
Re: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

From Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>

Date Thu 9/4/2025 12:00 PM

To Berriz, Sonia (Consultant) <Sonia.Berriz@consultant.wsdot.wa.gov>

Cc Holmquist, Dan (Consultant) <Dan.Holmquist@consultant.wsdot.wa.gov>; Pao, Evelyn C. <evelyn.pao@wsdot.wa.gov>; Pang, Jason (Consultant) <Jason.Pang@consultant.wsdot.wa.gov>; Bondy, Terry (Consultant) <terry.bondy@consultant.wsdot.wa.gov>; Prescott, Ryan <Ryan.Prescott@skanska.com>; Prendergast, Patrick <Patrick.Prendergast@skanska.com>; Sharrer, Kyle <Kyle.Sharrer@skanska.com>; Lovering, Janka (Consultant) <Janka.Lovering@consultant.wsdot.wa.gov>; Petterson, Michelle <Michelle.Petterson@skanska.com>; Bernauer, Colten <colten.bernauer@skanska.com>; Gaffney, Erin <erin.gaffney@skanska.com>; Forrest Megargel <forrestm@4mengineers.com>

 1 attachment (93 KB)

CONF_Floor props Eurex 20 top and Eurex 30 top, Floor props Eurex 20 and Eurex 30 US.pdf;

Also, see attached (which I received today, after reaching out to Doka for testing backup). This could be helpful in understanding what engineering/testing requirements were followed during the design of the Doka Props.

Thanks,

Zach

From: Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>

Sent: Tuesday, September 2, 2025 3:10 PM

To: Berriz, Sonia (Consultant) <Sonia.Berriz@consultant.wsdot.wa.gov>

Cc: Holmquist, Dan (Consultant) <Dan.Holmquist@consultant.wsdot.wa.gov>; Pao, Evelyn C. <evelyn.pao@wsdot.wa.gov>; Pang, Jason (Consultant) <Jason.Pang@consultant.wsdot.wa.gov>; Bondy, Terry (Consultant) <terry.bondy@consultant.wsdot.wa.gov>; Prescott, Ryan <Ryan.Prescott@skanska.com>; Prendergast, Patrick <Patrick.Prendergast@skanska.com>; Sharrer, Kyle <Kyle.Sharrer@skanska.com>; Lovering, Janka (Consultant) <Janka.Lovering@consultant.wsdot.wa.gov>; Petterson, Michelle <Michelle.Petterson@skanska.com>; Bernauer, Colten <colten.bernauer@skanska.com>; Gaffney, Erin <erin.gaffney@skanska.com>

Subject: Re: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

Sonia,

See attached responses, and electronic files.

Thanks,

Zach

From: Berriz, Sonia (Consultant) <Sonia.Berriz@consultant.wsdot.wa.gov>

Sent: Thursday, August 21, 2025 4:33 PM

To: Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>

Cc: Holmquist, Dan (Consultant) <Dan.Holmquist@consultant.wsdot.wa.gov>; Pao, Evelyn C. <evelyn.pao@wsdot.wa.gov>; Pang, Jason (Consultant) <Jason.Pang@consultant.wsdot.wa.gov>;

Bondy, Terry (Consultant) <terry.bondy@consultant.wsdot.wa.gov>; Prescott, Ryan <Ryan.Prescott@skanska.com>; Prendergast, Patrick <Patrick.Prendergast@skanska.com>; Sharrer, Kyle <Kyle.Sharrer@skanska.com>; Lovering, Janka (Consultant) <Janka.Lovering@consultant.wsdot.wa.gov>; Petterson, Michelle <Michelle.Petterson@skanska.com>; Bernauer, Colten <colten.bernauer@skanska.com>; Gaffney, Erin <erin.gaffney@skanska.com>

Subject: RE: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

Hi Zach,

Here are HQ's comments. I added them to the bottom of the spreadsheet. If you would like a separate spreadsheet that is ok with me as well.

