Washington State Board of Registration for Professional Engineers & Land Surveyors

Board Meeting

February 23, 2023

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Board Meeting

Tab 1

Call to Order

1.1 Roll Call

1.2 Order of Agenda

1.3 Approval of 12/08/2022 & 12/16/2022 Meeting Minutes

1.4 Public Comment Opportunity

STATE OF WASHINGTON

BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

Special Board Meeting Agenda

DATE & TIME:	February 23, 2023	9:30 am	
LOCATION:	The Heathman Lodge Chief Comcomly 7801 NE Greenwood Drive Vancouver, WA, 98662	and	**WebEx Link** or **Tap to join from a mobile device** **+1-650-479-3208 US Toll**

ATTENTION: All meetings are open to the public except when business calls for a Closed Session. During Closed Session all guests will be excused. Start times are subject to change by the Board or Committee Chair.

OPEN SESSION

1. **Call to Order**
   - 1.1. Roll Call
   - 1.2. Order of Agenda
   - 1.3. Approval of 12/08/2022 & 12/16/2022 Meeting Minutes
   - 1.4. Public Comment Opportunity

EXECUTIVE SESSION: The chair will announce the purpose and estimated duration for Executive Session. No formal actions will be taken during Executive Session. Once Executive Session concludes, the Board will take a break to announce and invite visitors to Open Session.

OPEN SESSION RECONVENES

2. **Disciplinary Action**
   - 2.1. Case Deliberation
   - 2.2. Disciplinary Report

3. **Committee Reports**
   - 3.1. Executive Committee
   - 3.2. Practice Committee
   - 3.3. Exam Qualifications Committee
   - 3.4. Survey Committee

4. New Business

4.1. Approval of Concise Explanatory Statement and Filing of CR103 for WAC 196-32.

4.2. Approval of Concise Explanatory Statement and Filing of CR103 for WAC 196-26A & WAC 196-30.

4.3. Letter Regarding the Tunnel Concept Assessment/Interstate Bridge Replacement Project.

4.4. NCEES Funded and Board Funded Delegates for 2023 NCEES Annual Meeting.

4.5. Recommendation to Form Communication Task Force.

5. Director's Report

5.1. Financial Report

5.2. Agency Operations

5.3. Program Reports

5.3.1. Communication & Outreach

5.3.2. Regulatory

5.3.3. Investigation & Compliance

5.3.4. Licensing

5.3.5. Admin

5.4. Other Items

5.4.1. FARB Forum Report

6. Other Business

6.1. Additional Public Comment

6.2. Upcoming Outreach and Events

6.3. Action Items from This Meeting

6.4. Agenda Items for Next Meeting

7. Adjourn Meeting

STATE OF WASHINGTON

BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS
BOARD MEETING MINUTES

DATE: December 08, 2022
TIME: 9:00 a.m.
LOCATION: BRPELS Office, Olympia, WA & WebEx
ATTENDANCE:

Board Members

Doug Hendrickson, PE, Chair
Dave Peden, PE, SE, Vice Chair
Aaron Blaisdell, PLS
Nirmala Gnanapragasam, Ph.D, PE
Marjorie Lund, PE, SE
James Wengler, PLS, CFedS

Staff Members

Elizabeth Lagerberg, Advising AAG
Paul Bitar, Senior Financial Consultant (WebEx)
Ken Fuller, PE, Director
Richard Larson, PLS, Deputy Director
Mackenzie Wherrett, Executive Assistant
Vonna Cramer, Licensing Lead
Shanan Gillespie, Regulatory Program Manager
Greg Schieferstein, Outreach & Communication Manager

Guest(s)

Luke Lymangrover (WebEx)
LC Engineers (WebEx)

1. Call to Order at 9:01 am

1.1. Roll Call
Mr. Hendrickson took roll call.

1.2. Order of Agenda
A motion was made by Mr. Peden, and seconded by Ms. Gnanapragasam, to accept the agenda. Motion carried.

1.3. Approval of Meeting October 20, 2022 Meeting Minutes
A motion was made by Ms. Lund, and seconded by Ms. Gnanapragasam, to accept the October 20, 2022 meeting minutes as written. Motion carried.

1.4. Public Comment Opportunity
None provided.

Executive Session
Mr. Hendrickson, Board Chair, announced that the Board would go into closed session to consult with the board attorney and discuss matters related to enforcement and cases in current litigation. It was estimated Executive Session would last from 9:08 a.m. until 9:43 a.m.
Open Session Reconvened - 9:43 a.m.

2. Disciplinary Action

2.1. Case Closures
No case closures.

2.2. Disciplinary Report
Mr. Larson provided a summary of the Disciplinary Report that was included in the board packet.

2.3. Consideration of Board Order 2021-08-2070-00LSV, 2022-10-1445-00LSV
Mr. Larson presented a permanent Cease-and-Desist order. A motion was made by Ms. Lund, and seconded by Mr. Peden, to approve the Cease-and-Desist order as presented by Mr. Larson. Motion carried. Mr. Wengler abstained.

3. Committee Reports

3.1. Executive Committee
Mr. Hendrickson delivered the committee's report.
- 12/07/22 Executive Committee Meeting Minutes

A motion was made by Ms. Lund, and seconded by Mr. Blaisdell, to accept the Executive Committee report. Motion carried.

3.2. Practice Committee (PC)
Mr. Peden delivered the committee's report.
- 12/07/22 Practice Committee Meeting Minutes

A motion was made by Ms. Lund, and seconded by Ms. Gnanapragasam, to accept the Practice Committee report. Motion carried.

3.3. Exam Qualifications Committee (EQC)
Ms. Gnanapragasam delivered the committee's report.
- 12/02/22 Exam Qualifications Committee Meeting Minutes

A motion was made by Ms. Lund, and seconded by Mr. Wengler, to accept the Exam Qualifications Committee report. Motion carried.

3.4. Survey Committee
Mr. Wengler delivered the committee's report.
- 12/07/22 Survey Committee Meeting Minutes

4. New Business

4.1. Approval of Monument Removal/Replacement Response to DNR (from PC)
A motion was made by Mr. Peden and seconded by Mr. Wengler to approve the Monument Removal/Replacement Response to DNR with signature of the Board Chair. Motion approved.

4.2. Potential Nomination of Dave Peden for NCEES WZ Secretary/Treasurer (from Executive Committee)
A motion was made by Mr. Hendrickson, and seconded by Ms. Lund, that the board nominate Mr. Peden for the NCEES WZ Secretary Treasurer. Motion approved.

4.3. NCEES Funded and Washington Funded Delegates for 2023 NCEES Zone Interim Meetings
Mr. Fuller asked the board who would like to attend the April 27-29, 2023 NCEES Zone Interim Meetings as funded delegates. The board directed Mr. Fuller to appoint Mr. Peden, Ms. Gnanapragasam, and Mr. Blaisdell as funded delegates.

4.4. NCEES PLS Exam EPS Request/Direction (from Survey Committee)
Survey Committee recommended the board require the following divisions of the NCEES PLS exam: Core, Boundary, Public Land Survey Systems and Mapping Sciences. The board directed Mr. Blaisdell and Mr. Fuller to work on completing the January survey.

4.5. Approval of Concise Explanatory Statement and Filing of CR-103 for WAC 196-25 (From PC)
Mr. Peden moved to approve the Concise Explanatory Statement and filing of CR-103 for WAC 196-25. The motion was seconded by Mr. Blaisdell. Motion carried.

4.6. Rulemaking for WAC 196-12 (from EQC)
A motion was made by Ms. Gnanapragasam and seconded by Mr. Wengler to approve the filing of CR101 for WAC 196-12. Motion carried.

4.7. Rulemaking for WAC 196-29 (from Survey Committee)
A motion was made by Mr. Wengler and seconded by Mr. Blaisdell to approve the filing of CR101 for WAC 196-29. Motion carried.

5. Directors Report

5.1. Financial Report
Mr. Bitar provided an overview of the financial report produced by Mr. Bitar that was included in the board packet. He reported the agency is in excellent financial condition and stated the agency is projected to end the biennium with about $1.79 million in its operating account and is on track to underspend appropriation this biennium by $558,000. He reported last fiscal year, the agency generated $2.866 million in licensing revenue vs. $2.402 million during the same period last biennium. This represents an increase of about 19.3% between biennia.

5.2. Agency Operations
Mr. Fuller reported on agency operations and staffing. Board Staff will begin permanently filling the role of Licensing Specialist in mid-February. Mr. Fuller discussed the potential hiring of a temporary admin level position not to exceed a year around March or April 2023.

5.3. Program Reports
Board Staff provided summaries of the program reports included within the board packet.
5.3.1. Communications & Outreach – Mr. Schieferstein
5.3.2. Regulatory – Ms. Gillespie
5.3.3. Investigation & Compliance – Mr. Larson
5.3.4. Licensing – Ms. Cramer
5.3.5. Admin – Ms. Wherrett
5.3.6. Deputy Director's Report – Mr. Larson

5.4. Other Items
No other items.

6. Assistant Attorney General's Report

6.1. Introducing The New Prosecuting AAG
The new Prosecuting AAG, Ms. Danitza Casselman could not attend.

7. Other Business

7.1. Additional Public Comment
None provided.

7.2. Upcoming Outreach and Events
- 01/26-28/23 | WOSSA SepticCon | Tacoma | Mr. Fuller
- 02/15-17/23 | LSAW Conference | Spokane | Mr. Blaisdell, Mr. Larson & Mr. Wengler
- 03/24/23 | WA State Specific Exams | TBD

7.2.1. April Committee/Board Meeting Dates
A motion was made by Ms. Lund and seconded by Mr. Blaisdell to change the April special board meeting date to April 27, 2023. The meeting location will be at the board's Olympia office and additionally in Houston, TX. Motion approved.

A motion was made by Mr. Blaisdell, and seconded by Mr. Peden, to change the August committee and special board meeting dates to August 2 - 3, 2023. Motion carried.

7.3. Action Items from This Meeting
- Board Staff to make the Disciplinary Report, as provided in the board packet, available on the board SharePoint site homepage.
- Board Staff to prepare nomination letter for Mr. Peden as NCEES WZ Secretary Treasurer.
- Board Staff to File CR103 for WAC 196-25.
- Mr. Schieferstein to add journal article about the importance of written contracts and reputation management.
- Board Staff to File CR101 for WAC 196-12.
- Board Staff to update the board website and revise the PE application to clarify changes to WAC 196-12.
- Mr. Schieferstein to add article to the spring journal to clarify changes to WAC 196-12.
- Board Staff to File CR101 for WAC 196-29.
- Mr. Fuller and Mr. Larson to work with DNR to discuss language changes for the filing of CR101 WAC 196-29.
- Mr. Blaisdell and Mr. Fuller to complete survey for NCEES EPS committee.
- Mr. Fuller to appoint Mr. Peden, Ms. Gnanapragasam, and Mr. Blaisdell as funded delegates to the NCEES Zone Interim Meetings.
- Board Members to send Mr. Schieferstein itemized review of the current board website.
- Board staff to update website language under 'For Consumers' to provide more direction regarding using the license look-up.

- Mr. Fuller and Board Staff to begin the process of onboarding a new pro-tem board member.
- Board staff to update committee and board meeting dates for April and August.
- Board Staff to send the Monument Removal/Replacement Response to DNR with signature of the Board Chair.
- Board Staff to send signed permanent Cease-and-Desist order by email and certified mail.
- Mr. Fuller, Ms. Lagerberg, and Ms. Short to research how the board may possibly pursue law enforcement action against unlicensed practice.

7.4. Agenda Items for Next Meeting.

- Discuss how the board may possibly pursue law enforcement action against unlicensed practice.

8. Adjourn Meeting

A motion was made by Ms. Lund, and seconded by Mr. Wengler, to adjourn the meeting at 1:40 p.m. Motion carried.

Next Meeting: February 23, 2022 - Special Board Meeting - Vancouver & WebEx

Respectfully submitted,

Ken Fuller, PE, Director

STATE OF WASHINGTON

BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS
SPECIAL BOARD MEETING MINUTES

DATE: December 16, 2022

TIME: 9:00 am

LOCATION: BRPELS Office, Olympia, WA & WebEx

ATTENDANCE:

Board Members

Doug Hendrickson, PE, Chair (WebEx)

Dave Peden, PE, SE, Vice Chair (WebEx)

Aaron Blaisdell, PLS (WebEx)

Nirmala Gnanapragasam, Ph.D, PE (WebEx)

Marjorie Lund, PE, SE (WebEx)

Ivan VanDeWege, PE (WebEx)

James Wengler, PLS, CFedS (WebEx)

Staff Members

Elizabeth Lagerberg, Advising AAG (WebEx)

Ken Fuller, PE, Director (WebEx)

Richard Larson, PLS, Deputy Director

Mackenzie Wherrett, Executive Assistant (WebEx)

Shanan Gillespie, Regulatory Program Manager (WebEx)

Vonna Cramer, Licensing Lead (WebEx)

Jill Short, Investigations & Compliance Manager

Greg Schieferstein, Outreach & Communication Manager (WebEx)

Guest(s)

Sharon Zimmerman (WebEx)

Call-In User 5 (WebEx)

1. Call to Order at

1.1. Roll Call

Mr. Hendrickson took roll call.

1.2. Order of Agenda

A motion was made by Mr. Peden, and seconded by Mr. Blaisdell, to accept the agenda with the addition of adding public comment opportunity before executive session. Motion approved.

1.3. Public Comment Opportunity

None provided.

Executive Session
Mr. Hendrickson, Board Chair, announced that the Board would go into closed session to consult with the board attorney and discuss matters related to enforcement and cases in current litigation. It was estimated Executive Session would last from 9:07 a.m. until 9:22 a.m.
Open Session Reconvened - 9:23 a.m.

2. **Consideration of Respondent's Request To Vacate Default Order 2021-08-2070-00LSV, 2022-10-1445-00LSV**
   Mr. Peden made a motion, and seconded by Ms. Lund, that the board issue a response to deny the request to vacate the order based on RCW 34.05.440(1). Motion carried.

3. **Adjourn Meeting**
   A motion was made by Ms. Lund, and seconded by Mr. VanDeWege, to adjourn the meeting at 9:26 a.m. Motion carried.

Next Meeting: February 23, 2022 - Special Board Meeting - Vancouver & WebEx

Respectfully submitted,

Ken Fuller, PE, Director

Board Meeting

Tab 2

Disciplinary Activity

2.1 Case Deliberations

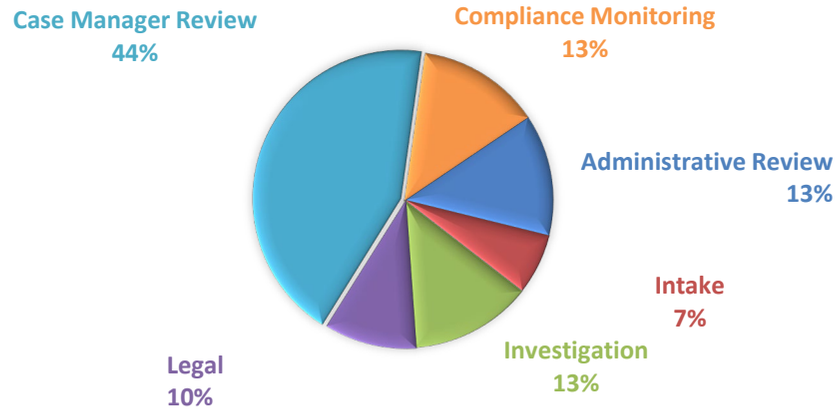
2.2 Disciplinary Report

Board of Registration for Professional Engineers Land Surveyors
Disciplinary Report - February 2023

Open Case Status

Status	Program Type			Total
	Engineers	Land Surveyors	OSW	
Administrative Review	1	3	0	**4**
Intake	1	1	0	**2**
Investigation	1	1	2	**4**
Legal	1	2	0	**3**
Case Manager Review	1	12	0	**13**
Compliance Monitoring	2	2	0	**4**
Total	**7**	**21**	**2**	**30**

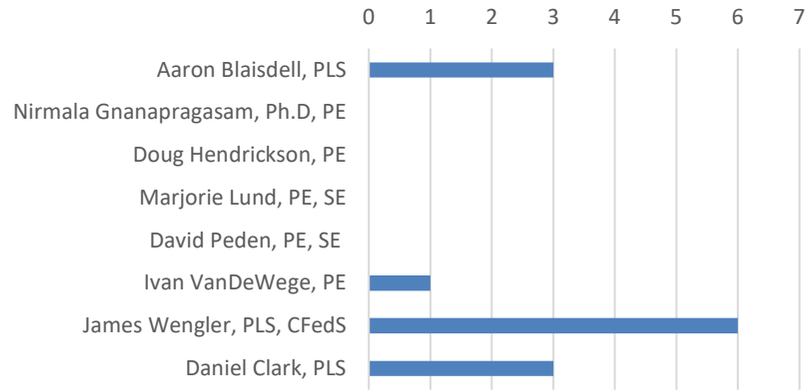
Open Complaint Status



Case Manager Review

Case Manager	Program Type		Total
	Engineers	Land Surveyors	
Aaron Blaisdell, PLS	0	3	**3**
Nirmala Gnanapragasam, Ph.D, PE	0	0	**0**
Doug Hendrickson, PE	0	0	**0**
Marjorie Lund, PE, SE	0	0	**0**
David Peden, PE, SE	0	0	**0**
Ivan VanDeWege, PE	1	0	**1**
James Wengler, PLS, CFedS	0	6	**6**
Daniel Clark, PLS	0	3	**3**
Total	**1**	**12**	**13**

Case Manager Open Complaints



Administrative Review

Board Staff	Engineers	Land Surveyors	OSW	Total
Ken Fuller, PE	1	0	0	**1**
Rich Larson, PLS	0	3	0	**3**
Total	**3**	**0**	**0**	**4**

Board Meeting

Tab 3

Committee Reports

3.1 Executive Committee

3.2 Practice Committee

3.3 Exam Qualifications Committee

3.4 Survey Committee

Board Meeting

Tab 4

New Business

4.1. Approval of Concise Explanatory Statement and Filing of CR103 for WAC 196-32. (From EQC)

4.2. Approval of Concise Explanatory Statement and Filing of CR103 for WAC 196-26A & WAC 196-30. (From Executive Committee)

4.3. Letter Regarding the Tunnel Concept Assessment/ Interstate Bridge Replacement Project (From PC)

4.4. NCEES Funded and Board Funded Delegates for 2023 NCEES Annual Meeting.

4.5. Recommendation to Form Communication Task Force. (From Executive Committee)

STATE OF WASHI NGTON
BOARD OF REGISTRATION FOR
PROFESSIONAL ENGINEERS AND LAND SURVEYORS
P.O. Box 9025, Olympia, WA 98507-9025

Washington Administrative Code
Notice of Permanent Rules for WAC 196-32
On-site Wastewater Treatment System Designer Licenses/Inspector Certificates of Competency

The Administrative Procedure Act (RCW 34.05.325(6)) requires agencies to complete a concise explanatory statement before filing adopted rules with the Office of the Code Reviser. This statement must be provided to anyone who gave comment about the proposed rulemaking.

