also be graded?
A. (Bowes) I think it will depend. If it's needed for construction, you know, where the vehicles will actually be, there'll probably be some temporary fill and cut to the areas. But without having a specific, it's hard to give more details on that.
Q. After which you would restore the previous terrain?
A. (Bowes) If that was the requirement by the DOT, yes.
Q. So when will these new exception requests be supplied?
A. (Johnson) I think we discussed that this morning, that after the survey reports are complete and the DOT has reviewed them and accepted them, we would continue the process of submitting exception requests for approval. So if it's six to eight weeks, I
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
think we talked this morning, plus a month for their approval, it would be sometime after that.
Q. So have you put in or are you planning to put in exception requests for the 30 feet of permanently cleared area required over the trench?
A. (Johnson) I believe you're mischaracterizing the 30 feet. I think we discussed this morning that if we're not in the roadway, that we would need approximately 10 feet off the edge of shoulder to put the duct bank out into the drainage areas or just beyond the drainage area.
Q. I mean the area that needs to be kept clear of growth so that the roots don't go in and destroy your duct bank and cables.
A. (Johnson) Again, I don't know where the 30 feet came from. I believe it's 10 feet or less.
Q. In the EIS it says 30 feet. And your right-of-way up in Coos is for 25 feet. And it showed cleared in the visual simulation over that cable.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

A. (Johnson) Correct. That's on land that we own and is what we've chosen to put in that particular area. That doesn't mean it is consistent across the entire project.
Q. So are you stating that over the duct bank anything will be allowed to grow?
A. (Johnson) No. I said that the clearing that we'd like to maintain will be somewhere between 5 and 10 feet.
Q. Centered over the duct bank --
A. (Johnson) Correct.
Q. -- or on either side?
A. (Johnson) No, 10 feet total. So, 5 feet either side would be the maximum.
(Court Reporter interrupts.)
Q. So, several of the exception requests state in green wording, quote, "Area beyond exception request to be routed outside of pavement in final design," end quote. How far outside of the pavement?
A. (Johnson) Again, as we just discussed, if there's room and there's no other obstructions, we can move it farther away. If there are obstructions, it would be within
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
this 10-foot area that we discussed this morning. It is all entirely situational as to how wide the right-of-way is and what particular land or land use is being used right at that particular area.
Q. So it would be fair to say that the trenching locations shown on the permit packages and exception requests are not accurate.
A. (Johnson) So, the permit package was exactly that; it was a preliminary design. The exception requests are accurate, the particular green areas, because those exception requests are for in the road by design.
Q. The exception requests show trenching at the edge of the pavement. So are we to assume that's not an accurate location?
A. (Johnson) The exception requests themselves, by definition, are for work that's done in the pavement or at the edge of pavement.
Q. So when they say "area beyond exception requests to be routed outside of pavement in final design," we don't know where that routing is going to be.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

A. (Johnson) So, currently we're in the draft stages of putting that, shall we say, nonexception request alignment together, which is how we came up with our chart this morning that discusses the number of miles and where they are and where they aren't. And that will ultimately become available as we work with the DOT to refine the design and publish the design documents. And I think we discussed earlier that that would be available and issued for the construction phase sometime around February of next year.
Q. So as it stands now, we don't know where the cables and trench will be located.
A. (Johnson) With a hundred percent certainty, I agree with you. But as we discussed this morning, the most probable places are going to be exactly as we noted on that drawing that I sketched out, that there will be some that will be in the roadway due to exception requests and some where there's an appropriate amount of room on the side of the road where we can be off the road surface and the shoulder.
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
Q. So, a landowner abutting the road will not know within 5 or 10 feet where the trenching might be.
A. (Johnson) That's a fair assessment.
Q. So, between Exception Request No. 122 and 124 is close to a half a mile not shown on either request, where the cables were proposed to do east to the west side of the road. Would you agree this is a plan change?
A. (Johnson) What do you mean by "plan change"? A change to the alignment?
Q. You moved the cable to the other side of the road. Would you call that a change in plan?
A. (Johnson) Change in design, yes.
Q. So in how many other areas are design changes such as this not reflected in the exception requests?
A. (Johnson) So, again, by definition, an exception request, when we cross a road, you have to have an exception request to do that because we're in the pavement. So in all the exception requests, what is shown is what the current plan is from a design perspective.
Q. So this is one more half-mile segment where
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
we won't know what side of the road the cable is on until final design in February, March.
A. (Bowes) Which is the same as the entire process has been all along.
Q. That's my point.
A. (Bowes) Until the DOT approves the final design, we have an alignment within the roadway, and now some alignment directly off the roadway.
Q. So when you started planning this project,
what was the width of the right-of-way that you were told you had to work within?
A. (Bowes) I think we assumed to be in the roadway. So it was, I won't say it was irrelevant, but it was not part of the design process because we were within the travel portion of the road.
Q. There was no Plan B?
A. (Bowes) Well, directly adjacent to the road would be the Plan $B$, which, again, would be,
in the normal course of business would be where the DOT has maintained those facilities over the years.
Q. Given that the UAM stated clearly that it was
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
roadway. So it was, I won't say it was

There was no Plan B?
to be at the edge of the roadway.
A. (Bowes) I believe we answered that question this morning. And again, our initial filing with the SEC also had that exception request in Appendix No. 9.
Q. Wouldn't it make sense that your Plan B would be burying at the edge of the right-of-way?
A. (Bowes) No, because that would have more environmental and abutting landowner impacts.
Q. Then what's the point of the Utility Accommodation Manual?
A. (Bowes) It's a way to control the uses of the road right-of-way, as well as maintain public safety for the utilities that go into that roadway.
Q. So where did the four-rod, general right-of-way that we see on the SHEB and other permit packages, where did that come from?
A. (Johnson) That came from the research that was done by our surveyors.
Q. So, in terms of the permit packages and exception requests previously submitted, you would agree that the surveys on which they
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
were based have been rejected by DOT.
A. (Johnson) They have been asked to be enhanced, yes. So, by the letter they rejected them and asked us to resubmit.
Q. Given that your surveys were rejected by DOT, at this point, as we sit here today, the information that we have is incomplete.
A. (Johnson) Again, as I've stated earlier, we've withdrawn the rest of the exception requests until we can update the survey.
Q. So this shows Northern Pass's estimates of expenses if DOT does not grant their Exception Request No. 10 for Plymouth.

What are your totals for increased costs if your exception requests are not granted?
A. (Bowes) For this one exception or --
Q. No, for everything.
A. (Bowes) I don't know.
Q. Can you find that figure out?
A. (Johnson) Considering we've withdrawn a bunch of the requests and we don't have a complete number, again, the answer is yes, but it would be in the six- to eight-week time period, plus the generation of the new
.
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
exception requests.
A. (Bowes) The existing ones are a matter of public record, so the total could be done by anyone.
Q. So I'm now showing you what has been marked as No. 10, Joint Muni 295, which is a portion of Exception Request 101 in Bethlehem. I believe this is shown at four rods.

If the 1871 two-rod layout covers this area, how would the work be done here? (Witness reviews document.)
A. (Johnson) So, again, the ascertation [sic] that this roadway is a two-rod layout, I'd have to bring it back to my surveyors and determine whether that was true. It looks like they believe it's a four-rod layout in this particular area.
Q. Hypothetical.
A. (Johnson) So if it was half the distance? Centered on the roadway? I mean, you'd have to look at the occupancy of the road and find a way to fit the equipment in.
Q. So could you do an HDD within a two-rod layout?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\} determine whether that was true. It looks

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\text { \{SEC 2015-06\}[Day } 42 \text { AFTERNOON Session ONLY]\{09-29-17\} }
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A. (Johnson) Yes.
Q. If your work area is 30 feet and your passing lane is 11 feet?
A. (Johnson) So, clearly you'd have to rearrange the equipment so the 30 feet was lessened. But I believe that there's plenty of experience doing that. We'd just have to be more in line as opposed to having the equipment spread out.
Q. And no road closures?
A. (Johnson) At this point, no. Again, it's a hypothetical, so we'd have to address that as the situation may arise.
Q. So are your surveyors currently assessing this area in regards to the 1871 two- and three-rod layout?
A. (Johnson) I can't speak specifically to the two- or three-rod layout as you've noted, but certainly they are reviewing historical documentation and will provide an update to this area.
Q. So I'm showing you a photograph marked as No. 11, Joint Muni 295. Are you aware that your proposed HDD exit work zone in Franconia
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
boxed the Lafayette School entrance, Franconia Auto and a local clinic?
A. (Johnson) I'm not familiar with this area, no.
Q. Are you aware that having only one lane of traffic open here will create traffic delays for Franconia Main Street?
A. (Bowes) I think Lynn has talked about the duration of traffic delays. But there will be some delay yes.
Q. Are you aware that your proposed HDD entry work zone for these bores is between Garnet Hill and its parking lot?
A. (Bowes) I am not aware of that. I don't dispute that, though.
Q. Are you aware that you have proposed HDD exit and entry work zones in front of the Wildwood Campground on the Lost River Road in Easton?
A. (Johnson) Without seeing the drawings or -- I can't say yes or no. But I'm not familiar with the area.
Q. And are you aware that you have proposed HDD entry and exit work zones opposite the Maple Haven Campground in Woodstock?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
A. (Bowes) That's not part of this exhibit; correct?
Q. No, it was just two more with the same problem.
A. (Bowes) If you have documentation, we'd be glad to review it and answer the question. So you don't know that, off the top of your head.
A. (Bowes) I do not.
Q. So this is just a map added to your map showing the location of your HDD work zone in relation to the school and the road to Sugar Hill. This is Franconia Main Street and the clinic in the gas station.
A. (Johnson) So the highlight there that you've shown is the laydown area for the conduit assembly. And effectively, that would be one of the last steps that's done and have a very short duration of impacts to landowners. I think we discussed earlier in our past testimony that there are ways to mitigate the way the conduit is laid out. We can either bury it underground to maintain grade so that people can enter and exit these businesses on
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
a regular basis.
Q. So this is part of an article by Martin Murray, Eversource/Northern Pass spokesperson, that was published in the Littleton Currier this past Wednesday.

Did the outreach he mentioned include letting business owners know of the exception requests, resulting in potential splice vaults, trenching or HDD work zones in front of their properties?
A. (Bowes) I'm not familiar with the article. Do you have an entire article so I can review it?
Q. I don't have the entire article. But it says right up there, "outreach to local businesses..."?
A. (Bowes) I'm sorry. Which column are we in?
Q. The middle.
(Witness reviews document.)
A. (Bowes) Yes, we have sent letters to all of the businesses along the route.
Q. Have they --
A. (Bowes) There was 248 that we've identified. Letters went out in March of this year. And
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
mid-year we hired a public relations, public consulting firm called Louis Karno. They have developed a plan for us, including interviewing 30 of the businesses along the route. And we are executing that plan as of October 1st this year. So there will be additional outreach taking place that will occur this coming week.

We are also starting to meet with towns to discuss various impacts, including emergency services. And that is taking place, again, launched effectively for the October 1st time line. So, yes, we will be reaching out to these landowners and businesses.
Q. So are you aware that many people, when they get a letter from Northern Pass, especially a thin one, it ends up in the trash?
A. (Bowes) I can't speak to what and how it ends up. I know that there's specific towns that have taken a position where they will not cooperate with us, and I believe the town you represent is one of those.
Q. So you did not go to these people or phone
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
them or go to them personally with the exception request sheets in hand to show them what was specifically planned for their property.
A. (Bowes) We have not because, again, the final approval from the DOT has not been received.
Q. Wouldn't it make sense to do some early outreach to explain things as they may be?
A. (Bowes) So we have outreached to all of the business customers, and we've had multiple sessions to talk about this and invite anyone that needs to see or participate in the process access to our latest information. And we have had some people take advantage of that. Many of have not, especially if their town leaders have instructed them not to cooperate with us.
Q. Has Northern Pass contacted Lafayette School, Garnet Hill, Ammonoosuc Community Health or Franconia Auto Service directly to discuss these plans?
A. (Bowes) We have made the offer to all of them, yes.
Q. Offer in what form?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
A. (Bowes) I believe in a letter.
Q. You consider that adequate outreach?
A. (Bowes) So it's the start of it. We also, as you have heard before when we testified around our data base, we maintain every contact with every entity along the route or even outside the route. I can research those specific ones and, you know, read into the record when the contacts were made. We typically don't talk about individual customer contacts for confidentiality reasons. But in this case, I think we could make that available.
Q. And when did this outreach start?
A. (Bowes) It's been progressive. But clearly in the March time frame we started with outreach along the underground route.
Q. But that did not include actually going to people's houses, contacting them in any way other than a form letter?
A. (Bowes) And an offer for web site updates, an offer for Hotline. And some people have taken advantage of that. Like I said, we do maintain all of those records.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
Q. And if someone calls you on the Hotline, you bring over the permit package and show them the plan?
A. (Bowes) If they request it, yes. We've made several of those trips.
Q. If they don't know to request it, do you show them that information?
A. (Bowes) Well, during the discussion it usually revolves around, "How is it going to impact my property directly?" So, yes, we would share that.
Q. Thank you.

CHAIRMAN HONIGBERG: Next on my list is the Abutting Property Owners. And there's apparently four people -- four different people who want to ask questions. I'm not sure -- I mean, I have a very brief description of what people said they want to do, not all of which $I$ understand. But Dr. McLaren, you're listed first.

UNKNOWN SPEAKER: Yes, Mr.
Chair, and we'd like to go in that order that they're listed.

CHAIRMAN HONIGBERG: According
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
to the list, Dr. McLaren wants to talk about the topic of ER 125 and 129.

CROSS-EXAMINATION
BY DR. MCLAREN :
Q. My name's Campbell McLaren. I'm from the central abutters. And I'm going to address this afternoon two questions for exceptions and also address splice vaults, pits.

And we'll start off with Exception 125. And I'm just going to lay the SHEB document on the ELMO. So is that clear for everybody --
A. (Johnson) Yes.
Q. -- on the panel?

So this request references an HDD pit in the pavement, an HDD alignment passing under the pavement. And really, my focus here has been if you could look at the... let's see. The start of the exception request is on this -- sorry. The end of the exception request is visualized. I think you can see we have a black line pointing to the end of two dashed lines.
A. (Bowes) I'm sorry. Do you have a copy of the
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
exception request?
Q. That's seen clearly, is it?
A. (Bowes) Do you have a copy of the exception

MR. IACOPINO: The text.
Q. Oh, the text? I don't have a copy, no. Is it not available? Can you not pull that up on the computer?
A. (Bowes) We don't have access to it, no.
Q. Well, if I could --

CHAIRMAN HONIGBERG: Let's go off the record for a moment.
(Discussion off the record)
CHAIRMAN HONIGBERG: Dr.

BY DR. MCLAREN:
Q. Does that help you tie into my question, that it is three- to five-week duration, that it's a HDD pit in the pavement, HDD alignment passing under the pavement?
A. (Bowes) Yes, that is correct.
Q. Right. And so I just want to perhaps go back to the prior SHEB description of that. Can you go back to that? And if you look at the

request?Well, if I could --CHAIRMAN HONIGBERG: Let's gooff the record for a moment.

## McLaren.

BY DR. MCLAREN:

[^1][ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
end of the exception request, it's shown, indicated by a black line pointing down to the end of two dashed red lines. Do you see that?

MR. IACOPINO: And the exhibit
that you're looking at now will be APOBP 53.
BY DR. MCLAREN :
Q. The difficulty that you are having is of course what we have as well.
A. (Johnson) Unfortunately, the way you placed it on ELMO, the writing that says "end of request" is just off the screen there.
Q. Okay. Hold on a minute.
A. (Johnson) I think we found it, but... perfect.
Q. So this request was for a pit, or two pits in the pavement. Does that not look like it's out with the pavement? I've colored in orange the edge of the pavement. Would you agree?
A. (Johnson) Yes, the orange looks like it's the edge of the pavement.
Q. I'm sorry. Could you repeat that?
A. (Johnson) The orange does look like the edge
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
of pavement, yes.
Q. And do you agree that these pits are out with the pavement?
A. (Johnson) The splice vault looks like it's located outside of the edge of pavement, yes.
Q. We're talking about pits, HDD pit. What is that reading for your splice vault?
A. (Johnson) So if it's a single large vault, that's a splice vault. The pits would be a little further to the left.
Q. Remember the requests were for HDD pits in the pavement. And we see the HDD line ending out with the pavement. I do have another part of the SHEB which also indicates that. I'll just place it...

I represent this is from 125. And if again you look at the pits, you see them out with the pavement, don't you?
A. (Bowes) That is correct.
Q. And that's all. The point I'm trying to make here is that your request is to put them in the pavement.
A. (Bowes) It's the other end we're talking about.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
Q. The entry?
A. (Bowes) Yes.
A. (Johnson) No, I think it's a whole separate HDD that's on the -- if you go to the other map that you have on that particular document, there's another HDD that starts. And I believe that one is the request to be in the roadway.
Q. So I am corrected there.

If we move on to requirements for those pits, though, accepting what you say, following the exception request document going on to Page 2, that document already looked at.
A. (Bowes) This is the text part of the document, correct, Page 2?
Q. Yes.
A. (Bowes) Yes, we have it.
Q. I'd just like to ask some questions about the following elements that are required. The need for a level work area for drill equipment, is that something that's necessary?
A. (Johnson) Yes. Typically you want your
machinery to be level and braced so that any -- as you go through you have a consistent, uniform platform.
Q. And level means level.
A. (Johnson) Correct.
Q. Just going to place on the ELMO... correcting myself. You're talking about this entry pit, aren't you?
A. (Johnson) That's correct, yes.
Q. I have kind of a blurry image here, but I think the line indicates the pit out with the roadway.

But I would concentrate on the need for a level work area and point out that that area is not level. It dips and recedes very rapidly within 5 feet. You go on to say that consequently you would need approximately 30 feet of level -- we've talked about that. Stable. It's not stable; it's crumbling. Heavy rains wash it down. Non-vegetated. Clearly it's vegetated.

How will you perform your -- what you have to in a situation like this, land not level and friable and vegetated?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
A. (Johnson) So the exception request is to put the entry pits in the roadway and extend slightly into the shoulder and the vegetated area that you have there. Clearly we would be having to bring in some temporary fill in to stabilize and provide an area flat enough. The drill rig in question for this particular one $I$ believe fits in the lane, a single lane of traffic. So the requirement to have 30 feet, again, is a conservative requirement. And we could align our drill rig in a perpendicular manner all basically contained within the lane and the shoulder area of this to perform the construction.
Q. So you don't require 30 feet; it's just an ideal figure?
A. (Johnson) That's correct.
Q. Okay. I'd like to move on to Exception Request No. 129. And if you could research your DOT source for 129. Perhaps you can let me know when you find it.
A. (Bowes) We have it.
Q. Okay. I've removed my source of questioning.
A. (Bowes) We have the pictures, so you can take
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
that if you need to.
Q. My question here is essentially the work zone. Where will the work zone be placed? How long will it be, and what width will it be? Noting that there is a barn about three quarters of the way along on the east side, the road right-of-way is three rods. We have evidence of this. Where will you place and how will you place the work zone? What width and length?
A. (Johnson) So this is just trenching. This is not a -- there's no HDDs in this area or any splice vaults. So this would be a train of activities, if you will, that has the excavation. You'd follow that by the conduit being installed. You'd follow that by the FTB and other backfill and then the final paving component once the road has been restored.
Q. So you won't need a work zone back to the exit pit which is just around the corner.
A. (Johnson) No. This particular area you're showing is only trenching. There's no HDDs or anything involved.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
Q. The HDD --
A. (Johnson Is further down the road.
Q. Back to that splice vault that we saw before on 125.
A. (Johnson) Correct. We will not need --
Q. You won't need a work zone for that splice pit?
A. (Johnson) The splice pit, yes.
A. (Bowes) This exception is to be in the roadway because of such a narrow portion here, as well as the elevation change, the banking right there.
Q. So you know what I'm talking about?
A. (Bowes) I do.
Q. The pit is just around the corner.
A. (Bowes) Yeah. So this particular, we would still have one lane available. But we would take the lane, and we would be offset here towards, you know, the white line or right into the ditch. It's probably -- I think the request was for four days, or the anticipated time frame to do this work would be about four days in duration.
Q. And you will be leaving the barn intact?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
A. (Bowes) Oh, yes. Yes. If we get out there and find that we cannot do the construction, we will move further into the roadway. And this is a location where we'd probably do some additional geotech, just to make sure we understand that there would be no need to use either mechanical means -- I'm talking about a rock hammer -- or certainly no other issues around how we would construct this.
Q. Fine. So just going to take you back to 125. And I think it was Mr. Bowes who pointed out the splice pit there.
A. (Bowes) Yes.
Q. From the plan it looks like it's moved further north, doesn't it?
A. (Bowes) Yes, it does.
Q. From black to green.
A. (Bowes) Yes.
Q. It's gone off the roadway, out to the roadway. It's now into the side. And to further develop this... this exhibit is APOBP 47. So this shows a power pole, some lines, the bridge over the Gale to the northwest. And then can you see from edge of the roadway
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
two stakes with green ribbons?
A. (Bowes) Yes we can.
Q. We have strong evidence to support a three-rod right-of-way here. That first pole just below the fire engine sign is at three rods, and the second one further out is four rods. Do you see those?
A. (Bowes) Yes, I do.
Q. Exhibit APOB48. Look at this exhibit. Can you see horizontal red tape?
A. (Bowes) Looks like a rectangle or square.
Q. That's right. And you see the fire engine
sign? This is intended to represent a splice vault or splice pit. I've heard several dimensions. This was -- the dimensions in this example are 8 feet wide and 14-foot long. Would that be agreeable for the splice vault itself, 8 feet wide -- sorry -- 34 feet long --
A. (Johnson) Yes.
Q. -- 14-foot wide?
A. (Johnson) The width is not 14 feet. I think
the width is 8 feet and the height is about
$7-1 / 2$ to 8 feet, and the length is, as you
the width is 8 feet and the height is about
$7-1 / 2$ to 8 feet, and the length is, as you
\{SEC 2015-06\}[Day 42 AFTERNOON Session ONLY] \{09-29-17\}
Q.

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say, 30 or 34 feet.
Q. Okay. What about room around for the shoring and for worker movement? What would you add to that?
A. (Johnson) Probably another 2 feet to 3 feet.
Q. Excuse me?
A. (Johnson) Assume two to three feet on each side.
Q. So, another 4, 6 feet?
A. (Johnson) Approximately, yes.
Q. So this as represented is smaller than perhaps one would expect for the customary splice vault. Would you agree? We could have made it larger.
A. (Bowes) So it looks like between the two green pins was supposed to be one rod, so that would be 16-1/2 feet.
Q. It goes from three rods to four rods. That's right.
A. (Bowes) Right. So is that dimension furthest away from us, towards the sign of the fire track?
Q. Yes.
A. (Bowes) Is that longer or wider than one rod?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}

Looks like it is in this picture. I can't tell where the rod markers are and where the stakes are for your outline. I'll accept your -- well, what dimensions are the red markers?
Q. The markers, the first marker is at three
rods; the second marker is at four rods, and the width measured from -- measured 5 feet in from the edge of the roadway is 14 feet wide.
A. (Bowes) The struggle I'm having is if these two green markers show one rod, your red outline is wider than one rod, which means it's more than 16-1/2 feet.
Q. Let's accept that.
A. (Bowes) Fine.
Q. Okay?
A. (Bowes) Yeah.
Q. If we accept that, $I$ would still contend that
the splice pit is beyond the first green marker upright. Would you agree?
A. (Bowes) I will accept that, yes.
Q. Okay. The evidence that we have indicating
that this is a three-rod road would then push the splice box into Mrs. Borchardt's[?]
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
territory. It would be over the right-of-way.
A. (Bowes) Yes. So that would require an exception request to bring it back towards the roadway.
Q. And would you intend to ask for that?
A. (Bowes) Yes, we would.
Q. And if you --
A. (Johnson) If the right-of-way is three rods.

The way that this design is laid out is
assuming that it's a four-rod right-of-way.
Q. Are you asking me a question?
A. (Johnson) No.
Q. Okay. If you push this back -- then if you were to push that splice vault backwards or westward or into the road, it would cross over that first lane, wouldn't it? It would cross certainly into the first one of the lanes.
A. (Bowes) I would say yes, it would be in part of the travel lane of the road.
Q. In part. Okay.

I want to talk about cranes. It would seem surprising to me that -- first of all,
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
you were asked the weight of a splice vault, and no one knew. But surely there's somebody on your panel that has the technical expertise and knowledge to oversee and write the contract for the contractors and know these figures. So could you perhaps have another shot at the weight, please, of the splice vault, this concrete structure?
A. (Scott) I believe our response is we didn't know, off the top of our head. We certainly could look it up. But we don't know it, off the top of our head.
Q. So you've not put any contracts, bids out; is that correct?
A. (Johnson) It's fully bid, yes. And the way that you --
Q. Mr. Scott, I'm not really hearing you very clearly.
A. (Scott) I wasn't speaking.
Q. Oh, I'm sorry.
A. (Johnson) The Project is fully bid. And the requirements aren't necessarily by pounds. It's a dimension and the thickness of a wall.
Q. The dimension and the thickness of the wall.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
A. (Bowes) I mean, it's probably in the 20- to $30,000-$ pound range per piece, subject to check. I mean, that would be probably a ballpark estimate.
Q. So could you please repeat that? How many?
A. (Bowes) Again, $I$ just was taking an estimate. Maybe 20- to 30,000 pounds.
Q. Twenty to 30,000 pounds?
A. (Bowes) Per segment. And there would be two segments.
Q. Okay. All right. I have other evidence from precast specialists that 8 feet by 6 feet by 8 inches thick by 33 feet long would be 54,000 pounds.

MR. NEEDLEMAN: Objection. This is testimony, Mr. Chair.

CHAIRMAN HONIGBERG: Yeah.
Dr. McLaren, stick to asking questions, please.

DR. McLAREN: Thank you.
BY DR. MCLAREN:
Q. What would you say to the information that this could weigh 54,000 pounds?
A. (Bowes) I think it's right in line with the \{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
estimate $I$ just gave you, 20- to 30,000 pounds per piece, two pieces --
Q. Sixty thousand for two?
A. (Bowes) Yeah, could be.
Q. And that would be approximately what, 30 tons?
A. (Bowes) In one piece? Yes. So the total weight is --
(Court Reporter interrupts.)
A. (Bowes) So the total weight installed could be that, yes.
Q. Is a solid 50 ; is that right?

CHAIRMAN HONIGBERG: Dr.
McLaren, you've got your numbers. It's somewhere in the 50- to 60,000. You can divide by the correct number to get the number of tons. Ask your next question. DR. McLAREN: Okay.