Jason and Terry are reviewing the responses provided Monday afternoon.

Thank you,

-Sonia

Sonia Berriz, P.E.
berrizs@consultant.wsdot.wa.gov
(425) 876-6283 (cell)

From: Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>
Sent: Monday, August 18, 2025 9:06 AM
To: Berriz, Sonia (Consultant) <Sonia.Berriz@consultant.wsdot.wa.gov>
Cc: Holmquist, Dan (Consultant) <Dan.Holmquist@consultant.wsdot.wa.gov>; Pao, Evelyn C. <evelyn.pao@wsdot.wa.gov>; Pang, Jason (Consultant) <Jason.Pang@consultant.wsdot.wa.gov>; Bondy, Terry (Consultant) <terry.bondy@consultant.wsdot.wa.gov>; Prescott, Ryan <Ryan.Prescott@skanska.com>; Prendergast, Patrick <Patrick.Prendergast@skanska.com>; Sharrer, Kyle <Kyle.Sharrer@skanska.com>; Lovering, Janka (Consultant) <Janka.Lovering@consultant.wsdot.wa.gov>; Petterson, Michelle <Michelle.Petterson@skanska.com>; Bernauer, Colten <colten.bernauer@skanska.com>; Gaffney, Erin <erin.gaffney@skanska.com>
Subject: Re: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

Thanks, Sonia. We will get these comments responded to.

When should we see the HQ comments?

Thanks,

Zach

From: Berriz, Sonia (Consultant) <Sonia.Berriz@consultant.wsdot.wa.gov>
Sent: Monday, August 18, 2025 6:47 AM
To: Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>
Cc: Holmquist, Dan (Consultant) <Dan.Holmquist@consultant.wsdot.wa.gov>; Pao, Evelyn C. <evelyn.pao@wsdot.wa.gov>; Pang, Jason (Consultant) <Jason.Pang@consultant.wsdot.wa.gov>; Bondy, Terry (Consultant) <terry.bondy@consultant.wsdot.wa.gov>; Prescott, Ryan <Ryan.Prescott@skanska.com>; Prendergast, Patrick <Patrick.Prendergast@skanska.com>; Sharrer, Kyle <Kyle.Sharrer@skanska.com>; Lovering, Janka (Consultant) <Janka.Lovering@consultant.wsdot.wa.gov>; Petterson, Michelle <Michelle.Petterson@skanska.com>; Bernauer, Colten <colten.bernauer@skanska.com>; Gaffney, Erin <erin.gaffney@skanska.com>
Subject: RE: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

Zach,

Please see attached updated RCSR form. The 7/24 package is with HQ as well.

-Sonia

Sonia Berriz, P.E.

berrizs@consultant.wsdot.wa.gov

(425) 876-6283 (cell)

From: Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>
Sent: Thursday, July 24, 2025 7:54 AM
To: Berriz, Sonia (Consultant) <Sonia.Berriz@consultant.wsdot.wa.gov>
Cc: Holmquist, Dan (Consultant) <Dan.Holmquist@consultant.wsdot.wa.gov>; Pao, Evelyn C. <evelyn.pao@wsdot.wa.gov>; Pang, Jason (Consultant) <Jason.Pang@consultant.wsdot.wa.gov>; Bondy, Terry (Consultant) <terry.bondy@consultant.wsdot.wa.gov>; Prescott, Ryan <Ryan.Prescott@skanska.com>; Prendergast, Patrick <Patrick.Prendergast@skanska.com>; Sharrer, Kyle <Kyle.Sharrer@skanska.com>; Lovering, Janka (Consultant) <Janka.Lovering@consultant.wsdot.wa.gov>; Petterson, Michelle <Michelle.Petterson@skanska.com>; Bernauer, Colten <colten.bernauer@skanska.com>; Gaffney, Erin <erin.gaffney@skanska.com>
Subject: Re: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

Sonia,

See attached. Let me know if you have any questions.

