



**Municipality of Anchorage
Geotechnical Advisory Commission**

A G E N D A

Tuesday, February 28, 2023

Noon – 1:30 p.m.

**Regular Meeting
(Hybrid format)**

In-Person Physical Location

Training Room
Planning and Development Center
4700 Elmore Road
Anchorage, Alaska

or

via Microsoft Teams

[Click here to join the meeting](#)

[Download Teams](#) | [Join on the web](#)

Meeting ID: 281 381 470 902

Passcode: DZwiVw

or Join by Conference Call:

Dial-in Number: (907) 519-0237

Conference ID: 745 151 574#

- I. CALL TO ORDER
 - A. Establishment of Quorum
 - B. Disclosures
- II. MINUTES
 - A. January 24, 2023
- III. OLD BUSINESS
 - A. Port of Alaska Update
- IV. NEW BUSINESS
 - A. Seismic Hazard Analyses and Time Histories for Port of Alaska – Presentation by Ivan Wong, Lettis Consultants International, Inc.
 - B. Scope of Potential Project for Seismic Hazard Analysis and Mapping
- V. PERSONS TO BE HEARD (3-minute limit)
- VI. COMMITTEE REPORTS
 - A. Communications Committee
 - B. Hazard Mitigation Committee
 - C. Seismic Hazard Committee
- VII. OTHER BUSINESS
- VIII. STAFF REPORTS
- IX. ADJOURNMENT

Next Regular Meeting – March 28, 2023



Municipality of Anchorage
Geotechnical Advisory Commission

ACTION SUMMARY

Tuesday, January 24, 2023

12:00 Noon

Regular Meeting

Held Virtually in Microsoft Teams

I. CALL TO ORDER

The meeting was called to order at 12:03 p.m.

A. Establishment of Quorum

A quorum was present.

Present: Dennis Berry
Kyle Brennan, Vice Chair
Steven Halcomb
David Hemstreet
Cody Kreitel
Thomas Krzewinski
Keri Nutter
Amy Steiner
John Thornley, Chair

Staff: Tom Davis, Senior Planner, Planning Department
Wayne Bolen, Plan Reviewer, Building Safety, Development Services Department
Tim Huntting, Geotechnical Lab Manager,
Project Management & Engineering Department
Ross Noffsinger, Engineering Services Manager, Development Services Department

Guests: Steve Ribuffo, Director, Port of Alaska
John Daley, PAMP Engineer Manager, Port of Alaska

B. Disclosures

No disclosures.

II. MINUTES

A. December 27, 2022

Commissioner Steiner moved to approve the December 27, 2022 minutes as drafted. *Commissioner Brennan* seconded.

The following corrections were suggested by meeting participants:

- A correction to a misspelling of Cody Kreitel's last name.
- A correction on page 2, second to last paragraph, to clarify that John Daley stated it is possible to use the standard in ASCE 61-23 without modifications and meet an acceptable professional standard of care and be consistent with industry standards for ports, but that the Port is okay using controlled and repairable damage for the Design Event.

The December 27, 2022, minutes were approved unanimously as amended above.

III. OLD BUSINESS

A. Port of Alaska Update

Chair Thornley explained that this item is for GAC to follow up from the January 10 work session held at the Port. The first discussion for this business item is to determine what format the GAC should use to share its recommendations, either as a letter or a resolution. He reported that Assembly Member Christopher Constant requested a resolution and expressed interest in holding an Assembly work session regarding GAC recommendations for PAMP Terminal 1 and 2 performance requirements. A resolution is the required format per GAC Rules of Procedure (Article II, Section 9) and is the most effective communication protocol with the Assembly. Commissioners discussed and agreed to share GAC recommendations by a resolution.

Chair Thornley asked the Port staff when the resolution was needed. *John Daley* responded that the Port is currently searching for a designer of record for the terminals, so a resolution in the February-to-March timeframe would be preferable.

Chair Thornley asked Mr. Daley when ASCE 61-23 might be formally approved. *John Daley* responded that it is in the review process, and there is a push to get it done. He does not yet have a timeframe except that it will be sometime in 2023, but he will ask for a status at the February meeting of the ASCE 61 Committee. The ASCE 61-23 draft is on a database file system that Mr. Daley will retrieve and get to Mr. Davis for sending to commissioners.

Chair Thornley announced that one of the authors of the ASCE 61-23 report, Ivan Wong, is scheduled to deliver a presentation to the GAC at the February 28 meeting.