BY DR. MCLAREN :
Q. For this poundage, what size of crane would you need?
A. (Bowes) You'd need a 30-ton to 40-ton crane.
Q. What kind of footprint profile pad does that require? What size?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
A. (Kayser) It would be an over-the-road crane that would be able to lift them.
A. (Bowes) So it would fit in one travel lane.
A. (Kayser) Yeah, one travel lane.
A. (Bowes) There would be some outriggers probably. Some stabilization would be required. It would hopefully take a lane plus the shoulder probably.
Q. How long would the boom be, approximately?
A. (Kayser) Yeah, probably in the 30-foot range I would guess.
Q. So in this situation here, with the sluice [sic] box pushed out, the crane has to be 20 feet away, does it not, from the center of the splice vault? Mechanically to be able to lift up this massive weight, it can't be too close to the splice vault. Wouldn't that be right?
A. (Bowes) I'll accept that.
Q. Twenty feet is about the --
A. (Bowes) Yes, I'll accept that.
Q. So that the crane, though we now don't have exact numbers, maybe we never did hear, but would be pushed further out away from the
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
splice vault in order to deliver the vault into the ground.
A. (Kayser) Well, the crane could be in line with that and just --
Q. I think this is important --
(Court Reporter interrupts.)
A. (Kayser) The crane would be in line with that, so it wouldn't necessarily be beside the truck. You could park the vault in front of it, have the crane, and then the crane would set it over in --
Q. So the crane would be --
(Court Reporter interrupts.)
A. (Kayser) So the crane would be in line with the truck that would deliver the splice vault, and then it would set it into the excavation.
A. (Bowes) And I think we discussed that there could be a temporary closure while we swing the piece of concrete over the roadway and then place it into the excavation pit.
Q. I think you saw previous exhibits. The power pole has two distribution lines running from
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}the truck that would deliver the splicevault, and then it would set it into theexcavation.
pole has two distribution lines running from
it. What would you do with that?
A. (Bowes) So I see three communication attachments and one power line in this picture.
Q. Yes.
A. (Bowes) The two conductors are at the top of the pole. So in this case, it looks like it's all on one side of the street, although it may cross over at this point. But the pick or movement of concrete would have to take place towards me in this picture. It couldn't be done lower or down the road, down the perspective of this road. It would have to be done behind me.
Q. Do you mean from the south?
A. (Bowes) From... again, I don't know the --
Q. We're looking northward.
A. (Bowes) It would be done from the south I believe, yes.
Q. And that's the southerly direction. The sun's coming in that way. Does that look like the kind of territory that you're going to be able -- it's not level. And in fact, just to the left of this gritty stuff is a stream. The road disintegrates rapidly
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
there. It was partially washed out during recent heavy rains. Do you think you're going to be able to put a crane there?
A. (Kayser) If that's the location of the splice vault, the crane would not have to sit there; the crane could remain on the paved area. Could you say that last bit again, please? (Kayser) I said the crane could remain on the paved area to place the splice vault into the excavation.
Q. Would you agree that with our narrow, twisty, crumbling roads, roads that crumble easily at the edge, get washed out, that these massive cranes could provide a significant problem, probably bringing out -- causing road closures just through the need for more space, flatter surfaces, more stability?
A. (Bowes) So as I said, and I think we testified previously --

CHAIRMAN HONIGBERG: Mr.
Bowes, that was a "Yes" or "No" question. Would you agree?
A. (Bowes) No.

BY DR. MCLAREN:
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
Q. Could I hear your reasons?
A. (Bowes) So I think as we've testified previously, there would be potentially a road closure while we swing the concrete piece over the roadway and place it into the excavation pit. But the work itself would be done from one travel lane or on the shoulder itself.
Q. What kind of time? You got to bring this vault up on the flatbed trailer. You've got to unload it, and you've got to assemble the crane -- what's the duration of the unloading?
A. (Bowes) Probably less than two hours with maybe a road closure for about five minutes. CHAIRMAN HONIGBERG: Dr.

McLaren, was this -- am I correct that this layout -- and maybe this is for the witnesses -- this particular location in the layout that's the subject of the exception request is the proposed layout; is it not? WITNESS JOHNSON: That is correct.

CHAIRMAN HONIGBERG: Dr.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

McLaren, why did you not ask these questions the first time this panel was here?

DR. MCLAREN: I hadn't seen
the SHEB and the new placement of the --
CHAIRMAN HONIGBERG: There's apparently no new placement. This is the original layout is what the testimony is.

DR. MCLAREN: No, no, it's not. They've already admitted that they moved it northward.

CHAIRMAN HONIGBERG: Mr.
Johnson.
WITNESS JOHNSON: This is subject to an exception request, yes.

CHAIRMAN HONIGBERG: So this
is new. This is not the original design.
WITNESS JOHNSON: Yes. I was incorrect. CHAIRMAN HONIGBERG: All right. You may continue.

DR. McLAREN: Thank you.
BY DR. MCLAREN:
Q. So, understanding that we have difficulties here, $I$ would mention that this spot at this
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
point is what appears to be an old foundation. Five feet down from the previous depicted edge of the splice vault is a stream year-round. Shows some horizontal rock formations. And I did have a picture of some beaten up lilies. I think here they are. So these lilies are kind of squashed. I think a lot of you will recognize them as lilies. And they're the traditional lilies planted at the site of the buildings, the one that we see. They're orange. These ones flower every year. So there was a building there. You're coming down on a prior building. My question would be: The historical department would be concerned about this, wouldn't they?
A. (Bowes) Potentially, yes.
Q. Have you investigated or have you noted these facts and contacted and asked them?
A. (Bowes) You're talking about the town now?
Q. No, no, the historical society.
A. (Bowes) DHR you mean?
Q. Yes.
A. (Bowes) I don't know if we have or not. I
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
know we had witnesses yesterday, I believe. Would have been a great question to ask them.
Q. Okay.
A. (Bowes) We can certainly confirm the origins of the building through the DHR process and our experts. And if we need to relocate this closer to the roadway, which I think that's what you're implying, that this would be close to the edge of the four-rod alignment, we can look --
Q. And three-rod alignment.
A. (Bowes) Obviously the four-rod alignment. So we could bring it back in closer to the three-rod alignment or find a different location. If this is truly right in line with the splice pit, it probably warrants a relocation.
Q. And how -- if you had to relocate north or south, do you see that as possible?
A. (Bowes) So, clearly the original design would be ideal in this location, but that would place it into the roadway. So, again, it could be a valid exception request for the Department of Transportation.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
Q. Could you extend the power line around this corner?
A. (Bowes) Yes.
Q. When does a curve become too great for the line? At what point does the line get stressed curving, arcing?
A. (Scott) Are you talking about during a bore or just --
Q. Yes, a --
A. (Scott) -- or an open cut installation?
(Court Reporter interrupts.)
A. (Scott) And your answer was during a bore?
Q. Yes.
A. (Scott) We use 1200-foot radius bends as a design criteria for those designs.
Q. So this would not be a problem?
A. (Scott) I believe that it's shown as is because that's what fits up with the geometry of the bore, as I understand it.
Q. Okay. Well, thank you very much. DR. McLAREN: Thank you. CHAIRMAN HONIGBERG: Mr.

Ahern. And Mr. Ahern wants to talk about
Route 3 south of Plymouth.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

## CROSS-EXAMINATION

BY MR. AHERN:
Q. Good afternoon, gentlemen. I'm Bruce Ahern, one of the intervenors from the Plymouth to -- excuse me -- Bethlehem to Plymouth Group. I'm the only intervenor down in the Plymouth area. And I wanted to talk about Route 3 south of Plymouth, since that's what I'm most familiar with.

My first question has arisen from some of the talk that's gone on this morning. You said during earlier testimony that there would be six to eight weeks before you completed this survey. What $I$ was wondering is, has the initial research on all the deeds and all the layouts that you've talked about, has that been completed?
A. (Johnson) Yes, it has.
Q. Okay. Have any of you talked to the surveyors before this meeting --
A. (Johnson) I talk to them every day.
Q. Okay. Have you found anything in their research that will change any of the exception requests that we were shown today
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

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or that you still have as active, the ones that have been approved by DOT?
A. (Johnson) The ones that have been approved by DOT, I don't believe so. I would have to check to see if there were anything significant. Off the top of my head, I would say no, there's been no new documentation that would change drastically the layouts that we had previously.
Q. Okay. And when was your last meeting with DOT?
A. (Johnson) The 19th of the month.
Q. Of this month? Okay.

Next thing I'd like to do is discuss -you talked earlier about the prescriptive process that you're planning on using for areas where you cannot determine the actual width of the right-of-way. I was wondering, did you intentionally omit, or do you not expect to include the landowner in that process?
A. (Johnson) I believe that the landowner wasn't consulted because the survey of prescription basically is the occupied use. So it would
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
be features of the roadway, the shoulder and the drainage ditches, and nothing beyond.
Q. Per the state of New Hampshire, the landowner owns the land that the road right-of-way sits on. So do you not think that the landowner should be included in that process?
A. (Johnson) I guess I've never thought about it. And the surveyors certainly have not brought it to my attention prior to this. If we're defining a travel way that's got a road, a shoulder and a ditch line, to me that's the obvious occupancy of a road.
Q. Okay. I'd like to next go to Exception Request No. 1, Revision 2.
(Pause)
Q. This is page -- okay. On this Page 4, you say that you're going to add rebar to the duct bank to form a 30-foot bridge over the culvert that will allow for excavation under the duct bank for purposes of future maintenance. Is this going to add time at all to the process that is being done?
A. (Johnson) Potentially, yes. Marginally.
A. (Scott) It would add a couple of hours.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
Q. Okay. You don't need to tie it together like they do in a concrete foundation?
A. (Scott) You do, but it would only add a couple of hours.
Q. Okay. Also on Page 4, it says that, in connection with the future maintenance activities especially related to the culvert, Northern Pass will provide any and all required support, including, but not limited to, providing crews to assist while work is being conducted in the vicinity of a culvert. Will this be at no charge?
A. (Bowes) It will be at no cost to the state. That is correct.
Q. Are you offering this at all locations where you go over or under utilities and drainage structures?
A. (Bowes) I'm just trying to remember what the requirements were in the DOT commission -conditions. I can't say that with specificity right now. I can review it and certainly provide an explanation.
Q. Okay.
A. (Bowes) Generally, that's a condition of a
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
permit with a DOT is that we will be required to support ongoing activities for the state.
2. So you wouldn't object to the Committee making this a stipulation of the operation of this transmission line?
A. (Bowes) Again, I think we would certainly accept a condition if it's not already in the DOT list of requirements. And I don't quite recall what your scope of requirements was. It sounded like it was under, over, near. I wasn't clear --
Q. I said go over or under utilities and drainage structures.
A. (Bowes) Yeah, there's probably some horizontal requirement as well $I$ would add in there.
Q. That you would provide crews at no cost to help with repair and maintenance?
A. (Bowes) Correct.
Q. Okay. I have two water lines that go across the road that you're going to be going by. Would this apply to my water lines also?
A. (Bowes) The requirement to repair/replace?
Q. The requirement that if sometime in the
. there.
2. That you would provide crews at no cost to
future I have to do maintenance on those lines, will you be providing crews to help to assist with -- crews to assist while work is being conducted in the vicinity of the culvert -- or excuse me -- in the vicinity of the utility?
A. (Bowes) Yes.
Q. Okay. So I'll be able to call you up and have you send somebody out, and I'll be able to repair that water line without it costing me large sums of money to get someone to do an engineering study and get that water line repaired or replaced.
A. (Bowes) So you could trigger that one of two ways. The normal Dig Safe process that you would go through, which clearly identifies, okay, something's going to happen. If it's going to be a new installation, and that would be more the emergency, where you have to get in there right away and have it repaired, so we would respond as a registered entity in the state of New Hampshire for Dig Safe, and we would provide assistance to both locate our facilities and to make sure that
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
safe work practices were done around them. If it were a planned activity, we'd like to be involved in that up front. So, rather than wait until the last minute, we'd like to be involved in the design process that you're going through, even though it may be limited. That would give us a little more notice in order to respond and maybe even help with the design next to our facilities, making sure that the clearances are proper. And then we'd also provide field assistance.
Q. Okay. I'm pretty sure that I'm not the only one with this situation, so I would hope that you -- well, let me ask it this way: If you would have no objection to the Committee making this a part of the stipulations of their approval of this project, that you would provide this to anybody that needed it, that had a utility underneath or that was going either under or over your project.
A. (Bowes) I think that's a reasonable request.
Q. Okay. Thank you.

Now, this exception is for installing a
line under the pavement in the area between
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

Station 2698+00 and 2701. Can you see that? (Witness reviews document.)
A. (Bowes) Yes, I see it.
Q. And it's above the culvert at Station 2699.
A. (Bowes) Yes, I see that.
Q. Okay. The culvert at Station 2700, are you still planning on going underneath that one?
A. (Bowes) Yeah, it's very difficult to see. But it's on the -- it's right along the line here. It's not outlined in red. It's right over the culvert. And yes, we are going over that as well. I'm sorry. We're going under that one.
Q. You're going under that one. Okay.

Now, at Station 2700, just above the big arrow that points to the north, I have a driveway at that location that $I$ use to access the top floor of my barn. Why was it not indicated on this diagram?
(Witness reviews document.)
A. (Bowes) Right about where it says NHECO --
Q. You can see where the --
(Court Reporter interrupts.)
A. (Bowes) NHECO 31-27.1.
$\{$ SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
(Court Reporter interrupts.)
A. (Bowes) NHECO 31-27.1.
$\{$ SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
(Court Reporter interrupts.)
A. (Bowes) NHECO 31-27.1.
$\{$ SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
Q. My driveway is in the area of the red writing, just above the "N" on that arrow. And I think it says -- where it says end of exception request, that's where my driveway is.
A. (Bowes) We will make the correction.
Q. Okay. There are times when I may need to access that driveway sometimes five to ten times a day with trucks, tractors, and sometimes towing equipment and trailers. Are there going to be any restrictions on me? Am I going to be delayed significantly getting in and out of that driveway?
A. (Bowes) So there will be some travel lane closure here for, looks like it's on the opposite side of the road from the driveway as planned right now. So you would be subject to that, you know, traffic control pattern. Doesn't look like there would be any need for plating over your driveway. It appears to be, as I said, on the other side of the road. So there would be some inconvenience while we're doing the construction adjacent to your property.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
Q. Okay. If I'm doing haying and I need to get the hay in before it rains late in the afternoon, am I going to end up losing hay because I can't get into my barn?
A. (Bowes) I don't believe you would. But that would certainly be a legitimate claim, and we would certainly be willing to buy the hay bales from you, if needed, or replace the hay bales if they were damaged. We will be using a lot of hay bales for, you know, sediment and erosion control on this project, and there's a possibility that we could even come to some accommodation to use some of that hay.
Q. Last time I checked, DOT requires straw, not hay.
A. (Bowes) I stand corrected then.
Q. I've tried to sell the hay before to the DOT, and it doesn't work.
A. (Bowes) Our intention would be to make you whole. First of all, not to cause you any disruption that causes you loss of product. But if there is, and I'm not going to even suggest there is, but if there were, we would
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
certainly take that as a legitimate claim.
Q. Okay. You can see the line just beyond the end of where that exception request stops. And I will show you a picture next that is just down from that. Am I correct that that line shows that you are going to be in the pavement at that point?
A. (Johnson) It appears that way, yes.
Q. Do you have an exception request in for that?
A. (Johnson) I'm having difficulty sort of figuring out where we are in relation to the exception request.
Q. The two culverts that we just talked about are just off the bottom of the page. The driveway that $I$ was talking about, you can see it right there at the bottom of the page on the right-hand side.
A. (Johnson) So if the alignment is in the road, by definition, it must have an exception request.
Q. Has one been submitted?
A. (Johnson) I'll go do the research and find out. I don't know the answer.
Q. Okay. Since you don't know, my next question
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
was if the splice vault at Station $2703+50$, which is shown there just past my house, if that was going to be in the road or off the side of the road.
A. (Johnson) Same answer.
Q. Okay. Am I correct that this is showing a right-of-way of 66 feet wide since it is more than twice the width of the paved surface?
A. (Johnson) It appears that way, yes, four rods.
Q. Okay. I'd like to go now to my prefiled testimony.
A. (Johnson) Sorry. I just went to the very top of this exception request.
Q. Yes.
A. (Johnson) And the exception request is for alignment and pavement, as well as crossing over existing drainage structures. So this request does encompass both the drainage structure going over the top of it, as well as the alignment in the pavement.
Q. The exception request goes from Station
$2698+00$ to 2701+00. It does not extend
beyond my driveway that we talked about that
(Johnson) It appears that way, Yes, four rods.
testimony.

[^2]goes up to the top of my barn.
A. (Johnson) Understood.
Q. So you have not submitted an exception request or anything for that stretch of the road.
A. (Johnson) I will check No. 2 to see where No. 2 is, if this is No. 1. But I --
Q. No. 2 is actually further north from this. It is to go around an area that has a big gully to the east side of the road. I looked through all the exception requests and could not find one for this area.
A. (Johnson) If there isn't one, then one needs to be created.
Q. Okay. I'll go back to the right-of-way showing 66 feet wide. This is from my prefiled testimony, which is APOBP 3. And I don't remember exactly which page it is, but it is in it. And I'm going to go back and forth here.

What this describes is the roadway in front of my house when they changed the road in 1931. And I would wonder if, Mr. Johnson, you'd tell me what it says down at the bottom
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
of that page, as far as the width of the right-of-way.
A. (Johnson) It says three rods wide.
Q. Okay. Since that was in my prefiled testimony, why did the surveyor not use that information?
A. (Johnson) I don't know. I'll have to go ask them. There could have been other documentation that superseded this or other historic layouts that put this into a inconsistent position.
Q. This is the only layout for that road because it was a new road. I will go back to the other picture and show you why.

If you look at that picture, the road used to go in front of my barn over to River Road where that driveway is on the right side of the road and then down the little road that you can see to the right of the main road and then out to what is now Route 3. The road in front of my house was a brand new layout in 1929 to '31. There is no other information on that area other than this.
A. (Johnson) I'll take your word for it.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
Q. Okay. This is your Exception Request No. 3, Revision No. 3, okay. In this one, does the depicted work area go right to the edge of the right-of-way? Can you see that?
A. (Johnson) It appears to, yes.
Q. Okay. Is there equipment that sits at the exit hole during this process at any time, like a big piece of equipment that sits there?
A. (Scott) Most likely.
Q. I'm sorry?
A. (Scott) Most likely.
Q. Okay. And how wide and how far past the exit hole sideways does it extend, that piece of equipment?
A. (Scott) I don't have a specific answer for that. But $I$ can say it would be within the work zone. Probably the length up and down the drawing as you're currently showing it would probably be within a hundred feet.
Q. But you say that the piece of equipment will actually sit at the edge of that work area?
A. (Scott) It would be right near there, yes.

So, essentially, this is the receiving end of
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
an HDD. So you wouldn't see much of anything during the boring process until it broke through grade. And then you would see equipment there, or right before they were getting ready to break through grade to back-ream the hole and then start pulling casings and conduits through.
Q. Okay. But the --
A. (Scott) The larger, longer work zone is for when they assemble the conduit and pull that through.
Q. But it will sit -- can that piece of equipment sit offset from the hole? I mean, can it sit in the roadway in this case, or does it have to sit in that work area to the edge of the right-of-way?
A. (Scott) I mean, I believe the work area is extending into the road as $I$ look at that.
Q. Okay. How long in this -- like in this situation, how long does the conduit sit in the exit work area that would be blocking the driveways of those apartment buildings at the bottom of the page and that house's driveway at the top of the page?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
A. (Scott) I believe Mr. Johnson addressed this previously in previous testimony. But if we ran across a scenario where there's no access, we can do things like provide a shallow trench and put that conduit on a roller through that trench to allow -- and put a plate over the trench to allow access during this process. So the assembly of the conduit bundle would take a day or two total, and then you could put it into that trench during that process. And when they were ready to pull it, it wouldn't really matter. It wouldn't impact access.
Q. I'm sorry. You said a day or two to assemble the conduit? Like the gentleman that is at top of the page there, is he going to be able to access his driveway for one or two days, or are you going to have that closed for one or two days?
A. (Scott) He would probably have a couple of hours of impact, most likely.
Q. Now, this is a picture of the entry work area or entry-area work space. Is it normal to have that go through the middle of somebody's
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
house?
A. (Scott) I mean, they wouldn't be in that person's house unless that person sold them the house. They would be working around the house.

This is depicting going to the edge of the right-of-way's work space. And that drawing should probably be amended to show a few feet off of the edge of houses, not work space.
Q. You can see why I was concerned.
A. (Scott) Sure.
Q. Okay. On your entry pit out of the pavement, how far beyond the end of the entry pit does the equipment extend when it's working? Like you've got the entry pit. It's a
four-by-four entry pit. How far beyond the edge of that entry pit does the equipment sit?
A. (Scott) How far from the edge of where?
Q. The entry pit that's off the pavement.
A. (Scott) I mean, the entry pit, you will have equipment right where that entry pit is.
Q. But what I'm saying is, how wide is the piece
of equipment? And I assume the entry pit is probably in the center of it. So how wide --
A. (Scott) I mean, it's essentially an 8- to 10-foot-wide piece of machinery. So the center of that offset would be 4 to 5 feet.
Q. Okay. So with a 4-foot hole, and 4 or 5 feet beyond that you're out about 10 feet?
A. (Scott) From the center line you'd be 4 to 5 feet off the side.
Q. Is it -- or let me -- the next question is, on this diagram, what kind of line is that that shows the right-of-way, as per the surveyors, Meridian Land Surveying, their definition of that type of line?
A. (Johnson) So the drawings themselves don't distinguish the type of right-of-way line. It is a long dash with two short dashes followed by another long dash by two short dashes. But in the design drawings in this particular case, they're all the same, no matter what type of survey quality they are.
Q. Okay. Just a minute. Let me see if $I$ can pull up that... okay. I don't have it on this computer. But your original plans and
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
also the survey showed it as a dashed line. I couldn't tell whether it was -- let me see the definition here -- whether it was a bold dashed line or a dashed line. But on both of those, either a bold dashed line or a dashed line, what is the definition of those lines per your surveyor?
A. (Johnson) So those were historical layouts or areas where there was no information.
Q. But what's the first word that they use in their definition? I think it was the first word. Let me see. (Pause)
Q. Okay. Bold solid for determined, bold dashed for approximately, and dashed for approximately.

I would like to ask, is it normal for your company to plan things right to the edge of a boundary line that is approximate?
A. (Bowes) I would say no.
Q. But you have in this case. Is that what you're telling me?
A. (Bowes) This is a temporary work area you're talking about?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
Q. Yes.
A. (Bowes) So, temporary work areas, I would say it's probably more common. But even so, I would think there would be a buffer.
Q. But Mr. Scott just told me that on the exit work area, the piece of equipment is going to be right to the edge of that work area.
A. (Bowes) I'm not sure I follow.
Q. Mr. Scott just -- I asked Mr. Scott if the piece of equipment that will be sitting in the exit work-area space will be right to the edge of the work space and the right-of-way as shown on your diagrams, and he told me yes.
A. (Bowes) I thought he said it was going to be 4 to 5 feet from the center of the pit.
Q. That was the piece of equipment at the entry-area work space.
A. (Johnson) I believe he was talking about both ends, both the entry and exit. The entry would have the drill rig --
Q. I think Mr. Scott knows what I'm talking about.
A. (Scott) Not really.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
A. (Bowes) I think he was saying the length of the conduit would be to the end of that work zone.
Q. No, I asked him specifically that. At the entry -- or excuse me -- the exit work area, would there be equipment sitting in the work space, and where that equipment would be, would it -- and he said it would go up to the edge of the work area.
A. (Scott) The designated work area is for work, yes. That's what we're planning on.
Q. But the piece of equipment that --
A. (Scott) Could be up to the --
Q. Edge of the --
A. (Scott) -- within that work area, yes.
Q. Okay. And that's my question. Is it normal for your company to plan to work in an area where the boundary is approximate?
A. (Bowes) So I was taking -- my response would be towards the road side. So it wouldn't be to the property boundary. That's where I thought he was indicating. It would be into the roadway. That was the discussion we were having. And we'd work right up to that area
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
and then put our traffic control measures in place. Doesn't mean a piece of equipment would be there, but there would be work around that. People could walk past that equipment.
Q. I'm getting at the actual what you have a right to be using part of it. Is it normal for you to plan on using an area where you don't know exactly where the boundary is, right up to the edge of what you think the boundary is?
A. (Bowes) For temporary work space, I would say yes. For permanent installations, I would say no.
Q. So you think it's all right for your company to go onto somebody else's property without their permission.
A. (Bowes) I didn't say that.
Q. But you don't know exactly where the boundary is.
A. (Bowes) We will know where the boundary is, yes.
Q. Okay. You've told me that -- I'm sorry. I'm forgetting if I asked this question.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}

Have there been any major changes that have been found in the research done by the surveyors that's going to change anything on any of the exception requests on Route 3 south in Plymouth?
A. (Johnson) As I said earlier, I don't know, but I can find out. But there's been no revelations, if you will, of a new document being found that would change.

MR. AHERN: Okay. I don't know how to switch from this to the ELMO. (Pause)
Q. Okay. If you look at Page 2, under No. 2, filled dot No. 2 and circle No. 3, can one of you tell me what that says?
A. (Johnson) Research suggests there may be a section which is variable within a portion of Plymouth.
Q. Have you or your surveyors read the Town of Plymouth town meeting minutes dated May 5th, 1931?
A. (Johnson) I don't know.
Q. Okay. If I was to tell you that in the town meeting, the Town of the Plymouth
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
discontinued any part of the highway that was more than one and a half rods either side of the highway from a point opposite the northern boundary of the Beardsley property, which --

MR. AHERN: If you would switch back to my computer again?

BY MR. AHERN :
-- the Beardsley property is the property that is just above and slightly to the right of my barn -- to a point approximately 350 feet north of the Crystal Springs, which is approximately your Station 2611, what effect would this have on your first five exception requests? And the reason I'm asking this is, when $I$ said that you need to discuss with the landowners when you're going through your process of determining what the right-of-ways are, that you need to include the landowners because they have information like this that the new people at DOT don't have, you don't have, and may not be in the deeds section of the county.

What effect is this going to have on
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
your first five exception requests if this is true?
A. (Johnson) So if the ascertation that it's not four rods wide or that it is three rods wide or some other rods?
Q. Yes.
A. (Johnson) Then clearly, if it was true, it would have to be taken into account in the design process.
Q. But you say that none of your surveyors have come up with this piece of information.
A. (Johnson) I said I did not know and I would go find out.

MR. AHERN: Thank you. That's
all I have.
CHAIRMAN HONIGBERG: All
right. We're going to take a ten-minute break.
(Brief recess was taken at 3:37 p.m., and the hearing resumed at 3:52 p.m.)

CHAIRMAN HONIGBERG: Mr.
Palmer, you may proceed.
MR. PALMER: Thank you.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

## CROSS-EXAMINATION

BY MR. PALMER:
Q. My name is Walt Palmer. I'm one of the abutting property owners in Franconia along the underground portion of the route. I just have two very quick questions for you today. First of all, I thought I heard someone say today that the width of the easement on Route 116 in Franconia varies between four rods and three rods wide. Did I hear that correctly?
A. (Johnson) You could have, yes. It depends what part you're talking about, but...
Q. All right. Because that road runs -- like Mr. Ahern, I own property on both sides of the road. My farm is on both sides of the road. The road runs right through the middle of my farm. The width of the right-of-way is of extreme importance to me --
A. (Johnson) Understand.
Q. -- and I need to have assurance from you that you're not going to be encroaching on my farm.

Are you familiar with this document from
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
the 1838 Town of Franconia records?
A. (Johnson) Sorry. We don't see it. It's not on the screen.
Q. Sorry?

MR. IACOPINO: Takes a minute for both screens.
(Pause in proceedings.)
A. (Bowes) If you'd like, we do have a copy of it.

CHAIRMAN HONIGBERG: Mr. Bowes apparently does have a copy. Do you want to ask him questions about it, even though we can't see it right now?

MR. PALMER: What $I$ was trying to put on the screen is a copy of Franconia town records from 1928 -- 1838, which shows that on March 13, 1838, the town voted to make the road between the town hall and the Landaff town line three rods ride, which now is the Easton town line. So, basically the entire Route 116 from the center of Franconia to the Easton town line was laid out as a three-rod-wide road. I've sent this to the DOT, and I have had response from them
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
confirming their agreement that that road is a three-rod-wide road.

BY MR. PALMER:
Q. So my point is -- my question is: Do you have any documentation showing anything otherwise? If you're still saying as late as today that some portions of that road may be four rods wide, it makes me concerned that you do not really have a very good idea of the width of that road.
A. (Johnson) So I can say with certainty that I know we have looked -- we have this document; otherwise, we wouldn't have it here. What I can tell you with certainty is how it's been incorporated into the survey design. I will certainly reach out to our surveyors and ask them that question. Ultimately, the evidence that we have will be presented to the DOT as part of the survey report, and they will again review that and will come up with a determination whether they believe it's correct or not.
Q. So when can $I$ expect to see that evidence?
A. (Johnson) Again, we've talked about it. It's
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
four to six weeks of field work, followed by another couple weeks to assemble the entire survey report.
Q. So we're talking about sometime in November, I guess?

CHAIRMAN HONIGBERG: There was extensive testimony about this, this morning, Mr. Palmer.