Thanks,

Zach

From: Berriz, Sonia (Consultant) <Sonia.Berriz@consultant.wsdot.wa.gov>
Sent: Tuesday, July 22, 2025 11:12 PM
To: Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>
Cc: Holmquist, Dan (Consultant) <Dan.Holmquist@consultant.wsdot.wa.gov>; Pao, Evelyn C. <evelyn.pao@wsdot.wa.gov>; Pang, Jason (Consultant) <Jason.Pang@consultant.wsdot.wa.gov>; Bondy, Terry (Consultant) <terry.bondy@consultant.wsdot.wa.gov>; Prescott, Ryan <Ryan.Prescott@skanska.com>; Prendergast, Patrick <Patrick.Prendergast@skanska.com>; Sharrer, Kyle <Kyle.Sharrer@skanska.com>; Lovering, Janka (Consultant) <Janka.Lovering@consultant.wsdot.wa.gov>; Petterson, Michelle <Michelle.Petterson@skanska.com>; Bernauer, Colten <colten.bernauer@skanska.com>
Subject: RE: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

Zach,

See feedback attached. We are trying to talk through some of this with HQ but in the mean time I wanted to send this over.

Here are the main issues:

- Temporary shoring posts are sized to support only the truck load and pavement load (pp 1), but not the total factored load in the middle "wall". On pp 18 the total load is calculated which is unfactored and the figures are not clear what is included. The existing 1 span structure is supporting self weight and soil load, while the 2 span structure supports the remaining. It seems a staged analysis is required to get this precise.
- How is the middle wall at 6" thick representative of the posts? The spacing need is calculated to be 11.6"

- It is not clear that the temp shoring is designed with factored loads including impact.

In addition, it seems like there were questions from the July 9th meeting that are unresolved.

- We discussed adding two more access points (creating a total of 4) and depending on what the load rating is for different elements within the vault (manufactures specs for screw jacks, etc.), would determine how often inspections need to occur. If this is not correct, then we need to have another discussion.
- WSDOT suggested installing at 4 ft long sleeper beam with steel posts to create an inspector access opening between the screw jacks. What was provided is more structurally conservative, but we are looking into the feasibility of getting an unconscious person from one side to the other.

More to come but movement.

-Sonia

Sonia Berriz, P.E.

berrizs@consultant.wsdot.wa.gov

(425) 876-6283 (cell)

From: Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>

Sent: Monday, July 7, 2025 4:17 PM

To: Berriz, Sonia (Consultant) <Sonia.Berriz@consultant.wsdot.wa.gov>; Lovering, Janka (Consultant) <Janka.Lovering@consultant.wsdot.wa.gov>

Cc: Holmquist, Dan (Consultant) <Dan.Holmquist@consultant.wsdot.wa.gov>; Pao, Evelyn C. <evelyn.pao@wsdot.wa.gov>; Pang, Jason (Consultant) <Jason.Pang@consultant.wsdot.wa.gov>; Bondy, Terry (Consultant) <terry.bondy@consultant.wsdot.wa.gov>; Prescott, Ryan <Ryan.Prescott@skanska.com>; Prendergast, Patrick <Patrick.Prendergast@skanska.com>; Sharrer, Kyle <Kyle.Sharrer@skanska.com>; Petterson, Michelle <Michelle.Petterson@skanska.com>; Bernauer, Colten <colten.bernauer@skanska.com>

Subject: Re: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

Sonia/Janka,

See attached. Let us know if you have any questions.

Thanks,

Zach

From: Berriz, Sonia (Consultant) <Sonia.Berriz@consultant.wsdot.wa.gov>

Sent: Wednesday, June 25, 2025 9:39 AM

To: Sharrer, Kyle <Kyle.Sharrer@skanska.com>

Cc: Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>; Lovering, Janka (Consultant) <Janka.Lovering@consultant.wsdot.wa.gov>; Holmquist, Dan (Consultant) <Dan.Holmquist@consultant.wsdot.wa.gov>; Prendergast, Patrick <Patrick.Prendergast@skanska.com>; Pao, Evelyn C. <evelyn.pao@wsdot.wa.gov>; Prescott, Ryan <Ryan.Prescott@skanska.com>

Subject: RE: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

Hi Kyle,

I wanted to make sure we reiterate the importance of the bullets I sent last week.