Adoption of:

WAC 196-32-005 Declaration and purpose. (New Section)
WAC 196-32-007 Definitions. (New Section)
WAC 196-32-011 Requirements for designer license. (New Section)
WAC 196-32-020 Acceptable experience and supporting documents. (New Section)
WAC 196-32-030 Requirements for inspector certificate of competency.
WAC 196-32-035 Application process. (New Section)
WAC 196-32-040 Examinations.
WAC 196-32-050 Registration of applicants licensed in other jurisdictions without examination.

Repeal of WAC 196-32-010 Applications.

Effective date: These rule changes will become effective 31 days after filing (approximately March 31, 2023).

Summary of all public comments received on this rule proposal and the agency's response to those comments:

Comment:
I agree. Thank you.

Response:
The Board thanks you for your support of the proposed change.

Changes made to the proposed WAC as a result of public comment:

There were no changes made to the proposed WAC.

The Board appreciates your involvement in this rule making process. If you have any questions, please contact Shanan Gillespie, Board Rules Coordinator, at (360) 664-1570 or e-mail at Shanan.Gillespie@brpels.wa.gov.

NEW SECTION

WAC 196-32-005 Declaration and purpose. This chapter contains rules and procedures for applications, experience, education, and eligibility to become licensed as an on-site wastewater treatment system designer or to obtain a certificate of competency.

NEW SECTION

WAC 196-32-007 Definitions. On-site wastewater treatment system designer. "Designer" or "licensee" means an individual authorized under chapter 18.210 RCW to perform design services for on-site wastewater systems.

On-site wastewater treatment system inspector/certificate of competency holder. "Certificate of competency holder" or "inspector" means a person who has been issued a certificate and has been authorized by the board to practice as an on-site wastewater treatment inspector.

NEW SECTION

WAC 196-32-011 Requirements for designer license. To become licensed as an on-site wastewater treatment system designer in Washington, you must meet the requirements described below:

(1) Have a high school diploma or GED equivalent.

(2) Have four years of progressive experience in the design of on-site wastewater treatment systems judged suitable by the board. The four years of experience could be a combination of education and work experience related to on-site wastewater system design.

(3) Fully complete the application form to the satisfaction of the board.

(4) Pay all applicable fees.

(5) Receive a passing score on the Washington law review.

(6) Receive a passing score on the Washington state on-site designer examination.

Upon passing the on-site designer examination, the applicant will be licensed as an on-site wastewater treatment system designer.

AMENDATORY SECTION (Amending WSR 00-20-017, filed 9/25/00, effective 10/26/00)

WAC 196-32-020 ((~~Qualifications for designer applicants—~~)) Acceptable experience and ((~~education records~~)) supporting documents. ((~~To qualify for examination the law requires a high school diploma or equivalent and~~)) The four years of experience in the design of on-site wastewater treatment systems of a character satisfactory to the

board((~~. The four years of experience must be completed two months prior to the date of the examination. The board shall evaluate all experience, including education, on a case-by-case basis and consider such experience and education as appropriate. The board will use~~)) should include site and soil assessment, hydraulics, topographic delineations, use of specialized treatment processes and devices, microbiology, and construction practices. The following criteria will be used in evaluating an applicant's experience record:

((~~Acceptable education experience will be based on transcripts.~~

~~(1) Education experience, up to a maximum of two years, may be approved based on the following:~~

~~(a) Graduation from a baccalaureate or associate degree program which contains course work in the sciences and technologies of on-site wastewater treatment systems, as provided in RCW 18.210.100.~~

~~(b) Completed college level course work without a degree will be evaluated on a case by case basis.~~

~~(c) Documented seminars, industry training programs, and other educational or training programs specifically related to the science and technologies of on-site wastewater treatment systems will be evaluated on a case by case basis.~~

~~(2)~~)) (1) Acceptable work experience shall be ((~~four years of~~)) broad based((~~,~~)) and progressive ((~~field and office experience~~)) in the design of on-site wastewater treatment systems. ((~~The applicability of the~~)) Work experience ((~~shall~~)) will be considered by the board based upon the verifications provided by the applicant, the level of independent judgments and decisions, and the demonstration of the ability to work within the regulatory structure. This experience must include, but shall not be limited to the following:

(a) Applying state and local health regulations;

(b) Exercising sound judgment when making independent decisions regarding the sciences and technologies of on-site wastewater treatment systems;

(c) Field identification and evaluation of soil types and site conditions;

(d) Conducting research; and((~~,~~))

(e) Interacting with clients and the public in conformance with chapter 18.210 RCW.

((~~The board may grant partial credit for experience that does not fully meet the requirements in (a) through (e) of this subsection.~~))

(2) Of the four years of work experience required, education relevant to on-site wastewater treatment may be considered satisfactory experience up to a maximum of two years; the board will determine if the education credentials are satisfactory to award years of experience based on the following:

(a) Graduation from a baccalaureate or associate degree program which contains course work in the sciences and technologies of engineering and/or on-site wastewater treatment systems, as provided in RCW 18.210.100 may be awarded up to a maximum of two years of experience. Course work relevant to on-site wastewater systems includes soil science, geology, biology, mapping, site development and construction management.

(b) Completed college level course work without a degree will be evaluated by the board in deciding the equivalent years of experience.

(c) Documented seminars, industry training programs, and other educational or training programs specifically related to the science and technologies of on-site wastewater treatment systems will be evaluated by the board in deciding the equivalent years of experience.

Official transcripts and/or other official educational documents must be sent to the board's office for review and approval to count towards experience.

(3) On-site wastewater related teaching ((~~of a character satisfactory to the board~~)) may be ((~~recognized as~~)) considered satisfactory experience up to a maximum of one year at the discretion of the board.

(4) ((~~Any~~)) Working for a local health jurisdiction as a certificate of competency holder may count towards a portion of the required experience, at the discretion of the board.

(5) All work experience gained ((~~in a situation which violates the provisions of~~)) must be performed under the direct supervision of a licensed designer or professional engineer as per chapter 18.210 RCW ((~~will not be credited towards the experience requirement~~)) or as approved by the board.

AMENDATORY SECTION (Amending WSR 00-20-017, filed 9/25/00, effective 10/26/00)

WAC 196-32-030 ((~~Qualifications~~)) Requirements for inspector certificate of competency. ((~~(1) To qualify for examination the law requires~~)) To receive an inspector certificate of competency you must meet the requirements below:

(1) Be an employee of a local health jurisdiction that reviews, inspects, or approves the design and construction of on-site wastewater treatment systems.

(2) Have one year of practical work experience under the supervision of a certificate of competency holder or one year of previous work under a licensed on-site designer or professional engineer, unless otherwise approved by the board.

The board will consider the following in evaluating the practical work experience: Verification(s) provided by the applicant, the demonstration of the ability to work within the regulatory structure and familiarity with the aspects of on-site wastewater system design, construction, and maintenance.

The work experience must demonstrate understanding of chapter 246-272A WAC and associated department of health recommended standards and guidance (RS&G) documents. In addition, the work experience should include:

(a) Review of site characteristics such as soil types and location of water tables.

(b) Review of well siting, testing, and construction.

(c) Review of plats and land subdivisions.

(d) Review of septic system designs.

(e) Review of system installation and construction.

(f) Review of system troubleshooting and operations and maintenance.

The applicant must demonstrate their knowledge and experience in more than one area listed under (a) through (f) of this subsection.

(3) Fully complete the application form to the satisfaction of the board.

(4) Provide a written request from the local health ((~~director or designee~~)) jurisdiction. Requests shall be submitted on a form prescribed by the board.

(5) Pay all applicable fees.

(6) Obtain a passing score on the Washington law review.

(7) Obtain a passing score on the on-site designer examination.

Upon passing the on-site designer examination, the applicant will be issued a certificate of competency. Issuance of the certificate of competency does not authorize the certificate of competency holder to offer or provide on-site wastewater treatment system design services to the public. However, nothing in this chapter limits or affects the ability of local health jurisdictions to perform on-site design services under their authority in chapter 70.05 RCW, RCW 18.210.190 (3)(d) and WAC 246-272A-0230.

NEW SECTION

WAC 196-32-035 Application process. The board has one application form for licensure as an on-site wastewater treatment system designer and another application for inspector certificate of competency. All applications must be completed on forms provided on the board's website, and include required documentation to be approved by the board for examination. Completed applications must be received at the board's address with the applicable fee by the date posted on the board's website to be considered for approval to take the exam. Incomplete applications, and/or applications received after the deadline may be considered for a later examination. Applications submitted without the proper fee shall be considered incomplete.

(1) **On-site wastewater treatment system designer application:** Applicants must complete all sections of the form and must meet all listed requirements for licensure.

(a) Applicants must provide information on the application form that demonstrates they meet all requirements for licensure. This includes work experience and education requirements, as detailed in WAC 196-32-011 and 196-32-020; and RCW 18.210.100, 18.210.110, and 18.210.120.

(b) All applicants must provide the following documents to verify these requirements:

(i) For education to be considered, you must submit official transcripts or other official educational documents.

(ii) Applicants must provide two or more verifications of work experience. Experience must be verified on the form titled "On-Site Wastewater Treatment Systems Designer Experience Verification" which includes not only work experience information and details but also verifications of work experience by supervisors or other verifiers. At least one of the verifiers should be a licensed on-site designer or professional engineer who provided direct supervision of the applicant performing design services.

(c) A certificate of competency holder who wants to become licensed as an on-site wastewater treatment system designer must complete the on-site wastewater treatment system designer application, including verification(s) of design experience.

(2) **Inspector certificate of competency application:** Applicants must complete all sections of the form and must meet all requirements to obtain an inspector certificate of competency.

(a) Applicants must provide verification of one year of practical work experience under the supervision of a certificate of competency

holder, licensed on-site designer or professional engineer; or otherwise demonstrate knowledge of (a) through (f) of this subsection to be considered by the board for approval of application.

(b) Applicants must have the local health department director or director designee complete and sign the "DOH request for examination" form per WAC 196-32-030 and submit it with the application.

AMENDATORY SECTION (Amending WSR 00-20-017, filed 9/25/00, effective 10/26/00)

WAC 196-32-040 Examinations. (1) To become licensed as an on-site wastewater treatment system designer or to become an inspector certificate of competency holder the ((~~candidate~~)) applicant must pass the on-site designer licensing examination as established by the board. ((~~The examinations are given at times and places designated by the board.~~)) The schedule of ((~~future~~)) examinations and an examination ((~~syllabus~~)) blueprint may be ((~~obtained from~~)) found on the board's ((~~office~~)) website.

(2) An applicant who has taken ((~~an~~)) the examination and failed or who qualified for ((~~an~~)) the examination but did not take it shall ((~~request to take or retake the examination at least three months prior to the examination date. A written request accompanied by the applicable fee and/or charge as listed in chapter 196-30 WAC is required to~~)) submit the exam reschedule ((~~for an examination~~)) application and applicable fee by the date posted on the board's website.

AMENDATORY SECTION (Amending WSR 00-20-017, filed 9/25/00, effective 10/26/00)

WAC 196-32-050 ((~~Comity—Licensing~~)) Registration of applicants licensed in other jurisdictions without examination. The board has the discretion to issue a license to an out-of-state licensee without examination who meets the following requirements:

(1) ((~~Applicants for licensure as an~~)) Completes the on-site wastewater treatment system designer ((~~by comity must meet the following criteria:~~

~~(a) The applicant's qualifications meet the~~)) registration application including supporting documentation as listed in WAC 196-32-035 and pays the appropriate fee.

(2) Receives a passing score on the Washington law review.

(3) Meets minimum requirements of ((~~chapter~~)) RCW 18.210.100, 18.210.110, and 18.210.180 ((~~RCW~~)) and this chapter((~~;~~

~~(b) The applicant is in good standing with the~~)).

(4) Holds a currently valid license in a board recognized licensing agency in a state, territory, possession, or foreign country. ((~~Good standing shall be defined as a currently valid license in the jurisdiction of original registration or the jurisdiction of most recent practice, if different from the jurisdiction of original registration.~~

~~(2) This provision does not apply to those individuals who have obtained a license, certificate or other authorization from a local health jurisdiction.~~))

REPEALER

The following section of the Washington Administrative Code is repealed:

WAC 196-32-010 Applications.

6506 NW Bernie Drive
Vancouver, WA 98663

December 29, 2022

Ken Fuller, PE, Director
State of Washington State Board of Registration for Professional Engineers and Land Surveyors
Olympia, WA
ken.fuller@brpels.wa.gov

Re: WSDOT's Failure to Stamp the "Tunnel Concept Assessment" Document

Dear Mr. Fuller:

I am writing to follow up on your phone conversation about WSDOT's failure to provide an engineering stamp on the document "Tunnel Concept Assessment", hereinafter referred to as the "TCA". I find it hard to believe that the Board is taking the position that an engineering stamp is not required. In this letter, I attempt to explain why.

I know that you know the law, but will quote it nonetheless. Washington Administrative Code (WAC) 196-23-020 states:

Seal/stamp usage.

"The use of the seal/stamp must be in accordance with chapter 18.43 RCW or as otherwise described herein:

(1) Final documents are those documents that are prepared and distributed for filing with public officials, use for construction, final agency approvals or use by clients. Any final document must contain the seal/stamp, signature and date of signature of the licensee who prepared or directly supervised the work. For the purpose of this section "document" is defined as plans, specifications, plats, surveys, land descriptions as defined in WAC 332-130-020, reports, and as-built documents prepared by the licensee.

(2) Preliminary documents are those documents not considered final as defined herein, but are released or distributed by the licensee. Preliminary documents must be clearly identified as "preliminary" or contain such wording so it may be differentiated from a final document. Preliminary documents must be stamped, but need not be signed or dated by the licensee."

I think it important that you understand the context of the TCA. It was only prepared in response to a Seattle engineer who questioned the technical merits of WSDOT's decision to reject the tunnel option from further consideration during an initial screening of bridge replacement alternatives. That engineer brought up some very valid engineering issues that were gaining traction with the public in the very public process that was a key part of WSDOT's effort to move the project forward. The fact is that the TCA was "distributed for filing with public officials" for "final agency approvals". At numerous meetings, it was referenced by WSDOT staff as expressing the engineering opinions of experts. Local governments approved WSDOT's proposed design concept without considering the tunnel option on the basis of the report, which again was clearly represented on numerous occasions as a reflection of engineering expertise.

The TCA was initially distributed as a draft with no stamp, then as a final with no stamp. It was distributed on WSDOT's IBR project website under the category "technical documents". In fact, it was the only technical document made available on the subject. It was in fact the basis of decision making by local governments who were given the task of approving the preferred bridge replacement alternative prior to moving forward with preliminary engineering and environmental compliance.