BY MR. PALMER:
Q. All right. My second question was about Exception Request No. 145, which I have a picture of up on my screen, but unfortunately, again, the computer doesn't seem to be working.
A. (Johnson) If you give me a second, I'll find it.
Q. I'm sorry?
A. (Johnson) If you give me a second, I'll find it.
Q. Okay.

MR. IACOPINO: You said 145?
MR. PALMER: 145.
(Pause)
A. (Johnson) Okay. We're good.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
Q. Okay. You have that now?
A. (Johnson) I do.
A. (Bowes) Yes, we do.
Q. In the Technical Discussion of Justification of Exception, in the second paragraph, NPT -makes a point that NPT must plan to install any facilities and conduct any work within 20 feet of the edge of the pavement, consistent with the study area for the draft Environmental Impact Statement. And at the end of that paragraph it states again, "Therefore, NPT must plan to install any facilities and conduct any work within the EIS study area" -- the point being that in this justification for the exception request, you're stating that you must comply with what was studied in the EIS study; is that right?
A. (Johnson) Yes.
Q. So, then, for this Project, Northern Pass is constrained by what was studied in the EIS; is that right?
A. (Johnson) Not a hundred percent. But yes, for almost the vast majority of the Project we are constrained within what the EIS has
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
studied as well as part of the Presidential Permit.
Q. So, not a hundred percent.
A. (Johnson) There are one or two exceptions to that where we are going to be seeking an exception, where we are going slightly outside of this 20-foot buffer, but on land owned by DOT, and it's already been previously disturbed areas.
Q. So as this exception request process, iterative process goes forward, at what point do changes become so great that now we're talking about a different project, and now we have to do another Environmental Impact Assessment?
A. (Johnson) Well, there will never be another Environmental Impact Statement exactly because of this. We're being within the area that's been studied, both on the state level and the federal level.
Q. Okay. My question then is: Can you show me anywhere in the Environmental Impact Assessment where it states that coal fly ash will be used as a backfill material in the
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
trenches? And can you show me anywhere in the Environmental Impact Assessment where potential impacts of that were discussed or studied?
A. (Johnson) Off the top of my head, I don't know the answer to that. The Department of Energy prepared that document.
Q. I'll help you with that. It's not in there. If you run a search for "coal fly ash" throughout the entire document, throughout the entire appendices, you will not find that term.
A. (Johnson) I'll accept that.
Q. Wouldn't you agree that that is a fairly major change in the proposed project to suddenly start using toxic material as backfill?

MR. NEEDLEMAN: Objection.
CHAIRMAN HONIGBERG: Mr.
Palmer.
MR. PALMER: I'm sorry?
CHAIRMAN HONIGBERG: He's objected.

What's the grounds, Mr.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

Needleman?
MR. NEEDLEMAN: We've been through this repeatedly. Coal fly ash is not considered a toxic material.

CHAIRMAN HONIGBERG: Mr.
Palmer.
MR. PALMER: I don't know who doesn't consider it a toxic material, but I can assure you that it contains heavy materials which leach out into the environment, and that has been shown by numerous technical documents.

CHAIRMAN HONIGBERG: Why don't you just not characterize it as "toxic material" and ask your questions about your coal fly ash of them, and they'll tell you what they know.

MR. PALMER: Okay. That was my question.

BY MR. PALMER:
Q. Wouldn't you consider that to be a major change to the Project proposal, to suddenly be proposing -- I mean, this is something that you introduced only a couple months ago.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

CHAIRMAN HONIGBERG: The objection is sustained.

MR. PALMER: What objection now?

CHAIRMAN HONIGBERG: You were repeating your question. His objection stands and it is sustained. Ask your next question.

MR. PALMER: So I don't get an answer to that one?

CHAIRMAN HONIGBERG: That's correct.

MR. PALMER: That was my last question.

CHAIRMAN HONIGBERG: Then you may return to your seat.

MR. PALMER: Thank you.
CHAIRMAN HONIGBERG: Mr. Thibeault.

CROSS-EXAMINATION
BY MR. THIBAULT:
Q. Good afternoon. My name's Bob Thibault. I'm from Easton. I'm an abutting property owner. Almost all of my questions have already been
CHAIRMAN HONIGBERG: You we
repeating your question. His objection
stands and it is sustained. Ask your next
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

|  |  |  | 99 |
| :---: | :---: | :---: | :---: |
| 1 |  | answered. I wanted to confirm an |  |
| 2 |  | understanding I got this morning about the |  |
| 3 |  | initial application. |  |
| 4 |  | Did I understand correctly, and I think |  |
| 5 |  | this came from Mr. Johnson, that the original |  |
| 6 |  | application was planned to go under the |  |
| 7 |  | pavement and that there was a blanket |  |
| 8 |  | exemption requested from the UAM? Is that |  |
| 9 |  | correct or any way near? |  |
| 10 | A. | (Bowes) I'm not sure I'd characterize it as a |  |
| 11 |  | "blanket" exemption. |  |
| 12 | Q. | Exemption from the UAM to run the alignment |  |
| 13 |  | under the pavement. |  |
| 14 | A | (Bowes) That is clearly what we discussed |  |
| 15 |  | with the DOT prior to filing the Application. |  |
| 16 |  | And we did provide that in writing to the |  |
| 17 |  | DOT, a request, and that's part of Appendix 9 |  |
| 18 |  | of our SEC Application. |  |
| 19 | Q. | Can you tell us approximately what date that |  |
| 20 |  | was? I imagine 2015 sometime? |  |
| 21 | A. | (Bowes) The letter that went to the DOT is |  |
| 22 |  | dated October 16, 2015. |  |
| 23 | Q. | And is it correct to assume that they denied |  |
| 24 |  | that application, that they denied that |  |

\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
request?
A. (Bowes) So in April of this year they approved our project subject to many conditions.
Q. And was one of those conditions that you follow the UAM?
A. (Bowes) In essence, I would say yes, and they introduced an "exception" process to that.
Q. So is it correct to say that until April you were hoping and planning that maybe you could have the exemption you were requesting originally?
A. (Bowes) That was the planned process we underwent, and it is supported by what other states do today.
Q. And this would have been around the time, the original plan, that you were holding the public information sessions; correct?
A. (Bowes) Yes, I would think 2015, 2016 time frame.
Q. So during those public information sessions, might -- you're thinking at that time running the alignment under the ground. Might that have explained why so many people today still
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
think their line is going under the pavement?
A. (Bowes) I don't know how many people think that.
Q. Okay. But wouldn't you agree that some people may because of the original plan?
A. (Bowes) Yes, I can accept that.
Q. Just wiped out half my questions. I have two left.

The Exhibit 222 that was shown this morning, I'm pretty sure I added the numbers correctly. The first two columns were 7-1/2 and 7-1/2. The whole sheet then said 15 miles of the line would be under the pavement. Is that correct?
A. (Johnson) Yes, that's correct.
Q. Okay. Do you think that might be a surprise to a lot of people who attended the meetings, the initial meetings? I'm speaking of those people who walked out with the impression that this line was going under the pavement.
A. (Bowes) I don't know if they'd be surprised or not.
Q. Okay. Last point. The RSA governing this proceeding gives the Committee the authority
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
to hold additional informational meetings based upon certain conditions. If the Committee did that, what do you think the public's reaction might be upon hearing the difference from the original information sessions and what we now know today with all the exception requests? Do you have a feeling, any of you, of what the public might think?
A. (Bowes) I think that they might think that the Project had changed.
Q. I would agree with you. I think they may be shocked.

Just one last question. Back around September of 2015, we were all talking this plan was 30 percent complete in its design; correct?
A. (Johnson) That's correct.
Q. Today, what percent would you assign?
A. (Johnson) Approximately 60.
Q. Fifty?
A. (Johnson) Sixty.
Q. Sixty.

MR. THIBAULT: Okay. That
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
concludes my questions. Thank you.
CHAIRMAN HONIGBERG: Ms.
Schibanoff.
MS. SCHIBANOFF: Thank you. Attorney Whitley is going to aid me at the ELMO, if he's ready. One of these days I got to get me a computer.

CHAIRMAN HONIGBERG: You don't need one when you have Mr. Whitley.

MS. SCHIBANOFF: Right.
CROSS-EXAMINATION
BY MS. SCHIBANOFF:
Q. While I've talked with you before, but again I'm Susan Schibanoff. I'm a member of the Non-Abutting Property Owners, Bethlehem to Plymouth, which is mainly entirely the underground route.

And I can start here because I don't need an exhibit for a few minutes. So let me tell you what I've read so far to get ready for this. The UAM manual; the 100, and I thought it was 20 , but apparently it's 118 exception requests on the DOT site; the DOT responses so far on that site; the
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

December 2016 Permit Package Application. Do I have most of it, or did I miss something?
A. (Bowes) I don't know what you've missed.
Q. Would that be enough to now feel like $I$ have a grip on what you're doing?
A. (Bowes) I do not know.
Q. How many people do you think have read that much material of just average landowners along the route?
A. (Bowes) I don't know.
Q. Okay. There are also on the DOT site 100 other exception requests, but $I$ don't know how they relate to all this material, and I haven't had time to read them all. Can you tell me?
A. (Bowes) Can I tell you what?
Q. What the 100 other exception requests on the DOT site are.
A. (Johnson) So those are either earlier revisions, other exception requests, or exception requests that have been withdrawn within the process.
Q. And do those numbers, I think they're listed

1 to 100, do they relate to the same number
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
on the page when you look at the Northern Pass page? How do they relate, in other words?
A. (Johnson) The numbering system of the exception request is not tied in any way to a direct drawing. It is a sequential order from bottom to top.
Q. So I guess I have some more reading, right, as do other people?

I'd like to just pick up on a few points that I heard this morning, make sure I've got them right.

Did I hear you say that tree-clearing areas will be shown soon on the plans? And I guess this would be the permit package plans.
A. (Johnson) So the exception request, by definition, will not have tree clearing because that's moving stuff into the roadway. When we do create the next set of alignment drawings, then, yes, those will show the tree-clearing areas.
Q. Okay. And will another aesthetics evaluation be done at that point in time when we know what trees are going to be removed?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
A. (Johnson) I can't answer that question.
Q. Is there anyone on the panel who can answer that question?
A. (Bowes) I can say that our plan is to have very little mature tree clearing along the entire route. In fact, in other projects, underground projects, the clearing of trees is never even discussed because it's never required.
Q. But where it will be done, will there be a re-evaluation of aesthetics?
A. (Bowes) I can't tell you that we're going to have to clear any trees at this point.
Q. Well, I thought I heard somebody mention this morning that it was going to be on the new plans.
A. (Bowes) If it is indeed required, then we would show it. But I'm --
Q. All right. Let me make that a hypothetical question then. If there is additional or new tree clearing, will a new aesthetics evaluation be done?
A. (Bowes) I do not know.
Q. Does anyone on the panel know?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
A. (Scott) No.
Q. Okay. Thank you. And then the other thing I wanted to clear up from this morning is that I had thought 10 feet, 3 meters, was the standard distance used to kind of ballpark at least the trench excavation area from the edge of the pavement. And that's a figure I've been using all along. But I think I heard you say this morning that actually the 10 feet is off the edge of the shoulder.
A. (Johnson) So I think you're right in both cases. But where there are areas where they're more constrained, it would be 10 feet off the edge of the pavement, but where there is room, it would be 10 feet off of the edge of shoulder.
Q. How wide can a shoulder be, typically?
A. (Johnson) It can be as little as zero to as wide as three or four feet.
Q. Okay. So from the edge of the pavement then, the work area could go in as much as 14 feet.
A. (Johnson) Potentially, yes, in areas where there is no constraints.
Q. Thank you.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

MS. SCHIBANOFF: Steven, could you put up Exhibit 36 first? And I'm going to be shuffling through paper here. And we're going to compare that with 37 in just a second.

BY MS. SCHIBANOFF:
Q. So, 36 is a section along Route 3 in Campton. And I'm showing you first the plan for this underground installation from the DOT Permit Package, December 7th, 2016. For those really into the numbers, it's Station 2202+00 to Station 2208+00.

Tell me if I'm reading this plan correctly, please, anyone on the panel. The right-hand side of this illustration is south, left hand is north, top is east, bottom is west. So when we're looking at the northern part of this plan, I've got a red arrow up there in the margin, and it's pointing to where the trench would go. And it looks to me as if in the northern part of the plan, the trench comes out under the pavement and then kind of curves back and goes along the edge of the pavement or the
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
shoulder. Is that reading that part of the plan correctly?
A. (Johnson) Yes, it is.
Q. So you were under the pavement, so to speak, way back in December of 2016. You just planned it that way; correct?
A. (Johnson) Correct.

MS. SCHIBANOFF: Okay. Could we look at, Steven, please, Exhibit 37, which is from Exception Request No. 36.

BY MS. SCHIBANOFF:
Q. And I have tried to, with the two gold
arrows, indicate just in larger figuration where your Exception Request 36 starts and ends. And essentially, if I'm reading this correctly, and tell me this, it's the same plan. The December plan and the one you filed on May 18th are the same, except now you've got to ask for an exception for what you planned in the beginning. Does that make sense?
A. (Johnson) That's correct, yes.
Q. Okay. So I'm confused about this entire process as you went from the permit package
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
in December to the exception requests later. Did you not understand that the Utility Accommodation Manual says don't put it under the pavement? Because you did that in December, and then it appears that you've come back in May and asked for an exception to do that. So can you explain to me how that sequence worked there? What happened?
A. (Bowes) So we did cover this at least a couple times this morning already, but we'll go through it again.
Q. Thank you.
A. (Bowes) We proposed an alignment in our initial SEC filing. With that we had some conditions that we thought were reasonable. In April of this year, the DOT gave us approval with a set of conditions that we now have to meet, one of those being that we have to apply for an exception in any location where we're within or under the pavement. In this case, we applied for Exception 36.

Although $I$ don't have it in front of me, $I$ believe the exception, what we asked for was because of the change in elevation adjacent
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
to the roadway, we could not be off of the pavement at this location. And based on what you've written here, it looks like that was approved with conditions.
Q. Yes, it was approved with conditions. You're correct. And in fact, there is a guardrail right there.

But I'm still very puzzled about why in December you thought, based on the Utility Accommodation Manual, that it was going to be okay to propose that. But as you say, we've covered that, so I'm going to leave that and move on. A number of my questions have been asked already, so I'll try to flip over them here and ask something different about them. Many of -- in fact, all of I think your exception requests make a statement about cost, and it's usually to say that if you don't get this exception request, it's going to cost you more to do something or other. And you say that's a requirement of an exception request, that you estimate the cost?
A. (Johnson) Yes, the Utility Accommodation

[^3]Manual has, and I think we looked at it this morning, has a component where cost is a valid -- or needs to be provided.
Q. And do you have any idea how DOT weighs cost in its decision -- your cost, that is -- in its decision about whether to grant a request or not?
A. (Johnson) I do not.
Q. Do you think they weigh it against their cost of letting you do this, whatever the exception request is?
A. (Johnson) I'm sure it's a factor just like every other piece of information that we provide.
Q. And what would their cost, DOT's cost, be for
you to do an under-pavement alignment? you to do an under-pavement alignment?
A. (Johnson) So there isn't any cost to the DOT, nor will there be any future costs to the DOT, because if they to have to rebuild a road or widen a road that would have some influence on our infrastructure, it's the Project's responsibility to either move that infrastructure or pay for the inconvenience to the DOT.

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Q. If there's no cost to the DOT, then why don't they want the line under the pavement in the first place?
A. (Bowes) So I'll answer in general terms of what $I$ believe, but it's really a question for the DOT to respond to.
Q. Sure. I understand. It's your understanding of what the DOT thinks.
A. (Bowes) Right. So their main charge is public safety and maintaining roads in a safe and reliable manner. And other uses of the roads are secondary to the primary use, which is for public transportation.
Q. So they think it's less safe to have the alignment under the pavement?
A. (Bowes) I'm not sure I said that, and I'm not sure I would characterize it that way either.
Q. Well, then, I guess I didn't understand your answer.
A. (Bowes) So I think they would view our use of the highway system as secondary to its primary function, which would be for safe and reliable transportation. So we are secondary or subordinate to the primary use.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\} MS. SCHIBANOFF: Steven, could we look, please, at Exhibit 43, Page 2. BY MS. SCHIBANOFF:
Q. This is Exception Request 52, Revision 1. And I could have chosen any number of examples. It just happens to be this one.

On Page 2, and I see this very frequently in your exception requests, you write a fairly standard paragraph, that if you were not given an exception request, you would have -- if I understand this correctly, you would have to, I guess, remove and then replace a guardrail. And you don't want to do that because why?
A. (Bowes) Again, not being a lawyer, I read it at its face value. The first sentence says that.
Q. That you have liability concerns?
A. (Bowes) That's what it says, yes.
Q. So you say later on it's not a cost issue, but you don't want the responsibility of owning that guardrail, and so for that reason you want to go under the pavement; is that correct?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
A. (Bowes) Yes.
Q. And I believe it was either Mr. Palmer or Mr. Thibeault just raised the EIS study limit issue. I think $I$ have a slightly different question to ask about it.

MS. SCHIBANOFF: If we could
look, Steven, please, at Exhibit 44, which happens to be Exception Request No. 155.

BY MS. SCHIBANOFF:
Q. Again, this paragraph occurs in many of your statements. We're looking at Exhibit 44, Page 2, please. And I'll read the highlighted section that I'd like to ask you about. "The draft EIS analyzed an area of impact within 20 feet from edge of pavement on each side of the road, quote, 'the EIS Study Area.' This study area limits the design area available to NPT. The federal agencies may only issue authorizations..." and so forth.

Am I understanding correctly here that the DOT is limited or at least has to conform to an EIS study limit?
A. (Bowes) I don't believe the DOT does. I
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
believe Northern Pass does.
Q. I see. That's a little bit different then.

So, because you have a special condition by virtue of having applied for a Presidential Permit, therefore you are asking the DOT to accommodate your needs to go under the pavement. Is that a fair --
A. (Bowes) I think that is one of the reasons for this exception request.
Q. I'm only interested in the EIS study limit part. Your special need because of the EIS involvement of the Project is what you're basing, or at least partly basing your request to DOT to do something that is against the UAM. That's a question. Is that a fair --
A. (Bowes) So it is one of the many reasons we're asking for this exception, and it would be an exception to the Utility Accommodation Manual.

MS. SCHIBANOFF: Steven, could
we now look at Exhibit 45, yet another exception request.

BY MS. SCHIBANOFF:
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
Q. That's just a generic example. It happens to be No. 1, Revision 2. And on Page 3, if you could just flip to that, please, I have highlighted a section that I'll read. "Road closures are not needed for the proposed installation, which thereby minimizes traffic impacts and attendant safety issues." What are the safety issues attendant upon road closures, please?
A. (Bowes) I'm not sure $I$ understand the exact wording of what this says, so I will try to provide an answer.

I think the issue is anytime there are traffic control measures in place and a traffic work zone created, that workers within that zone are exposed to a higher safety risk because of that, working next to a travel lane.
Q. I'm confused. I thought road closures meant both lanes are closed, not a lane closure.
A. (Bowes) Correct. But if you come upon a complete closure, there's potential safety issues of someone driving through a work zone.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
Q. Ah, I see. Hadn't thought about that.

How many road closures are proposed for this project? Is guess this is Ms. Frazier's question.
A. (Johnson) So there are rolling road closures proposed in Clarksville and Pittsburg -- I'm sorry -- Stewartstown, as well as one just north of the traffic circle in Plymouth for a short duration.
Q. So we have the safety issue there of somebody driving through the barrier?
A. (Johnson) The safety issue is always inherent, as Mr. Bowes has noted, with construction zones.
Q. But it's more so with road closure than lane closure? Is that --
A. (Johnson) The potential for somebody to come upon a full road closure driving at a high rate of speed and not being able to stop in time is usually more catastrophic than when properly signed, where a single lane is closed.
Q. What does the Utility Accommodation Manual have to say about road closures?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
A. (Bowes) I believe, in essence, that road closures are discouraged.
Q. Thank you.

Trees. We've talked a lot about trees today, so let me clear aside some of the branches here and try not to climb the same trunk.
A. (Johnson) That's pretty good for 4:30 on a Friday.
Q. Used to be my business.

MS. SCHIBANOFF: Could we look
at Exhibit 31, please. I'll just leave that there for a moment and we'll get to it.

BY MS. SCHIBANOFF:
Q. I think I heard you say in your exception requests you are trying to avoid tree removal -- in other words, with exception requests?
A. (Johnson) So the exception requests that have been filed to date deal directly with other obstacles other than trees that have forced the Project to be in the roadways. I think we discussed this this morning, that as we now generate the alignment, these type of
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
issues where mature trees could be impacted would generate another set of exception requests which we would petition the DOT to again go in the roadway to avoid impacts to trees such as these.
Q. This particular property, 891 Easton Valley Road, which I think is at Station 609 on your permit package, has a tree, a maple tree as you can see. And I measured 10 feet from the edge of the pavement. That's what the red arrow represents. I probably should have measured a little bit further, now that I know about the shoulder allowance. I believe this area is slated for a trench. Would you file an exception request for this property, please?
A. (Bowes) Yes, we would.
Q. Have you?
A. (Bowes) We have not filed any yet for trees.
Q. And how will you go about identifying all the trees? Are you actually going to drive up and down the road or do one of these computer searches?
A. (Bowes) So we've already done the computer
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
search with a LIDAR-based system, which is a laser measurement. We have overlaid that with a mapping system, and we have done field reviews. So we will plan to identify every location such as this along the route and file exception requests for that.
Q.

Do you expect the DOT will honor an exception request for a tree, or does it have to have another reason for the request?
A. (Johnson) So as I discussed this morning, there is a section regarding scenic byways, of which this is a scenic byway. And the state itself has already granted exception requests to themselves for this exact type of scenario. So we expect the state to review this on a case-by-case basis and come up with an appropriate decision.
Q. I believe I heard Mr. Varney say that the Easton Valley Road is in the process of being de-designated as a scenic byway. I don't know whether it has been or not but --
A. (Bowes) So whether it's a scenic byway today, we intend to follow the same process for the entire route, whether it's designated today
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
or it's on a route that is not designated today.
Q. And when would the owner of 891 Easton Valley Road possibly know whether or not that tree is on the chopping block?
A. (Johnson) So, the exception request process will begin again when the survey report is complete. So as we talked about, in the November time frame.
Q. Thank you.

MS. SCHIBANOFF: Could we look at exception -- excuse me -- Exhibit 46 .

BY MS. SCHIBANOFF:
Q. This is a letter dated March 22nd, 2017, sent from your project director, Jerry Fortier, to some businesses, not all. And there are lots things to say about this letter, but let's look at the last bullet point on the first page.

Mr. Fortier tells business owners about the Project's commitment to restoring impact areas. "Areas affected by construction will be restored to the same or better condition."

Let's say DOT does not grant the
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
exception request for that maple tree you just saw in Exhibit 31. How do you restore a mature tree?
A. (Bowes) I'm not sure there is a way to restore a mature tree.
Q. Thank you.

MS. SCHIBANOFF: And if we could look, please, Steven, at Exhibit 47.

BY MS. SCHIBANOFF:
Q. And this is Exception Request 70, Revision 1. It's down in Woodstock, in front of the Jack O'Lantern Resort that I'll be talking about in just a second. And you make an unusual statement here, by my reading. You say at the end of the first paragraph, "NPT has not identified a viable alternative if the requested exception for alignment in pavement is not granted."

Let's take a worst-case scenario and say it's not granted. What happens then?
A. (Johnson) Not knowing the basis behind this, but on the question itself, this would be an opportunity to have an iterative process with the DOT and try and understand what they're
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]
thinking as to why they may or may not approve such a request. And we'd have to figure out another way to do it. I think what this statement is saying is that, based on the information that we have today, the Project has not been able to identify a solution to this at this time.
Q. So does that then make it DOT's responsibility to find a solution?
A. (Johnson) Not at all. It means that it will become a collaborative effort to come up with a solution that best fits both, the DOT's requirements as well as the Project being able to construct through this area.
Q. Okay. I have just one more general question, and then $I$ have two specific areas that I'd like to look at.

I have been curious ever since I started looking at this stuff about how you came up with the nomenclature for the sections that you see on the exception requests. You've got a number of acronyms: Rock, ROT3. Can you explain to me what WBR3 means?
A. (Johnson) Sure. It's Woodstock to(Johnson) Not at all. It means that it willbecome a collaborative effort to come up witha solution that best fits both, the DOT'srequirements as well as the project beingable to construct through this area.and then $I$ have two specific areas that I'dlike to look at.I have been curious ever since I startedlooking at this stuff about how you came upwith the nomenclature for the sections thatyou see on the exception requests. You'vegot a number of acronyms: Rock, ROT3. Canyou explain to me what WBR3 means?

\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
\{SEC 2015-06\}[Day 42 AFTERNOON Session ONLY]\{09-29-17\}

Bridgewater along Route 3.
Q. Rock?
A. (Johnson) Rock is the alignment along 302 next to the Rocks Estate.
Q. WMNF is self-explanatory. ROT3?
A. (Johnson) Is Route 3 crossing between Pittsburg into Clarksville, or vice versa.
Q. And SHEB?
A. (Johnson) Sugar Hill, Easton.
Q. It's $S-H-E-B$, though. What does the $B$ stand for?
A. (Johnson) Oh, Sugar Hill, Easton Bypass.
Q. What is it bypassing?
A. (Johnson) The original overhead route.
Q. And all of the other sections talk about where the route is. This one talks about where the route isn't, and that's odd.
A. (Johnson) It just stuck.
Q. Just stuck.
A. (Johnson) There's no rhyme or reason how we came up with this.
Q. I'd like to look at two specific areas, and I'll try to be quick about this because I'm running close to my predicted time.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

If we could look at Exhibit 34. Back when I started, we looked at a couple of plans, and this happens to be the property at that plan. It's the Schoolhouse Restaurant on Route 3. And actually, the restaurant is in the lower part of the -- in the lower picture, you'll see the restaurant. In the back, it's an interesting treehouse with screening around it, and then there's sort of a craft shop in the front. And for anyone following this more technically, it's Station $2202+00$ to Station 2208+00.

So if we could go back, please, to Exhibit 37, which is your exception request in this area.

MS. SCHIBANOFF: Steven, please, Exhibit 37.
Q. We discussed this quickly --

MS. SCHIBANOFF: That's good. Thanks. Do I dare ask if people can see this or. . okay.

BY MS. SCHIBANOFF:
Q. I just showed you the photograph of the Schoolhouse Restaurant, which you'll see is
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
written in blue in the middle of the picture on the east side of Route 3. Your exception request is over on the left there. And you want to come in under the pavement because, actually, there's a guardrail there and a drop-off. So that makes sense. But then let's talk about how that trench goes on down the road to the south.

MS. SCHIBANOFF: Steven, if
you could throw up now Exhibit 38.
BY MS. SCHIBANOFF:
Q. That's looking south on Route 3 along this exception request area. You see two kind of antique guardrails there, but there they are. And that's what you want to come under the pavement for. And you'll notice just beyond that is the Schoolhouse Restaurant parking lot. And this is a pretty popular place. It fills up in the summer.

So in your exception request, once you swing out around those guardrails, you want to go back into the parking lot and go on down. At least that's what your plan shows as of now. And it's going to cause an issue
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
for this business owner. You're going to be putting a trench through there and basically blocking the lot. Steel plates or whatever, it's going to be difficult to get in there. And there is no other place to park along the road in this narrow section. Since you're already asking for an exception request, if this landowner, this business owner came to you and said, "Look, I'd really like you to do something that would help me. How about just pushing the trench out under the road further down, which will help access to my business?" would you include that in an exception request?
A. (Bowes) We certainly would consider it. There may be some other options here that would be agreeable to the business owner as well. The way you're showing it is probably the extent of the disturbed area plus the work space that we would need to the left, in this case, where the arrows are. The trench would probably actually be closer to the edge of payment here. So there would still be impact to the access to the parking area.
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

And potentially you could do half of that at a time so that you could maintain one entrance. If that were not a viable option and we had to close the entire entrance to this customer for period of time, then we would, preconstruction, decide when the best time of year to do that would be.
Q. This business is open until October 15th. You've got a couple weeks you could slip in there and do it before the end of your construction season. But isn't this owner going to be impacted by everything that's happening up and down Route 3 , which is very narrow, all summer?
A. (Bowes) So I can finish now. So in this case, we could work with this customer to find the best time of year for the direct impacts to the business and try to schedule that.