Please ensure your next submittal has these elements addressed/discussed.

- *How to maintain access that meets L & I requirements*
- *When concrete/rebar are unknown – the BDM points to AASHTO's Bridge Evaluation Manual. This document states in section 6A.5.2., unknown steel constructed during or after 1954 shall use $f_y=40\text{ksi}$ and concrete 3 ksi.*
- *The struts being placed interior to the structure – there are several concerns*
 - *These are not meant for long term dynamic loading – one thought was to have the manufacturer weigh in on the use/longevity of the bracing system*
 - *How frequently will the team get into the vault to ensure/fix any of the floor props that have fallen? The bridge group was suggesting a weekly check on the vault.*
 - *How will the floor props be pre-loaded and how will it be designed so they don't punch through the concrete?*

In addition, we have been looking through the Environmental Health and Safety Plan but don't think it covers the requirements of 2.13.6.2 which requires inspection and access plans for enclosed spaces. Let me know your thoughts there.

Thank you,

-Sonia

Sonia Berriz, P.E.

berrizs@consultant.wsdot.wa.gov

(425) 876-6283 (cell)

UPCOMING PTO – 6/26 – 7/14

From: Berriz, Sonia (Consultant)

Sent: Tuesday, June 17, 2025 7:35 AM

To: Sharrer, Kyle <Kyle.Sharrer@skanska.com>

Cc: Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>; Petterson, Michelle <Michelle.Petterson@skanska.com>; Lovering, Janka (Consultant) <Janka.Lovering@consultant.wsdot.wa.gov>

Subject: RE: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

Hi Kyle,

Please see attached feedback from structures.

The larger topics:

- How to maintain access that meets L & I requirements
- When concrete/rebar are unknown – the BDM points to AASHTO's Bridge Evaluation Manual. This document states in section 6A.5.2., unknown steel constructed during or after 1954 shall use $f_y=40\text{ksi}$ and concrete 3 ksi.
- The struts being placed interior to the structure – there are several concerns
 - These are not meant for long term dynamic loading – one thought was to have the manufacturer weigh in on the use/longevity of the bracing system
 - How frequently will the team get into the vault to ensure/fix any of the floor props that have fallen? The bridge group was suggesting a weekly check on the vault.
 - How will the floor props be pre-loaded and how will it be designed so they don't punch through the concrete?

I generally have direction/a path to successfully move forward but I am unsure of what that is here. The question that keeps being asked is can they use baker tanks and take the vault offline?

An option I heard floating around was – could you build a frame around the vault and place steel plates on top so the load isn't on the lid of the vault? I think you are too far along for that to be a

reasonable option. There was discussion about building a wall on the interior of the vault but that was met with resistance due to accessibility.

Thank you,

-Sonia

Sonia Berriz, P.E.

berrizs@consultant.wsdot.wa.gov

(425) 876-6283 (cell)

UPCOMING PTO – 6/26 – 7/14

From: Sharrer, Kyle <Kyle.Sharrer@skanska.com>

Sent: Wednesday, June 4, 2025 12:29 PM

To: Berriz, Sonia (Consultant) <Sonia.Berriz@consultant.wsdot.wa.gov>

Cc: Lucarelli, Zachary <Zachary.Lucarelli@skanska.com>; Petterson, Michelle <Michelle.Petterson@skanska.com>

Subject: [EXTERNAL] NW-12 Load Rating Report Responses and Calcs

WARNING: This email originated from outside of WSDOT. Please use caution with links and attachments.

Sonia,

Please see load rating report responses and calcs attached.

Can you please send these to your SME's for closure?

Thanks,

Kyle Sharrer

+1 909 721 9753