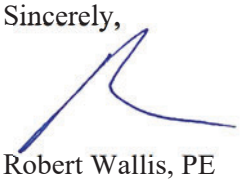
From my four decades practicing consulting civil engineering, I have always understood that there are state laws regarding the use of an engineering stamp for good reason. Elected officials and their citizenry often frequently rely upon engineers to provide expert advice in making policy and project decisions. By placing a professional stamp upon any document that supports that expert advice, an engineer is taking responsibility for the accuracy of that advice. This is particularly important with public works projects simply because of the long history of corruption involved in such projects. It is my understanding that state laws regarding professional licenses exist to maintain the integrity of the engineering profession, which in turn protects the welfare of the public. Please let me know if I am mistaken.

As I mentioned in our phone conversation, making a mistake in failing to stamp a document is not uncommon. What makes this particularly disturbing is that WSDOT, after being informed of the mistake, continues to reference the TCA as an engineering report, which justified their decision to reject a tunnel as an option. In fact, at a recent meeting, which was recorded, the TCA was referenced by WSDOT representatives several times as having been "signed off" by engineering experts. A newspaper article regarding that meeting can be found at – https://www.columbian.com/news/2022/dec/06/i-5-bridge-replacement-program-leaders-critics-make-their-case/.

I consider this a very serious matter not simply because the law was clearly violated, but because it reflects a trend that has been growing for decades – putting sales ahead of engineering. It was only a short time ago that consulting firms were led by professional engineers. Engineering consulting has become big business. Corporations answering to shareholders now dominate the public works consulting engineering world. Even though those corporations have engineers doing the work, they are led by business professionals who ignore the historic values that made an engineering license something to be proud of. In essence, the profession of engineering is being undermined by the profession of sales. That trend needs to stop. If the Board ignores this action, it will continue, which is most unfortunate for the profession of civil engineering and the public we serve.

I would appreciate you looking into this matter further. I have reached out to a few others who value engineering as profession and are equally disturbed by WSDOT's actions. I am not alone in having a concern about this matter.

Sincerely,



Robert Wallis, PE

Interstate BRIDGE Replacement Program

Tunnel Concept Assessment

July 14, 2021

Tunnel Concept Assessment

Draft — For Internal Review Only

Prepared for:

Oregon Department of Transportation

Washington State Department of Transportation

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FIGURES

TABLES

ACRONYMS AND ABBREVIATIONS

AHJ	authority having jurisdiction
BNSF	Burlington Northern Santa Fe Railroad
BRT	bus rapid transit
CRBG	Columbia River Basalt Group
CSZ	Cascadia Subduction Zone
FDCs	fire department connections
FFFS	fixed fire fighting system
HCT	high-capacity transit
I-5	Interstate 5
IBR	Interstate Bridge Replacement
ITT	immersed tube tunnel
LRT	light-rail transit
MUP	multiuse path
NB	northbound
SB	southbound
SCADA	Supervisory control and data acquisition
SR	State Route
USACE	US Army Corps of Engineers

1. INTRODUCTION

The Interstate Bridge Replacement (IBR) program will replace the existing Interstate 5 (I-5) bridges crossing the Columbia River between Vancouver, Washington, and Portland, Oregon. Multiple design options will be considered for the bridge replacement.

As part of the preliminary work, the IBR program assembled a group of engineers with international experience in tunnel design and construction to provide a comprehensive conceptual review of the suitability of an immersed tube tunnel (ITT).

Two alignments, one upstream and one downstream of the existing Interstate Bridges, were investigated from multiple perspectives, including design, construction, operations, environmental, and cost considerations.

This is an assessment of preliminary concepts. These concepts are not in design and remain at the conceptual level. They will not be advanced to design until or if it is deemed appropriate.

The following professionals participated in the development of this document:

- Coles Bales, PE — IBR Deputy Geotechnical Lead
- Matt Bilson, PhD, PE — Tunnel Fire-Life Safety & Ventilation Expert
- Patrick Chan, PE — Tunnel Structures Expert
- Ian Chaney, PE — Tunnel Design & Construction Expert
- William Connell — Tunnel Systems Expert
- Brittany Cowgill, PE — IBR Civil Design Engineer
- Matt Deml, PE, SE — IBR Deputy Structures Lead
- Angela Findley - IBR Environmental Lead
- John Horne, PhD, PE — IBR Geotechnical Lead
- Bobby Melvin, PE — Tunnel Mechanical Systems Expert
- Brad Phillips, PE — IBR Civil Design Lead
- Noreen Roster — IBR Deputy Environmental Permit Lead
- Michele Shi, PE — Tunnel Mechanical Systems Engineer
- Vicky Smith, PE — IBR Transit Lead
- Jose del Solar, PE — Tunnel Mechanical Systems Expert
- Tolga Togan — Tunnel Construction and Cost Estimating Expert
- Rob Turton, PE, SE — IBR Structures Lead

2. DESIGN CONSIDERATIONS

The IBR program will replace the existing I-5 bridges crossing the Columbia River between Vancouver, Washington, and Portland, Oregon. In addition to vehicular traffic, the conceptual tunnel facility explored here would also accommodate high-capacity transit (HCT) and a multi-use path (MUP).

Two types of tunnels are typically considered for crossing below bodies of water. One is a bored tunnel where the tunnel is constructed using a tunnel boring machine. Given the length, size, and soil conditions present at this location, a bored tunnel is not appropriate. The other type is an ITT in which a series of prefabricated tunnel segments are constructed in a casting basin or on dry docks, and then sunk onto a prepared soil substrate. Tunnel segments are then connected underwater and the tunnel is dewatered. An ITT is assumed for this assessment.

The ITT concept reviewed here would accommodate all three transportation modes: roadway, HCT, and a MUP. The tunnel section would consist of six cells separated by concrete walls. One cell would accommodate four lanes of traffic for northbound (NB) I-5 and another cell would accommodate four lanes of traffic for southbound (SB) I-5. Two cells, one direction each, would accommodate NB and SB HCT. One cell would accommodate the MUP. One cell would accommodate the operations and maintenance/egress route. It is assumed that all these modes would be housed within a single immersed tube cross-section (see Figure 1).

The length of the facility would consist of an ITT for in-water sections, transitioning to cut-and-cover tunnel sections beyond the river, and then into a retained cut (U-section) until I-5 attains grade.

2.1 Alignments

Two alignments were evaluated: upstream and downstream of the existing Interstate Bridges. Each alignment was assessed considering highway geometry, navigation requirements, geotechnical conditions, structural design requirements, constructability, and environmental considerations. See Figure 2 for a plan showing the two alignments.

Figure 1. Immersed Tube Tunnel Typical Section

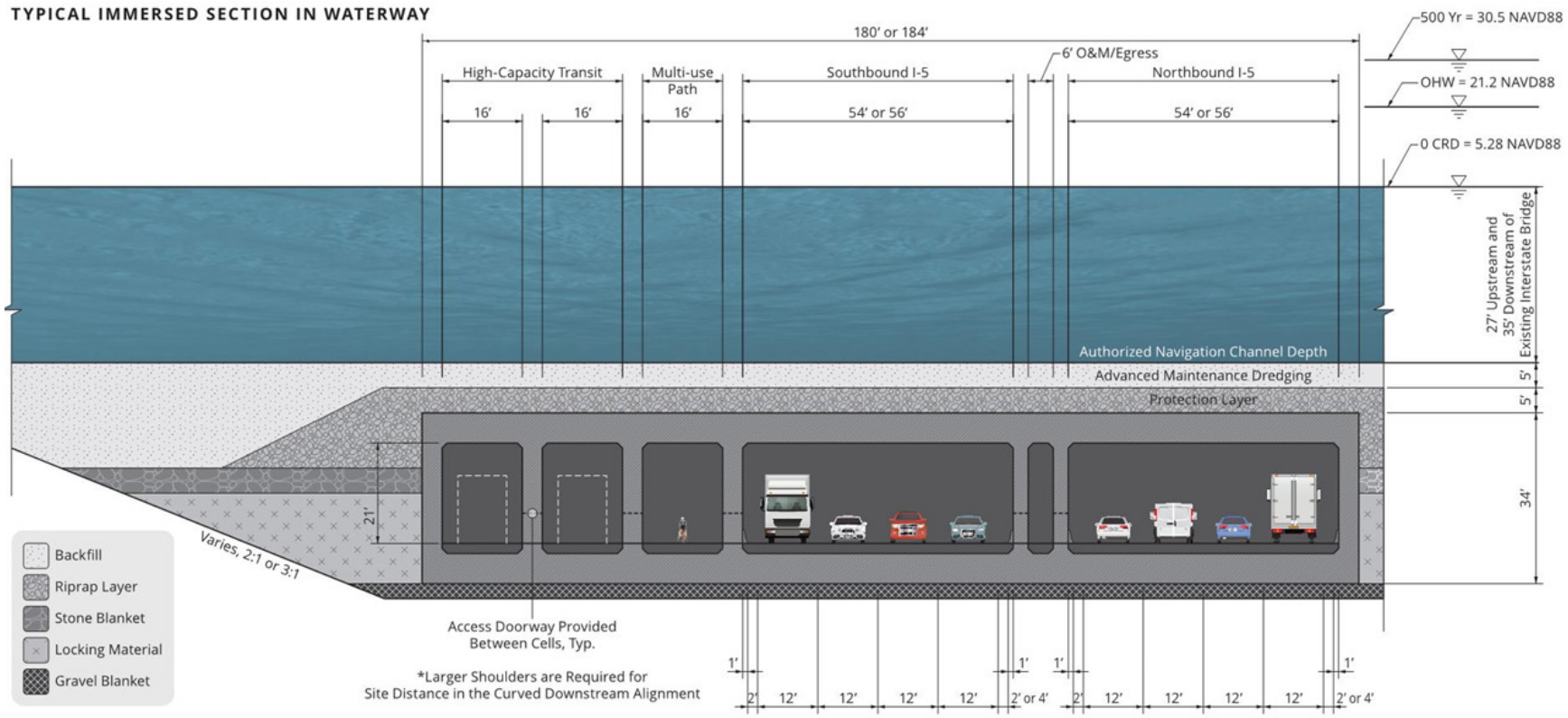


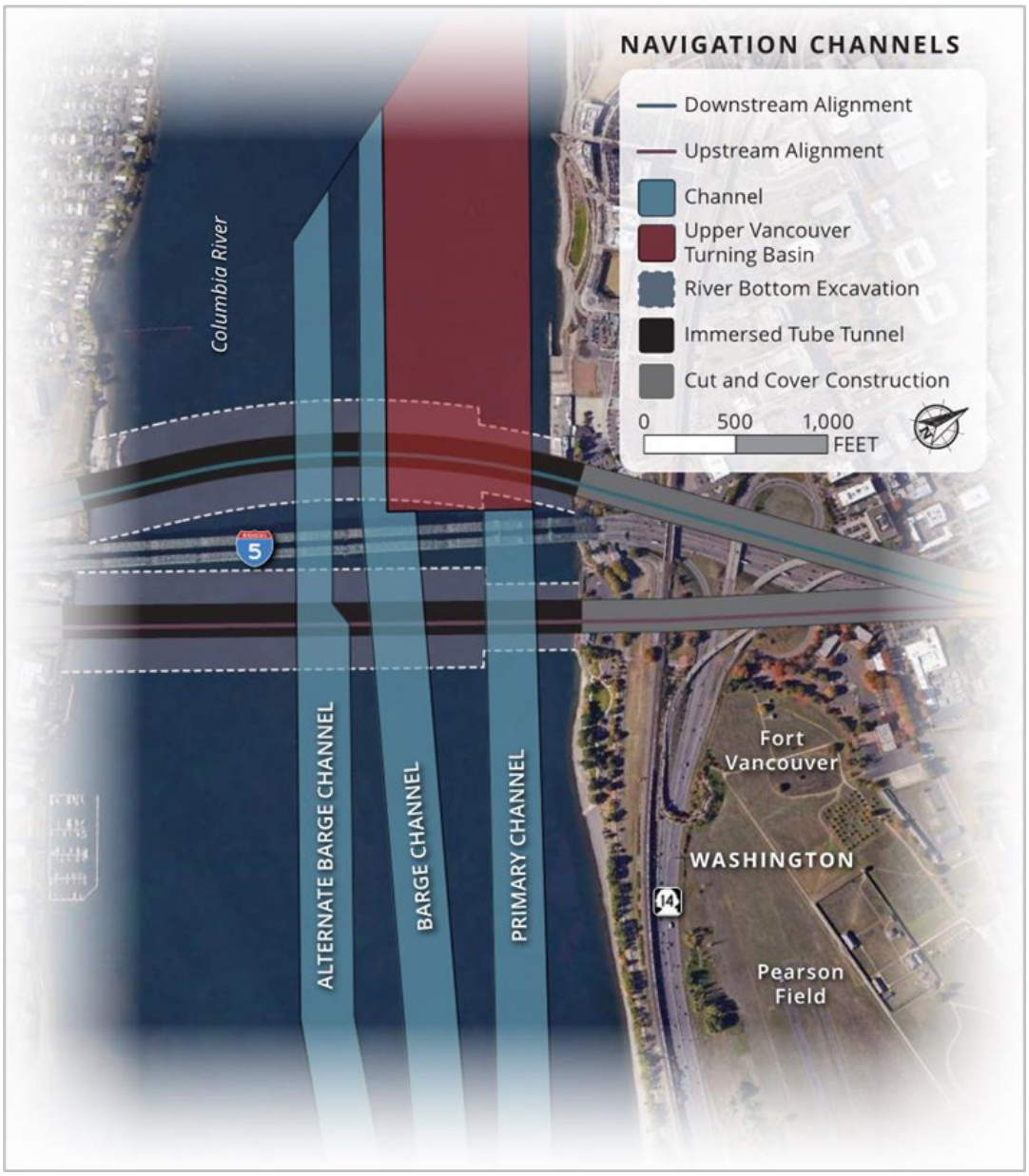
Figure 2. Uptream and Downstream Tunnel Alignments

2.2 Columbia River Navigation

Operational requirements for vessel navigation on the Columbia River define how deep a tunnel must be as it crosses below the Columbia River.

The United States Army Corps of Engineers (USACE) maintains the navigation channels on the Columbia River. River navigation features are authorized to specific locations, widths, and depths, as shown in Figure 3. Navigation features differ upstream and downstream of the existing Interstate Bridges.

Figure 3. Columbia River Navigation Channels



The Upper Vancouver Turning Basin, downstream of the existing Interstate Bridges, has an authorized depth of 35 feet (see Figure 4).

Upstream of the existing Interstate Bridge are three navigation channels: the primary channel, barge channel, and alternate barge channel. All three channels have an authorized depth of 27 feet (see Figure 5). USACE maintains the navigation channels through continuous dredging operations. Currently, USACE maintains the channels to a depth of 17 feet below zero Columbia River Datum

(CRD); however, any project must comply with the authorized depth of the channel. The authorized channel depth of 27 feet extends approximately 90 miles upriver to The Dalles, Oregon.

Figure 4. Navigation Channel for the Downstream Alignment

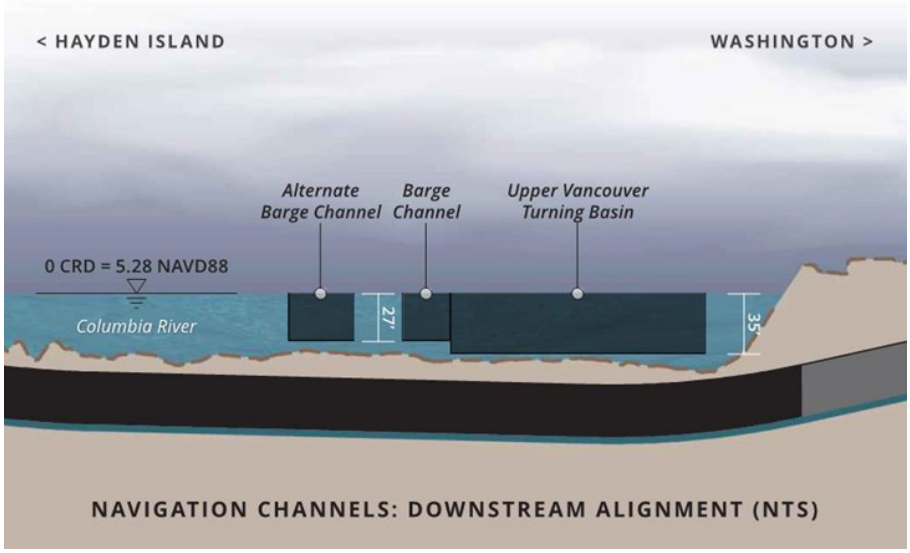
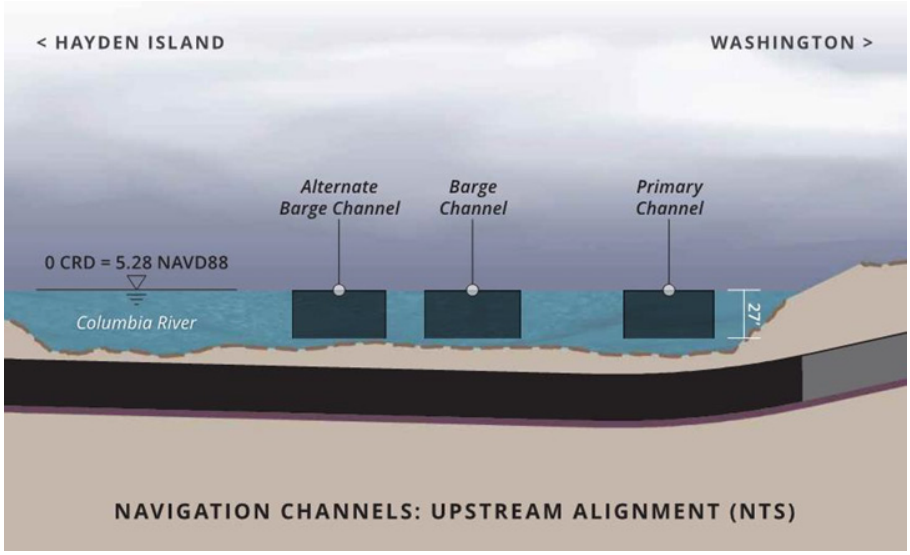


Figure 5. Navigation Channel for the Upstream Alignment



USACE requires that any civil works below the turning basin or navigation channels must be placed below the authorized depths and include an additional 5 feet of depth for advanced maintenance dredging. This is to allow for excess over-dredging required to maintain the authorized channel depth.