You are correct that there's going to be indirect impacts for traffic along this roadway. So, understanding what the business loss would be, whether it's direct, where we would have the business close, or whether it
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
was indirect because of the season, that the business owner experienced a loss, this is exactly what our claims process is designed to address, is to make this customer whole for the lost opportunity, as well as the direct loss of business.

MS. SCHIBANOFF: Could we put up Exhibit 35 now, please, Danielle? Did I wear out Steven? Sorry.

BY MS. SCHIBANOFF:
Q. If owners of the Schoolhouse Restaurant are looking for information on their property and they go to the most likely place, which is the Northern Pass web site, and they pull up the page on their town, the Campton town page, which happens to be Sheet 114, what information will that map give them?
A. (Bowes) Really just an alignment, that there will be an underground trench in front of their business and along Route 3.
Q. Could I ask everyone to actually focus on Route 3 ? You see the dashed golden line? Is that visible to everyone? Does that line not look like it is smack --
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

MS. SCHIBANOFF: That's it.
Stop, stop. Right there. Thank you.
BY MS. SCHIBANOFF:
Q. Does that line not look like it's right under the middle of the pavement?
A. (Bowes) I can't really tell either.
Q. Well, I think that part's pretty clear.
A. (Bowes) I think it's somewhat in the middle of the road right-of-way. I'm not sure I can even make out the road based on my eyes. But it clearly does not give a full
representation to the business owner. That's why we have started our outreach. I spoke a little about that this morning, that the next wave of the outreach will begin October 1st. And if we don't hear back from this customer, whether they have -- they're opposed to the Project, or for whatever they don't get in contact, we will go door to door and ultimately meet with this customer and understand the business impacts and come up with a plan, an individualized plan for this business.
Q. Could you read the date, please, of this map?
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}
[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

MS. SCHIBANOFF: Going to have to scroll down again. It's on the lower right. Oh, that's it. Okay.

BY MS. SCHIBANOFF:
Q. Can you see that?
A. (Bowes) It says October 2nd, 2015.
Q. This is on the Northern Pass web site today. If a property owner goes to the most obvious place to look for information about his or her property, this is what they find. If they do not read the list that I started this little session with, the permit package, the exception request, et cetera, et cetera, they won't know.
A. (Bowes) So, to date, we have -- I just asked Sam for the latest update. To date, we've had outreach to 4500 customers in New Hampshire around the Northern Pass Project. I would recommend that on that same web page they find the contact e-mail or they find the contact telephone number and reach out to us. And as I said, we will show them our latest plans. We'll explain the process that we're in right now of ultimately getting a final
\{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

[ NORTHERN PASS CONSTRUCTION WITNESS PANEL]

CERTIFICATE
I, Susan J. Robidas, a Licensed Shorthand Court Reporter and Notary Public of the State of New Hampshire, do hereby certify that the foregoing is a true and accurate transcript of my stenographic notes of these proceedings taken at the place and on the date hereinbefore set forth, to the best of my skill and ability under the conditions present at the time.

I further certify that I am neither attorney or counsel for, nor related to or employed by any of the parties to the action; and further, that $I$ am not a relative or employee of any attorney or counsel employed in this case, nor am I financially interested in this action.

Susan J. Robidas, LCR/RPR Licensed Shorthand Court Reporter Registered Professional Reporter N.H. LCR No. 44 (RSA 310-A:173)

|  | actually (10) | 25:9;27:24;40:20; | answered (3) |  |
| :---: | :---: | :---: | :---: | :---: |
| [ | 20:9;36:18;76:8; | 41:2;49:13;50:20 | 12:19;27:2;99:1 | 45:12,22;58:6,9; |
|  | 7:9;120:21; | 58:11,22;96:14 | Anticipated (2) | 64:7;70:24;72 |
| [No (1) | 126:5;127:5;128:22; | 101:4;102:12 | 18:15;46:21 | 76:9,12;77:23;78:3, |
| 133:15 | 0:21 | agreeable (2) | antique (1) | 22;79:15,17,21; |
| [sic] (2) | add (6) | 48:17;128:17 | 127:14 | 80:22;83:23;84:6,7; |
| 29:12;55:13 | 49:3;66:17,21,24 | Agreed (1) | apart (1) | 85:5,9,10,15,17,24; |
|  | 67:3;68:15 | 5. |  | 86:8;94:9,14;95:18; |
| A | added | agreement (2) | apartment (1) | 107:6,21;115:14,17, |
|  |  |  | A |  |
| able (12) 5:16;17: | $10: 17 ; 12: 7 ; 34: 7$ | Ah (1) | APOB 48 | 128:19,24 |
| $57: 22 ; 58: 3 ; 69: 8,9$ | 47:5;102:1;106:20 | Ahern (9) | APOBP (3) | Area' (1) |
| $80: 16 ; 118: 19 ; 124: 6,$ | address (5) | 63:23,23;64:2,3; | 40:6;47:21;76:17 | 115:17 |
| $14$ | 10:12;30:12;38:6 | 87:10;88:6,8;89:1 | apparently (4) | areas (26) |
| above (5) | 8;130:4 | 90:15 | 37:15;60:6;91:11; | 7:16;8:2;11:9,21; |
| $\begin{aligned} & 13: 1 ; 71: 4,15 ; 72: 2 \\ & 88: 10 \end{aligned}$ | addressed ( 13:4;80:1 | $\begin{array}{\|c\|} \hline \text { aid (1) } \\ 103: 5 \end{array}$ | 103:22 <br> appears (6) | $\begin{aligned} & 19: 6,14,19,20 ; 20: 4,5 \\ & 10 ; 21: 13 ; 23: 12 ; \end{aligned}$ |
| Absolutely (1) | adequate (1) | aids (1) | 61:1;72:21;74:8; | 25:15;65:17;83:9; |
| 17:23 | 36:2 | 4:14 | 75:9;78:5;110:5 | 4:2;95:9,105:14,21; |
| abutters (1) | adjacent (3) | align (1) | appendices (1) | 07:12,22;122:22,22; |
| 38:6 | $\begin{aligned} & 26: 19 ; 72: 24 \\ & 110: 24 \end{aligned}$ | alignm | App | $124: 16$ |
| abutting (5) 25:1;27:9 | adjourn (1) | $\begin{aligned} & \text { gnment (25) } \\ & 16: 1,3 ; 24: 3 ; 25: 11 \end{aligned}$ | Appendix (2) 27:5;99:17 | $30: 13$ |
| $\begin{aligned} & 20: 1 ; 21: 9 ; \\ & 90: 4 ; 98: 23 \end{aligned}$ | 133:13 | 26:7,8;38:16;39:19; | application (8) | arisen (1) |
| accept (10) | adjourned (2) | 62:9,11,12,14;74:18; | 8:23;13:8;99:3,6, | 64:10 |
| 8:10;50:3,14,18, | 133:17,19 | 75:17,21;99:12; | 15,18,24;104:1 | around (19) |
| 21;55:19,21;68:7; | admitted (1) | 100:23;105:19; | applied | 5:20;11:15;24 |
| 96:13;101:6 | 60:9 | 110:13;112:16 | 10:21;116 | 36:5;37:9;45:21; |
| accepted (1) | dvantage (2) | $123 \cdot 17 \cdot 125 \cdot 3 \cdot 130 \cdot 18$ | apply (2) <br> $68 \cdot 22 \cdot 110 \cdot 19$ | $63 \cdot 1 \cdot 70 \cdot 1 \cdot 76 \cdot 9 \cdot 81 \cdot 4$. |
| 20:22 | $\begin{aligned} & \text { 35:14;36:23 } \\ & \text { aesthetic (1) } \end{aligned}$ | $\begin{aligned} & \text { 123:17;125:3;130:18 } \\ & \text { allow (4) } \end{aligned}$ | 68:22;110:19 <br> appropriate (3) | $\begin{aligned} & \text { 63:1;70:1;76:9;81:4; } \\ & 86: 4 ; 100: 16 ; 102: 14 ; \end{aligned}$ |
| $\begin{gathered} \text { accepting } \\ 42: 11 \end{gathered}$ | 19:8 | 10:22;66:19;80:6,7 | 6:8;24:22;121:17 | 126:9;127:21;132:18 |
| access (11) | aesthetics (3) | allowance (1) | approval (7) | arrow (4) |
| 19:8;35:13;39:9; | $105: 22 ; 106: 11,21$ | $120: 13$ | $\begin{aligned} & 16: 2 ; 20: 24 ; 21: 2 \\ & 35: 6 ; 70: 17: 110: 17: \end{aligned}$ | $71: 16 ; 72: 2 ; 108: 19$ |
| $71: 18 ; 72: 8 ; 80: 4,7,13$ | $\begin{array}{\|c} \hline \text { affected (1) } \\ 122: 22 \end{array}$ | $\begin{array}{\|r} \text { allowed (2) } \\ 9: 13 ; 22: 6 \end{array}$ | $\begin{aligned} & 35: 6 ; 70: 17 ; 110: 17 \text {; } \\ & 133: 1 \end{aligned}$ | 120:11 <br> arrows (2) |
| accommodate (1) | Afternoon (6) | almost (2) | approve (1) | 109:13;128:21 |
| 116:6 | 6:22;18:1;38:7 | 94:23;98:2 | 124:2 | article (4) |
| Accommodation (8) | 64:3;73:3;98:22 again (37) | $\underset{\text { along (21) }}{\text { are }}$ (21:26:4.33.21. | $\xrightarrow{\text { approved (8) }}$ | $33: 2,11,12,14$ ascertation (2) |
| 8:8;27:11;73:13; | again (37) | 14:21;26:4;33:21 | 12:2,5;20:2;65:2,3; | ascertation (2) |
| 110:3;111:10,24; | 4:4;9:7;13:4; <br> $14 \cdot 24 \cdot 16 \cdot 12 \cdot 17 \cdot 18$ | $\begin{aligned} & 34: 4 ; 36: 6,17 ; 45: 6 \\ & 71 \cdot 9 \cdot 90 \cdot 4 \cdot 104 \cdot 9 \end{aligned}$ |  | $\begin{gathered} \text { 29:12;89 } \\ \text { ach ( } \mathbf{4}) \end{gathered}$ |
| 116:19;118:23 | $21 ; 21: 18 ; 22: 21$ | 106:5;107:8;108:7, | $26: 6$ | 95:23;96:9;97:3,1 |
| According (2) <br> 13:18;37:24 | $\begin{aligned} & 21 ; 21: 18 ; 22: 21 ; \\ & 25: 18 ; 26: 20 ; 27: 3 ; \end{aligned}$ | $24 ; 121: 5 ; 125: 1,3$ | approximate (2) | aside (1) |
| account (1) | 28:8,22;29:12;30:11; | 127:12;128:5; | 83:19;85:18 | 119:5 |
| 89:8 | 34:12;35:5;41:17; | 129:21;130:20 | approximately (11) | assemble (4) |
| accurate (3) | 44:10;53:6;57:15; | alternative (1) | 21:11;43:17;49:10; | 59:11;79:10;80:14; |
| 23:8,11,17 | 58:7;62:22;68:6; | 123:16 | 54:5;55:9;83:15,16; | 93:2 |
| acronyms (1) | 88:7;92:20,24;93:13; $94 \cdot 11 \cdot 103 \cdot 13$. | although (2) $57 \cdot 7 \cdot 110 \cdot 22$ | 88:11,13;99:19; $102 \cdot 20$ | assembly (2) |
| 124:22 | 94:11;103:13; <br> 110:11;114:15; | $\begin{aligned} & \text { 57:7;110:22 } \\ & \text { always (1) } \end{aligned}$ | $\begin{array}{r} \text { 102:20 } \\ \text { April (3) } \end{array}$ | 32:17;80:8 <br> assessing (1) |
| across (3) $22: 4 ; 68: 20 ; 80: 3$ | $\begin{aligned} & 110: 11 ; 114: 15 ; \\ & 115: 10 ; 120: 4 ; 122: 7 \end{aligned}$ | always (1) 118:12 | $\begin{aligned} & \text { April (3) } \\ & \text { 100:2,9;110:16 } \end{aligned}$ | $\begin{aligned} & \text { assessing (1) } \\ & 30: 14 \end{aligned}$ |
| action (1) | 132:2 | amended (1) | archives (3) | assessment (6) |
| 10:8 | against (3) | 81:8 | 5:17,19,20 | 14:12,19;25:4; |
| active (1) | 13:15;112:9 | Ammonoosuc (1) | arcing (1) | 95:15,23;96:2 |
| 65:1 | 116:15 | 35:19 | 63:6 | assign (1) |
| activities (3) | agencies (1) | amount (1) | area (67) | 102:19 |
| 45:14;67:7;68:2 | 115:19 | 24:22 | 7:22;8:1 | assist (3) |
| activity (1) | ago (1) | analyzed | 18;21:6,14,15;22:3, | 67:10;69:3,3 assistance (2) |
| 70:2 |  |  | $\begin{aligned} & 17 ; 23: 1,5,21 ; 29: 10, \\ & 17 \cdot 30 \cdot 21521 \cdot 31 \cdot 3, \end{aligned}$ | assistance (2) $69: 23: 70: 11$ |
| $\begin{gathered} \text { actual (3) } \\ 6: 3 ; 65: 1 \end{gathered}$ | $\begin{aligned} & \text { agree (15) } \\ & 8: 16,20 ; 9: 8 ; 24: 16 ; \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { and/or (2) } \\ 5: 10 ; 17: 8 \end{array}$ | $\begin{aligned} & 17 ; 30: 2,15,21 ; 31: 3, \\ & 21 ; 32: 16 ; 42: 21 ; \end{aligned}$ | assume (5) |


| $\begin{aligned} & \text { 20:5;23:16;49:7; } \\ & \text { 82.1:00:23 } \end{aligned}$ | $53: 4 ; 107: 5$ | 71:15;76:9;78:8 | $15,17 ; 58: 18,21,23$ | 80:9 |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{r} 82: 1 ; 99: 23 \\ \text { assumed (1) } \end{array}$ | bank (7) 7:13;21:12,17; | $\begin{aligned} & \text { bit (3) } \\ & 58: 7 ; 116: 2 ; 120: 12 \end{aligned}$ | $24 ; 62: 4,12,20 ; 63: 3$ | $\begin{gathered} \text { burden (1) } \\ 133: 5 \end{gathered}$ |
| 26:13 | 22:5,10;66:18,20 | BL (1) | 67:13,18,24;68:6,14, | buried (1) |
| assuming (1) | banking (1) | 17:1 | 19,23;69:7,14;70:21; | 12:24 |
| 51:11 | 46:12 | black (3) | 71:3,5,8,21,24;72:6, | bury (3) |
| assurance (1) | barn (7) | 38:22;40:2;47:17 | 14;73:5,17,20;83:20, | 8:14;9:13;32:23 |
| 90:21 | 45:5;46:24;71:18; | blanket (2) | 23;84:2,8,15;85:1,19; | burying (1) |
| assure (1) | 73:4;76:1;77:16; | 99:7,11 | 86:12,18,21;91:8,10; | 27:7 |
| 97:9 | 88:11 | block (1) | 94:3;99:10,14,21; | business (21) |
| attachments (1) | barrier (1) | 122:5 | 100:2,7,13,19;101:2, | 10:4;26:21;33:7; |
| 57:2 | 118:11 | blocking (2) | 6,21;102:10;104:3,6, | 35:10;119:10; |
| attendant (2) | base (2) | 79:21;128:3 | 10,16;106:4,12,17, | 122:20;128:1,8,13, |
| 117:7,8 | 14:2;36:5 | blue (1) | 23;110:9,13;113:4,9, | 17;129:8,18,22,24; |
| attended (1) | based (7) | 127:1 | 16,20;114:15,19; | 130:2,6,20;131:12, |
| 101:17 | 16:10;28:1;102:2; | blurry (1) | 115:1,24;116:8,17; | 21,23;133:3 |
| attention (1) | 111:2,9;124:4; | 43:10 | 117:10,21;118:13; | businesses (6) |
| 66:9 | 131:10 | Bob (1) | 119:1;120:17,19,24; | 32:24;33:16,21; |
| Attorney (1) | basically (5) | 98:22 | 121:22;123:4; | 34:4,15;122:16 |
| 103:5 | 16:22;44:12;65:24; | bold (4) | 128:15;129:15; | butts (1) |
| authority (1) | 91:20;128:2 | 83:3,5,14,14 | 130:18;131:6,8; | 13:14 |
| 101:24 | basing (2) | boom (1) | 132:6,15;133:7 | buy (1) |
| authorizations (1) | 116:13,13 | 55:9 | box (2) | 73:7 |
| 115:19 | basins (1) | Borchardt's[] (1) | 50:24;55:13 | Bypass (2) |
| Auto (2) | 12:11 | 50:24 | boxed (1) | 13:9;125:12 |
| 31:2;35:20 | basis (4) | bore (3) | 31:1 | bypassing (1) |
| available (9) | 15:11;33:1;121:16; | 63:7,12,19 | braced (1) | 125:13 |
| 5:2;15:5;19:11; | 123:21 | bores (1) | 43:1 | byway (3) |
| 24:7,11;36:13;39:7; | Beardsley (2) | 31:12 | branches (1) | 121:12,20,22 |
| 46:17;115:18 | 88:4,9 | boring (1) | 119:6 | byways (3) |
| average (1) | beaten (1) | 79:2 | brand (1) | 19:2,3;121:11 |
| 104:8 | 61:6 | both (12) | 77:21 |  |
| avoid (2) | become (4) | 69:23;75:19;83:4; | break (2) | C |
| $119: 16 ; 120: 4$ | 24:7;63:4;95:12; | $84: 19,20 ; 90: 15,16$ | 79:5;89:18 |  |
| $12: 12$ | begin (2) | 117:20;124:12 | bridge (2) 47:23;66:18 | $21: 24 ; 25: 12 ; 26: 1$ |
| aware (7) | 122:7;131:15 | bottom (6) | Bridgewater (1) | cables (5) |
| 30:23;31:5,11,14, | beginning (2) | 74:14,16;76:24 | 125:1 | 6:24;7:2;21:17; |
| 16,22;34:16 | 11:16;109:20 | 79:23;105:7;108:17 | brief (2) | 24:14;25:7 |
| away (6) | behind (2) | boundary (8) | 37:17;89:19 | call (2) |
| 13:23;22:23;49:21; | 57:13;123:21 | 83:19;85:18,21; | bring (6) | 25:13;69:8 |
| $55: 14,24 ; 69: 20$ | below (1) | 86:9,11,19,21;88:4 | 29:14;37:2;44:5; | called (1) |
|  | 48:5 | bounds (2) | 51:4;59:9;62:13 | 34:2 |
| B | bends (1) | 14:20;16:6 | bringing (1) | calls (1) |
|  | 63:14 | Bowes (190) | 58:15 | 37:1 |
| back (26) | beside (1) | 6:20;7:4,10,18;8:5, | broke (1) | came (7) |
| 14:12,16;17:11,21; | 56:8 | 10,16;9:1,7,16,20; | 79:2 | 21:19;24:4;27:20; |
| 29:14;39:22,24; | best (3) | 10:3,11;11:7,23; | brought (1) | 99:5;124:19;125:21; |
| 45:20;46:3;47:10; | 124:12;129:6,17 | 12:19;20:7,15;26:3,6, | 66:9 | 128:8 |
| 51:4,14;62:13;76:15, | Bethlehem (3) | 13,19;27:2,8,12; | Bruce (1) | Campbell (1) |
| $19 ; 77: 13 ; 88: 7$ | 29:7;64:5;103:15 | $28: 16,18 ; 29: 2 ; 31: 8$ | 64:3 | 38:5 |
| 102:14;108:23; | better (1) | 14;32:1,5,9;33:11,17, | buffer (2) | Campground (2) |
| 109:5;110:6;126:1,8, | 122:23 | 20,23;34:19;35:5,9, | 84:4;95:7 | 31:18,24 |
| 13;127:22;131:16 | beyond (11) | 22;36:1,3,15,21;37:4, | building (5) | Campton (2) |
| backfill (3) | 21:13;22:17;23:21 | 8;38:24;39:3,9,21; | 13:13,23;61:12,13; | 108:7;130:15 |
| 45:17;95:24;96:17 | 50:19;66:2;74:2; | 41:19,23;42:2,15,18; | 62:5 | can (63) |
| back-ream (1) | 75:24;81:14,17;82:7; | 44:22,24;46:9,14,16; | buildings (2) | 13:14;14:17;16:12; |
| 79:6 | 127:16 | 47:1,11,13,16,18; | 61:10;79:22 | 17:12;18:3;19:7; |
| backwards (1) | bid (2) | 48:2,8,11;49:15,20, | bullet (1) | 22:23;24:23;28:10, |
| 51:15 | 52:15,21 | 24;50:10,15,17,21; | 122:18 | 19;32:22,24;33:12; |
| bales (3) | bids (1) | 51:3,7,20;53:1,6,9, | bunch (1) | 36:7;38:21;39:7,23; |
| 73:8,9,10 | 52:13 | 24;54:4,7,10,22;55:3, | 28:20 | 44:20,24;47:24;48:2, |
| ballpark (2) | big (3) | 5,19,21;56:18;57:1,5, | bundle (1) | 9;54:15;62:4,10; |


| 67:21;71:1,22;74:2, | change (16) | 118:22 | 43:13 | 94:20,24;107:13 |
| :---: | :---: | :---: | :---: | :---: |
| 15;77:19;78:4,17; | 14:3;15:12;16:18; | closer (3) | concerned (3) | constraints (1) |
| 79:12,14;80:4;81:11; | 25:9,10,11,13,14; | 62:7,13;128:22 | 61:15;81:11;92:8 | 107:23 |
| 82:22;87:7,14;92:11, | 46:11;64:23;65:8; | closure (10) | concerns (1) | construct (2) |
| 14,23;95:21;96:1; | 87:3,9;96:15;97:22; | 11:14;56:19;59:4, | 114:18 | 47:9;124:14 |
| 97:9;99:19;101:6; | 110:24 | 15;72:15;117:20,22; | concerted (1) | constructed (1) |
| 103:18;104:14,16; | changed (2) | 118:15,16,18 | 17:11 | 12:15 |
| 106:2,4;107:17,18; | 76:22;102:11 | closures (14) | concludes (1) | construction (15) |
| 110:7;120:9;124:22; | changes (3) | 10:19;11:2,4,10 | 103:1 | 10:18,21;11:14; |
| 126:20;129:15; | 25:15;87:1;95:12 | 22;30:10;58:16; | concrete (5) | 12:21;16:16,18;20:8; |
| 131:9;132:5;133:7 | characterize (3) | 117:5,9,19;118:2,5 | 52:8;56:20;57:9 | 24:11;44:14;47:2; |
| case (8) | 97:14;99:10; | 24;119:2 | 59:4;67:2 | 72:24;118:14; |
| 36:12;57:6;79:14; | 113:17 | coal (4) | condition (4) | 122:22;129:11;133:4 |
| 82:20;83:21;110:21; | charge (2) | 95:23;96:9;97:3,16 | 67:24;68:7;116:3; | consulted (1) |
| 128:21;129:16 | 67:12;113: | collaborative (1) | 122:23 | 65:23 |
| case-by-case (1) | chart (1) | 124:11 | conditions (9) | consulting (1) |
| 121:16 | 24:4 | colored (1) | 19:15;67:20;100:4, | 34:2 |
| cases (1) | check (3) | 40:18 | 5;102:2;110:15,17; | contact (4) |
| 107:12 | 53:3;65:5;76:6 | column (1) | 111:4,5 | 36:6;131:19; |
| casings (1) | checked (1) | 33:17 | conduct (2) | 132:20,21 |
| 79:7 | 73:15 | columns (1) | 94:7,13 | contacted (2) |
| catastrophic (1) | choice (1) | 101:11 | conducted (2) | 35:18;61:19 |
| 118:20 | 10:9 | coming (3) | 67:11;69:4 | contacting (1) |
| catch (1) | chopping (1) | 34:8;57:20;61:1 | conductors (1) | 36:19 |
| 12:11 | 122:5 | commencing (1) | 57:5 | contacts (2) |
| cause (2) | chosen (2) | 133:22 | conduit (9) | 36:9,11 |
| 73:21;127:24 | 22:2;114:5 | Commission (2) | 32:16,22;45:15; | contained (2) |
| causes (1) | circle (3) | 4:17;67:19 | 79:10,20;80:5,9,15; | 16:3;44:13 |
| 73:22 | 11:15;87:14;118:8 | commissioner's (1) | 85:2 | contains (1) |
| causing (1) | cite (1) | 4:24 | conduits (2) | 97:9 |
| 58:15 | 16:23 | commitment (1) | 7:13;79:7 | contend (1) |
| center (6) | claim (2) | 122:21 | confidentiality (1) | 50:18 |
| 55:14;82:2,5,8; | 73:6;74:1 | Committee (5) | 36:11 | continue (4) |
| 84:16;91:21 | claims (1) | 9:6;68:3;70:15; | confirm (2) | 14:18,19;20:22; |
| Centered (2) | 130:3 | 101:24;102:3 | 62:4;99:1 | 60:20 |
| 22:10;29:20 | Clarksville (2) | common (1) | confirming (1) | contract (1) |
| central (1) | 118:6;125:7 | 84:3 | 92:1 | 52:5 |
| 38:6 | clear (7) | communication (1) | conflicts (1) | contractors (1) |
| certain (3) | 21:15;38:11;68:11; | 57:1 | 8:6 | 52:5 |
| 11:21;14:17;102:2 | 106:13;107:3;119:5; | Community (1) | conform (1) | contracts (1) |
| certainly (15) | 131:7 | 35:19 | 115:22 | 52:13 |
| 16:13;17:7;30:19; | clearances (1) | Companies (1) | confused (2) | control (5) |
| 47:8;51:18;52:10; | 70:10 | 17:1 | 109:23;117:1 | 27:12;72:18;73:11; |
| 62:4;66:8;67:22; | cleared (4) | company (3) | congested (2) | 86:1;117:14 |
| 68:6;73:6,7;74:1; | 19:20;20:5;21:6,23 | 83:18;85:17;86:15 | 7:16;8:2 | cooperate (2) |
| 92:16;128:15 | clearing (6) | compare (1) | connection (1) | 34:22;35:17 |
| certainty (3) | 18:21;22:7;105:17; | 108:4 | 67:6 | Coos (1) |
| 24:15;92:11,14 | 106:5,7,21 | complete (6) | consequently (1) | 21:22 |
| certification (1) | clearly (13) | 10:19;20:21;28:21; | 43:17 | copy (6) |
| 10:5 | 15:21;26:24;30:4; | 102:16;117:22;122:8 | Conservation (1) | 38:24;39:3,6;91:8, |
| cetera (2) | 36:15;39:2;43:21; | completed (3) | 4:16 | 11,15 |
| 132:13,13 | 44:4;52:18;62:20; | 10:7;64:14,17 | conservative (1) | corner (3) |
| Chair (2) | 69:16;89:7;99:14; | completely (2) | 44:10 | 45:21;46:15;63:2 |
| 37:22;53:16 | 131:11 | 10:14;14:9 | consider (7) | corrected (2) |
| CHAIRMAN (32) | climb (1) | comply (1) | $8: 1 ; 15: 19 ; 19: 18$ | 42:9;73:17 |
| 4:3;37:13,24; | 119:6 | 94:16 | 36:2;97:8,21;128:15 | correcting (1) |
| 39:11,14;53:17; | clinic (2) | component (2) | considered (2) | 43:6 |
| 54:13;58:20;59:16, | 31:2;32:14 | 45:18;112:2 | 13:2;97:4 | correction (1) |
| 24;60:5,11,15,19; | close (6) | computer (7) | Considering (1) | 72:6 |
| 63:22;89:16,21; | 25:6;55:17;62:9; | 39:8;82:24;88:7; | 28:20 | correctly (9) |
| 91:10;93:6;96:19,22; | 125:24;129:4,24 | 93:13;103:7;120:22, | consistent (3) | 6:10;90:11;99:4 |
| 97:5,13;98:1,5,11,15, | closed (3) | 24 | 22:4;43:3;94:9 | 101:11;108:14; |
| 18;103:2,8;133:11,16 | 80:18;117:20; | concentrate (1) | constrained (3) | 109:2,16;114:11; |