Below the advanced maintenance dredging depth, a 5-foot protective layer of rip rap would be required (see Figure 1). The rip rap layer would protect the ITT from unintended additional dredge excavation, sunken vessels, dragging anchors, river scour, and other hazards that could be detrimental to the structural section of the ITT.

2.3 Highway Design

Two mainline I-5 alignments were evaluated; one upstream of the existing Interstate Bridges and one downstream. Both alignments were established to minimize impacts to the existing Interstate Bridges and facilitate construction phasing.

The ITT depth would be controlled by the authorized depths of the statutory Columbia River navigation channels. Maximum grades for the tunnel would be approximately 4.5%, controlled by highway design requirements. (This exceeds the maximum interstate grade of 4% prescribed by the departments of transportation. However, 4.5% grades can still accommodate the HCT and MUP.) A design speed of 60 miles per hour is assumed for both alignments. At the south end of the facility for both alignments, I-5 would attain grade near the south shore of Hayden Island. At the north end of the facility for both alignments, I-5 would attain grade near Evergreen Boulevard (see Figure 2).

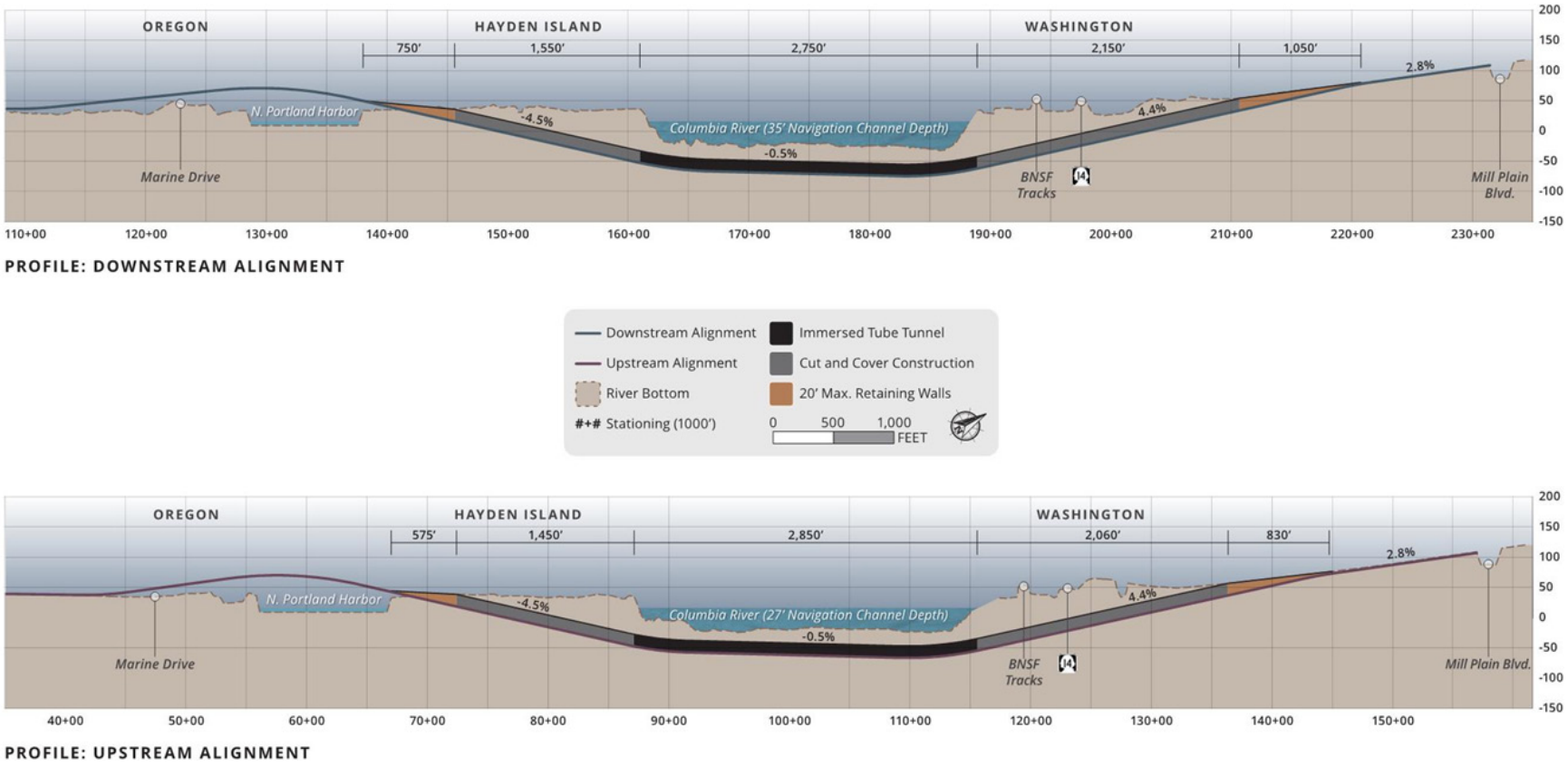
Shoulder widths in the facility are assumed to be 2 to 4 feet wide (see Figure 1). This would require a design exception from the Oregon and Washington departments of transportation, but these widths are typical of similar proposed and constructed tunnels currently in service.

2.4 Downstream Alignment

The downstream alignment as shown in Figure 2 would incorporate a horizontal curve to avoid temporary impacts to the existing Interstate Bridges during construction. This alignment would result in a portal-to-portal tunnel length of 6,450 feet. The grades associated with the downstream alignment are shown in Figure 6. Due to the horizontal curve, 4-foot shoulders would be required to accommodate site distance as shown in Figure 1.

A deeper excavation would be required for this alignment than for the upstream alignment.

Figure 6. Downstream Alignment Profile (top) and the Upstream Alignment Profile (bottom)



2.4.1 Upstream Alignment

The upstream alignment as shown in Figure 2 would follow a more direct route across the river with a shorter portal-to-portal length of 6,360 feet. The grades associated with this alignment are shown in Figure 5.

Due to the upstream USACE-authorized channel depths, this alignment would require less overall excavation. Refer to the Construction Considerations section for further details.

2.4.2 Interchanges

In this assessment of a conceptual ITT, interchanges were not addressed in detail. However, interchanges at Hayden Island, downtown Vancouver, and State Route (SR) 14 would require unconventional and complex below-grade construction. For example, at the center of Hayden Island, I-5 would be 34 feet below grade for the upstream alignment and 38 feet below grade for the downstream alignment. Where I-5 intersects SR-14, I-5 would be 71 feet below grade for the upstream alignment and 73 feet below grade for the downstream alignment (see Figure 5).

The only way to provide connectivity would be to construct cut-and-cover tunnels for ramps to achieve the required interchange connections. The ramp geometry required to accomplish this has not been verified. Large temporary excavations would be required to construct the cut-and-cover ramps. This type of construction is not typical and would have operational implications that are addressed in Chapter 4, Operational Considerations.

2.5 High-Capacity Transit

HCT, regardless of whether it is bus rapid transit (BRT) or light rail transit (LRT), would be accommodated at the 4.5% grades established for the highway profiles. (LRT has a maximum recommended grade of 5%.)

2.5.1 Multi-Use Path

The MUP can have a maximum sustained grade of 5%, which would be accommodated by the grades shown on the highway profiles. The MUP would be in a tunnel section for the entire portal-to-portal lengths described above.

2.6 Aviation

The ITT would result in removal of the obstruction caused by the existing iInterstate Bridges and would not impact permanent operations at Pearson Field or Portland International Airport.

2.7 Geotechnical Considerations

2.7.1 Regional Geology

The project area is located within the Portland Basin, approximately 5 miles east of the confluence of the Columbia River and the Willamette River. The Portland Basin is a northwest-trending structural basin, roughly 40 miles in length and 20 miles in width, flanked by the Tualatin Mountains to the west and the Cascade foothills to the east. The basin is underlain by sequences of lava flows of the Columbia River Basalt Group (CRBG).

During and following the period of extensive lava flows forming the CRBG (ca. 17 to 6 million years ago), the Portland Basin subsided and Sandy River Mudstone and Troutdale Formation were deposited [primarily] by the ancestral Columbia River. Troutdale Formation conformably overlies Sandy River Mudstone and may be up to 400 feet thick in some locations. The Troutdale Formation has been variably eroded by the ancestral Columbia and Willamette Rivers, and by a series of late Pleistocene glacial outburst floods which deposited up to 200 feet of sediment ranging from silts and sands with occasional clay interbeds (fine-grained facies) to gravels and boulders (coarse-grained facies). Following the last of the catastrophic glacial outburst floods, the sea level rose and the deep channels of the Columbia River were infilled with silty/sandy alluvium and broad floodplains were formed along the Columbia River.

2.7.2 Seismicity and Faulting

The regional seismicity is largely driven by proximity to an active convergent-plate boundary. This zone, called the Cascadia Subduction Zone (CSZ), is a broad, eastward-dipping zone of contact between the upper portion of the subducting slabs of the Gorda, Juan de Fuca, and Explorer plates and the overriding North American plate. Regional seismicity associated with the CSZ includes mega-thrust interface events as well as deeper intraslab events.

Local seismicity is generally driven by shallow crustal sources in the vicinity of or within the Portland Basin. The Portland Basin is bounded by high-angle, northwest-trending, right-lateral strike-slip faults considered to be seismogenic; however, the relationship between specific earthquakes and individual faults in the area is not well understood since few of these faults are expressed clearly at the ground surface and the foci of the observed earthquakes have not been located with precision.

2.7.3 Geologic Units

Fill

Fill materials are only anticipated to be encountered near the shoreline and where excavations extend beyond the banks of the river. The fill materials include loose to medium dense, clean to silty, sand to gravel with some wood and other debris, consistent with the historical development and frequent, local modifications to facility use type and operation.

Sand/Silt Alluvium

Sand/silt alluvium is anticipated to be present in nearly all excavation and dredging operations extending from the south end of the proposed alignments to within about 500 feet of the north riverbank. These materials include very soft/loose to stiff/dense silts and sands that are frequently interbedded and generally non-plastic to low plasticity.

Gravel Alluvium

Gravel alluvium is anticipated to be present in excavation and dredging operations extending from about 500 feet south of the north riverbank and continuing to the north. These materials include gravels with variable amounts of silt and sand, and sometimes appear as openwork gravels. This unit is documented as containing scattered cobbles and boulders.

Troutdale Formation

Troutdale may be present for a short distance at the base of dredging operations between about 1,000 feet and 500 feet south of the north riverbank. These materials may appear as a weakly to moderately cemented conglomerate which comprises gravels within a sand and silt matrix. Similar to the gravel alluvium, this unit is documented as containing scattered cobbles and boulders.

2.7.4 Geologic Hazards

Ground Shaking

An ITT would need to be designed to withstand the transient strains associated with ground shaking. Tunnels are regularly designed to account for ground behavior during a seismic event.

Liquefaction

Previous geotechnical studies conducted in this location found that saturated fill materials and silt/sand alluvium are likely susceptible to excess pore pressure development leading to liquefaction-

induced strength loss, settlement and lateral spreading during a design seismic event. To mitigate against liquefaction effects, most particularly the potential for differential liquefaction-induced settlements along the tunnel alignment, it is expected that some level of ground improvement may be required. A discussion of ground improvement is provided in the Construction Considerations section.

2.8 Structural Design

A preliminary structural design was developed for the ITT cross-section. Dimensions of the section considered in-service loading and temporary conditions as the section is floated out and placed. The general arrangement and dimensions are shown in Figure 1.

The maximum interior clear height is assumed to be 21 feet with equipment niches of up to an additional 2 feet to allow for ventilation, fire suppression, signage, and lighting while maintaining the required vertical clearance of 17 feet, 4 inches. The 2-foot equipment niches are located in the cut-and-cover sections of the facility.

2.8.1 Preliminary Analysis

Based on experience, the required structural dimensions are most often controlled by the transverse cross-sectional analysis. Because of this, a longitudinal analysis was not performed at this preliminary stage. A transverse analysis was performed for the cross-section. The section was checked for strength and service loads for moment, axial force, and shear demands, showing that the conceptual section depicted in Figure 1 is adequate.

ITTs can be subjected to several extreme load cases. These load cases are typically checked during later stages of design and were thus not checked as part of this conceptual assessment. These load cases include ship anchors, ship sinking and grounding, heat effects associated with a design fire, explosion, tunnel flooding, and loss of support during construction.

This cross-section (see Figure 1) allows for a buoyant condition during transport and would achieve an acceptable factor of safety against buoyancy during immersion.

3. CONSTRUCTION CONSIDERATIONS

The following sections identify considerations associated with construction of a tunnel facility. Focus is primarily on construction of the ITT section of the facility and the interfaces with the cut-and-cover sections on Hayden Island and in Vancouver.

3.1 Dredging and Excavation

Prior to placement of the ITT segments, a trapezoidal channel would be dredged, with the base of the trapezoid wider than the base of the immersed tunnel segment and side slopes laid back to prevent sloughing or raveling. Table 1 shows the anticipated preliminary excavation quantities on Hayden Island, in the Columbia River, and in Vancouver for the full cross-section shown in Figure 1.

Some of the dredged materials would typically be used as backfill over the rip rap protection layer. However, much of the excavated material would be replaced by engineered fill designed to protect the tunnel from scour and potential impacts, as well as to provide tunnel support both during construction and a potential seismic event. Figure 7 shows a cross-section of the conceptual dredge prism for the ITT across the Columbia River.

Table 1. Preliminary Tunnel Excavation Quantities

Location	Upstream Alignment	Downstream Alignment
Hayden Island (on land)	1,800,000 yd^3	2,200,000 yd^3
Columbia River (in water)	3,800,000 yd^3	4,000,000 yd^3
Vancouver (on land)	2,300,000 yd^3	2,700,000 yd^3
Total	**7,900,000 yd^3**	**8,900,000 yd^3**

3.1.1 Dredging Operations

Dredged materials are anticipated to consist primarily of loose/soft alluvial and fluvial-marine deposits that could be excavated using conventional methods. Any dredge operations would abide by jurisdictional permitting requirements, which could include the use of silt curtains and seasonal work-window limitations.

3.1.2 Dredging Configuration

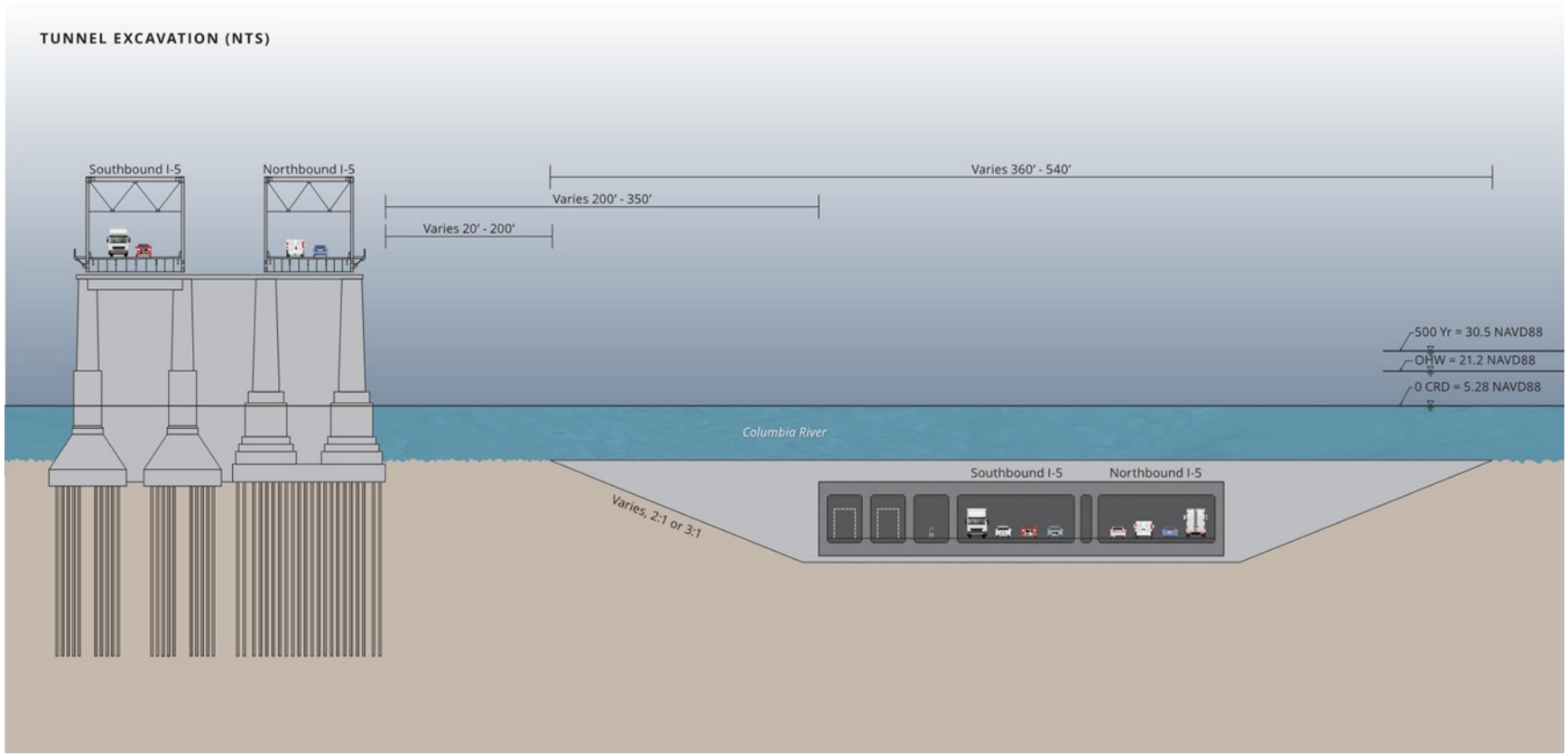
For the purposes of this assessment, a 3H:1V slope was assumed for the cut slopes of the dredged prism when dredging in silt/sand alluvium and a 2H:1V slope when dredging in gravel alluvium and Troutdale Formation materials. This configuration could possibly be refined based on subsequent geotechnical and river hydraulic investigations.

The dredge prism would continue to the north and south banks of the Columbia River. It is anticipated that the dredged prism would be approximately 2,800 feet in length.

3.1.3 Dredging and Excavation Risks

The proximity of dredge slopes to the existing I-5 bridge foundations introduces a risk of foundation support loss or undermining. Temporary works to protect the existing foundations, if required, would be extensive, expensive, and have environmental impacts. Tunnel alignments are intended to minimize the potential for protective temporary works.

Figure 7. Estimated Excvation for ITT Construction



3.1.4 Shoreline Excavation

Excavation support would be required to facilitate excavations for the transition from the immersed tunnel segments to the cut-and-cover and retained cut segments. Support for excavations outside of the river would likely consist of sheet pile wall shoring systems that are anchored, braced, or some combination of the two. Potential conflicts between anchors and adjacent subsurface infrastructure were not evaluated as part of this assessment.

3.2 Ground Improvement

Ground improvement may be required to mitigate against liquefaction effects. Several ITTs designed and constructed in the recent past have included ground improvement programs to mitigate against these effects, such as stone columns for the Aktio-Preveza Tunnel (Greece) and the Limerick Tunnel (Ireland) or compaction grouting for the Marmaray Tunnel (Turkey). For the New George Massey Tunnel (Canada), multiple ground improvement options are being considered, including stone columns beneath the tunnel and cut-off walls on the sides of the new tunnel (to resist lateral spreading type deformations, limit the potential for interaction between the new and an existing tunnel, and limit the dredging footprint).

Any ground improvement program would need to consider and mitigate against the potential for adverse impacts during construction, including both environmental impacts and impacts to the existing Interstate Bridges. For example, grouting-type programs include the risk of cementitious material release into the river and displacement/replacement methods require vibration to advance a probe into the subsurface materials.

3.3 ITT Construction

3.3.1 Segment Fabrication

ITT segments are typically constructed in dry docks or casting basins adjacent to a navigable waterway. Many immersed tunnel projects have required the development of dedicated casting facilities designed specifically for the project, such as for the Fehmarnbelt Tunnel project (Denmark/Germany), though some have been able to utilize existing dry-dock facilities such as the Elizabeth River Tunnels project (Virginia). The cost to develop a project-specific casting facility is typically quite high. However, project constraints can often make this the only practical solution due to lack of adequate existing facilities and/or navigation challenges.

Due to the lack of suitable facilities in the region, it is expected that a new casting facility would need to be designed and constructed specifically for this project. Potential sites for a new casting facility

were not identified as part of this assessment. It is recommended that any new casting facility developed for this project be sized to accommodate the simultaneous fabrication of multiple ITT segments as temporary float storage of segments and/or significant downtime between placement of immersed segments can increase project costs and risks.

3.3.2 Segment Delivery

The delivery of the tunnel segments would require coordination with private and public entities in the region to ensure navigation requirements were adhered to. Additionally, seasonal constraints, such as river levels, flow velocities, and in-water work windows, would need to be considered.

3.3.3 Segment Placement and Connection

After dredging is completed, a level bedding layer of gravel would be placed. The tunnel segments would be ballasted and lowered. Once the tunnel segments are aligned and set at the proper grade, any void space between the base of the segments and the gravel layer would be filled. When these phases are complete and an initial seal between tunnel segments is established, the water within the sealed zone between segments would be pumped out for construction of a final seal and structural connections.

3.3.4 Segment Cover and Backfill

The proper placement of lateral support and vertical protection and restraint materials is integral to the performance of the ITT. Lateral support is generally derived from keying/locking materials that compact naturally and that would remain stable under seismic conditions. The keying/locking materials and the tunnel segments would be covered with a blanket of well-graded stones followed by rip rap armoring to further lock the segment in place and provide protection against potential impact loads.

3.4 Cut-and-Cover and Retained Cut Construction

The ITT would be connected to the above-ground roadway network via cut-and-cover and retained cut connections at either end. Excavation support for these end connections could differ between Vancouver and Hayden Island, as excavations in Vancouver are anticipated to be primarily in gravel alluvium, whereas excavations on Hayden Island are anticipated to be primarily in silt/sand alluvium. The deepest excavations could require ground support systems consisting of braced or restrained secant pile or slurry walls, while shallower excavations may require less robust ground support systems. Ground improvement measures could be incorporated to decrease the potential for seepage

through the base of the excavation and to provide long-term support for the constructed cut-and-cover and retained cut sections.

3.5 BNSF Railroad Coordination

Temporary shoring would be required to excavate and construct the cut-and-cover sections through Vancouver, including below the existing BNSF Railroad berm and tracks. Two methods of constructing the cut-and-cover tunnel below the BNSF tracks were considered. Both methods would require extensive coordination and permitting with BNSF.

The first would be a jacking procedure in which all or portions of the ITT cross-section would be advanced below ground using hydraulic jacks and a reaction structure.

The second method would reroute the existing tracks via temporary tracks, or a “shoo-fly” for the duration of construction. The cut-and-cover section could then be excavated and constructed in the BNSF right-of-way before the tracks would be restored over the newly constructed tunnel. There is limited right-of-way to accommodate a shoo-fly.

3.6 Traffic Staging

During construction, I-5 maintenance of traffic would require complex staging, particularly south of Evergreen Boulevard in the vicinity of the historic post hospital, where the retained cut section attains grade. To maintain traffic during construction, additional right-of-way west of I-5 could be required.

4. OPERATIONAL CONSIDERATIONS

Tunnel facilities require an extensive variety of operating systems to support safe traffic operation and provide for life safety of motorists and emergency responders. The following sections address the systems required for traffic operation and fire/life safety. Information is presented based on the mode: highway, HCT, and MUP.

4.1 Highway

It is assumed that hazardous cargos would be permitted for this route. Hazardous cargos are normally banned from road tunnels, as the potential fire size is an extreme risk to both life safety and the facility itself. However, I-5 is an integral part of the Western US freight corridor. The fire size for a gasoline tanker can escalate to full heat release rate in a matter of minutes, creating a situation that is difficult, if not impossible, to manage or contain in terms of smoke control, firefighting, spill capture, and structural protection.

Certain elements of the fire protection and life safety systems have significant spatial requirements. Feasible concepts for these systems have been assessed to ensure that the conceptual tunnel structure has adequate space to accommodate them. Fire protection and life safety system elements with spatial impacts include:

- Emergency ventilation system
- Fixed fire suppression system
- Tunnel drainage system
- Emergency egress

The primary national standard for fire protection systems in road tunnels is NFPA 502, Standard for Road Tunnels, Bridges, and Other Limited Access Highways. The standard provides performance goals and general guidance for fire protection design.

For a tunnel of this length (6,500 feet, Category D), NFPA 502 mandates the following minimum road tunnel fire protection requirements:

- Emergency ventilation system sized to meet minimum ventilation requirements with one fan out of service or providing operational measures to ensure that life safety is not compromised with one fan out of service.
- Fire protection of structural elements. The structure shall be able to withstand the temperature exposure represented by the Rijkswaterstaat time-temperature curve or other recognized time-temperature curve approved by the authority having jurisdiction (AHJ), following an engineering analysis.

- Fire alarm control panel and detection, identification, and location of fire in the tunnel.
- Fire standpipe designed and installed in accordance with NFPA 14.
- Fire hose valve connections are required so that no location on the tunnel is more than 150 feet from a hose connection.
- An emergency power system in accordance with Article 700 of NFPA 70 is required, and it shall provide power to all major tunnel systems, including the ventilation system.
- Tunnel drainage collection system designed so that spills of hazardous and flammable liquids cannot spread or cause flame propagation.

The following requirements are conditionally mandatory pending the results of an engineering analysis:

- Water-based fire-fighting system
- Closed-circuit television and automatic fire detection systems

The tunnel would need to accommodate a variety of operational systems and features to support safe traffic operations and to provide the necessary level of fire protection and life safety, including:

- Emergency egress
- Normal and emergency tunnel ventilation
- Fixed firefighting system and fire standpipe
- Fire detection and alarm
- Emergency communications
- Roadway drainage
- Normal and emergency electrical power
- Supervisory control and data acquisition (SCADA)
- Roadway lighting
- Traffic control and monitoring
- Tunnel finishes and special signage
- Operations and maintenance

4.1.1 Highway Egress

The egress strategy would be a fire-rated corridor (cell) that runs between the NB and SB I-5 cells. The door spacing must be 1,000 feet or less; 600 feet is typical. Suitable emergency signage, lighting, and pressurization of the fire-rated corridor is also required.

The egress corridor should have a width of 6 feet to accommodate drainage pipes, water mains, and other services. The space above the egress envelope would house these items.

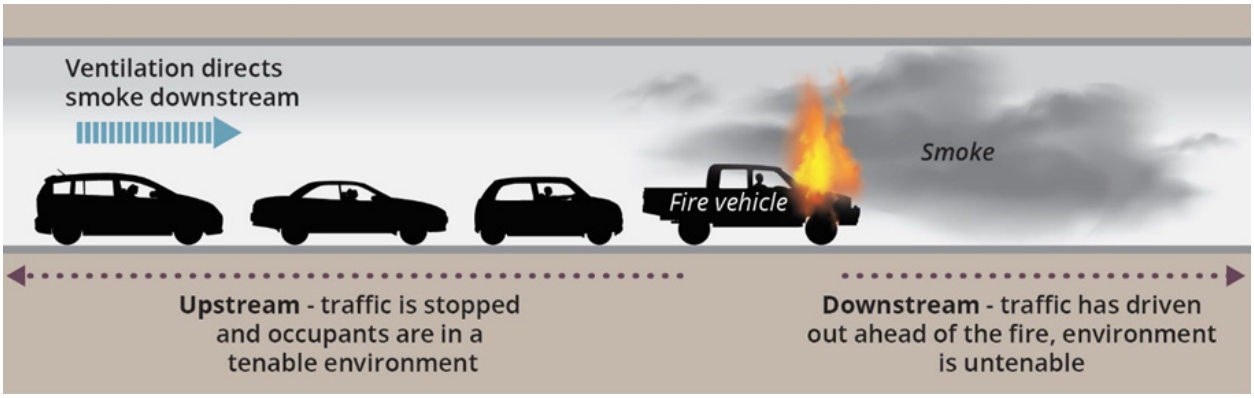
4.1.2 Highway Ventilation

Ventilation is required for normal operations (vehicle emissions management) and emergency operations (smoke management). NFPA 502 requires tenable conditions for egress and facilitation of conditions for firefighting. Achieving these conditions relies on ventilation, means of egress, and fire control. Based on the tunnel length and traffic configuration, a longitudinal ventilation system is recommended for this facility.

Portal emissions and air quality compliance in surrounding areas would be critical with a longitudinal ventilation system. If acceptable air quality cannot be achieved or maintained, then ventilation buildings at each portal would be required.

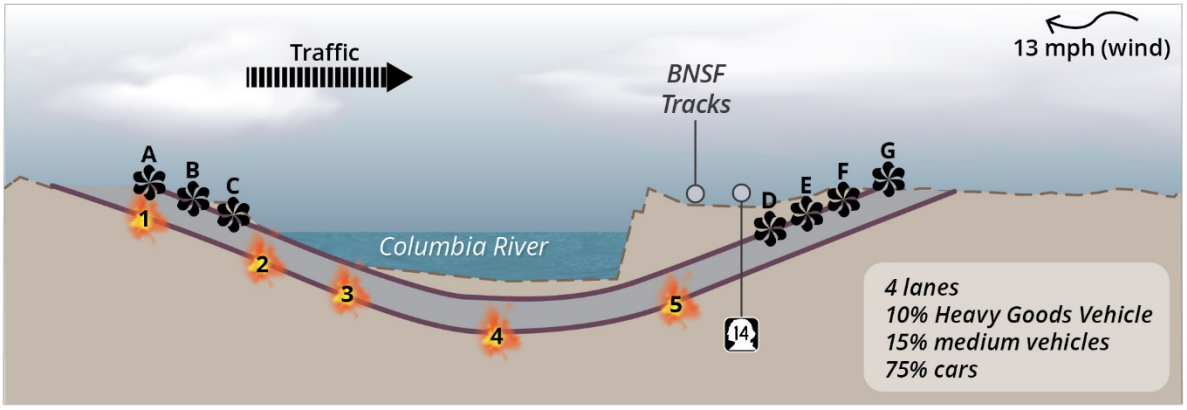
A likely ventilation concept based on one-way traffic would direct the smoke downstream of the fire site (vehicles downstream drive out ahead of the fire) in a longitudinal ventilation concept (see Figure 8).

Figure 8. Longitudinal Ventilation Concept



Jet fans would be placed in the cut-and-cover sections of the tunnel to generate the longitudinal airflow. A general fan arrangement is shown in Figure 9. Letters A through F indicate the approximate locations of the jet fan niches, while numbers 1 through 5 show approximate fire locations. There would be six to seven jet fans per niche. Assuming that hazardous materials would be permitted for this route, it would also be necessary to supplement the jet fans with an automatic sprinkler system.

Figure 9. Highway Tunnel Fan Layout



4.1.3 Highway Fire Protection Systems

NFPA sprinkler system requirements for tunnels include material properties, hydraulic performance, functional provisions for fire department interaction, system approval, and occupancy classification.

Roadway Fixed Fire Fighting System

The fixed fire fighting system (FFFS) would be an automatic sprinkler system providing water spray covering the entire roadway surface. The FFFS would be supplied with a permanent water supply from the local water utility. It is not anticipated that fire pumps or water storage tanks would be required, though holding tanks and treatment would be needed for the discharged water. The FFFS is also provided with fire department connections (FDCs) to allow responding fire departments to boost system pressure if needed.

Roadway Standpipe System

A fire standpipe system would be provided to supply fire hose valve outlets throughout both roadway cells at 275-foot intervals. The standpipe system would be supplied with a permanent water supply from the local utility. Should additional pressure be required, FDCs at the tunnel portals would be used to boost the pressure.

Structural Thermal Protection System

The extreme temperatures possible in a tunnel fire can do extensive damage to a tunnel's structural elements. Thermal protective board or other protective insulation would be required.

4.1.4 Highway Drainage Systems

Tunnel drainage systems normally consist of two independent systems: a stormwater control system and a tunnel drainage system. Stormwater control systems would be required at the tunnel portals to intercept stormwater flows that accumulate on the open approaches and transition roadways leading into and out of the tunnel. A separate tunnel drainage system, independent of inflow from sources outside the tunnel, would be required to collect and discharge water and effluents generated within the tunnel. These effluent flows would result from tunnel washing, use of fire suppression systems, vehicle carryover, and some seepage. The tunnel drainage system would also have to accommodate a potential fuel or hazardous material spill.