| 115:21 | 69:5;71:4,6,11 | December (9) | designated (3) | discontinued (1) |
| :---: | :---: | :---: | :---: | :---: |
| cost (14) | culverts (2) | 13:8;18:14;104:1; | 85:10;121:24; | 88:1 |
| 67:13;68:17; | 12:10;74:13 | 108:10;109:5,17; | 122:1 | discouraged (1) |
| 111:18,20,23;112:2, | curious (1) | 110:1,5;111:9 | designed (1) | 119:2 |
| 4,5,9,15,15,17;113:1; | 124:18 | decide (1) | 130:3 | discuss (4) |
| 114:20 | current (1) | 129:6 | designs (1) | 34:10;35:20;65:14; |
| costing (1) | 25:23 | decision (3) | 63:15 | 88:17 |
| 69:10 | currently (3) | 112:5,6;121:17 | destroy (1) | discussed (17) |
| costs (2) | 24:1;30:14;78:19 | de-designated (1) | 21:17 | 5:5,8;16:8;20:19; |
| 28:14;112:18 | Currier (1) | 121:20 | details (2) | 21:9;22:21;23:1; |
| counted (1) | 33:5 | deeds (2) | 15:1;20:12 | 24:10,16;32:20; |
| 8:6 | curve (1) | 64:15;88:23 | determination (1) | 56:18;96:3;99:14; |
| county (1) | 63:4 | deeper (2) | 92:21 | 106:8;119:23; |
| 88:23 | curves (1) | 7:9;11:20 | determine (2) | 121:10;126:18 |
| couple (8) | 108:23 | defining (1) | 29:15;65:17 | discusses (1) |
| 66:24;67:4;80:20; | curving (1) | 66:10 | determined (1) | 24:5 |
| 93:2;97:24;110:10; | 63:6 | definitely (1) | 83:14 | discussion (5) |
| 126:2;129:9 | customary (1) | 18:8 | determining (1) | 4:18;37:8;39:13; |
| course (4) | 49:12 | definition (8) | 88:18 | 85:23;94:4 |
| 10:3,8;26:21;40:9 | customer (6) | 23:19;25:18;74:19; | develop (2) | disintegrates (1) |
| Court (6) | 36:11;129:5,16; | 82:14;83:3,6,11; | 15:24;47:21 | 57:24 |
| 22:15;54:9;56:6, | 130:4;131:16,20 | 105:17 | developed (1) | dispute (1) |
| 13;63:11;71:23 | customers (2) | delay (1) | 34:3 | 31:15 |
| cover (1) | 35:10;132:17 | 31:10 | development (1) | disruption (1) |
| 110:9 | cut (2) | delayed (1) | 10:5 | 73:22 |
| covered (1) | 20:10;63:10 | 72:12 | DHR (2) | distance (2) |
| 111:12 | cutting/taking (1) | delays (3) | 61:22;62:5 | 29:19;107:5 |
| covers (1) | 18:16 | 16:20;31:6,9 | diagram (2) | distinguish (1) |
| $29: 9$ craft (1) |  | deliver (2) | 71:19;82:11 | 82:16 |
| craft (1) | D | 56:1,15 | diagrams (1) | distribution (1) |
| $126: 10$ crane (16) |  | denied (2) | 84:13 | 56:23 |
| crane (16) | damaged (1) | 99:23,24 | dialogue (1) | disturbed (2) |
| $54: 20,22 ; 55: 1,13,$ | $73: 9$ | Department (6) | 6:3 | 95:9;128:19 |
| $22 ; 56: 3,7,10,10,12$ | Danielle (1) | 8:24;11:5;18:12; | difference (1) | ditch (2) |
| 14;58:3,5,6,8;59:12 | 130:8 | 61:15;62:24;96:6 | 102:5 | 46:20;66:11 |
| cranes (2) | dare (1) | depend (2) | different (7) | ditches (1) |
| 51:23;58:14 | 126:20 | 10:9;20:7 | 14:9;37:16;62:14; | 66:2 |
| create (2) | dash (2) | dependent (1) | 95:13;111:15;115:4; | divide (1) |
| 31:6;105:19 | 82:17,18 | 11:11 | 116:2 | 54:16 |
| created (2) | dashed (10) | depends (1) | difficult (2) | docket (1) |
| 76:14;117:15 | $38: 23 ; 40: 3 ; 83: 1,4$ | 90:12 | 71:8;128:4 | 7:5 |
| creating (1) | 4,5,5,14,15;130:22 | depicted (2) | difficulties (2) | document (15) |
| 16:7 | dashes (2) | 61:3;78:3 | 4:9;60:23 | 8:4;29:11;33:19; |
| crews (4) | 82:17,19 | depicting (1) | difficulty (2) | $38: 10 ; 42: 6,12,13,16$ |
| 67:10;68:17;69:2,3 | data (1) | 81:6 | 40:8;74:10 | 71:2,20;87:8;90:24; |
| criteria (1) | 36:5 | depth (1) | dig (3) | 92:12;96:7,10 |
| 63:15 | date (5) | 10:24 | 11:20;69:15,22 | documentation (8) |
| cross (4) | 99:19;119:20; | described (1) | dimension (3) | 5:1,22;6:2;30:20; |
| 25:19;51:16,18; $57 \cdot 8$ | 131:24;132:15,16 | 6:2 | $49: 20 ; 52: 23,24$ | $32: 5 ; 65: 7 ; 77: 9 ; 92: 5$ |
| 57:8 | dated (4) | describes (1) | dimensions (3) | documents (4) |
| $\begin{gathered} \text { CROSS-EXAMINATION (6) } \\ 4: 11 ; 38: 3 ; 64: 1 ; \end{gathered}$ | $\begin{aligned} & 18: 13 ; 87: 20 ; 99: 22 ; \\ & 122: 14 \end{aligned}$ | 76:21 <br> describin | $\begin{aligned} & \text { 48:15,15;50:4 } \\ & \operatorname{dips}(1) \end{aligned}$ | $\begin{aligned} & 6: 4 ; 19: 24 ; 24: 9 \\ & 97: 12 \end{aligned}$ |
| 90:1;98:20;103:11 | Day (8) | $15: 13$ | dips (1) $43: 15$ | done (22) |
| crossing (2) | 6:21;18:1;64:21; | description (3) | direct (4) | 5:13,15;9:1;14:5; |
| 75:17;125:6 | 72:9;80:9,14;133:18, | 6:23;37:18;39:23 | 105:6;129:17,23; | 15:21;23:19;27:21; |
| crumble (1) | 20 | design (24) | 130:6 | 29:3,10;32:18;57:11, |
| 58:12 | days (5) | 10:6;22:19;23:10, | direction (1) | 13,17;59:7;66:22; |
| crumbling (2) | 46:21,23;80:17,19; | 14,23;24:8,9;25:14, | 57:19 | 70:1;87:2;105:23; |
| 43:19;58:12 | 103:6 | 15,23;26:2,7,15; | directly (5) | 106:10,22;120:24; |
| Crystal (1) | deal (1) | 51:10;60:16;62:20; | 26:8,19;35:20; | 121:3 |
| 88:12 | 119:20 | 63:15;70:5,9;82:19; | 37:10;119:20 | door (2) |
| culvert (7) | $\underset{0.19}{\text { dealing (1) }}$ | 89:9;92:15;102:16; | director (1) | 131:19,19 |
| 66:19;67:7,11; | 9:19 | 115:18 | 122:15 | DOT (57) |


| 4:19;5:17,19;6:3; | 7:13;21:12,17; | 10:18;11:17;22:12, | try (19) | 50:22;53:11;92:17, |
| :---: | :---: | :---: | :---: | :---: |
| ;11:12;16:1; | 22:5,10;66:18,2 | ; 32:22;47:7; | 31:11,17,23;42:1 | 23 |
| ;19:6;20:2,16 | due (2) | , $3 \cdot 5 \cdot 88 \cdot 2$. | -80.22 | exact (3) |
| 21:24:8:26:6,22. |  |  | 4,16,17,18,21, | 55.2 |
| 28:1,5,12;35:6; | d | 113.17,115 | 3;82:1;84:20,20; | 1:14 |
| 44:20;65:2,4,11 | 10 | elaborate (1) |  | exactly (7) |
| 67:19;68:1,8;73:15, | :18;46:23;59:12 | 1:2 | entry-area | 23:9;24:18; |
| , | 8 | elements (1) | 80:23;84:18 | 6:9,19;95:17;130:3 |
| 91:24;92:18;95: |  |  | environment (1) | mple (2) |
| 99:15,17,21;103:23 | 7;1 | el | 97: | 48:16;117: |
| 18;108:9; | :8;58:1;63:7, | 11;110 | environmental ( 7 | examples (1) |
| 110:16;112:4,17,19, | 12;64:12;78:7;79:2; | ELMO (5) | 19:8;27:9;94:10 | 114:6 |
| 24;113:1,6,8;115:22, | 80:8,11;100:21 | :11;40:1 | $5: 14,17,22 ; 96$ | excavation |
| $: 3$ | E | 103: | equipment (23) | $0: 23 ; 45: 15 ;$ |
| OT's (5) |  | 133:1 | 10;78:6,8, | $\begin{aligned} & \text { 1;,38: } \\ & \text { 107: } \end{aligned}$ |
| 6:11;8:8;1 |  | els | 4,13;81:15, | excavations |
| 124:8,12 |  | 6:16 | 2:1;84:6,10, | 7:9 |
| down | , |  | 12;86:2 | except (1) |
| 40:2;43:20 | 8;32:20;64:12 | 132:20 | ER (1) | 109:18 |
| 57:11,11;61:2,1 | 15;87:6;104:1 | emer | 38:2 | Exception |
| 64:6;74:5;76:24; | early (1) | 3:11;6 | erosio | 7:21,24;9:1 |
| 77:18;78:18;120 | 35:7 | encomp | 73:11 | 0:15;11:6,1 |
| 123:11;127:7,23 | easemen | 75:19 | pe | :1,4,9;13:6,17,19 |
| 128:12;129:13;132:2 | 90:8 | encroach | 34:17;35:15;67 | 15:4;18:19,20;19:4 |
| Or (20) | easily (1) | 0:22 | essence ( | 10,17,23;20:17,23; |
| 19 | $58 \cdot 12$ | end (18) | 100:7;119:1 | 21:5;22:16,18;23:8 |
| 39:14,16;40:7; | east (5) | :17 | essentially (4) | 11,13,15,18,21;24:3 |
| 20,21;54:13,18,19; | 25:8;45:6;76:1 | 38:20,22;40:1,3,1 | 45:2;78:24;8 | $20 ; 25: 5,16,19,20,22$ |
| 58:24;59:16,24;60:3, | 108:16;127:2 | :23;72:3;73:3; | 109:15 | 27:4,23;28:9,13,15, |
| 8,21,22;63:21 | Eastern | 81:1 | establish | 6;29:1,7;33:7;35:2 |
| draft (3) | 4:16 | :2;94:11;123:1 | 4:23 | 8:9,19,20;39:1,3; |
| 24:1;94:9; | Easton | 129:10 | Estate | 40:1;42:12;44:1,18; |
| drainag | 31:18;91:20,22; | endin | :9;1 | 6:9;51:4;59:20; |
| 21:13,14;6 | 98:23;120:6;121:19; | 41:1 | timate (5) | 6:14;62:23;64:24; |
| 67:16;68:13;75 | 122:3;125:9,12 | en | ;53:4 | 6:13;70:23;72:4 |
|  | edge |  | 111:22 | :3,9,12,19;75:14 |
| dr | 13:13;2 | 109:15 | estimated | 16,22;76:3,11;78:1; |
|  | 20;27:1,7;40:19,22, | En | 16:16 | 87:4;88:15;89:1; |
| drastic | 24;41:5;47:24;50:9; |  | timates | 3:11;94:5,15;95 |
| 65 | 58:13;61:3;62:9 | engine | 28:11 | 0;100:8;102:7 |
| drawing | 78:3,22;79:16;81:6,9, | 48:5,1 | et (2) | 03:23;104:12,17,20 |
| 24:18;78:19; | 18,20;83:18;84:7,12; | engineer | 132:13, | 21;105:5,16;109:10, |
| 105:6 | 85:9,14;86:10;94:8; | 9:12 | valuation (3) | 14,19;110:1,6,19,21 |
| drawing | 7:7,10,14,15,20; | enhanc | 9:5;105:22;106:22 | 23;111:17,19,22; |
| 31:19;82:1 | 108:24;115:15; | $5 \cdot 17$ | even (9) | 112:11;114:4,8,10; |
| 105:20;133 | 120:10; | en | 6:7;70:6,8;73:12, | 115:8;116:9,18,19, |
| drill (4) |  |  | ;84:3;91:12;106:8; | 3;119:15,17, |
| 42:21; |  |  | 131:10 | 120:2,15;121:6,7,13 |
|  |  | 6:10;44:6 | even | 22:6,12;123:1,10, |
| $\begin{array}{r} \text { drive (1) } \\ 120: 21 \end{array}$ | ; 3 | en | 12:14, | , |
| driveway | effor | entire | 7:1,8,14;8:3;9 | 14;132:13 |
| 71:17;72 | 17:11; |  | versource/Northern (1) | exceptions (3) |
| 16,20;74:15;75:24; | eight | 91:21;93:2;96 | 33:3 | 8:7;38:7;95:4 |
| 77:17;79:23;80:17 | 16:9;20 | 11;106:6;109:23; | Eversou | Excuse (5) |
| driveways (1) | eight-wee | 121:24;129:4 | 6:23 | 49:6;64:5;69 |
| 79:22 | 28:23 | entirel | erybod | 85:5;122:12 |
| driving (3) | EIS (11) | 23:2;103: | 15:8;38:12 | executing (1) |
| 117:23;118 | 21:21;9 | entity | everyone (2) | 34:5 |
| drop-off (1) | 24;115:3,14, | 36:6;69:22 | 130.21 | exemption (4) |
| $7: 6$ | 116:10,11 | entrance (3) | idence (7) | 99:8,11,12;100:1 |
| duct (7) | either (15) | 31:1;129:3,4 | 17:3;45:8;48:3; | exhibit (22) |


| 32:1;40:5;47:21; | facilities (5) | 109:13 | flatbed (1) | 90:4,9;91:1,15,21 |
| :---: | :---: | :---: | :---: | :---: |
| 48:9,9;101:9;103:19; | 26:22;69:24;70:9; | figure (5) | 59:10 | Frazier's (1) |
| 108:2;109:9;114:2; | 94:7,13 | 17:3;28:19;44:16; | flatter (1) | 118:3 |
| 115:7,11;116:22; | fact (8) | 107:7;124:3 | 58:17 | frequently (1) |
| 119:12;122:12; | 7:4,10,18;10:3; | figures (1) | flip (2) | 114:8 |
| 123:2,8;126:1,14,17; | 57:22;106:6;111:6, | 52:6 | 111:14;117:3 | friable (1) |
| 127:10;130:8 | 16 | figuring (1) | floor (1) | 43:24 |
| exhibits (1) | factor (1) | 74:11 | 71:18 | Friday (1) |
| 56:22 | 112:12 | file (2) | flower (1) | 119:9 |
| existence (3) | facts (1) | 120:15;121:6 | 61:11 | front (12) |
| 8:13;9:3,24 | 61:19 | filed (3) | fly (4) | 6:19;31:17;33:9; |
| existing (3) | failed (1) | 109:18;119:20; | 95:23;96:9;97:3,16 | 56:9;70:3;76:22; |
| 9:14;29:2;75:18 | 16:23 | 120:19 | focus (3) | 77:16,21;110:22; |
| exit (13) | fair (6) | filing (3) | 13:6;38:17;130:21 | 123:11;126:10; |
| 13:10;30:24;31:16, | 8:12,21;23:6;25:4; | 27:3;99:15;110:14 | follow (5) | 130:19 |
| $23 ; 32: 24 ; 45: 21 ; 78: 7$ | 116:7,16 | fill (2) | 45:15,16;84:8; | FTB (1) |
| 13;79:21;84:5,11,20; | fairly (2) | 20:10;44:5 | 100:6;121:23 | 45:17 |
| 85:5 | 96:14;114:9 | filled (1) | followed (2) | full (2) |
| expect (5) | familiar (5) | 87:14 | 82:18;93:1 | 118:18;131:11 |
| $49: 12 ; 65: 20 ; 92: 23 ;$ | 31:3,20;33:11; | fills (1) | following (3) | fully (2) |
| $121: 7,15$ | 64:9;90:24 | 127:19 | $42: 12,20 ; 126: 11$ | 52:15,21 |
| expected (1) | far (11) | final (8) | footprint (1) | function (1) |
| $17: 17$ | 5:10;14:18,18; | 10:6;22:19;23:23; | 54:23 | 113:22 |
| expenses (1) | 22:20;77:1;78:13; | 26:2,6;35:5;45:17; | forced (1) | fundamentally (1) |
| $28: 12$ | 81:14,17,20;103:20, | 132:24 | 119:21 | 15:12 |
| experience (5) | 24 | find (24) | forested (1) | further (11) |
| 7:8,15;8:3;9:19; | farm (3) | 10:9,10;14:17; | 19:19 | 17:18;41:10;46:2; |
| 30:7 | 90:16,18,23 | 16:13;17:9,12,17; | forgetting (1) | 47:3,15,21;48:6; |
| experienced (3) | Farrington (1) | 28:19;29:21;44:21; | 86:24 | 55:24;76:8;120:12; |
| 7:1;9:21;130:2 | 11:1 | 47:2;62:14;74:22; | form (3) | 128:12 |
| expertise (2) | farther (2) | 76:12;87:7;89:13; | 35:24;36:20;66:18 | furthest (1) |
| 6:23;52:4 | 13:23;22:23 | 93:15,18;96:11; | formations (1) | 49:20 |
| experts (1) | features (1) | 124:9;129:17; | 61:5 | future (5) |
| 62:6 | 66:1 | 132:10,20,20 | formerly (1) | $12: 17 ; 66: 20 ; 67: 6$ |
| explain (4) | February (2) | Fine (2) | 11:1 | 69:1;112:18 |
| $\begin{aligned} & 35: 8 ; 110: 7 ; 124: 23 \text {; } \\ & 132: 23 \end{aligned}$ | $\begin{aligned} & 24: 12 ; 26: 2 \\ & \text { federal }(2) \end{aligned}$ | $47: 10 ; 50: 15$ <br> finish (1) | $\begin{array}{\|l} \text { forth (3) } \\ 5: 18 ; 76: 20 ; 115: 20 \end{array}$ | G |
| explained (1) | $95: 20 ; 115: 18$ | finish (1) 129:15 | Fortier (2) | G |
| 100:24 | feel (1) | fire (3) | 122:15,20 | Gale (1) |
| explanation (1) | 104:4 | 48:5,12;49:21 | forward (2) | 47:23 |
| $67: 22$ | feeling (1) | firm (1) | 16:1;95:11 | Garnet (2) |
| exposed (1) | 102:8 | 34:2 | found (5) | 31:12;35:19 |
| 117:16 | feet (59) | first (28) | 17:15;40:14;64:22; | gas (2) |
| extend (5) | 14:1;21:5,9,11,19, | 4:5;5:14,21;9:10; | 87:2,9 | 9:21;32:14 |
| $44: 2 ; 63: 1 ; 75: 23$ | 19,21,22;22:9,13,13; | 11:13;17:10;37:20; | foundation (2) | gave (2) |
| $78: 14 ; 81: 15$ | 25:2;30:2,3,5;43:16, | 48:4;50:6,19;51:17, | 61:2;67:2 | 54:1;110:16 |
| extended (1) | 18;44:10,15;48:16, | 18,24;60:2;64:10; | four (18) | general (3) |
| 10:21 | 18,18,22,23,24;49:1, | 73:21;83:10,11; | 7:12;13:11;16:17, | 27:16;113:4; |
| extending (1) | 5,5,7,9,17;50:8,9,13; | 88:14;89:1;90:7; | 19;29:8;37:15,15; | $124: 15$ |
| 79:18 | 53:12,12,13;55:14, | 101:11;108:2,8; | 46:21,23;48:6;49:18; | Generally (1) |
| extensive (2) | 20;61:2;75:7;76:16; | 113:3;114:16; | 50:7;75:9;89:4;90:9; | 67:24 |
| 10:23;93:7 | 78:20;81:9;82:5,6,7, | 122:18;123:15 | 92:8;93:1;107:19 | generate (2) |
| extent (1) | 9;84:16;88:12;94:8; | fit (2) | four-by-four (1) | 119:24;120:2 |
| 128:19 | 107:4,10,13,15,19, | 29:22;55:3 | 81:17 | generation (1) |
| extreme (1) | 21;115:15;120:9 | fits (3) | four-rod (6) | 28:24 |
| $90: 19$ | few (4) | 44:8;63:18;124:12 | 15:21; 27:16;29:16; | generic (1) |
| eyes (1) | 18:18;81:9;103:19; | five (5) | 51:11;62:9,12 | 117:1 |
| 131:10 | 105:10 | 59:15;61:2;72:8; | frame (4) | gentleman (1) |
|  | field (3) | 88:14;89:1 | 36:16;46:22; | 80:15 |
| F | 70:11;93:1;121:3 | five-week (1) | 100:20;122:9 | gentlemen (1) |
|  | Fifty (1) | 39:18 | Franconia (12) | 64:3 |
| face (1) | 102:21 | flat (1) | 13:7;16:14;30:24; | geometry (1) |
| 114:16 | figuration (1) | 44:6 | 31:2,7;32:13;35:20; | 63:18 |


| geotech (1) | 76:10 | $39: 17 ; 68: 18 ; 69: 2$ | 5:4;24:15;78:20; | incomplete (1) |
| :---: | :---: | :---: | :---: | :---: |
| given (5) | H | high (1) | Hypothetical (3) | inconsistent (1) |
| $\begin{aligned} & 5: 12 ; 15: 8 ; 26: 24 ; \\ & 2 \cdot 5 \cdot 14 \cdot 10 \end{aligned}$ |  | $118: 18$ | $\begin{aligned} & \text { 29:18;30:12; } \\ & 106: 19 \end{aligned}$ | $77: 11$ |
| gives (1) | 25:6;29:19;88:2; | 117:16 |  | 72:23;112:23 |
| 101:24 | 101:7;129:1 | highlight (1) | I | incorporate (1) |
| glad (1) | half-mile (1) | 32:15 |  | 15:3 |
| 32:6 | 25:24 | highlighted (2) | IACOPINO (4) | incorporated (1) |
| goal (1) | hall (1) | 115:13;117:4 | 39:5;40:5;91:5; | 92:15 |
| 18:5 | 91:18 | highway (3) | 93:21 | incorrect (1) |
| goes (8) | hammer (1) | 88:1,3;113:21 | idea (2) | 60:18 |
| 11:15;49:18;75:22; | 47:8 | Hill (5) | 92:9;112:4 | increase (2) |
| $76: 1 ; 95: 11 ; 108: 24$ | Hampshire (3) | 31:13;32:13;35:19; | ideal (2) | 16:15,20 |
| 127:7;132:8 | 66:3;69:22;132:18 | 125:9,12 | 44:16;62:21 | increased (1) |
| gold (1) | hand (2) | hire (1) | identification (1) | 28:14 |
| 109:12 | 35:2;108:16 | 17:20 | 5:7 | indeed (1) |
| golden (1) | happen (1) | hired (1) | identified (4) | 106:17 |
| 130:22 | 69:17 | 34:1 | 7:20;18:24;33:23; | indicate (1) |
| Good (6) | happened (1) | historic (3) | 123:16 | 109:13 |
| 64:3;92:9;93:24; | 110:8 | 5:3;15:15;77:10 | identifies (1) | indicated (2) |
| 98:22;119:8;126:19 | happening (1) | historical (4) | 69:16 | 40:2;71:19 |
| governing (1) | 129:13 | 30:19;61:14,21; | identify (2) | indicates (2) |
| $101: 23$ | happens (6) | 83:8 | 121:4;124:6 | 41:14;43:11 |
| grade (3) | 114:6;115:8;117:1; | Hold (2) | identifying (1) | indicating (2) |
| 32:23;79:3,5 | 123:20;126:3;130:16 | 40:13;102:1 | 120:20 | 50:22;85:22 |
| graded (2) | hard (2) | holding (1) | illustration (1) | indirect (2) |
| 19:20;20:6 | 17:13;20:11 | 100:17 | 108:15 | 129:21;130:1 |
| grant (3) | Haven (1) | hole (5) | image (1) | individual (1) |
| 28:12;112:6; | 31:24 | 78:7,14;79:6,13 | 43:10 | 36:10 |
| 122:24 | hay (8) | 82:6 | imagine (1) | individualized (1) |
| granted (6) | 73:2,3,7,8,10,14, | HONIGBERG (32) | 99:20 | 131:22 |
| 11:5,19;28:15; | 16,18 | 4:3;37:13,24; | impact (12) | influence (1) |
| $121: 13 ; 123: 18,20$ | haying (1) | 39:11,14;53:17; | 37:10;80:13,21; | 112:21 |
| great (3) | 73:1 | 54:13;58:20;59:16, | 94:10;95:14,17,22; | information (26) |
| 62:2;63:4;95:12 | HDD (18) | 24;60:5,11,15,19; | 96:2;115:15;122:21; | 5:16,19;6:10,18; |
| green (7) | 29:23;30:24;31:11, | 63:22;89:16,21; | 128:24;133:4 | 12:7;14:2,10;15:2, |
| 22:17;23:12;47:17; | 16,22;32:11;33:9; | 91:10;93:6;96:19,22; | impacted (2) | 22;28:7;35:13;37:7; |
| 48:1;49:16;50:11,19 | 38:15,16;39:19,19; | 97:5,13;98:1,5,11,15, | 120:1;129:12 | 53:22;77:6,23;83:9; |
| grip (1) | 41:6,11,12;42:4,6; | 18;103:2,8;133:11,16 | impacts (14) | 88:20;89:11;100:18, |
| 104:5 | 46:1;79:1 | honor (1) | 10:20;11:3;12:22; | 21;102:5;112:13; |
| gritty (1) | HDDs (2) | 121:7 | 19:9;27:9;32:19; | 124:5;130:12,17; |
| 57:23 | 45:12,23 | hope (1) | 34:10;96:3;117:7; | $132: 9$ |
| ground (3) | head (5) | 70:13 | 120:4;129:18,21; | informational (1) |
| 17:3;56:2;100:23 | 32:8;52:10,12 | hopefully (1) | 131:21;133:3 | 102:1 |
| grounds (1) | 65:6;96:5 | 55:7 | implying (1) | infrastructure (2) |
| 96:24 | Health (1) | hoping (1) | 62:8 | 112:21,23 |
| Group (1) | 35:19 | 100:10 | importance (1) | inherent (1) |
| 64:6 | hear (5) | horizontal (3) | 90:19 | 118:13 |
| grow (1) | 55:23;59:1;90:10 | 48:10;61:4;68:15 | important (1) | initial (6) |
| 22:6 | 105:13;131:16 | Hotline (2) | 56:5 | $14: 12 ; 27: 3 ; 64: 15$ |
| growth (1) | heard (8) | 36:22;37:1 | impression (1) | 99:3;101:18;110:14 |
| 21:16 | 36:4;48:14;90:7; | hours (4) | 101:19 | install (2) |
| guardrail (4) | 105:11;106:14; | 59:14;66:24;67:4; | inches (1) | 94:6,12 |
| 111:6;114:13,22; | 107:9;119:15;121:18 | 80:21 | 53:13 | installation (5) |
| 127:5 | Hearing (5) | house (7) | include (5) | $10: 22 ; 63: 10 ; 69: 18$ |
| guardrails (3) | 4:2;52:17;89:20; | 75:2;76:22;77:21; | $33: 6 ; 36: 18 ; 65: 20$ | 108:9;117:6 |
| 12:11;127:14,21 | 102:4;133:20 | 81:1,3,4,5 | 88:19;128:13 | installations (1) |
| guess (8) | Heavy (3) | houses (2) | included (1) | 86:13 |
| 55:11;66:7;93:5; | 43:20;58:2;97:9 | 36:19;81:9 | 66:6 | installed (2) |
| 105:8,15;113:18; | height (1) | house's (1) | including (5) | 45:16;54:10 |
| 114:12;118:3 | 48:23 | 79:23 | 10:20;15:14;34:3, | installing (1) |
| gully (1) | help (7) | hundred (5) | 10;67:9 | 70:23 |