The profile of the selected tunnel alignment would dictate the tunnel's low point. A drainage pump station would be required at this location. Systems would also be required for the MUP, HCT, and egress cells. The tunnel drainage effluent would require some form of pre-treatment prior to discharge depending on local permitting requirements.

4.1.5 Highway Electrical Systems

Several electrical operating systems would be necessary to support safe traffic operations. Tunnel electrical systems would include:

- Normal power distribution
- Emergency power distribution
- Fire alarm and detection
- Emergency communications
- Security
- SCADA
- Communication systems

4.1.6 Highway Lighting Systems

The tunnel lighting system would provide the required illumination so that a motorist could safely navigate and maintain speed while in the tunnel. This objective must be met during daytime, nighttime, and during an emergency (loss of power). Daylight conditions require high levels of

illumination at the tunnel's entry portals. Nighttime lighting levels are lower. During an emergency, lighting would be maintained at the nighttime level to allow for egress.

4.1.7 Traffic Control and Monitoring Systems

Roadway tunnels require a means for control of traffic within the tunnel, as well as traffic on the approach roadways leading into the tunnel. The types of traffic control systems and devices would likely include:

- Automatic incident identification system
- Closed-circuit television
- Variable message signs
- Lane use/control signals
- Over-height vehicle detection

4.2 Transit

The primary national standard for fire protection systems in underground trainways is NFPA 130. If LRT were selected as the HCT, these requirements would apply. (If BRT were selected as the HCT, NFPA 502 would apply; see Section 4.1 above.) NFPA 130 protection requirements include:

- Cross-passageways at a maximum spacing of 800 feet for egress
- An emergency power system for all tunnel systems
- Minimum clear walkway width of 24 inches for egress

The tunnel would need to accommodate a variety of systems to support safe operations, fire protection, and life safety. Various trainway tunnel systems would include:

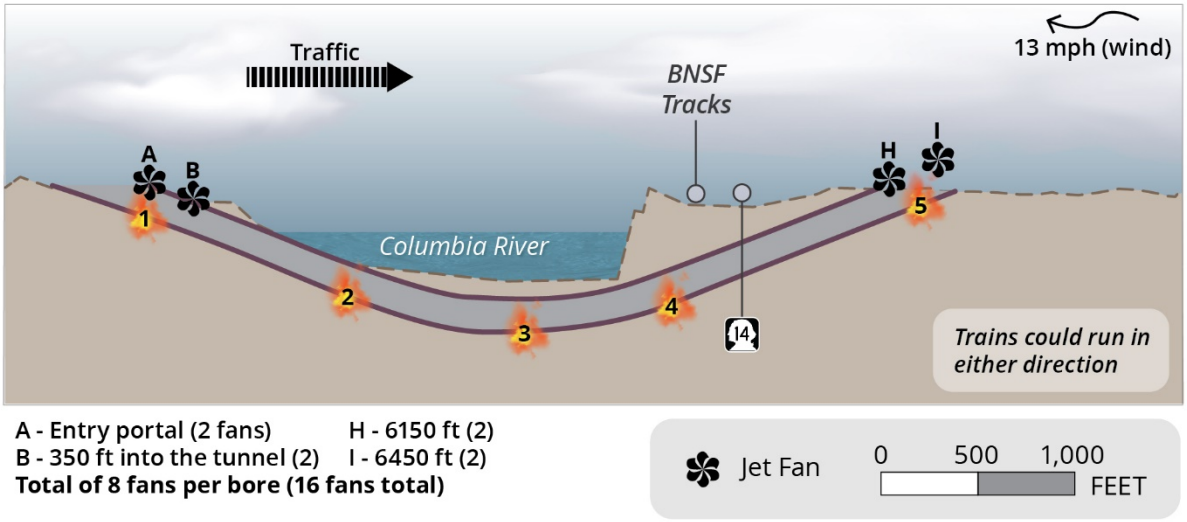
- Emergency egress
- Tunnel ventilation
- Fire protection
- Tunnel drainage
- Electrical systems
- Tunnel lighting
- Tunnel finishes (fire protection)
- Operations and maintenance

4.2.1 Transit Ventilation Systems

Ventilation is required for smoke management per NFPA 130. The design fire is representative of a fully engulfed railcar or bus.

Jet fans would be placed in the tunnel to generate the longitudinal airflow. Fans would be placed in the cut-and-cover sections. A general fan arrangement is shown in Figure 10. Letters A, B, H, and I indicate the approximate locations of the jet fan niches, while numbers 1 through 5 show approximate fire locations. There would be two jet fans per niche.

Figure 10. HCT Tunnel Fan Layout



4.2.2 Transit Fire Protection Systems

NFPA sprinkler system requirements for tunnels include material properties, hydraulic performance, functional provisions for fire department interaction, system approval, and occupancy classification.

Transit Standpipe System Configuration

A fire standpipe system would be provided to supply fire hose valve outlets throughout both HCT cells at 275-foot intervals. The standpipe system would be supplied with a permanent water supply from the local utility. Should additional pressure be required, FDCs at the tunnel portals would be used to boost the pressure.

4.3 Multi-Use Path

The MUP cell would require lighting, ventilation, drainage, security, and fire and life-safety systems.

Walkways and bikeways in tunnels are not uncommon, but there are no known MUPs in facilities of this length. Egress with respect to smoke management would need to allow people downstream of the fire enough time to reach an egress point. This is of particular concern because any doors from the MUP would lead either to the transit or roadway cells, creating a security and safety risk.

Based on experience, a ventilation system similar to that proposed for the transit tunnel would likely be enough to provide sufficient fresh air. Supply air would be provided via jet fans.

4.4 Operations and Maintenance

A comprehensive operations and maintenance program is necessary to ensure a safe, well-maintained, and reliable tunnel facility. The program would include emergency management plans, maintenance management plans, and operational procedure manuals.

A staffed operations center would be required for monitoring the mechanical, electrical, traffic control systems, and security. A tunnel system support building would be required at each end of the tunnel to house electrical distribution equipment, communications equipment, intelligent transportation system equipment, ventilation systems, fire systems, etc.

Additional facilities may include maintenance shops, garages, and storage spaces to house equipment and spare parts.

An operational ITT would require a full-time staff. A mix of personnel would be required, including electricians, mechanics, millwrights, and general maintenance staff to maintain the facilities and various systems.

5. ENVIRONMENTAL CONSIDERATIONS

This section provides a general overview of the environmental considerations associated with a tunnel alternative.

5.1 Biological

- In-water trenching during construction would disturb the river bottom across the entire width of the Columbia River, including the riverbanks.
- Dredged material would need to be placed in an in-water or upland site and may require special handling if contaminated materials are found.
- Disturbance to the river bottom and nearshore habitat would require mitigation.
- In-water construction would impact aquatic plants, fish, marine mammals, and birds.
- The tunnel would eliminate over-water shading.

5.2 Hazardous Material

- Excavation would cause disturbance and suspension of potentially contaminated sediment in the Columbia River.
- Large excavations required on land would potentially encounter contaminated soils requiring treatment and/or disposal in approved facilities.
- The volume of potentially contaminated material associated with tunnel excavation may exceed the capacity of existing disposal locations.

5.3 Historic Structures and Archaeological

- Historic structures and archaeological resources may be disturbed and permanently impacted due to the size and volume of excavation required for the tunnel.
- There are tribal concerns about burials along the Columbia River shoreline.
- Construction vibration could cause impacts to historic structures and archeological resources.
- The tunnel could impact Fort Vancouver and the Old Apple Tree Park.

5.4 Land Use

- Construction activities would impact businesses, neighborhoods, and parks and recreation areas. These impacts would include construction noise, vibration, and additional traffic congestion.

- Utility relocations would be required for the tunnel facility.
- Tunnel right-of-way would require negotiation with BNSF for construction impacts and temporary track reroutes.
- A tunnel would provide opportunities for trail connectivity on the Washington shore and increase the potential for more park space along the river.
- The tunnel provides an unimpaired viewshed along the river.

5.5 Navigation and Aviation

- A tunnel would not impact aviation operations at Pearson Field or Portland International Airport.
- The tunnel would eliminate navigation hazards in the river.

5.6 Permitting

- In-water work windows and related work restrictions would impact the construction schedule.
- It is yet to be determined whether existing dredge spoil disposal sites could accommodate the volume of sediment generated.
- Permitting a new dredge spoil disposal site may not be feasible to complete within the expected project schedule.

5.7 Safety and Emergency Response

- The tunnel would impact emergency response routes on both sides of the river.
- The MUP, which would be enclosed for over one mile, poses a safety concern for users.

5.8 Storm Water Management

- Once constructed, the tunnel would require a continuously operating low-point sump and pump system. The sump and pump system would require storm water retention and treatment facilities.

6. CONCEPTUAL COSTS

Conceptual costs were developed based on previously completed projects and the collective expertise of this team. These costs are for a facility that would accommodate I-5, HCT, and the MUP. Interchange costs are not included.

Based on the preliminary assessment, the downstream alignment would result in a deeper, longer, and therefore more expensive facility compared to the upstream alignment. As a result, conceptual costs in Table 2 are based on the upstream alignment and shown in 2021 dollars.

Ancillary facilities would include an operations building and fan plants.

The conceptual costs do not include an allowance for soft costs such as design, construction management, or right-of-way. The conceptual costs also do not include any allowance for contingency or life-cycle considerations. However, based on previous experience, operation and maintenance costs of the facility would be on the order of $465 million over a 75-year design life.

Table 2. Reasonable Order-of-Magnitude Construction Costs

Description	Conceptual Cost
ITT	$970,000,000
Cut-and-cover	$1,725,000,000
Retained cut	$235,000,000
Ancillary facilities	$150,000,000
Rough Order-of-Magnitude cost*	**$3,080,000,000**

*Costs shown for the ITT are approximately two times higher than cost estimates for a replacement bridge and approaches. This estimate does not include other highway, interchange, or high capacity transit improvements that would be necessary.

7. SUMMARY

The following is a summary of the considerations associated with the ITT concept.

7.1 Design

- Upstream and downstream tunnel alignments were considered.
- The facility would consist of an ITT for in-water sections, transitioning to cut-and-cover tunnel sections beyond the river and then into a retained cut (U-section) until I-5 attains grade.
- At the south end of the facility, I-5 would attain grade near the south shore of Hayden Island.
- At the north end of the facility, I-5 would attain grade near Evergreen Boulevard.
- The facility would consist of six cells: four lanes for NB I-5 and four lanes for SB I-5, a MUP, NB and SB HCT, and a maintenance/egress corridor. Each mode and direction are separated by a wall.
- Maximum grades for the tunnel would be approximately 4.5% controlled by highway design requirements.
- The ITT depth would be controlled by the authorized depths of the statutory Columbia River navigation channels.
- The ITT would be designed to meet current seismic safety standards.
- The combination of the controlling grades and the depth of the river channel would require interchange access modifications. Connectivity to Hayden Island, downtown Vancouver, and SR-14 would be extremely difficult and require unconventional construction below grade.

7.2 Constructability

- Large excavations in excess of 70 feet deep at the Washington shoreline and in excess of 30 feet deep on Hayden Island would be required to facilitate construction of the cut-and-cover tunnel sections.
- The high groundwater and permeable soil would require extensive measures, such as temporary shoring and dewatering systems, to provide a suitably dry and stable excavation for construction of the cut-and-cover and retained cut sections.
- The proximity of in-water and on-land excavations to the existing Interstate Bridges' foundations could require extensive temporary works to preserve the structural integrity of the existing bridges during ITT construction. The alignments considered sought to avoid this risk.

- Washington excavations would require temporary relocation of the dual BNSF mainline tracks or complex staged and phased construction techniques.
- Maintenance of traffic on I-5 would require complex staging south of Evergreen Boulevard in the vicinity of the historic post hospital.
- Due to the lack of suitable facilities in the region, it is expected that a new casting facility would need to be developed.

7.3 Operations

- The ITT would require an operations and maintenance/egress tunnel from end to end between NB and SB I-5.
- Extensive fire and life safety systems would be required.
- The ITT would require a continuously operational low-point sump and pump system.
- Operations and maintenance equipment housing would be required at each end of the facility.

7.4 Environmental Considerations

- In-water excavation would require approximately 4 million cubic yards of material. Total excavation for the tunnel facility would be approximately 8 to 9 million cubic yards of material.
- In-water construction would impact aquatic plants, fish, marine mammals and birds.
- Excavations in the vicinity of SR-14 would likely encounter cultural resources.
- In-water work windows and related work restrictions would impact the construction schedule.
- A tunnel would not impact aviation operations at Pearson Field or Portland International Airport.
- The tunnel would eliminate navigation hazards in the river.

NCEES
advancing licensure for engineers and surveyors

NCEES annual meeting information

The 2023 NCEES annual meeting will be held August 15-18 at the Westin Boston Seaport in Boston, Massachusetts.

Past annual meetings

Use the links below to access information, files, and multimedia related to past NCEES annual meetings.

- 2022 annual meeting
- 2021 annual meeting
- 2020 annual meeting
- 2019 annual meeting
- 2018 annual meeting
- 2017 annual meeting
- 2016 annual meeting
- 2015 annual meeting
- 2014 annual meeting
- 2013 annual meeting
- 2012 annual meeting
- 2011 annual meeting
- 2010 annual meeting
- 2009 annual meeting
- 2008 annual meeting
- 2007 annual meeting

Future annual meetings

Mark your calendar for these upcoming NCEES events.

- August 15-18, 2023-Boston, Massachusetts
- August 20-23, 2024-Chicago, Illinois

Board Meeting

Tab 5

Director's Report

5.1 Financial Report

5.2 Agency Operations

5.3 Program Reports

- 5.3.1 Communication & Outreach
- 5.3.2 Regulatory
- 5.3.3 Investigations & Compliance
- 5.3.4 Licensing
- 5.3.5 Admin

5.4 Other Items

- 5.4.1 FARB Forum Report

Wherrett, Mackenzie (BRPELS)

From: Bitar, Paul (DES)
Sent: Wednesday, February 1, 2023 12:30 PM
To: Fuller, Ken (BRPELS)
Cc: Wherrett, Mackenzie (BRPELS)
Subject: December 2022 Financial Status
Attachments: BRPELS_Financial Status_December 2022.xlsx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Ken,

I have attached BORPELS' December 2022 financial status and projection reports. The information in the reports shows that **BORPELS is in excellent financial condition.** At this time, I project the agency will end the biennium with about $1.71 million in its operating account, Fund 024. Additionally, the agency is on track to underspend its appropriation by $506k.

REVENUE
Biennium 2021-23 revenue collections have been strong. For the period of July 2021 – December 2022, the agency generated $3.199 million in revenue vs. just $2.798 million during the same period last biennium. This represents an increase of 14.3% between biennia. I currently project that BORPELS will generate about $4.459 million in revenue this biennium.

EXPENSES
- I haven't received the Oct-Dec 2022 invoice yet from DOL, so I emailed Tracy Norman to request a copy of it.
- I wasn't sure how much BORPELS is planning to spend on the acquisition of a vehicle, so I added $20k to the projection for the vehicle. Let me know whether or not this is accurate.

Thanks,
Paul Bitar
Senior Financial Consultant
Small Agency Financial Services
Washington State Department of Enterprise Services
d: 360-407-8129
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Bd of Reg-Prof Engineers/Land Surveyors Agency Summary BITD as of December 2022

Category	BI Allotment	BITD Allotment	BITD Expenditures	BITD Variance	BI Variance
Capital Outlays	48,000	36,000	101,454	(65,454)	(53,454)
Employee Benefits	516,755	380,465	330,705	49,760	186,050
Goods and Services	2,064,716	1,583,540	1,223,302	360,238	841,414
Grants, Benefits & Client Services	0	0	1,505	(1,505)	(1,505)
Professional Service Contracts	0	0	48,225	(48,225)	(48,225)
Salaries and Wages	1,473,529	1,095,155	1,001,904	93,251	471,625
Travel	126,000	94,500	38,541	55,959	87,459
Sum:	**4,229,000**	**3,189,660**	**2,745,635**	**444,025**	**1,483,365**

Category			FM Allotment	FM Expenditure	FM Variance	BITD Allotment	BITD Expenditures	BITD Variance
Salaries and Wages			**62,945**	**57,454**	**5,491**	**1,095,155**	**1,001,904**	**93,251**
A	A	Salaries and Wages	4,000	0	4,000	72,000	0	72,000
	AA	State Classified	47,225	43,779	3,446	812,531	778,134	34,397
	AC	State Exempt	11,186	10,833	353	201,012	195,000	6,012
	AE	State Special	534	1,225	(691)	9,612	10,688	(1,076)
	AU	Overtime and Call-Back	0	1,617	(1,617)	0	18,082	(18,082)
Employee Benefits			**22,695**	**19,490**	**3,205**	**380,465**	**330,705**	**49,760**
	B	Employee Benefits	1,900	0	1,900	34,200	0	34,200
	BA	Old Age and Survivors Insurance	3,556	3,517	39	62,837	60,028	2,809
	BB	Retirement and Pensions	6,242	5,842	400	105,417	101,917	3,500
	BC	Medical Aid & Industrial Insurance	346	268	78	6,117	5,176	941
	BD	Health, Life & Disability Insurance	9,819	9,040	779	157,194	148,228	8,966
	BH	Hospital Insurance (Medicare)	832	823	9	14,700	14,039	661
	BK	Paid Family and Medical Leave	0	0	0	0	(12)	12
	BV	Shared Leave Provided Annual Leave	0	0	0	0	1,305	(1,305)
	BZ	Other Employee Benefits	0	0	0	0	25	(25)
Professional Service Contracts			**0**	**8,765**	**(8,765)**	**0**	**48,225**	**(48,225)**
C	CA	Management and Organizational Services	0	8,765	(8,765)	0	48,225	(48,225)
Goods and Services			**80,198**	**72,545**	**7,653**	**1,583,540**	**1,223,302**	**360,238**
	E	Goods and Other Services	5,450	0	5,450	98,100	0	98,100
	EA	Supplies and Materials	1,000	820	180	18,000	13,262	4,738
	EB	Communications/Telecommunications	800	573	227	14,400	12,868	1,532
	EC	Utilities	50	0	50	900	345	555
	ED	Rentals and Leases - Land & Buildings	3,000	1,938	1,062	54,000	39,396	14,604
	EE	Repairs, Alterations & Maintenance	1,000	275	725	18,000	35,615	(17,615)
	EF	Printing and Reproduction	500	326	174	9,000	12,981	(3,981)
	EG	Employee Prof Dev & Training	1,000	0	1,000	18,000	12,883	5,117
	EH	Rental & Leases - Furn & Equipment	500	922	(422)	9,000	9,031	(31)
	EJ	Subscriptions	100	656	(556)	1,800	656	1,144
	EK	Facilities and Services	5,667	4,401	1,266	94,002	83,567	10,435
	EL	Data Processing Services (Interagency)	12,167	10,590	1,577	217,002	197,794	19,208
	EM	Attorney General Services	15,417	15,116	301	272,502	190,699	81,803
	EN	Personnel Services	1,100	1,401	(301)	19,800	26,247	(6,447)
	EP	Insurance	79	81	(2)	3,410	3,506	(96)
	ER	Other Contractual Services	16,250	11,410	4,840	373,500	210,461	163,039
	EW	Archives & Records Management Svcs	18	55	(37)	324	318	6
	EY	Software Licenses and Maintenance	16,000	23,890	(7,890)	360,000	373,107	(13,107)
	EZ	Other Goods and Services	100	91	9	1,800	566	1,234
Travel			**5,250**	**3,610**	**1,640**	**94,500**	**38,541**	**55,959**
G	GA	In-State Subsistence & Lodging	1,500	1,791	(291)	27,000	16,786	10,214
	GB	In-State Air Transportation	700	664	36	12,600	5,922	6,678
	GC	Private Automobile Mileage	1,500	466	1,034	27,000	5,860	21,140
	GD	Other Travel Expenses	700	172	528	12,600	3,272	9,328
	GF	Out-of-State Subsistence & Lodging	300	0	300	5,400	2,257	3,144
	GG	Out-of-State Air Transportation	300	517	(217)	5,400	3,707	1,693
	GN	Motor Pool Services	250	0	250	4,500	738	3,762
Capital Outlays			**2,000**	**2,479**	**(479)**	**36,000**	**101,454**	**(65,454)**
	JA	Noncapitalized Assets	1,000	2,479	(1,479)	18,000	101,454	(83,454)
	JB	Noncapitalized Software	1,000	0	1,000	18,000	0	18,000
Grants, Benefits & Client Services			**0**	**1,505**	**(1,505)**	**0**	**1,505**	**(1,505)**
	NZ	Other Grants and Benefits	0	1,505	(1,505)	0	1,505	(1,505)
Total Dollars			**173,088**	**165,848**	**7,240**	**3,189,660**	**2,745,635**	**444,025**

Board of Registration for Professional Engineers and Land Surveyors
Biennium 21-23 Projections
Fund 024 - Operating Account

Revenue Category	Biennium 21-23 Revenue Allotments	Actual Revenues through FM18 Dec-2022	Projected FM 19 Jan-2023	FM 20 Feb-2023	FM 21 Mar-2023	FM 22 Apr-2023	FM 23 May-2023	FM 24 Jun-2023	Projected Revenue Total	Projected Variance	
Licenses and Fees	3,900,000	3,197,901	209,966	209,966	209,966	209,966	209,966	209,966	4,457,700	557,700	Revenue projection based on 19-21 revenues, plus 14.3%. Revenue receipts have been strong this biennium.
Fines, Forfeits and Seizures		750							750	750	
Recov of Prior Expend Authority Expendit		122							122	122	
Cash Over and Short		604							604	604	
Total Revenue	**3,900,000**	**3,199,377**	**209,966**	**209,966**	**209,966**	**209,966**	**209,966**	**209,966**	**4,459,176**	**559,176**	

Expenses Category	Biennium 21-23 Expense Allotments	Actual Expenses through FM18 Dec-2022	Projected FM 19 Jan-2023	FM 20 Feb-2023	FM 21 Mar-2023	FM 22 Apr-2023	FM 23 May-2023	FM 24 Jun-2023	Projected Expenditure Total	Projected Variance
Salaries and Wages	1,473,529	1,001,904	56,614	58,687	60,760	60,760	60,760	60,760	1,360,242	113,287
Employee Benefits	516,755	330,705	19,235	20,192	21,147	21,147	21,147	21,147	454,720	62,035
Professional Service Contracts									48,225	(48,225)
Goods and Other Services	2,064,716	1,223,302	61,797	61,028	61,341	61,742	61,028	138,841	1,669,082	395,634
Travel	126,000	38,541	4,300	4,300	4,300	4,300	4,300	4,300	64,343	61,657
Capital Outlays	48,000	101,454	564	564	564	564	564	564	124,836	(76,836)
Grants, Benefits & Client Services	0	1,505	0	0	0	0	0	0	1,505	(1,505)
Sum:	**4,229,000**	**2,745,635**	**142,510**	**164,771**	**148,112**	**148,513**	**147,799**	**225,612**	**3,722,952**	**506,048**

Operating Transfers	Biennium 21-23 Operating Transfers	Actual Operating transfers through FM18 Dec-2022	Projected FM 19 Jan-2023	FM 20 Feb-2023	FM 21 Mar-2023	FM 22 Apr-2023	FM 23 May-2023	FM 24 Jun-2023	Projected Op. Trans. Total	Projected Variance
Operating Transfer In		30,131							30,131	(30,131)
Total Net Operating Transfers	**0**	**30,131**	**0**	**0**	**0**	**0**	**0**	**0**	**30,131**	**(30,131)**

Fund Balance Projection		Biennium 21-23 Rev Allotments - Exp Allotments	Actual Rev - Exp through FM18 Dec-2022	Projected FM 19 Jan-2023	FM 20 Feb-2023	FM 21 Mar-2023	FM 22 Apr-2023	FM 23 May-2023	FM 24 Jun-2023	Projected end of BI 21-23	Projected Variance	
Net Income (Loss)	BI 21-23 Beginning Balance	(329,000)	483,873	67,456	45,195	61,854	61,453	62,167	(15,646)	766,355	1,095,355	
	$ 939,391	610,391	**1,423,264**	**1,490,721**	**1,535,916**	**1,597,770**	**1,659,224**	**1,721,391**	**1,705,746**	**1,705,746**	**<-- Ending Fund Balance (projected)**	

Expenses Detail Category			Biennium 21-23 Expense Allotments	Actual Expenses through FM18 Dec-2022	Projected FM 19 Jan-2023	FM 20 Feb-2023	FM 21 Mar-2023	FM 22 Apr-2023	FM 23 May-2023	FM 24 Jun-2023	Projected Expenditure Total	Projected Variance	
Salaries and Wages			**1,473,529**	**1,001,904**	**56,614**	**58,687**	**60,760**	**60,760**	**60,760**	**60,760**	**1,360,242**	**113,287**	
	A	Salaries and Wages	96,000	0							0	96,000	
	AA	State Classified	1,096,589	778,134	44,189	46,262	48,335	48,335	48,335	48,335	1,061,925	34,664	-2/16/2023 Emily Weston begins job
	AC	State Exempt	268,128	195,000	10,833	10,833	10,833	10,833	10,833	10,833	259,998	8,130	
	AE	State Special	12,812	10,688	587	587	587	587	587	587	14,210	(1,398)	
	AU	Overtime and Call-Back		18,082	1,005	1,005	1,005	1,005	1,005	1,005	24,109	(24,109)	AU cost based on BITD avg
Employee Benefits			**516,755**	**330,705**	**19,235**	**20,192**	**21,147**	**21,147**	**21,147**	**21,147**	**454,720**	**62,035**	
	B	Employee Benefits	45,600	0							0	45,600	
	BA	Old Age and Survivors Insurance	84,217	60,028	3,411	3,540	3,668	3,668	3,668	3,668	81,651	2,566	
	BB	Retirement and Pensions	142,937	101,917	5,717	5,933	6,148	6,148	6,148	6,148	138,159	4,778	
	BC	Medical Aid & Industrial Insurance	8,193	5,176	269	286	303	303	303	303	6,943	1,250	
	BD	Health, Life & Disability Insurance	216,108	148,228	9,040	9,605	10,170	10,170	10,170	10,170	207,553	8,555	
	BH	Hospital Insurance (Medicare)	19,700	14,039	798	828	858	858	858	858	19,097	603	
	BK	Paid Family and Medical Leave		(12)							(12)	12	
	BV	Shared Leave Provided Annual Leave		1,305							1,305	(1,305)	
	BZ	Other Employee Benefits		25							25	(25)	
Professional Service Contracts			**0**	**48,225**	**0**	**0**	**0**	**0**	**0**	**0**	**48,225**	**(48,225)**	
	CA	Management and Organizational Services		48,225							48,225	(48,225)	No additional CA expenses anticipated. Vorsite expenses estimated at $28,860 Express Employment Services estimated at $15k
Goods and Other Services			**2,064,716**	**1,223,302**	**61,797**	**61,028**	**61,341**	**61,742**	**61,028**	**138,841**	**1,669,082**	**395,634**	
	E	Goods and Other Services	130,800	0							0	130,800	
	EA	Supplies and Materials	24,000	13,262	737	737	737	737	737	737	17,682	6,318	EA projection based on BITD monthly avg
	EB	Communications/Telecommunications	19,200	12,868	715	715	715	715	715	715	17,157	2,043	EB projection based on BITD monthly avg
	EC	Utilities	1,200	345							345	855	no utilities costs projected at this time
	ED	Rentals and Leases - Land & Buildings	72,000	39,396	2,233	2,233	2,233	2,233	2,233	2,233	52,794	19,206	$1,938/mo firefighter's building rent costs $295/mo Secure It Self Storage
	EE	Repairs, Alterations & Maintenance	24,000	35,615	495	495	495	495	495	495	38,583	(14,583)	Projection based on 25% of BITD monthly average, as it is assumed most tenant improvement costs for the new space have already been incurred.
	EF	Printing and Reproduction	12,000	12,981	721	721	721	721	721	721	17,308	(5,308)	EF projection based on BITD monthly avg
	EG	Employee Prof Dev & Training	24,000	12,883	716	716	716	716	716	716	17,177	6,823	EG projection based on BITD monthly avg
	EH	Rental & Leases - Furn & Equipment	12,000	9,031	502	502	502	502	502	502	12,041	(41)	EH projection based on BITD monthly avg
	EJ	Subscriptions	2,400	656	91	91	91	91	91	91	1,200	1,200	EJ projection based on half of Bi 23 allotment, as expenditures have been low this biennium
	EK	Facilities and Services	128,000	83,567	4,711	4,711	4,711	4,711	4,711	4,711	111,833	16,167	$3,019/mo SAFS $1,500/mo CMS (estimated) $127/mo DES Office Facilities $65/mo campus security starting July 2022
	EL	Data Processing Services (Interagency)	290,000	197,794	11,122	10,408	10,408	11,122	10,408	10,408	261,670	28,330	$1,410/mo CTS Allocations $31/mo CTS Services $64/qtr avg OFM Core Financials $650/qtr avg OFM Enterprise Systems Fee $17/mo DES Information Systems $8,950/mo CTS Desktop Support
	EM	Attorney General Services	365,000	190,699	10,594	10,594	10,594	10,594	10,594	10,594	254,265	110,735	EM projection based on BITD monthly avg.
	EN	Personnel Services	26,400	26,247	1,401	1,401	1,659	1,401	1,401	1,659	35,169	(8,769)	$1,378/mo Small Agency HR $23/mo DES Personnel Svcs $258/qtr OFM Personnel Services
	EP	Insurance	3,884	3,506	81	81	81	81	81	81	3,992	(108)	$81/mo DES Risk Management $1,020/yr Self Insurance Premium
	ER	Other Contractual Services	471,000	210,461	11,086	11,086	11,086	11,086	11,086	88,586	354,477	116,523	$10,000/mo est. misc DOL costs $1,000/mo estimated misc other costs $86/mo avg OFM Central Services $40k FY23 outreach modules (estimated) $25k FY23 question development (estimated) $12.5k FY23 OS Adhoc and Exam (estimated)
	EW	Archives & Records Management Svcs	432	318	55		55			55	483	(51)	$52/qtr archives
	EY	Software Licenses and Maintenance	456,000	373,107	16,233	16,233	16,233	16,233	16,233	16,233	470,505	(14,505)	$15,900/mo POLARIS FY23 (estimated) $300/mo CTS Services $33/mo Adobe
	EZ	Other Goods and Services	2,400	566	306	306	306	306	306	306	2,400	0	EZ projection based on Bi 23 allotment
Travel			**126,000**	**38,541**	**4,300**	**4,300**	**4,300**	**4,300**	**4,300**	**4,300**	**64,343**	**61,657**	Travel projection based on 50% of Bi 23 allotment, with the exception of GG out of state air transportation which is baed on BITD monthly avg. Travel expenditures have been low this biennium.
	GA	In-State Subsistence & Lodging	36,000	16,786	202	202	202	202	202	202	18,000	18,000	
	GB	In-State Air Transportation	16,800	5,922	413	413	413	413	413	413	8,400	8,400	
	GC	Private Automobile Mileage	36,000	5,860	2,023	2,023	2,023	2,023	2,023	2,023	18,000	18,000	
	GD	Other Travel Expenses	16,800	3,272	855	855	855	855	855	855	8,400	8,400	
	GF	Out-Of-State Subsistence & Lodging	7,200	2,257	224	224	224	224	224	224	3,600	3,600	
	GG	Out-Of-State Air Transportation	7,200	3,707	206	206	206	206	206	206	4,943	2,257	GG projection based on BITD monthly avg
	GN	Motor Pool Services	6,000	738	377	377	377	377	377	377	3,000	3,000	
Capital Outlays			**48,000**	**101,454**	**564**	**20,564**	**564**	**564**	**564**	**564**	**124,836**	**(76,836)**	
	JA	Noncapitalized Assets	24,000	101,454	564	564	564	564	564	564	104,836	(80,836)	Monthly JA purchases projected to be just 10% of BITD avg, as it is assumed most purchases have already occurred.
	JB	Noncapitalized Software	24,000	0							0	24,000	
	JC	Vehicles				20,000					20,000	(20,000)	$20,000 acquisition of vehicle
Grants, Benefits & Client Services			**0**	**1,505**	**0**	**0**	**0**	**0**	**0**	**0**	**1,505**	**(1,505)**	
	NZ	Other Grants and Benefits		1,505							1,505	(1,505)	
Total Dollars			**4,229,000**	**2,745,635**	**142,510**	**164,771**	**148,112**	**148,513**	**147,799**	**225,612**	**3,722,952**	**506,048**	

Communication Report

February 2023
Vancouver Board Meeting
Greg Schieferstein

Current/Upcoming Projects

Communication Task Force – Development of a Task Force to turn our Board Mission and Goals into an actionable and measurable, long-term Strategic Communication Plan. First, steps include decisions on task force membership and a clear understanding of mission/goals/objectives with timelines.

- audit what has been done/currently being done
- identify target audiences and their contexts
- develop clear and easy-to-understand key messages
- define mediums for integrated communication, engagement and education
- identify a ready bench of messengers on key topics

Vehicle Purchase – Investigating possibility of purchasing a new AWD hybrid van for agency use. Logistics of renting from the motor pool is a challenge and purchasing a used vehicle from state surplus would be unreliable. Working on a state waiver for all electric, because of charging station availability and reliability.

NCEES Ambassadors – a pilot program in the early stages, to promote licensure interest in up-and-coming engineers and land surveyors. This is a component of the overall communication plan.

Website - Thank you for emailing your website input. We have comments from board members, some of their staff and Board staff. WaTech is very slow in development and we're not too late for adjustments or additions.

2023 Calendar – two dates to bring to your attention:

- American Public Works Association conference, Tacoma, Wed April 26 & 27th
- St. Martins Class Visit, March 22nd (Ken and Greg)

PEAR (Pro-Equity Anti-Racism) project - awaiting next instructions from the state and assignment of small agency staff help, which we agreed to pay for ($3,500). I attended a required day long "Equity Summit" or rally, November 30th.