| instructed (1) | 133:1 | 34:2 | 7:4;32:18;58:7; | level (11) |
| :---: | :---: | :---: | :---: | :---: |
| 35:16 | issues (5) | Kayser (8) | 65:10;70:4;73:15; | 42:21;43:1,4,4,14, |
| intact (1) | 47:8;117:7,8,23; | 55:1,4,10;56:3,7, | 98:13;101:23; | 15,18,24;57:22; |
| 46:24 | 120:1 | 14;58:4,8 | 102:14;122:18 | 95:19,20 |
| intend (2) | iterative (2) | kept (1) | 133:12 | liability (1) |
| 51:6;121:23 | 95:11;123:23 | 21:15 | late (2) | 114:18 |
| intended (1) |  | killing (1) | 73:2;92:6 | LIDAR-based (1) |
| 48:13 | J | 18:11 | later (3) | 121:1 |
| intention (1) |  | kind (9) | 17:22;110:1 | lift (2) |
| 73:20 | Jack (1) | 43:10;54:23;57:21; | 114:20 | 55:2,16 |
| intentionally (1) | 23:11 | 59:9;61:7;82:11; | latest (3) | likely (5) |
| 65:19 | Jerry (1) | 107:5;108:23;127:13 | 35:13;132:16,22 | 10:18;78:10,12; |
| interested (1) | 122:15 | knew (2) | launched (1) | 80:21;130:13 |
| 116:10 | Johnson (177) | 8:17;52:2 | 34:12 | lilies (4) |
| interesting (1) | 4:22;5:15,24;6:7, | knowing (2) | lawyer (1) | 61:6,7,8,9 |
| 126:8 | 14,18;11:13;12:3,6, | 9:24;123:21 | 114:15 | limit (3) |
| interrupts (6) | 13,19;13:4,12,16,22; | knowledge (1) | lay (2) | 115:3,23;116:10 |
| 22:15;54:9;56:6, | 14:4,9,16,21,24;15:7, | 52:4 | 15:17;38:10 | limited (3) |
| 13;63:11;71:23 | 11,20;16:7,12,17,21; | known (1) | laydown (1) | 67:9;70:6;115:22 |
| intervening (1) | 17:5,23;18:22;19:10, | 16:15 | 32:16 | limits (1) |
| 19:12 | 15,21;20:19;21:8,18; | knows (1) | layout (20) | 115:17 |
| intervenor (1) | 22:1,7,11,13,21;23:9, | 84:22 | 5:1;14:14,20; | line (46) |
| 64:6 | 18;24:1,15;25:4,10, | Kris (1) | 15:22,24;16:3,4,11; | 9:13;12:15;30:8; |
| intervenors (2) | 14,18;27:20;28:2,8, | 4:16 | 29:9,13, 16,24;30:16, | 34:13;38:22;40:2; |
| 19:7;64:4 | 20;29:12,19;30:1,4, |  | 18;59:18,20,21;60:7; | 41:12;43:11;46:19; |
| interviewing (1) | 11,17;31:3,19;32:15; | L | 77:12,22 | 53:24;56:3,7,14; |
| $34: 4$ <br> (33) | 38:13;40:10,14,21, |  | layouts (9) | 57:2;62:15;63:1,5,5; |
| into (33) | 24;41:4,8;42:3,24; | label (1) | 5:3;6:5,8,13;15:15; | 66:11;68:5;69:10,12; |
| 5:23;6:1;10:5; | 43:5,9;44:1,17;45:11, | 6:9 | 64:16;65:8;77:10; | 70:24;71:9;74:2,6; |
| 15:3;21:13;27:14; | 22;46:2,5,8;48:20,22; | labeled (2) | 83:8 | 82:8,11,14,16;83:1,4, |
| 36:8;39:17;44:3; | 49:5,7,10;51:9,13; | 6:1,12 | leach (1) | 4,5,6,19;91:19,20,22; |
| 46:20;47:3,20;50:24; | 52:15,21;59:22; | Lafayette (2) | 97:10 | 101:1,13,20;113:2; |
| 51:16,18;56:2,16,21; | 60:12,13,17;64:18, | 31:1;35:18 | leaders (1) | 130:22,23;131:4 |
| 58:9;59:5;62:22; | 21;65:3,12,22;66:7, | laid (4) | 35:16 | lines (8) |
| 73:4;77:10;79:18; | 23;74:8,10,18,22; | 5:4;32:22;51:10; | least (5) | 38:23;40:3;47:22; |
| 80:10;85:22;89:8; | 75:5,9,13,16;76:2,6, | 91:22 | 107:6;110:9; | 56:23;68:20,22;69:2; |
| 92:15;97:10;105:18; | 13,23;77:3,7,24;78:5; | land (7) | 115:22;116:13; | 83:6 |
| 108:11;125:7;127:22 | 80:1;82:15;83:8; | 22:1;23:4,4;43:23; | 127:23 | list (4) |
| introduced (2) | 84:19;87:6,16,22; | 66:4;82:13;95:7 | leave (2) | 37:14;38:1;68:8; |
| 97:24;100:8 | 89:3,7,12;90:12,20; | Landaff (1) | 111:12;119:12 | 132:11 |
| investigated (1) | 91:2;92:11,24;93:15, | 91:19 | leaving (1) | listed (3) |
| 61:18 | 18,24;94:2,18,22; | landowner (8) | 46:24 | 37:20,23;104:23 |
| invite (1) | 95:4,16;96:5,13; | 25:1;27:9;65:20, | left (6) | little (9) |
| 35:11 | 99:5;101:15;102:18, | 22;66:3,5;128:8; | 41:10;57:23;101:8; | 41:10;70:7;77:18; |
| involved (3) | 20,22;104:19;105:4, | 133:6 | 108:16;127:3;128:20 | 106:5;107:18;116:2; |
| 45:24;70:3,5 | 16;106:1;107:11,18, | landowners (5) | legitimate (2) | 120:12;131:14; |
| involvement (1) | 22;109:3,7,22; | 32:19;34:14;88:17, | 73:6;74:1 | 132:12 |
| 116:12 | 111:24;112:8,12,17; | 20;104:8 | length (5) | Littleton (1) |
| involves (1) | 118:5,12,17;119:8, | lane (18) | 14:21;45:10;48:24; | 33:5 |
| 6:22 | 19;121:10;122:6; | 30:3;31:5;44:8,8, | 78:18;85:1 | local (2) |
| involving (2) | 123:21;124:10,24; | 13;46:17,18;51:17, | less (4) | 31:2;33:15 |
| 7:2,15 | 125:3,6,9,12,14,18,20 | 21;55:3,4,7;59:7; | 8:2;21:20;59:14; | locate (2) |
| iron (1) | Joint (4) | 72:14;117:18,20; | 113:14 | 17:10;69:24 |
| 17:8 | 7:21;9:10;29:6; | 118:15,21 | lessened (1) | located (2) |
| irrelevant (1) | 30:23 | lanes (2) | 30:5 | 24:14;41:5 |
| 26:15 | June (1) | 51:19;117:20 | letter (8) | location (17) |
| issue (7) | 9:6 | large (3) | 18:13;28:3;34:17; | 6:16;8:22;9:4,7,24; |
| 114:20;115:4,19; | Justification (2) | 9:23;41:8;69:11 | 36:1,20;99:21; | 19:18;23:17;32:11; |
| 117:13;118:10,12; | 94:4,15 | larger (3) | 122:14,17 | 47:4;58:4;59:19; |
| 127:24 issued (2) | K | 49:14;79:9;109:13 laser (1) | letters (2) $33: 20,24$ | $\begin{aligned} & \text { 62:15,21;71:17; } \\ & \text { 110:19;111:2;121:5 } \end{aligned}$ |
| 10:7;24:11 |  | 121:2 | letting (2) | locations (4) |
| issued-for-construction (1) | Karno (1) | last (11) | 33:7;112:10 | 18:21;19:5;23:7; |


| 67:15 | 103:16 | materials (1) | members (1) | 107:13;111:20; |
| :---: | :---: | :---: | :---: | :---: |
| long (12) | maintain (7) | 97:10 | 19:12 | 118:15,20;124:15; |
| 4:14;5:22,24;45:4; | 12:16;22:8;27:13; | matter (3) | mention (2) | 126:11 |
| 48:17,19;53:13;55:9; | 32:23;36:5,24;129:2 | 29:2;80:12;82:21 | 60:24;106:14 | morning (27) |
| 79:19,20;82:17,18 | maintained (1) | mature (4) | mentioned (7) | 4:22;12:20;13:5; |
| longer (3) | 26:22 | 106:5;120:1;123:3, | 4:18;7:11;17:5; | 18:23;19:1;20:20; |
| 11:20;49:24;79:9 | maintaining (1) | 5 | 18:19,22;19:21;33:6 | 21:1,10;23:2;24:4, |
| look (34) | 113:10 | maximum (1) | Meridian (1) | 17;27:3;64:11;93:7; |
| 14:24;15:5;17:22; | maintenance (5) | 22:14 | 82:13 | 99:2;101:10;105:11; |
| 20:3;29:21;38:18; | 12:18;66:21;67:6; | May (23) | meters (1) | 106:15;107:3,9; |
| 39:24;40:17,24; | 68:18;69:1 | 6:21;9:6;18:1 | 107:4 | 110:10;112:2; |
| 41:17;48:9;52:11; | major (3) | 30:13;35:8;57:8; | middle (6) | 119:23;121:10; |
| 57:20;62:10;72:19; | 87:1;96:15;97:21 | 60:20;70:6;72:7; | 33:18;80:24;90:17; | 131:14;133:13,18 |
| 77:15;79:18;87:13; | majority (1) | 87:16,20;88:22; | 127:1;131:5,8 | most (9) |
| 105:1;109:9;114:2; | 94:23 | 89:22;92:7;98:16; | mid-year (1) | 16:14;24:17;64:9; |
| 115:7;116:22; | makes (3) | 101:5;102:12; | 34:1 | 78:10,12;80:21; |
| 119:11;122:11,18; | 92:8;94:6;127:6 | 109:18;110:6; | Might (8) | 104:2;130:13;132:8 |
| 123:8;124:17; | making (4) | 115:19;124:1,1; | 10:9;25:3;100:22, | move (6) |
| 125:22;126:1;128:9; | 15:4;68:4;70:9,16 | 128:16 | 23;101:16;102:4,8,10 | 22:23;42:10;44:18; |
| 130:24;131:4;132:9 | management (1) | maybe (7) | mile (1) | 47:3;111:13;112:22 |
| looked (5) | 10:6 | 11:23;53:7;55:23 | 25:6 | moved (3) |
| 42:14;76:10;92:12; | manner (2) | 59:15,18;70:8; | miles (5) | 25:12;47:14;60:10 |
| 112:1;126:2 | 44:12;113:11 | 100:10 | 14:21;18:24;19:2; | movement (2) |
| looking (7) | Manual (8) | McLaren (21) | 24:5;101:13 | 49:3;57:9 |
| 40:6;57:16;108:17; | 8:8;27:11;103:21; | 37:20;38:1,4,5; | minimize (1) | moving (1) |
| 115:11;124:19; | 110:3;111:10;112:1; | 39:15,16;40:7;53:18, | 12:21 | 105:18 |
| 127:12;130:12 | 116:20;118:23 | 20,21;54:14,18,19; | minimized (1) | Mrs (1) |
| looks (11) | many (13) | 58:24;59:17;60:1,3,8, | 11:24 | 50:24 |
| 29:15;40:21;41:4; | 17:14;25:15;34:16; | 21,22;63:21 | minimizes (1) | much (4) |
| 47:14;48:11;49:15; | 35:15;53:5;100:3,24; | mean (19) | 117:6 | 63:20;79:1;104:8; |
| 50:1;57:6;72:15; | 101:2;104:7;111:16; | 8:17;11:21;14:21; | minute (4) | 107:21 |
| 108:21;111:3 | 115:10;116:17;118:2 | 21:15;22:3;25:10; | 40:13;70:4;82:22; | multiple (1) |
| losing (1) | $\boldsymbol{m a p}(5)$ | 29:20;37:17;53:1,3; | 91:5 | 35:10 |
| 73:3 | 32:10,10;42:5; | 57:14;61:22;79:13, | minutes (3) | Muni (4) |
| loss (4) | 130:17;131:24 | 17;81:2,22;82:3; | 59:15;87:20; | 7:21;9:10;29:6; |
| 73:22;129:23; | Maple (3) | 86:2;97:23 | 103:19 | 30:23 |
| 130:2,6 | 31:23;120:8;123:1 | means (6) | mischaracterizing (1) | municipal (1) |
| Lost (2) | mapping (1) | 11:19;43:4;47:7; | 21:8 | 13:1 |
| 31:18;130:5 | 121:3 | 50:12;124:10,23 | miss (1) | Murray (1) |
| $\boldsymbol{l o t}(10)$ | maps (1) | meant (2) | 104:2 | 33:3 |
| 5:8;17:5;31:13; | 5:9 | 11:4;117:19 | missed (1) | must (4) |
| 61:8;73:10;101:17; | March (5) | measure (1) | 104:3 | 74:19;94:6,12,16 |
| 119:4;127:18,22; | 26:2;33:24;36:16; | 13:24 | mitigate (1) | myself (1) |
| 128:3 | 91:17;122:14 | measured (4) | 32:21 | 43:7 |
| lots (2) | margin (1) | 50:8,8;120:9,12 | moment (2) |  |
| 17:7;122:16 | 108:19 | measurement (1) | 39:12;119:13 | N |
| Louis (1) | Marginally (1) | 121:2 | Monday (2) |  |
| 34:2 | 66:23 | measures (2) | 133:13,21 | name (1) |
| lower (4) | marked (3) | 86:1;117:14 | money (1) | 90:3 |
| 57:11;126:6,6; | 9:9;29:5;30:22 | mechanical (1) | 69:11 | name's (2) |
| 132:2 | marker (3) | 47:7 | month (3) | 38:5;98:22 |
| Lynn (3) | 50:6,7,20 | Mechanically (1) | 21:1;65:12,13 | narrow (4) |
| 11:1,8;31:8 | markers (4) | 55:15 | months (1) | 46:10;58:11;128:6; |
|  | 50:2,5,6,11 | meet (3) | 97:24 | 129:14 |
| M | markings (1) | 34:9;110:18 | monuments (2) | near (3) |
|  | 5:10 | 131:20 | 17:8,12 | 68:10;78:23;99:9 |
| machinery (2) | Martin (1) | meeting (4) | more (27) | necessarily (3) |
| 43:1;82:4 | 33:2 | 64:20;65:10;87:20, | 5:16;7:2,15,16; | 6:9;52:22;56:8 |
| Main (11) | massive (2) | 24 | 10:11,13,14;20:12; | necessary (2) |
| 7:23;8:14;9:14,17; | 55:16;58:13 | meetings (3) | 25:24;27:8;30:8; | 10:17;42:23 |
| 12:2,4,10;31:7; | material (8) | 101:17,18;102:1 | 32:3;50:13;58:16,17; | need (28) |
| 32:13;77:19;113:9 | 16:5;95:24;96:16; | member (1) | 69:19;70:7;75:7; | 11:24;12:12;17:21; |
| mainly (1) | 97:4,8,15;104:8,13 | 103:14 | 84:3;88:2;105:8; | 21:11;42:21;43:13, |


| 17;45:1,20;46:5,6; | 30:18;61:18;118:13 | 47:19;52:10,11;65:6; | 129:3 | overlaid (1) |
| :---: | :---: | :---: | :---: | :---: |
| 47:6;54:21,22;58:16; | notice (2) | 74:14;75:3;81:9,21; | options (1) | 121:2 |
| 62:6;67:1;72:7,20; | 70:7;127:1 | 82:9;96:5;107:10,14, | 128:16 | oversee (1) |
| 73:1;88:16,19;90:21; | Noting (1) | 15;111:1 | orange (4) | 52:4 |
| 103:9,19;116:11; | 45:5 | offer (4) | 40:19,21,24;61:11 | over-the-road (1) |
| 128:20;133:14 | November (2) | 35:22,24;36:21,22 | order (4) | 55:1 |
| needed (4) | 93:4;122:9 | offering (1) | 37:22;56:1;70:8; | own (2) |
| 20:8;70:18;73:8; | NPT (5) | 67:15 | 105:6 | 22:2;90:15 |
| 117:5 | 94:5,6,12;115:18; | offset (3) | original (12) | owned (1) |
| NEEDLEMAN (4) | 123:15 | 46:18;79:13;82: | 14:5,7;16:22;60:7, | 95:8 |
| 53:15;96:18;97:1,2 | number (12) | offsets (1) | 16;62:20;82:24;99:5; | owner (9) |
| needs (5) | 8:9,11;17:15;24:5 | 10:17 | 100:17;101:5;102:5; | 98:23;122:3;128:1, |
| 21:15;35:12;76:13; | 28:22;54:16,17; | O'Lantern (1) | 125:14 | 8,17;129:11;130:2; |
| 112:3;116:6 | 104:24;111:13; | 123:12 | originally (1) | 131:12;132:8 |
| new (17) | 114:5;124:22;132:21 | old (1) | 100:12 | owners (6) |
| 20:17;28:24;60:4, | numbering (1) | 61:1 | origins (1) | 33:7;37:14;90:4; |
| 6,16;65:7;66:3; | 105:4 | omit (1) | 62:4 | 103:15;122:20; |
| 69:18,22;77:13,21; | numbers (5) | 65:19 | otherwise (2) | 130:11 |
| 87:8;88:21;106:15, | 54:14;55:23 | once (2) | 92:6,13 | owning (1) |
| 20,21;132:17 | 101:10;104:23; | 45:18;127:20 | out (53) | 114:22 |
| Next (16) | 108:11 | one (61) | 5:4;16:13;17:1,3, | owns (1) |
| 13:17;18:12;24:12; | numerous (1) | 7:11,12,12;13:17 | 10,16,17,21;21:12 | 66:4 |
| 37:13;54:17;65:14; | 97:12 | 19:15;25:24;28:16; | 24:19;28:19;30:9; |  |
| 66:13;70:9;74:4,24; 82:10;98:7;105:19; | 0 | $31: 5 ; 32: 17 ; 34: 18,23 ;$ $42: 7 ; 44: 8 ; 46: 17$ | $32: 22 ; 33: 24 ; 34: 14$ | P |
| $\begin{aligned} & 82: 10 ; 98: 7 ; 105: 19 ; \\ & \text { 117:17:125:4:131:14 } \end{aligned}$ | 0 | $\begin{aligned} & 42: 7 ; 44: 8 ; 46: 17 ; \\ & 48: 6 ; 49: 12,16,24 \end{aligned}$ | $\begin{aligned} & 40: 18 ; 41: 2,13,17 \\ & 43: 11,14 ; 47: 1,11,19 \end{aligned}$ | package (8) |
| NHECO (2) | object | 50:11,12;51:18;52:2; | 48:6;51:10;52:13; | 23:9;37:2;104:1; |
| 71:21,24 | 68:3 | 54:7;55:3,4;57:2,7; | 55:13,24;58:1,13,15; | 105:15;108:10; |
| nomenclature (2) | objected (1) | 59:7;61:10;64:4; | 69:9;72:13;74:11,23; | 109:24;120:8;132:12 |
| 5:8;124:20 | 96:23 | 69:14;70:13;71:7,13, | 77:20;81:13;82:7; | packages (3) |
| non- (1) | Objection (6) | 14;74:21;76:12,13, | 87:7;89:13;91:22; | 23:7;27:18,22 |
| 24:2 | 53:15;70:15;96:18; | 13;78:2;80:17,18; | 92:16;97:10;101:7, | pad (1) |
| Non-Abutting (1) | 98:2,3,6 | 87:14;88:2;90:3; | 19;108:22;124:3; | 54:23 |
| 103:15 | obstacles (1) | 95:4;98:10;100:5; | 127:21;128:11; | Page (27) |
| none (1) | 119:21 | 102:14;103:6,9; | 130:9;131:10;132:21 | 6:22;10:15;17:24; |
| 89:10 | obstruction (2) | 109:17;110:18; | outline (2) | 18:14;42:13,16; |
| non-scenic (1) | 12:17;13:3 | 114:6;116:8,17; | $50: 3,12$ | $66: 16,16 ; 67: 5 ; 74: 14$ |
| $19: 3$ | obstructions (10) | 118:7;120:22; | outlined (1) | 16;76:18;77:1;79:23, |
| Non-vegetated (1) | 6:24;7:16;8:13,22; | 124:15;125:16;129:2 | 71:10 | 24;80:16;87:13; |
| $43: 20$ | 9:4,18;10:1;13:2; | ones (6) | outreach (10) | 105:1,2;114:2,7; |
| nor (1) | 22:23,24 | 20:2;29:2;36:8 | 33:6,15;34:7;35:8; | 115:12;117:2; |
| 112:18 | obvious (2) | 61:11;65:1,3 | 36:2,14,17;131:13, | 122:19;130:15,16; |
| normal (9) | 66:12;132:8 | ongoing (1) | 15;132:17 | 132:19 |
| $10: 3,8 ; 17: 20$ | obviously (2) | 68:2 | outreached (1) | pages (1) |
| 26:21;69:15;80:23; | 8:17;62:12 | only (11) | 35:9 | 9:11 |
| 83:17;85:16;86:7 | occupancy (2) | 18:18;20:1;31:5; | outriggers (1) | Palmer (20) |
| north (7) | 29:21;66:12 | 45:23;64:6;67:3; | 55:5 | $89: 22,23 ; 90: 2,3$ |
| 47:15;62:18;71:16; | occupied (1) | 70:12;77:12;97:24; | outside (6) | 91:14;92:3;93:8,9, |
| 76:8;88:12;108:16; | 65:24 | 115:19;116:10 | 22:18,20;23:22; | 22;96:20,21;97:6,7, |
| 118:8 | occur (2) | onto (1) | 36:7;41:5;95:7 | 18,20;98:3,9,13,17; |
| Northern (16) | 18:21;34:8 | 86:16 | over (31) | 115:2 |
| 12:14,24;13:3; | occurs (1) | open (4) | 5:4;9:13;15:17; | panel (7) |
| 28:11;34:17;35:18; | 115:10 | 18:6;31:6;63:10; | 19:19;21:6,24;22:5, | 7:5;38:14;52:3; |
| 67:8;88:4;94:19; | October (8) | 129:8 | 10;26:23;37:2;47:23; | 60:2;106:2,24; |
| 105:1;108:18,21; | 8:24;34:6,13; | operation (1) | 51:1,17;56:11,20; | 108:14 |
| 116:1;130:14;132:7, | 99:22;129:8;131:15; | 68:4 | 57:8;59:5;66:18; | paper (1) |
| 18 | 132:6;133:21 | opportunity (2) | 67:16;68:10,12; | 108:3 |
| northward (2) | odd (1) | 123:23;130:5 | 70:20;71:11,11; | paragraph (5) |
| 57:16;60:10 | 125:17 | opposed (2) | 72:20;75:18,20; | 94:5,11;114:9; |
| northwest (1) | off (23) | 30:8;131:17 | 77:16;80:7;111:14; | 115:10;123:15 |
| 47:23 | 18:4;21:11;24:23; | opposite (3) | 127:3 | park (2) |
| noted (6) | 26:8;32:7;38:9; | 31:23;72:16;88:3 | overhead (1) | 56:9;128:5 |
| 6:17;15:21;24:18; | 39:12,13;40:12; | option (1) | 125:14 | parking (4) |


| 31:13;127:17,22; | pay (1) | picture (11) | 7:24;13:19;15:18, | possibility (2) |
| :---: | :---: | :---: | :---: | :---: |
| 128:24 | 112:23 | 50:1;57:3,10;61:5; | 0;18:16;35:21; | 13:22;73:12 |
| part (22) | payment | 4;77:14,15;80:22; | 2:24;105:14,15; | possible (1) |
| 6:20;11:16;12:20; | 128:23 | 93:12;126:7;127:1 | 106:16;126:3;132:23 | 62:19 |
| 26:15;32:1;33:2; | people (18) | pictures (1) | planted (1) | possibly (1) |
| 41:14;42:15;51:20, | 32:24;34:16,24 | $44: 24$ | 61:9 | 122:4 |
| 22;70:16;86:7;88:1; | 35:14;36:22;37:15 | piece (18) | plate (1) | potential (4) |
| 90:13;92:19;95:1; | 16,18;86:4;88:21; | 53:2;54:2,7;56:20 | 80:7 | 33:8;96:3;1 |
| 99:17;108:18,21; | 100:24;101:2,5,1 | 59:4;78:8,14,21; | plates (1) | 118:17 |
| 109:1;116:11;126:6 | 19;104:7;105:9; | 79:12;81:24;82:4 | 128:3 | potentially (6) |
| partially (1) | 126:20 | 8:6,10,17;85:12 | platform | 8:19;59:3;61:17 |
| 58:1 | people's (1) | 86:2;89:11;112:1 | 43:3 | 66:23;107:22;129:1 |
| participate (1) | 36:19 | pieces (1) | plating | poundage (1) |
| 35:12 | per (6) | 54:2 | 11:24;72: | 54:20 |
| particular | 53:2,9;54:2;66:3 | pins (3) | please (18) | pounds (6) |
| 15:1;17:12;22:3 | 82:12;83:7 | $17: 8,13 ; 49: 1$ | $52: 7 ; 53: 5,19 ; 58$ | 52:22;53:7,8,14, |
| 23:4,5,12;29:17; | percent (5) | pit (26) | $108: 14 ; 109: 9 ; 114: 2$ | 23;54:2 |
| 42:5;44:7;45:22; | 24:15;94:22;95:3 | 38:15;3 | 115:7,12;117:3,9; | power (4) |
| 46:16;59:19;82:20 | 102:16,19 | 41:6;43:7,11;45:2 | 19:12;120:1 | 47:22;56: |
| 120:6 | perfect | 46:7,8,15;47:12 | 3:8;126:13,1 | 63:1 |
| partly (1) | . 1 | 48:14;50:19;56:2 | 30:8;131:24 | practice (1) |
| 116:13 | perform | 59:6;62:16;81:13,14, | plenty (1) | 17:20 |
| part's (1) | 43:22;44:1 | 16,17,18,21,22,23; | 30:6 | practices (1) |
| 131:7 | perhaps (4) | 82:1;84:16 | plus (4) | 70:1 |
| Pass (13) | 39:22;44:20;49:12 | pits (9) | 21:1;28:24;55: | precast (1) |
| 12:14,24;13:3 | 52:6 | 38:8;40:16;41:2,6 | 128:19 | 53:12 |
| 33:3;34:17;35:18 | period (3) | 9,11,17;42:11;44:2 | Plymouth (17) | preconstruction (1) |
| 67:8;94:19;105:2 | 10:6;28:24;129 | Pittsburg (2) | $7: 23 ; 8: 15 ; 9: 15$ | 129:6 |
| $116: 1 ; 130: 14 ; 132: 7$ | permanent (1) | 118:6;125:7 | $11: 3,14 ; 28: 13 ; 63: 24$ | predicted |
| 18 | 86:13 | place (18) | 64:4,5,7,8;87:5,18, | 125:24 |
| passing (3) | permanently | 34:7 | 20,24;103:16;118:8 | prefiled (3) |
| 30:2;38:16;39:20 | 21:6 | 43:6;45:8,9;56:2 | pm (4) | 75:11;76:17;77:4 |
| Pass's (1) | permissio | 57:10;58:9;59:5; | 4:2;89:19,2 | preliminary (1) |
| 28:11 | 86:17 | 62:22;86:2;113:3 | 133:20 | $23: 10$ |
| past (7) | permit (19) | 117:14;127:18; | point (22) | prepared (3) |
| $5: 4,5 ; 32: 20 ; 33: 5 ;$ | $8: 23 ; 10: 7 ; 13: 8$ | $128: 5 ; 130: 13 ; 132: 9$ | $6: 16 ; 9: 2 ; 26: 5$ | 14:5;15:8;96:7 |
| 75:2;78:13;86:4 | 15:18,20;23:7,9; | placed (2) | 27:10;28:6;30:11; | prescription (1) |
| Pastoriza (5) | $27: 18,22 ; 37: 2 ; 68$ | 40:10;45: | 41:20;43:14;57:8; | 65:23 |
| attern (1) | 108:9;109:24;116:5; | $60: 4,6$ | $11 ; 92: 4 ; 94: 6,14$ | $5: 6 ; 65: 15$ |
| 72:19 | 120:8;132:12 | places (5) | 95:11;101:23; | presented (2) |
| Pause (6) | perpendicular (1) | 6:14,15;17:1 | 105:23;106:13 | 19:1;92:18 |
| $4: 10 ; 66: 15 ; 83: 1$ | 44:12 | 24:17;133:5 | 122:18 | Presidential (2) |
| $87: 12 ; 91: 7 ; 93: 23$ | person (1) | plan (34) | pointed (1) | 95:1;116:5 |
| paved (3) | 81:3 | 11:16;13:20;25: | 47:11 | pretty (5) |
| 58:6,9;75:8 | personall | 10,13,23;26:18,20 | pointing (3) | 70:12;101:10 |
| pavement (53) | 35:1 | 27:6;34:3,5;37:3 | 38:22;40:2;108:20 | 119:8;127:18;131 |
| 22:19,20;23:16,20 | person's | 47:14;83:18;85:17; | points (3) | previous (4) |
| 20,22;25:21;38:16, | 81:3 | 86:8;94:6,12;100:17; | 14:1;71:16;105:10 | $20: 13 ; 56: 22 ; 61: 2$ |
| 17;39:19,20;40:17, | perspective (2) | 101:5;102:16;106:4; | pole (4) | 80:2 |
| 18,19,22;41:1,3,5,12, | 25:23;57:12 | 108:8,13,18,22; | 47:22;48:4;56:23; | previously (6) |
| 13,18,22;70:24;74:7; | pertinent (1) | 109:2,17,17;121:4; | 57:6 | 27:23;58:19; |
| 75:17,21;81:13,21; | 5:11 | 126:4;127:23; | poles (1) | 65:9;80:2;95 |
| 94:8;99:7,13;101:1, | petition | 131:22,22 | 12:12 | primary (4) |
| 14,20;107:7,14,20; | 120:3 | planned (7) | popular (1) | 5:1;113:12,22,2 |
| 108:23,24;109:4; | phase (1) | 35:3;70:2;72:17; | 127:18 | prior (4) |
| 110:4,20;111:2; | 24:12 | 99:6;100:13;109:6, | portion (5) | 39:23;61:13;66:9; |
| 113:2,15;114:23; | phone (1) | 20 | 26:17;29:6;4 | 99:15 |
| 115:15;116:7; | 34:2 | plannin | 87:17;90:5 | probable (1) |
| 120:10;123:17; | photograph (2) | 10:2;21:4;26:10 | portions (1) | 24:17 |
| 127:4,16;131:5 | 30:22;126:23 | 65:16;71:7;85:11; | 92:7 | probably (22) |
| aving (1) | pick (2) | 100:10 | position (3) | 20:9;46:20;47:4; |
| 45:18 | 57:9;105:10 | plans (12) | 12:23;34:21;77:11 | $49: 5 ; 53: 1,3 ; 55: 6,8$ |


| 10;58:15;59:14; | propose (1) | quality (1) | reasonable (2) | 67:7 |
| :---: | :---: | :---: | :---: | :---: |
| 62:16;68:14;78:18, | 111:11 | 82:21 | 70:21;110:15 | relation (2) |
| 20;80:20;81:8;82:2; | proposed (13) | quarters (1) | reasons (4) | 32:12;74:11 |
| 84:3;120:11;128:18, | 8:14;19:20;25:7; | 45:6 | 36:12;59:1;116:8, | relations (1) |
| 22 | 30:24;31:11,16,22; | questioner (1) | 17 | 34:1 |
| problem (3) | 59:21;96:15;110:13; | 4:6 | rebar (1) | reliable (2) |
| 32:4;58:14;63:16 | 117:5;118:2,6 | quick (2) | 66:17 | 113:11,23 |
| procedure (1) | proposing (1) | 90:6;125:23 | rebuild (1) | relocate (2) |
| 5:13 | 97:23 | quickly (1) | 112:19 | 62:6,18 |
| proceed (1) | protocols (3) | 126:18 | recall (1) | relocation (1) |
| 89:22 | 4:19,21,23 | quite (1) | 68:9 | 62:17 |
| proceeding (1) | prove (1) | 68:8 | recedes (1) | remain (2) |
| 101:24 | 15:23 | quote (7) | 43:15 | 58:6,8 |
| proceedings (1) | provide (13) | 10:16;18:3,15,17; | received (1) | remainder (1) |
| 91:7 | 30:20;44:6;58:14; | 22:17,19;115:16 | 35:6 | 11:18 |
| process (30) | 67:8,22;68:17;69:23; |  | receiving (1) | Remember (3) |
| 10:2;20:22;26:4, | 70:11,18;80:4;99:16; | R | 78:24 | 41:11;67:18;76:18 |
| 16;35:13;62:5;65:16, | 112:14;117:12 |  | recent (1) | removal (2) |
| 21;66:6,22;69:15; | provided (2) | radius (1) | 58:2 | 10:23;119:17 |
| 70:5;78:7;79:2;80:8, | 14:10;112:3 | 63:14 | recess (1) | remove (1) |
| 11;88:18;89:9;95:10, | providing (2) | railroads (1) | 89:19 | 114:12 |
| 11;100:8,13;104:22; | 67:10;69:2 | 12:11 | recognize (1) | removed (2) |
| 109:24;121:19,23; | provisions (1) | rains (3) | 61:8 | 44:23;105:24 |
| 122:6;123:23;130:3; | 12:20 | 43:20;58:2;73:2 | recommend (1) | repair (2) |
| 132:23 | proximity (1) | raised (1) | 132:19 | 68:18;69:10 |
| product (2) | 10:1 | 115:3 | record (4) | repair/replace (1) |
| 5:18;73:22 | public (9) | $\operatorname{ran}(1)$ | 29:3;36:9;39:12,13 | 68:23 |
| profile (1) | 27:13;29:3;34:1,1; | 80:3 | records (4) | repaired (2) |
| 54:23 | 100:18,21;102:8; | range (2) | 14:16;36:24;91:1, | 69:13,21 |
| progressive (1) | 113:10,13 | 53:2;55:10 | 16 | repeat (3) |
| 36:15 | public's (1) | rapidly (2) | rectangle (1) | 12:3;40:23;53:5 |
| project (27) | 102:4 | $43: 16 ; 57: 24$ | $48: 11$ | repeatedly (1) |
| 7:3,9,11,17;11:18; | publish (1) | rate (1) | red (8) | 97:3 |
| 19:22;22:4;26:10; | 24:8 | 118:19 | 40:3;48:10;50:4, | repeating (1) |
| 52:21;70:17,20; | published (1) | rather (1) | 11;71:10;72:1; | 98:6 |
| $73: 11 ; 94: 19,23$ | 33:4 | 70:3 | 108:18;120:10 | replace (2) |
| 95:13;96:15;97:22; | pull (5) | reach (2) | re-evaluation (1) | 73:8;114:13 |
| 100:3;102:11; | 39:7;79:10;80:12; | 92:16;132:21 | 106:11 | replaced (1) |
| 116:12;118:3; | 82:23;130:14 | reaching (1) | references (1) | 69:13 |
| 119:22;122:15; | pulling (1) | 34:14 | 38:15 | report (6) |
| 124:6,13;131:18; | 79:6 | reaction (1) | referencing (1) | 14:6;15:7;16:7; |
| 132:18 | purposes (1) | 102:4 | 15:14 | 92:19;93:3;122:7 |
| projects (7) | 66:20 | read (10) | refers (1) | Reporter (6) |
| 7:2,6,15,18;9:23; | push (3) | $36: 8 ; 87: 19 ; 103: 20$ | 14:14 | $22: 15 ; 54: 9 ; 56: 6$ |
| 106:6,7 | 50:23;51:14,15 | $104: 7,14 ; 114: 15$ | refine (1) | 13;63:11;71:23 |
| Project's (2) | pushed (2) | 115:12;117:4; | 24:8 | reports (1) |
| 112:22;122:21 | $55: 13,24$ | 131:24;132:11 | refinements (1) | 20:20 |
| proper (1) | pushing (1) | reading (6) | 17:18 | represent (3) |
| 70:10 | 128:11 | 41:7;105:8;108:13; | reflected (1) | 34:23;41:16;48:13 |
| properly (1) | put (22) | 109:1,15;123:14 | 25:16 | representation (1) |
| 118:21 | 5:18;6:4,6,7,10; | ready (7) | regarding (1) | 131:12 |
| properties (1) | 21:4,4,12;22:2; | 4:4,7;16:9;79:5; | 121:11 | represented (1) |
| 33:10 | 41:21;44:1;52:13; | 80:12;103:6,20 | regards (1) | 49:11 |
| property (21) | 58:3;77:10;80:5,7, | really (10) | 30:15 | represents (1) |
| 17:14,14;35:4; $37 \cdot 10,14 \cdot 72 \cdot 24$ | 10;86:1;91:15;108:2; | 38:17;52:17;80:12; | registered (1) | $120: 11$ |
| $37: 10,14 ; 72: 24 ;$ $85 \cdot 21 \cdot 86 \cdot 16 \cdot 88 \cdot 4$, | $110: 3 ; 130: 7$ | $84: 24 ; 92: 9 ; 108: 11$; $113 \cdot 5 \cdot 128 \cdot 9 \cdot 130 \cdot 18$. | 69:21 regular (1) | Request (91) <br> 7:22:8:1:9•11,13. |
| $\begin{aligned} & \text { 85:21;86:16;88:4,9, } \\ & 9 ; 90: 4,15 ; 98: 23 ; \end{aligned}$ | putting (3) $18: 10 ; 24: 2 ; 128: 2$ | $\begin{aligned} & \text { 113:5;128:9;130:18; } \\ & 131: 6 \end{aligned}$ | $\underset{33: 1}{\operatorname{regular}(1)}$ | $\begin{aligned} & 7: 22 ; 8: 1 ; 9: 11,13 ; \\ & 10: 15 ; 11: 6,12 ; 12: 1,4, \end{aligned}$ |
| $103: 15 ; 120: 6,15$ | puzzled (1) | rearrange (1) | $\stackrel{3}{\text { rejected (4) }}$ | $8,9 ; 13: 7,18,20 ; 15: 4$ |
| 126:3;130:12;132:8, | 111:8 | 30:4 | 15:10;28:1,4,5 | 22:18;24:3;25:5,7,19, |
| 10 |  | reason (4) | relate (3) | 20;27:4;28:13;29:7; |
| $\begin{gathered} \text { proposal }(\mathbf{1}) \\ 97: 22 \end{gathered}$ | Q | $\begin{aligned} & 88: 15 ; 114: 22 ; \\ & 121: 9 ; 125: 20 \end{aligned}$ | $\begin{aligned} & \text { 104:13,24;105:2 } \\ & \text { related (1) } \end{aligned}$ | $\begin{aligned} & 35: 2 ; 37: 4,6 ; 38: 15,19 \\ & 21 ; 39: 1,4 ; 40: 1,12,16 \end{aligned}$ |
|  |  |  |  |  |


| 41:21;42:7,12;44:1, | responsibility (3) | 48:12;49:19,20; | 8:19;10:22;21:10; |  |
| :---: | :---: | :---: | :---: | :---: |
| 19;46:21;51:4;59:21; | 112:22;114:21; | 53:11,24;54:12; | 24:20;26:8,9,14;27:1, | S |
| 60:14;62:23;66:14; | 124:9 | 55:18;60:20;62:15; | 15;29:13,20;42:8; |  |
| 70:21;72:4;74:3,9,12, | rest (2) | 67:21;69:20;71:9,10, | 43:12;44:2;46:10; | Safe (6) |
| 20;75:14,16,19,22; | 15:5;28:9 | 21;72:17;74:16; | 47:3,19,20,24;50:9; | 69:15,23;70:1; |
| 76:4;78:1;93:11; | Restaurant (6) | 77:17,19;78:3,23; | 51:5;56:20;59:5; | 113:10,14,22 |
| 94:15;95:10;99:17; | 126:4,5,7,24; | 79:4;81:23;83:18; | 62:7,22;66:1;76:21; | safety (8) |
| 100:1;105:5,16; | 127:17;130:1 | 84:7,11;85:24;86:7, | 79:14;85:23;105:18; |  |
| 109:10,14;111:19,22; | restore (3) | 10,15;88:10;89:17; | 111:1;120:4;129:22 | $117: 7,8,17,22$ |
| 112:6,11;114:4,10; | 20:13;123:2, | 90:14,17;91:13; | roadways (1) | 118:10,12 |
| 115:8;116:9,14,23; | restored (2) | 93:10;94:17,21; | $119: 22$ | Sam (1) |
| 120:15;121:8,9; | 45:19;122:23 | 103:10;105:8,12; | rock (5) | 132:16 |
| 122:6;123:1,10; | restoring (1) | 106:19;107:11; | 47:8;61:4;124:22; | same (12) |
| 124:2;126:14;127:3, | 122:21 | 111:7;113:9;131:2,4; | $125: 2,3$ | 13:18;26:3;32:3; |
| 13,20;128:7,14; | restrictions | 132:3,24 | Rocks (1) | $75: 5 ; 82: 20 ; 104: 24$ |
| 132:13 | 72:11 | right-hand (2) | 125:4 | 109:16,18;119:6; |
| requested (4) | resubmit (3) | 74:17;108:15 | $\operatorname{rod}(5)$ | 121:23;122:23; |
| 19:6,16;99:8; | 12:7;19:10;28 | right-of-way (34) | $49: 16,24 ; 50: 2,11,$ | $132: 19$ |
| 123:17 | result (1) | 4:20;5:7;13:10,14, | $12$ | satisfy (1) |
| requesting (3) | 10:19 | 20;14:3,19;15:2; | rods (27) | $6: 11$ |
| 8:7;18:9;100:11 | resulting | 17:4;18:5;19:19; | 13:11,21;15:19; | saw (4) |
| requests (48) | 33:8 | 21:22;23:3;26:11 | 16:6,15,17,19,19; | 18:18;46:3;56:22; |
| 18:10,19,20;19:4, | resume (3) | 27:7,13,17;45:7; | 29:8;45:7;48:6,7; | $123: 2$ |
| 11,17,23;20:17,23; | 4:5;133:13,20 | 48:4;51:2,9,11; | 49:18,18;50:7,7; | saying (5) |
| 21:5;22:16;23:8,11, | resumed (2) | 65:18;66:4;75:7; | 51:9;75:10;77:3; | $6: 5 ; 81: 24 ; 85: 1 ;$ |
| 13,15,18,22;24:21; | 4:2;89:20 | 76:15;77:2;78:4; | 88:2;89:4,4,5;90:10, | 92:6;124:4 |
| 25:17,22;27:23; | return (2) | 79:16;82:12,16; | 10;91:19;92:8 | scenario (3) |
| 28:10,15,21;29:1; | 4:24;98:1 | 84:12;90:18;131 | roller (1) | 80:3;121:15; |
| 33:8;41:11;64:24; | revelations (1) | right-of-ways (1) | 80:6 | 123:19 |
| 76:11;87:4;88:15; | 87:8 | 88:19 | rolling (1) | scenic (5) |
| 89:1;102:7;103:23 | review (7) | right-of-way's (1) | 118:5 |  |
| 104:12,17,20,21; | 18:12,18;32:6; | 81:7 | room (4) | $22$ |
| 110:1;111:17;114:8; | 33:12;67:21;92:20; | risk (1) | 22:22;24:22;49:2; | schedule (2) |
| 119:16,18,19;120:3; | 121:15 | 117:17 | 07:15 | 129:18;133:3 |
| 121:6,14;124:21 | reviewed (1) | River (2) | roots (1) | Schibanoff (33) |
| require (6) | 20:21 | 31:18;77:16 | 21:16 |  |
| 4:14;10:18;11:22; | reviewing | road (93) | ROT3 (2) | $108: 1,6 ; 109: 8,11$ |
| 44:15;51:3;54:24 required (7) | $30: 19$ reviews (6) | 6:5,8,12;10:19; $11: 2,4,10,14,22$ | $124: 22 ; 125:$ | 114:1,3;115:6,9; |
| $\begin{aligned} & \text { required (7) } \\ & \text { 21:6;42:20;55:7; } \end{aligned}$ | $\begin{aligned} & \text { reviews (6) } \\ & 8: 4 ; 29: 11 ; 33 \end{aligned}$ | $\begin{aligned} & 11: 2,4,10,14,22 \\ & 12: 15 ; 13: 1 ; 14: 22 \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { route (37) } \\ 8: 14 ; 10: 1 ; 11: 9 \end{array}$ | $116: 21,24 ; 119: 11,14$ |
| 67:9;68:1;106:9,17 | 8.4,29.11,33.4 $71: 2,20 ; 121: 4$ | 18:4;23:13;24:23,23; | 15:6;16:14,17;17:22; | $\begin{aligned} & 122: 11,13 ; 123: 7,9 \\ & 126: 16,19,22 ; 127: 9, \end{aligned}$ |
| requirement (7) | revised (1) | 25:1,8,13,19;26:1,17, | 33:21;34:5;36:6,7, | 11;130:7,10;131:1,3; |
| 20:15;44:9,11; | 19:24 | 19;27:13;29:21; | 17;63:24;64:8;77:20; | 132:1,4;133:9 |
| 68:15,23,24;111:21 | Revision (8) | 30:10;31:18;32:12; | 87:4;90:5,9;91:21; | School (3) |
| requirements (7) | 7:22;9:12;10:15 | 45:7,18;46:2;50:23; | 103:17;104:9;106:6; | $31: 1 ; 32: 12 ; 35: 18$ |
| 6:11;42:10;52:22; | 66:14;78:2;114:4; | 51:16,21;57:11,12, | 108:7;121:5,24; | Schoolhouse (4) |
| 67:19;68:8,9;124:13 | 117:2;123:10 | 24;58:15;59:3,15; | 122:1;125:1,6,14,16, | $126: 4,24 ; 127: 17$ |
| requires (1) | revisions (1) | 66:4,11,12;68:21; | 17;126:5;127:2,12; | $130: 11$ |
| 73:15 | 104:20 | 72:16,22;74:18;75:3, | 129:13;130:20,22 |  |
| research (10) | revolves (1) | 4;76:5,10,22;77:12, | routed (2) | $68: 9$ |
| 14:4;15:23;27:20; | 37:9 | 13,15,17,18,18,20,21; | 22:18;23:2 | Scott (36) |
| 36:7;44:19;64:15,23; | rhyme (1) | 79:18;85:20;90:14, | routing (1) | $4: 18 ; 14: 11 ; 18: 2 ;$ |
| 74:22;87:2,16 | 125:20 | 16,17,17;91:18,23; | 23:24 | $52: 9,17,19 ; 63: 7,10$ |
| Resort (1) | ribbons (1) | 92:1,2,7,10; $112: 20$, | RSA (1) | 12,14,17;66:24;67:3; |
| 123:12 | 48:1 | $20 ; 115: 16 ; 117: 4,8$, $19 \cdot 118 \cdot 2$ 5,15,18,24 | 101:23 | 78:10,12,16,23;79:9, |
| $\begin{aligned} & \text { respond (3) } \\ & 69: 21 ; 70: 8 ; 113: 6 \end{aligned}$ | ride (1) $91: 19$ | 19;118:2,5,15,18, 119:1;120:7,22; | run (2) 96:9;99:12 | $\begin{aligned} & 17 ; 80: 1,20 ; 81: 2,12, \\ & 20,22 ; 82: 3,8: 84: 5.9 \end{aligned}$ |
| response (3) | rig (3) | 121:19;122:4;127:8; | running (3) | $9,22,24 ; 85: 10,13,15$ |
| 52:9;85:19;91:24 | 44:7,12;84:2 | 128:6,11;131:9,10 | 56:23;100:22; | $107: 1$ |
| response] (1) | right (59) | roads (4) | 125:24 | screen (4) |
| 133:15 | $9: 15 ; 13: 14,17,21$ | 58:12,12;113:10, | runs (2) | 40:12;91:3,15; |
| $\begin{gathered} \text { responses (1) } \\ 103: 24 \end{gathered}$ | $\begin{aligned} & 16: 6,8 ; 23: 5 ; 33: 15 \\ & 39: 22 ; 46: 12,19 \end{aligned}$ | $12$ | 90:14,17 | 93:12 |
| 103:24 | 39:22;46:12,19; | roadway (33) |  | screening (1) |


| 126:9 | 35:20 | showed (3) | sitting (2) | 12:3;33:17;38:20, |
| :---: | :---: | :---: | :---: | :---: |
| screens (1) | services (1) | 21:23;83:1;126:23 | 84:10;85:6 | 24;40:23;48:18; |
| 91:6 | 34:11 | showing (16) | situation (5) | 52:20;71:12;75:13; |
| scroll (1) | Session (3) | 6:20;7:20,23;9:9; | 30:13;43:23;55:12; | 78:11;80:14;86:23; |
| 132:2 | 6:22;132:12; | 13:7;16:5;29:5; | 70:13;79:20 | 91:2,4;93:17;96:21; |
| search (2) | 133:19 | 30:22;32:11;45:23; | situational (1) | 118:7;130:9 |
| 96:9;121:1 | sessions (4) | 75:6;76:16;78:19; | 23:2 | sort (2) |
| searches (1) | 35:11;100:18,21; | 92:5;108:8;128:18 | six (4) | 74:10;126:9 |
| 120:23 | 102:6 | shown (15) | 16:9;20:24;64:13; | sound (1) |
| season (2) | set (5) | 18:16;19:7;23:7; | 93:1 | 8:9 |
| 129:11;130:1 | 56:11,16;105:19; | 25:6,22;29:8;32:16; | six- (1) | sounded (1) |
| seat (1) | 110:17;120:2 | 40:1;63:17;64:24; | 28:23 | 68:10 |
| 98:16 | setting (1) | 75:2;84:13;97:11; | six-conductor (1) | source (4) |
| SEC (4) | 4:19 | 101:9;105:14 | 7:11 | 5:1,2;44:20,23 |
| 19:7;27:4;99:18; | several (4) | shows (9) | Sixty (3) | south (9) |
| 110:14 | 5:4;22:16;37:5; | 13:10,20;28:11; | 54:3;102:22,23 | 57:14,17;62:19; |
| second (9) | 48:14 | 47:22;61:4;74:6; | size (2) | 63:24;64:8;87:5; |
| 5:2;48:6;50:7; | sewer (1) | 82:12;91:16;127:23 | 54:20,24 | 108:16;127:8,12 |
| 93:10,15,18;94:5; | 8:18 | shuffling (1) | sketched (1) | southerly (1) |
| 108:5;123:13 | SGC (1) | 108:3 | 24:19 | 57:19 |
| secondary (3) | 17:1 | side (22) | slated (1) | space (11) |
| 113:12,21,23 | shall (1) | 22:12,14;24:22; | 120:14 | 13:10;58:17;80:23; |
| section (9) | 24:2 | 25:8,12;26:1;45:6; | slightly (4) | 81:7,10;84:11,12,18; |
| 14:15;15:1;87:17; | shallow (1) | 47:20;49:8;57:7; | 44:3;88:10;95:6; | 85:7;86:12;128:20 |
| 88:23;108:7;115:13; | 80:5 | 72:16,21;74:17;75:4; | 115:4 | spare (1) |
| 117:4;121:11;128:6 | share (1) | 76:10;77:17;82:9; | slip (1) | 7:13 |
| sections (2) | 37:11 | 85:20;88:2;108:15; | 129:9 | speak (3) |
| 124:20;125:15 | SHEB (8) | 115:16;127:2 | sluice (1) | 30:17;34:19;109:4 |
| sediment (1) | 13:9;14:7;27:17; | sides (2) | 55:12 | SPEAKER (1) |
| 73:10 | 38:10;39:23;41:14; | 90:15,16 | smack (1) | 37:21 |
| seeing (1) | 60:4;125:8 | sideways (1) | 130:24 | speaking (2) |
| 31:19 | S-H-E-B (1) | 78:14 | smaller (1) | 52:19;101:18 |
| seeking (1) | 125:10 | sign (3) | 49:11 | special (2) |
| 95:5 | sheet (3) | 48:5,13;49:21 | society (1) | 116:3,11 |
| seem (2) | 14:7;101:12; | signed (1) | 61:21 | specialists (1) |
| 51:24;93:14 | 130:16 | 118:21 | sold (1) | 53:12 |
| segment (2) | sheeting (1) | significant (5) | 81:3 | specific (9) |
| 25:24;53:9 | 10:22 | 10:20;11:3;17:15; | solid (2) | 9:7;10:12,13; |
| segments (1) | sheets (1) | 58:14;65:6 | 54:12;83:14 | 20:11;34:20;36:8; |
| 53:10 | 35:2 | significantly (1) | solution (3) | 78:16;124:16;125:22 |
| self-explanatory (1) | shocked (1) | 72:12 | 124:7,9,12 | Specifically (5) |
| 125:5 | 102:13 | similar (1) | somebody (6) | 8:16,20;30:17; |
| sell (1) | shop (1) | 9:17 | 52:2;69:9;86:16; | 35:3;85:4 |
| 73:18 | 126:10 | simply (2) | 106:14;118:10,17 | specificity (1) |
| send (2) | shoring (1) | 6:6;16:23 | somebody's (1) | 67:21 |
| 17:21;69:9 | 49:2 | simulation (1) | 80:24 | speed (1) |
| sense (5) | short (4) | 21:23 | someone (4) | 118:19 |
| 11:17;27:6;35:7; | 32:19;82:17,18; | single (3) | 37:1;69:11;90:7; | splice (28) |
| 109:21;127:6 | 118:9 | 41:8;44:8;118:21 | 117:23 | 33:8;38:8;41:4,7,9; |
| sent (3) | shot (1) | sit (9) | something's (1) | 45:13;46:3,6,8; |
| 33:20;91:23; | 52:7 | 28:6;58:5;78:22; | 69:17 | 47:12;48:13,14,17; |
| 122:14 | shoulder (13) | 79:12,13,14,15,20; | sometime (5) | 49:13;50:19,24; |
| sentence (1) | 21:12;24:24;44:3, | 81:19 | 21:2;24:12;68:24; | 51:15;52:1,8;55:15, |
| 114:16 | 13;55:8;59:7;66:1, | Site (9) | 93:4;99:20 | 17;56:1,15;58:4,9; |
| separate (1) | 11;107:10,16,17; | 9:5;36:21;61:10; | sometimes (2) | 61:3;62:16;75:1 |
| 42:3 | 109:1;120:13 | 103:23,24;104:11,18; | 72:8,10 | spoke (1) |
| September (1) | show (17) | 130:14;132:7 | somewhat (1) | 131:13 |
| 102:15 | 16:2;19:5,13,18; | sited (1) | 131:8 | spokesperson (1) |
| sequence (1) | 23:15;35:2;37:2,6; | 7:6 | somewhere (2) | 33:4 |
| 110:8 | 50:11;74:4;77:14; | siting (2) | 22:8;54:15 | spot (1) |
| sequential (1) | 81:8;95:21;96:1; | 10:4;12:17 | soon (1) | 60:24 |
| 105:6 | 105:20;106:18; | sits (3) | 105:14 | spread (1) |
| Service (1) | 132:22 | 66:4;78:6,8 | sorry (18) | 30:9 |