Completed Projects

City Engineer Workshop – sponsored by eCityGov mybuildingpermit.com alliance and the City of Bellevue. Marjorie Lund and Ken Fuller were speakers. We'll have a Journal article with pictures.

WOSSA – Updated/produced On-Site PowerPoint. Ric Wilkerson Bob Suggs and Rich Larson presented. Also, upcoming Journal article/pictures.

LSAW – Updated/produced PowerPoint, with upcoming Journal article/pictures.

NCEES – Promoted "Mechanical Engineers Survey" through Constant Contact – 4815 messages sent - 60.8% open rate.

Office Electronics – as discussed last meeting, I have improved our web conferencing, whiteboard and office monitors.

State of Washington
Board of Registration for
Professional Engineers & Land Surveyors

Regulatory Program Report
2/23/23

Current Items:

- Rulemaking
  - 196-09 Indexing rule language being drafted.
  - 196-12 CR101 filed. EQC working on draft language.
  - 196-26A & 196-30 Hearing 2/1/23 – Ex.Comm. reviewing comments & draft CES.
  - 196-29 CR101 filed. Survey Comm working on draft language.
  - 196-32 Hearing 1/25/23 – EQC reviewing comment & draft CES.
- Exam Development (Team: Rich, Vonna, Shanan)
  - Pending: Enter exam information into Scantron
  - Met with LS SMEs for 2-day workshop 2/2-3/23. Working on updating item bank. Next meeting TBD.
- Legislation
  - Tracking 14 bills
    - 6 licensing bills
    - 2 budget bills
    - 6 agency – administrative
- Public Records Requests:
  - 2023: 6 (as of 2/6/23)
  - 2022: 85
  - 2021: 63
  - 2020: 74 (Prior to February 1, 2020, DOL was processing our requests)

State of Washington
Board of Registration for
Professional Engineers & Land Surveyors

Investigation/Compliance Program Report

2/23/23

Current Items:

- PDH Audits
  - Project Team Assigned
    - Rich Larson/Vonna Cramer/Jill Short
    - Meeting scheduled with Polaris group and project team.
    - Met with Polaris group. This feature in Polaris is currently turned off due to a glitch. They are working on a fix.
    - Rich/Vonna/Jill will now be conducting a manual blind draw process of 1% of renewals for PLS and OS. Will measure results for approximately 6 months to determine results.
    - Template audit letters prepared.
    - Vonna in contact with Polaris team on different between PDH/CE

- Complaint Process/Tracking
  - Project Team Assigned
    - Jill Short/Ken Fuller/Rich Larson/Diane Gallagher
    - Team developed a step-by-step complaint process and determined times for completion during each status stage and notification/tickler points.
    - Team met with Diane Gallagher regarding capabilities and notification/tickler points.
    - Diane Gallagher will be putting together a process to present to the team by 2/13/23.

Completed Items:

- PLS Standards
  - Project Team Assigned
    - Aaron Blaisdell/Rich Larson/Jill Short
    - Project team met and discussed next steps.
    - Team determined next steps would be to look at each investigation on a case-by-case basis. If a CM determines charges are appropriate, the CM, board staff, and AAG will meet to discuss violations and appropriate sanctions.
    - The Advising AAG and Prosecuting AAG will be conducting a board training.
    - A document showing past violations and sanctions will be posted to the Board Resources SharePoint site.

State of Washington
Board of Registration for
Professional Engineers & Land Surveyors

Committee and/or Board Action Items:

- Board training by Advising and Prosecuting AAGs.
- A document showing past violations and sanctions will be posted to the Board Resources SharePoint site.

State of Washington
Board of Registration for
Professional Engineers & Land Surveyors

Licensing Program Report
February 23, 2023

Statistical Data

- ***Applications received****: 570 (12/1/2022 – 2/12/2023)*
  - Corp/LLC: 30
  - EIT: 124
  - LSIT: 15
  - PE: 333
    - Exam: 125
    - Comity: 208
  - SE: 49
    - Exam: 40
    - Comity: 9
  - PLS: 12
    - Exam: 8
    - Comity: 4
  - On-Site Wastewater: 7
    - Designer: 3
    - Inspector: 4

- ***New licenses issued*:**
  - *Corp/LLC*: 18
  - EIT: 58
  - LSIT: 1
  - PE: 139
    - Exam: 13
    - Comity: 126
  - SE:
    - Exam: 13 (from Oct 2022 exam)
    - Comity: 9
  - PLS: in between exams – next exam 3/24/23
  - OS: in between exams – next exam 3/24/23

- ***Total active licenses:***
  - PE: 27,327
    - SE: 1,795
  - PLS: 1,030
  - Corp/LLC: 1,514
  - On-Site Wastewater: 315
    - Designer: 213
    - Inspector: 102

Currently working on:

- **Special Projects**
    - PLS SME group
        - Uploading questions to Scantron
    - On-Site SME group
        - Scheduling review meetings for 2023
        - Obtaining new SME from east-side of the state
    - Monitor Polaris issues/bug
        - Polaris
            - DOL/BRPELS “bug” meeting: 7
                - Currently have 4 work items
                - Currently have 3 story items
    - Scantron – in progress
        - ParTest & Par Score training completed
        - Hardware installs completion scheduled
        - Uploading PLS SME approved question
    - Box cleanup – in progress

Completed items

- In person PLS SME meeting (2/2/23 – 2/3/23)
    - Domain breakdown and review - completed
    - In person meeting – completed
- LSAW data for Power Point completed
- FARB conference – Nashville, TN

State of Washington
Board of Registration for
Professional Engineers & Land Surveyors

Administration Program Report
02/23/23

Current Items:

- **Filling Temporary Office Assistant Position**
  - Started the hiring process for temporary Office Assistant 3 position.
  - Assists licensing staff, clerical/admin, and other duties as assigned.
  - Forecasting hiring to occur in Mid-March.

- **New Cubicle Space in BRPELS Office**
  - Need for an additional cubicle space for new hire and future office changes.
  - Furniture, cubicle walls, and other workspace items purchased through Correctional Industries.
  - Estimated delivery/install date: 04/27/2023

- **Psychometrician for PLS and OSW Examination**
  - Operational Validity Report - analysis of the tests' performance.
  - Item-writing Training.

Ongoing Items:

- **Develop BRPELS Training Process (W/ Vonna)**
  - Establish standard process of obtaining access to POLARIS for new or existing employees.
- **Agency Form Clean Up Project**
  - Categorize forms by program and create a master list.
  - Update Form Numbers (remove DOL agency #, logos, and misc. information).
  - Update Barcodes on licensing applications and forms.
- **Admin Policies – List & Reorg**
  - Develop and establish any missing policies.
  - Revise Layoff Policy for HR.
  - Create employee attestation regarding policies.

Completed Items:

- ✓ **Permanent Customer Service Specialist Position**
  - Emily Weston is hired! Start date: 02/15/2023
- ✓ **Document BRPELS Onboarding/New Hire Process**
  - Establish standard onboarding process specific to BRPELS.
- ✓ **SharePoint & MS365 Development**
- ✓ **Develop Standard Project Template**
- ✓ **Required Training & Additional Training**
  - Became The WA Learning Center (TLC) Admin for BRPELS.

- Apply Required Training Policy to align with state requirements (RCW, WAC, and SAAM).
- Obtained LinkedIn Learning license for BRPELS staff.

✓ **BRPELS ID Badges For Board Staff**

✓ **LeMay Mobile Shredding Services**
- Once every 2 months shredding services.

✓ **Team-Building Workshops with The Leneker Team**
- Final staff workshop: 01/24/2023
- Debrief with Ken and Rich: 01/26/2023
- Looking at options for follow-up sessions.

✓ **Admin Policies – List & Reorg**
- Tuition Reimbursement Policy, and Reimbursement Form sent to AAG Labor Relations Section Staff for review/recommendations.
- Admin Policy Template created for new policies.
- List and organize agency templates (examples from Accounting Board and DES).

FARB conference report-out

Licensing - Defense of Occupational Licensing. Government cannot regulate an occupation or profession unless it can be shown that regulation is for the protection of the public health, safety and welfare. *Dent v. West Virginia,* 129 U.S. 114 (1889).
Benefit of licensing – saves businesses & citizens money and time. The shortcomings in comity/reciprocity and issues with military & military spouses are being addressed in most states. Alliance for Responsible Professional Licensing (ARPL) is fighting against deregulation at national level.

Board member roles

- Don't speak for the Board or as a Board member to public audiences w/o Board authorization.
- Don't use status for personal gain.
- Know & comply with applicable laws and regulations (OPMA, Ethics, etc.)

2023 Legislation & policy trends

- Mobility
- Deregulation and least restrictive regulations. Are all regulations necessary for license? More judicial review options. (Protect Board efforts by following established procedures.)
- Ideas to change board composition and practices. One-size fits all. Less flexibility. Changing size of boards and adding public members.
- Boards now must defend existing rules & have burden of proof for why proposing a new rule.
- Montana - standardizing boards/professional licensing. 1. Standardize board member requirements - appointments, terms, qualifications. 2. Standardize application, issuance & renewal process, and create processes for provisional licensure. 3. Repeal about 60 statutes/enforcement provisions and replace with standardized penalties.

Provided a list of things a board and board staff should do before a lawsuit; preparing for a lawsuit; and, during a lawsuit.
Boards should consider getting away from the term "Voluntary Surrender" and use alternative language. Litigation in OH(?) brought by respondent that surrender of license wasn't really "voluntary."

Best practice for legislative relationships

- Boards and board staff need a clear understanding of scope of authority. Understand role – advocacy v. education
- You are the SME. Have reasons for changes written out – provide data & facts to back them up.
- Legislator/staff = Priority
- Be prepared but it is okay to say "I don't know…" Always own it – whether good, bad, or ugly.
- Meet with legislators when out of session.
- Transparency.

Open Public Meetings

- Reminder:
  - Be careful when sending texts or emails because you can achieve a quorum.
  - Any public business conducted on private phone or email is subject to public records laws.
  - 24-hour meeting notice posted.
- Establish procedures to receive public comment during public comment period at meetings.
- When meeting virtually, at the beginning of executive session, each member participating remotely in the executive session should state that no other person is present or able to hear the discussion at the remote location, unless that person has been approved by the board.

FARB conference report-out

Exam Security

Is there a formal security policy or plan? If not, one should be considered. The policy/plan should include language about prevention; detection; impact; and mitigation & remediation.

Boards should copyright their exam questions. In case of exam breach, it should allow you to recover monetary damages.

Non-Disclosure and Confidentiality Agreements are extremely important. Make sure these are adhered to.

Communicate security measures to test takers several times (include repercussions).

Exam materials (whether physical or digital) should be kept in one secure location with limited access. You need to plan for when a breach happens, not if. Top sources of exam breaches: social media, word of mouth & study courses, unauthorized materials used during exam, test take collusion, item dump sites.

ChatGPT

What is it? Generative Pre-Training Transformer, owned by OpenAI
Early indications are OpenAI ChatGPT, and similar platforms will be among the most disruptive technologies to emerge in assessments and learning.

It can write essays, poetry, ad copy, test items, recipes, computer code, and almost anything else you ask it to do.

ChatGPT can answer questions, and it has "passed" or scored high on some of the following exams:

- SAT, AWS Cloud Engineer exam (passed above certification level)
- USMLE, Torts and Evidence section of the US Bar Exam (passing scores)

AI-driven technologies pose both a threat and an opportunity for licensure and certification bodies.

Board Meeting

Tab 6

Other Business

6.1 Additional Public Comment

6.2 Upcoming Outreach and Events

6.3 Action Items from this Meeting

6.4 Agenda Items for Next Meeting

2023 BRPELS EVENTS

JANUARY

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

MARCH

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

MAY

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JUNE

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
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JULY

SUN	MON	TUE	WED	THU	FRI	SAT
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AUGUST

SUN	MON	TUE	WED	THU	FRI	SAT
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SEPTEMBER

SUN	MON	TUE	WED	THU	FRI	SAT
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OCTOBER

SUN	MON	TUE	WED	THU	FRI	SAT
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NOVEMBER

SUN	MON	TUE	WED	THU	FRI	SAT
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DECEMBER

SUN	MON	TUE	WED	THU	FRI	SAT
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24	25	26	27	28	29	30
31						

IMPORTANT DATES

February

15-17 LSAW Conference – Spokane

22-23 Committee & Board Meetings – Vancouver

March

24 State Specific Exams

April

13-14 NCEES Structural Exams

14 Pacific Northwest ASCE Student Symposium, MSU Bozeman

17-21 & 27 Committee and Board Meeting, Olympia & Houston, TX

26-27 American Public Works Association – AWPA, Tacoma

27-29 NCEES Interim Zone Meeting, Houston

May

22 St Martins University Presentation, Lacey

June

21-22 Committee and Board Meetings – Tri-Cities

July

31 Fiscal Year 23 End

August

2-3 Committee and Board Meetings – Sea-Tac

15-18 NCEES Annual Meeting, Boston

September

22 State Specific Exams

October

18-19 Committee and Board Meetings, Spokane

26-27 NCEES Structural Exams

4-5 American Public Works Association – AWPA, Wenatchee

November

December

6-7 Committee and Board Meetings, Olympia

2023 State Holidays

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Board of Registration for Professional Engineers and Land Surveyors

Action Item List

Executive Committee

Date Assigned	Action Item	Assigned To	Status
-	-	-	-

Exam Qualifications Committee (EQC)

Date Assigned	Action Item	Assigned To	Status
2/17/21	Research options for the Law Review and State Specific exams to be administered through an alternate platform.	Ms. Cramer	In Progress
10/21/21	Review WAC 196-16 and 196-34 and consider adding language to address the issue of reporting PDHs when a newly licensed surveyor is audited within a year of obtaining their license.	Committee	Pending
~~12/08/22~~	~~Staff update language on the website, application & the FAQ reflecting board practice for experience granted during education process "No more than one year of experience will be granted for one calendar year." Clarification for changes made to WAC 196-12.~~	~~Board Staff~~	~~Complete~~

Practice Committee (PC)

Date Assigned	Action Item	Assigned To	Status
10/21/21	Review RCW 18.43 and determine next steps to address outcomes from recent litigation concerning the use of the word engineer and the practice of engineering.	Committee	In Progress
10/19/22	Mr. Schieferstein to add journal articles for licensees regarding reputation management.	Mr. Schieferstein	Pending
12/07/22	Ms. Lagerberg and Mr. Fuller to contact Sydney Muhle, Program Specialist Lead, for the Board's Section of Business & Professions Division, Department of Licensing about removing BRPELS information from the Guidelines for Building Officials currently on their website.	Ms. Lagerberg and Mr. Fuller	Pending

Survey Committee

Date Assigned	Action Item	Assigned To	Status
12/08/22	Mr. Fuller and Mr. Larson to work with DNR to discuss language changes for the filing of CR101 WAC 196-29.	Mr. Fuller Mr. Larson	In Progress
12/08/22	Mr. Blaisdell and Mr. Fuller to complete survey for NCEES EPS committee.	Mr. Blaisdell Mr. Fuller	Pending

On-Site Committee

Date Assigned	Action Item	Assigned To	Status
4/12/22	Compile OS Designer & Inspector pass/fail & reexam statistics over the last 5 years.	Ms. Cramer	In Progress

Board Staff

Date Assigned	Action Item	Assigned To	Status
10/20/22	Discuss and begin writing a Communication Action Plan for board review.	Mr. Fuller Mr. Schieferstein	In Progress
~~8/12/21~~	~~Check with DOL regarding limiting applicant/licensees' ability to change name in Polaris.~~	~~Ms. Cramer~~	~~Complete~~
3/3/22	Develop a Letter of Education and BAP alternative to present to the Board.	Mr. Fuller	In Progress
10/20/22	Mr. Schieferstein to provide outreach to licensees regarding general renewal information in the spring journal.	Mr. Schieferstein	In Progress
10/20/22	Ms. Cramer to provide licensing statistical data on an annual basis.	Ms. Cramer	Pending
12/08/22	Mr. Schieferstein to add article to the spring journal to clarify changes to WAC 196-12	Mr. Schieferstein	Pending
12/08/22	Mr. Fuller and Board Staff to begin the process of onboarding a new pro-tem board member.	Mr. Fuller Board Staff	In Progress

AGO

Date Assigned	Action Item	Assigned To	Status
4/21/22	Check with Mr. Pitel regarding facilitating a training with the Board.	Ms. Lagerberg	In Progress
6/15/22	Work with staff and Mr. Pitel to review "Standard of Care" in the industry to outline an objective process of what errors or how many errors may trigger moving forward with formal investigation/statement of charges for presentation at August board meeting.	Ms. Lagerberg Ms. Short Mr. Fuller	In Progress
12/02/22	Mr. Fuller, Ms. Lagerberg, and Ms. Short to research how the board may possibly pursue law enforcement action against unlicensed practice.	Mr. Fuller Ms. Lagerberg Ms. Short	In Progress

Tab 7

Adjourn Meeting