| Springs (1) | 32:18 | 18:20;19:4;27:23; | surveyor (3) | ten (1) |
| :---: | :---: | :---: | :---: | :---: |
| 88:12 | Steven (9) | 74:21;76:3 | 5:21;77:5;83:7 | 72:8 |
| square (1) | 108:1;109:9;114:1; | submitting (1) | surveyors (11) | ten-minute (1) |
| 48:11 | 115:7;116:21;123:8; | 20:23 | 17:1;27:21;29:14; | 89:17 |
| squashed (1) | 126:16;127:9;130:9 | subordinate (1) | 30:14;64:20;66:8; | term (1) |
| 61:7 | Stewartstown (1) | 113:24 | 82:13;87:3,19;89:10; | 96:12 |
| stability (1) | 118:7 | suddenly (2) | 92:16 | terms (2) |
| 58:17 | stick (1) | 96:16;97:22 | surveys (3) | 27:22;113:4 |
| stabilization (1) | 53:18 | Sugar (3) | 6:12;27:24;28:5 | terrain (1) |
| 55:6 | still (11) | 32:12;125:9,12 | Susan (1) | 20:14 |
| stabilize (1) | 12:2,5;18:4;46:17; | suggest (1) | 103:14 | territory (2) |
| 44:6 | 50:18;65:1;71:7; | 73:24 | sustained (2) | 51:1;57:21 |
| Stable (2) | 92:6;100:24;111:8; | suggests (1) | 98:2,7 | testified (6) |
| 43:19,19 | $128: 23$ | 87:16 | swing (3) | $7: 5 ; 9: 5 ; 11: 2 ; 36: 4$ |
| stages (1) | stipulation (1) | summer (3) | 56:19;59:4;127:21 | $58: 19 ; 59: 2$ |
| 24:2 | 68:4 | 14:12;127:19; | switch (2) | testimony (12) |
| stakes (2) | stipulations (1) | 129:14 | 87:11;88:7 | 6:21;7:7;18:2; |
| 48:1;50:3 | 70:16 | sums (1) | system (4) | 32:21;53:16;60:7; |
| stand (3) | stop (3) | 69:11 | 105:4;113:21; | $64: 12 ; 75: 12 ; 76: 17$ |
| 19:17;73:17; | 118:19;131:2,2 | sun's (1) | $121: 1,3$ | $77: 5 ; 80: 2 ; 93: 7$ |
| 125:10 | stops (1) $74: 3$ | 57:20 supersed | T | Thanks (1) |
| standard (3) $5: 12 ; 107: 5 ; 114: 9$ | $74: 3$ storm (1) | supersed $77: 9$ | T | $\begin{gathered} \text { 126:20 } \\ \text { thereby (1) } \end{gathered}$ |
| stands (2) | 12:10 | supplied (1) | table (1) | 117:6 |
| 24:13;98:7 | straw (1) | 20:18 | 18:24 | Therefore (2) |
| start (9) | 73:15 | supply (1) | talk (11) | 94:12;116:5 |
| 4:13;36:3,14;38:9, | stream (2) | 19:16 | 35:11;36:10;38:1; | there'll (1) |
| 19;79:6;96:16; | 57:24;61:3 | support (3) | 51:23;63:23;64:7,11, | 20:9 |
| 103:18;133:2 | Street (10) | 48:3;67:9;68:2 | 21;125:15;127:7; | THIBAULT (3) |
| started (7) | 7:23;8:15;9:14,17; | supported (1) | 133:2 | 98:21,22;102:24 |
| 4:4;26:10;36:16; | 12:2,5,10;31:7; | 100:14 | talked (12) | Thibeault (2) |
| 124:18;126:2; | 32:13;57:7 | supposed (1) | $21: 1 ; 31: 8 ; 43: 18$ | 98:19;115:3 |
| 131:13;132:11 | stressed (1) | 49:16 | 64:16,19;65:15; | thick (1) |
| starting (1) | 63:6 | sure (19) | 74:13;75:24;92:24; | 53:13 |
| 34:9 | stretch (1) | 37:17;47:5;69:24; | 103:13;119:4;122:8 | thickness (2) |
| starts (2) | 76:4 | 70:9,12;81:12;84:8; | talking (16) | 52:23,24 |
| 42:6;109:14 | strong (1) | 99:10;101:10; | 41:6,23;43:7; | thin (1) |
| state (8) | 48:3 | 105:11;112:12; | 46:13;47:7;61:20; | $34: 18$ |
| 22:16;66:3;67:13; | structure (2) | 113:7,16,17;117:10; | 63:7;74:15;83:24; | thinking (2) |
| 68:2;69:22;95:19; | 52:8;75:20 | 123:4;124:24;131:9; | 84:19,22;90:13;93:4; | 100:22;124:1 |
| 121:13,15 | structures (3) | 133:7 | 95:13;102:15;123:12 | third (1) |
| stated (8) | 67:17;68:13;75:18 | surely (1) | talks (1) | 5:6 |
| $7: 1,7,14 ; 9: 18$ | struggle (1) | 52:2 | 125:16 | though (6) |
| $10: 16 ; 11: 10 ; 26: 24$ | 50:10 | surface (2) | tape (1) | $31: 15 ; 42: 11 ; 55: 22$ |
| 28:8 | stuck (2) | 24:23;75:8 | 48:10 | 70:6;91:12;125:10 |
| Statement (5) | 125:18,19 | surfaces (1) | team (1) | thought (11) |
| 94:10;95:17; | studied (5) | 58:17 | 17:20 | $66: 7 ; 84: 15 ; 85: 22$ |
| 111:17;123:14;124:4 | 94:17,20;95:1,19; | surprise (1) | technical (4) | 90:7;103:22;106:14; |
| $\begin{aligned} & \text { statements (1) } \end{aligned}$ | 96:4 | 101:16 | $\begin{aligned} & \text { 4:9;52:3;94:4; } \\ & 97 \cdot 12 \end{aligned}$ | 107:4;110:15;111:9; |
| 115:11 states (4) | $69: 12 ; 94: 9,14,17$ | $\begin{gathered} \text { surprised } \\ 101: 21 \end{gathered}$ | technically (1) | thousand (1) |
| 18:15;94:11;95:23; | 115:3,17,17,23; | surprising (1) | 126:11 | 54:3 |
| 100:15 | 116:10 | 51:24 | telecommunications (1) | three (18) |
| stating (2) | stuff (3) | survey (28) | 9:22 | 13:21;15:19;16:6, |
| 22:5;94:16 | 57:23;105:18; | 5:11,14,23;6:1,6,8, | telephone (1) | 15,19;45:5,7;48:5; |
| station (13) | 124:19 | 13,17;9:2;12:7;14:6; | 132:21 | 49:7,18;50:6;51:9; |
| 32:14;71:1,4,6,15; | subject (5) | 15:7,16;16:7,22;17:6, | telling (1) | 57:1;77:3;89:4; |
| 75:1,22;88:13; | 53:2;59:20;60:14; | 20;19:24;20:20; | 83:22 | 90:10;91:19;107:19 |
| 108:11,12;120:7; | 72:18;100:3 | 28:10;64:14;65:23; | tells (1) | three- (1) |
| 126:11,12 | submit (2) | 82:21;83:1;92:15,19; | 122:20 | 39:18 |
| Steel (1) | 16:1;20:4 | 93:3;122:7 | temporary (6) | three-conductor (1) |
| 128:3 | submitted (9) | surveying (2) | $20: 10 ; 44: 5 ; 56: 19$ | 7:12 |
| steps (1) | 7:24;8:23;13:8,19; | 5:12;82:13 | 83:23;84:2;86:12 | three-rod (11) |


| 14:14;15:24;16:2, | 61:9 | true (4) | 32:23;36:17;90:5; | $95: 24 ; 107: 5 ; 119: 10$ |
| :---: | :---: | :---: | :---: | :---: |
| 4,10;30:16,18;48:4; | traffic (15) | 7:3;29:15;89:2,7 | 03:17;106:7;108:9; | uses (2) |
| 50:23;62:11,14 | 10:20;11:3,15; | truly (1) | 130:19 | 27:12;113:11 |
| three-rod-wide (2) | 16:20;31:6,6,9;44:9; | 62:15 | underneath (2) | using (9) |
| 91:23;92:2 | 72:18;86:1;117:6,14, | trunk (1) | 70:19;71:7 | 13:24;15:3;16:24; |
| throughout (2) | 15;118:8;129:21 | 119:7 | under-pavement (1) | 65:16;73:9;86:7,8; |
| 96:10,10 | trailer (1) | try (6) | 112:16 | 96:16;107:8 |
| throw (1) | 59:10 | 111:14;117:11 | Understood (1) | usually (3) |
| 127:10 | trailers (1) | 119:6;123:24; | 76:2 | 37:9;111:18; |
| tie (2) | 72:10 | 125:23;129:18 | underwent (1) | 118:20 |
| 39:17;67:1 | train (1) | trying (5) | 100:14 | utilities (7) |
| tied (1) | 45:13 | 17:2;41:20;67:18; | undue (1) | 8:18;9:14,17;13:1; |
| 105:5 | transcript (1) | 91:14;119:16 | 133:5 | $27: 14 ; 67: 16 ; 68: 12$ |
| tightening (1) | 17:24 | Twenty (2) | Unfortunately (2) | utility (13) |
| 17:6 | Transmission (2) | 53:8;55:20 | 40:10;93:13 | 6:24;8:8;9:2;12:12, |
| times (4) | 12:15;68:5 | twice (1) | uniform (1) | 17;27:10;69:6;70:19; |
| 14:10;72:7,9; | Transportation (5) | 75:8 | 43:3 | 110:2;111:9,24; |
| 110:10 | 8:24;11:5;62:24; | twisty (1) | UNKNOWN (1) | 116:19;118:23 |
| today (16) | 113:13,23 | 58:11 | 37:21 |  |
| 28:6;64:24;90:6,8 | Transportation's (1) | two (37) | unless (1) | V |
| 92:7;100:15,24; | 18:13 | 7:6,10,18,23 | 81:3 |  |
| 102:6,19;119:5; | trash (1) | $32: 3 ; 38: 7,23 ; 40: 3$ $16 ; 48 \cdot 1 \cdot 49 \cdot 7,15$ | unload | valid (2) |
| $121: 22,24 ; 122: 2$ $124 \cdot 5 \cdot 132 \cdot 7 \cdot 133 \cdot 12$ | 34:18 | 16;48:1;49:7,15; | 59:11 | 62:23;112:3 |
| 124:5;132:7;133:12 | travel (8) | 50:11;53:9;54:2,3; | unloading ( | Valley (3) |
| together (3) | 26:16;51:21;55:3 | 56:23;57:5;59:14; | 59:13 | 120:6;121:19; |
| 6:4;24:3;67:1 | 4;59:7;66:10;72:14; | 68:20;69:14;74:13; | unsuspecting (1) | 122:3 |
| told (5) | 117:18 | 80:9,14,17,19;82:17, | 133:6 | value (1) |
| 17:2;26:12;84:5, | tree (13) | 18;90:6;95:4;101:7, | unusual (1) | 114:16 |
| 13;86:23 | 18:15,21;105:17; | 11;109:12;124:16; | 123:13 | variable (1) |
| tons (2) | 106:5,21;119:16; | 125:22;127:13 | up (41) | 87:17 |
| 54:6,17 | 120:8,8;121:8;122:4; | two- (2) | 13:14;17:6;21:22; | variance (1) |
| top (14) | 123:1,3,5 | 30:15,18 | 24:4;33:15;34:18,20, | 18:10 |
| 32:7;52:10,12; | tree-clearing (4) | two-rod (3) | $39: 7 ; 52: 11 ; 55: 16$ | variation (1) |
| 57:5;65:6;71:18; | 19:5,13;105:13,21 | 29:9,13,23 | 59:10;61:6;63:18; | 18:8 |
| 75:13,20;76:1;79:24; | treehouse (1) | type (6) | 69:8;70:3;73:3;76:1; | varies (1) |
| 80:16;96:5;105:7; | 126:8 | 9:18;82:14,16,21 | 78:18;82:23;85:8,13, | 90:9 |
| 108:16 | trees (12) | 119:24;121:14 | 24;86:10;89:11; | various (1) |
| topic (1) | 18:11,19;105:24; | typically (4) | 92:20;93:12;105:10; | 34:10 |
| 38:2 | 106:7,13;119:4,4,21; | 9:21;36:10;42:24; | 107:3;108:2,19; | Varney (1) |
| total (6) | 120:1,5,19,21 | 107:17 | 120:21;121:16; | 121:18 |
| 7:13;22:13;29:3; | trench (18) |  | 124:11,19;125:21; | vast (2) |
| 54:7,10;80:9 | 10:16,24;18:6; | $\mathbf{U}$ | 127:10,19;129:13; | 9:19;94:23 |
| totals (1) | 21:7;24:14;80:5,6,7, |  | 130:8,14;131:21 | vault (22) |
| 28:14 | 10;107:6;108:20,22; | UAM (6) | update (4) | 41:4,7,8,9;46:3; |
| towards (5) | 120:14;127:7;128:2, | $26: 24 ; 99: 8,12$ | 19:23;28:10;30:20; | $48: 14,18 ; 49: 13$ |
| $46: 19 ; 49: 21 ; 51: 4$ $57 \cdot 10 \cdot 85 \cdot 20$ | 11,21;130:19 | 100:6;103:21;116:15 | $132: 16$ | $51: 15 ; 52: 1,8 ; 55: 15$ |
| 57:10;85:20 | trenches (1) | ultimately (4) | updated (1) | $17 ; 56: 1,1,9,16 ; 58: 5$ |
| towing (1) | 96:1 | 24:7;92:17;131:20 | 15:22 | 9;59:10;61:3;75:1 |
| 72:10 | trenching (6) | 132:24 | updates (1) | vaults (3) |
| town (16) | 23:6,15;25:2;33:9; | unaware (3) | 36:21 | 33:9;38:8;45:13 |
| 34:22;35:16;61:20; | 45:11,23 | 8:12,21;9:3 | upon (6) | vegetated (3) |
| $87: 19,20,23,24 ; 91: 1$ | tried (2) | under (31) | 102:2,4;117:8,21; | 43:21,24;44:3 |
| 16,17,18,19,20,22; | 73:18;109:12 | 8:14;13:1;38:16; | 118:18;133:5 | vehicles (1) |
| 130:15,15 | trigger (1) | 39:20;66:19;67:16; | upright (1) | 20:9 |
| towns (2) | 69:14 | 68:10,12;70:20,24; | 50:20 | verbal (1) |
| 34:9,20 | trip (1) | 71:12,14;87:13;99:6, | use (14) | 133:15 |
| toxic (4) | 5:21 | 13;100:23;101:1,13, | 4:24;11:23;15:5; | versa (1) |
| 96:16;97:4,8,14 | trips (1) | 20;108:22;109:4; | 23:4;47:6;63:14; | 125:7 |
| track (1) | 37:5 | 110:3,20;113:2,15; | 65:24;71:17;73:13; | viable (2) |
| 49:22 | truck (2) | 114:23;116:6;127:4, | 77:5;83:10;113:12, | 123:16;129:3 |
| tractors (1) | 56:9,15 | 15;128:11;131:4 | $20,24$ | vice (1) |
| 72:9 | trucks (1) | underground (10) | used (6) | 125:7 |
| traditional (1) | 72:9 | 7:6;10:10;13:24; | 15:15;23:4;77:16; | vicinity (3) |


| 67:11;69:4,5 | weeks (6) | 44:13;78:17,20; | 40:11;72:2;99:16 | 13:18 |
| :---: | :---: | :---: | :---: | :---: |
| view (1) | 16:9;20:24;64:13; | 85:15;87:17;94:7,13, | written (2) | 118 (1) |
| 113:20 | 93:1,2;129:9 | 24;95:18;104:22; | 111:3;127:1 | 103:22 |
| virtue (1) | weigh (2) | 110:20;115:15; |  | 1200-foot (1) |
| 116:4 | 53:23;112:9 | 117:16 | Y | 63:14 |
| visible (1) | weighs (1) | without (5) |  | 122 (1) |
| 130:23 | 112:4 | 9:23;20:11;31:19; | year (11) | 25:5 |
| visual (2) | weight (5) | 69:10;86:16 | 9:6;15:9;17:21; | 124 (1) |
| 4:14;21:23 | 52:1,7;54:8,10; | Witness (8) | 24:12;33:24;34:6; | 25:5 |
| visualized (1) | 55:16 | 8:4;29:11;33:19; | 61:12;100:2;110:16; | 125 (5) |
| 38:21 | weren't (2) | 59:22;60:13,17;71:2, | $129: 7,17$ | 38:2,9;41:16;46:4; |
| voted (1) | 17:8,9 | 20 | year-round (1) | 47:10 |
| 91:17 | west (2) | witnesses (2) | 61:4 | 129 (3) |
| W | 25:8;108:17 westward (1) | 59:19;62:1 WMNF (1) | years (2) $5: 5: 26: 23$ | 38:2;44:19,20 |
|  | 51:16 | 125:5 | yesterday (1) | 91:17 |
| wait (1) | what's (4) | wonder (1) | 62:1 | 14 (3) |
| 70:4 | 27:10;59:12;83:10; | 76:23 |  | 48:22;50:9;107:21 |
| $\begin{gathered} \text { waiting (1) } \\ 12: 6 \end{gathered}$ | 96:24 <br> Wheneve | $\begin{gathered} \text { wondering (2) } \\ 64: 14: 65: 18 \end{gathered}$ | Z | $\begin{array}{\|l\|} \hline 145(3) \\ 93: 11,21,22 \end{array}$ |
| walk (1) | 4:6 | Woodstock (3) | zero (1) | 14-foot (2) |
| 86:4 | Whereupon (1) | 31:24;123:11; | 107:18 | 48:16,21 |
| walked (1) | 133:18 | 124:24 | zone (14) | 15 (2) |
| 101:19 | wherever (1) | word (5) | 30:24;31:12;32:11; | 18:14;101:13 |
| wall (2) | 18:3 | 13:12;77:24;83:10, | 45:3,3,9,20;46:6; | 155 (1) |
| 52:23,24 | white (1) | 12;133:12 | 78:18;79:9;85:3; | 115:8 |
| Walt (1) | 46:19 | wording (2) | 117:15,16,24 | 15th (1) |
| 90:3 | Whitley (2) | 22:17;117:11 | zones (4) | 129:8 |
| wants (2) | 103:5,9 | words (2) | 31:17,23;33:9; | 16 (1) |
| 38:1;63:23 | whole (4) | 105:3;119:17 | 118:14 | 99:22 |
| $\begin{gathered} \text { warrants (1) } \\ 6 \cdot \cdot 16 \end{gathered}$ | $\begin{aligned} & 42: 3 ; 73: 21 ; 101: 12 ; \\ & 130 \cdot 4 \end{aligned}$ | work (62) 5:22;13:10;23: | 1 | $\begin{aligned} & \mathbf{1 6 - 1 / 2 ~ ( 2 )} \\ & 49: 17 ; 50: 13 \end{aligned}$ |
| wash (1) | wide (17) | $24: 7 ; 26: 12 ; 29: 10$ |  | $1838 \text { (3) }$ |
| 43:20 | 23:3;48:16,18,21; | 30:2,24;31:12,17,23; | 1 (9) | 91:1,16,17 |
| washed (2) | 50:9;75:7;76:16; | 32:11;33:9;42:21; | 7:22;9:12;10:15; | 1839 (1) |
| 58:1,13 | 77:3;78:13;81:24; | 43:14;45:2,3,9,20; | 66:14;76:7;104:24; | 16:10 |
| water (5) | 82:2;89:4,4;90:10; | 46:6,22;59:6;67:10; | 114:4;117:2;123:10 | 1871 (2) |
| $8: 18 ; 68: 20,22 ;$ | 92:8;107:17,19 | 69:3;70:1;73:19; | 1:40 (1) | 29:9;30:15 |
| $69: 10,12$ | widen (1) | 78:3,18,22;79:9,15, | 4:2 | 18th (1) |
| wave (1) | 112:20 | 17,21;80:22,23;81:7, | 10 (14) | 109:18 |
| 131:15 | wider (3) | 9;83:23;84:2,6,7,12, | 6:21;21:11,19; | 1928 (1) |
| way (25) | 7:8;49:24;50:12 | 18;85:2,5,6,9,10,10, | 22:9,13;25:2;28:13; | 91:16 |
| 5:16,23;6:1;15:13; | width (18) | 15,17,24;86:3,12; | 29:6;82:7;107:4,10, | 1929 (1) |
| 27:12;29:22;32:22; | 10:16,24;14:3; | 93:1;94:7,13;107:21; | 13,15;120:9 | 77:22 |
| 36:19;40:10;45:6; | 15:17;16:10;17:4; | 117:15,23;128:20; | 100 (5) | 1931 (2) |
| 51:10;52:15;57:20; | 26:11;45:4,9:48:22, | 129:16 | 14:1;103:21; | 76:23;87:21 |
| 66:10;70:14;74:8; | 23;50:8;65:18;75:8; | work-area (1) | 104:11,17,24 | 19th (1) |
| 75:9;99:9;105:5; | 77:1;90:8,18;92:10 | 84:11 | 101 (1) | 65:12 |
| 109:5,6;113:17; | widths (1) | worked (2) | 29:7 | 1st (4) |
| 123:4;124:3;128:18 | 16:24 | 9:23;110:8 | 103 (1) | 18:1;34:6,13; |
| ways (2) | Wildwood (1) | worker (1) | 8:6 | 131:15 |
| 32:21;69:15 | 31:17 | 49:3 | 10-foot (1) |  |
| WBR3 (1) | willing (1) | workers (1) | 23:1 | 2 |
| 124:23 | 73:7 | 117:15 | 10-foot-wide (1) |  |
| wear (1) | wiped (1) | working (9) | 82:4 | 2 (17) |
| 130:9 | 101:7 | $4: 15 ; 7: 2,8,15 ; 8: 3$ | 11 (2) | $10: 15 ; 18: 14 ; 42: 13$ |
| web (4) | withdrawn (4) | 81:4,15;93:14; | 30:3,23 | 16;49:5;66:14;76:6, |
| 36:21;130:14; | 19:22;28:9,20; | 117:17 | 114 (1) | 7,8;87:13,13,14; |
| 132:7,19 | 104:21 | worst-case (1) | 130:16 | 114:2,7;115:12; |
| Wednesday (1) | within (23) | 123:19 | 116 (5) | 117:2;133:21 |
| 33:5 | $10: 21 ; 16: 4 ; 18: 4$ | write (2) | $16: 14,17 ; 17: 4$ | 20 (4) |
| week (1) | $22: 24 ; 25: 2 ; 26: 7,12$ | 52:4;114:9 | 90:9;91:21 | 55:14;94:8;103:22; |
| 34:8 | 16;29:23;43:16; | writing (3) | $117 \text { (1) }$ | 115:15 |

SEC DOCKET NO. 2015-06 NORTHERN PASS TRANSMISSION, LLC DAY 42 - AFTERNOON SESSION ONLY ADJUDICATORY HEARING

| 20- (3) | 30 (13) | 4-foot (1) | 133:14,22 |  |
| :---: | :---: | :---: | :---: | :---: |
| 53:1,7;54:1 | 21:5,9,19,21;30:2, | 82:6 |  |  |
| 2014 (1) | 5;34:4;43:18;44:10, |  |  |  |
| 5:20 | 15;49:1;54:6;102:16 | 5 |  |  |
| 2015 (7) | 30,000 (3) |  |  |  |
| 8:24;14:13;99:20, | 53:7,8;54:1 | 5 (9) |  |  |
| 22;100:19;102:15; | 30,000-pound (1) | 22:9,13;25:2; |  |  |
| 132:6 | 53:2 | 43:16;50:8;82:5,6,9; |  |  |
| 2016 (6) | 302 (1) | 84:16 |  |  |
| 13:9;18:14;100:19; | 125:3 | 50 (1) |  |  |
| 104:1;108:10;109:5 | 30-foot (2) | 54:12 |  |  |
| 2017 (4) | 55:10;66:18 | 50- (1) |  |  |
| 6:21;18:1;122:14; | 30-ton (1) | 54:15 |  |  |
| 133:21 | 54:22 | 52 (1) |  |  |
| 20-foot (1) | 31 (3) | 114:4 |  |  |
| 95:7 | 77:22;119:12; | 53 (1) |  |  |
| 2202+00 (2) | 123:2 | 40:6 |  |  |
| 108:11;126:12 | 31-27.1 (1) | 54,000 (2) |  |  |
| 2208+00 (2) | 71:24 | 53:14,23 |  |  |
| 108:12;126:12 | 31st (1) | 5th (1) |  |  |
| 222 (1) | 6:21 | 87:20 |  |  |
| 101:9 | 33 (1) |  |  |  |
| 22nd (1) | 53:13 | 6 |  |  |
| 122:14 | 34 (3) |  |  |  |
| 248 (1) | 48:18;49:1;126:1 | 6 (4) |  |  |
| 33:23 | 35 (1) | 18:1;19:2;49:9; |  |  |
| 25 (1) | 130:8 | 53:12 |  |  |
| 21:22 | 350 (1) | 60 (1) |  |  |
| 2611 (1) | 88:12 | 102:20 |  |  |
| 88:13 | 36 (5) | 60,000 (1) |  |  |
| 2698+00 (2) | 108:2,7;109:10,14; | 54:15 |  |  |
| 71:1;75:23 | 110:21 | 609 (1) |  |  |
| 2699 (1) | 37 (4) | 120:7 |  |  |
| 71:4 | 108:4;109:9; | 66 (2) |  |  |
| 2700 (2) | 126:14,17 | 75:7;76:16 |  |  |
| 71:6,15 | 38 (1) |  |  |  |
| 2701 (1) | 127:10 | 7 |  |  |
| $71: 1$ $2701+00(1)$ | 4 |  |  |  |
| 75:23 |  | 7:22;9:11 |  |  |
| 2703+50 (1) | 4 (8) | 70 (2) |  |  |
| 75:1 | 9:10;49:9;66:16; | 6:22;123:10 |  |  |
| 295 (4) | 67:5;82:5,6,8;84:16 | 7-1/2 (3) |  |  |
| 7:21;9:10;29:6; | 4:30 (1) | 48:24;101:11,12 |  |  |
| 30:23 | 119:8 | 7th (1) |  |  |
| 2nd (2) | 4:53 (1) | 108:10 |  |  |
| 18:14;132:6 | 133:19 |  |  |  |
| 3 | $\begin{gathered} \text { 40-ton (1) } \\ 54: 22 \end{gathered}$ | 8 |  |  |
|  | 42 (1) | 8 (7) |  |  |
| 3 (21) | 133:18 | 13:8;48:16,18,23, |  |  |
| 7:21;49:5;63:24; | 43 (2) | 24;53:12,13 |  |  |
| 64:8;76:17;77:20; | 114:2;133:20 | 8- (1) |  |  |
| 78:1,2;87:4,14; | 44 (2) | 82:3 |  |  |
| 107:4;108:7;117:2; | 115:7,11 | 891 (2) |  |  |
| 125:1,6;126:5;127:2, | 45 (1) | 120:6;122:3 |  |  |
| 12;129:13;130:20,22 | 116:22 |  |  |  |
| 3.7 (1) $18: 24$ | 4500 (1) | 9 |  |  |
| 3:37 (1) | 46 (1) | 9 (4) |  |  |
| 89:19 | 122:12 | $17: 24 ; 19: 2 ; 27: 5$ |  |  |
| 3:52 (1) | 47 (2) | 99:17 |  |  |
| 89:20 | 47:22;123:8 | 9:00 (2) |  |  |


[^0]:    plating has minimized that need as well.
    \{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

[^1]:    \{SEC 2015-06\}[Day 42 AFTERNOON Session ONLY]\{09-29-17\}

[^2]:    \{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY]\{09-29-17\}

[^3]:    \{SEC 2015-06\} [Day 42 AFTERNOON Session ONLY] \{09-29-17\}