Chair Thornley discussed key topics for the resolution and shared a working draft letter of GAC recommendations on-screen. He offered to edit the points in the letter based on the discussion. The draft letter recommends using “controlled and repairable damage” as the performance level for the Design Event, supplemented by five bulleted additional considerations to be included in the PAMP design and long-term operations at the Port. He summarized the thinking behind GAC’s 2014 recommendations—primarily that the Port restore functionality within a short period of time after the Design Event. The ASCE definition of the “controlled and repairable damage” performance level has been clarified for the GAC to indicate that, although “controlled and repairable damage” anticipates damage and loss of serviceability from the Design Event but not a complete failure. Port will be partially usable after the Design Event. He also went over the five additional considerations for pre-Event planning and preparation in the working draft letter, which are based on ASCE language.

Commissioner Brennan asked the Port staff if the Port has an emergency response plan and infrastructure already in place to support the bulleted additional considerations in the draft letter that involve emergency preparedness steps.

Steve Ribuffo responded that the Port’s role after a Design Event is to conduct a damage assessment and it may be limited to reporting to an overall governmental emergency response command and help get the facility back up and running in context of an overall response. Port users have their own emergency response plans and are responsible to inspect their own facilities from the valve yard to terminals and report to the Port, which is responsible for inspecting other parts of the Port facility. Therefore, the Port’s current focus is to build mitigation into the PAMP design, rather than depend on a specific emergency response action plan.

John Daley added that the Port carried out a dress rehearsal in 2018 conducting a facility inspection/assessment and that it has term contractors in place to carry out a damage assessment. Some damage may take time to assess, depending on what part of the year a Design Event may occur (e.g., winter).

Commissioner Brennan suggested adding language describing what “serviceability” means in terms of Port operations, and what types of damage are acceptable. He asked for input on what that “serviceability” and acceptable damage is from the Port and other commissioners.

Commissioner Berry responded that it will be difficult to quantify what damage is acceptable and questioned the practicality of the last bulleted consideration in the working draft letter. He supported the draft bullets as presented. Commissioners discussed what the Commission should recommend that can be clear while avoiding being overly precise, unreasonable, impractical.

Chair Thornley suggested reaching out to the ASCE 61 committee and explain the conditions specific to Anchorage to see what the committee might suggest.

Steve Ribuffo and *John Daley* recommended avoiding recommending details such as “50%” serviceable, which some readers may interpret as picking one terminal’s users over the other terminal’s users and may be unactionable given the unpredictability of actual Design Events.

Instead, pick a design category based on an acceptable level of risk. They did not have objections to the bulleted considerations recommended in the draft letter.

Commissioner Hemstreet recommended referencing ASCE 61-14 instead of a draft version of ASCE 61-23. ASCE 61-14 is adequate for what the GAC needs to accomplish. He added that the GAC recommendation should be simple and avoid requiring an emergency response plan.

Chair Thornley asked commissioners to review the working draft letter individually before the February GAC meeting and the anticipated Assembly work session and plan to discuss more.

IV. NEW BUSINESS (*none*)

V. PERSONS TO BE HEARD (3-minute limit) (*none*)

VI. COMMITTEE REPORTS

A. Communications Committee

Commissioner Nutter reported that the Communications Committee will continue its efforts to reach out to meeting guests, agencies, and officials. One of the objectives for 2023 is still to encourage GAC attendance or comment at Planning and Zoning Commission meetings. The Committee anticipates losing two of its members and so could use two other commissioners to join it.

B. Hazard Mitigation Committee

No report.

C. Seismic Hazard Committee

Chair Thornley reported that the USGS is planning to do presentations or workshops at its annual Seismological Society of America meeting being held in April in Puerto Rico.

VII. OTHER BUSINESS (*none*)

Commissioner Brennan noted a staff report from the December GAC meeting minutes about a public concern with the Kincaid Bluff. He reported that he has been working with the municipal Parks and Recreation Department on this issue. The cracking began this past fall after a rain event, although there had been tension cracking from the 2018 Earthquake. *Commissioner Brennan* has also been appointed to the States Geologic Mapping Advisory Board. He is available to respond to any questions on either item.

VIII. STAFF REPORTS

Tom Davis reported that the Assembly passed an emergency ordinance to extend by another 60 days the terms of municipal commissioners who have not been reappointed. This is in addition to the 120-day extension past mid-October. As a result, Commissioners Berry, Brennan, and Hemstreet will remain commissioners through February and March, until mid-April.

Tom Davis reported that the member of the public who had expressed concerns about the Kincaid Bluff sent additional photos of the cracks in the bluff slope.

IX. ADJOURNMENT

Commissioner Brennan moved to adjourn. *Commissioner Hemstreet* seconded.

The meeting adjourned at 1:16 p.m.

Site-Specific Seismic Hazard Analyses and Development of Time Histories for the Port of Alaska

**Ivan Wong, Nora Lewandowski, Brian Gray,
Nesrin Yenihayat, Qimin Wu, and Arash
Zandieh**

Lettis Consultants International, Inc.

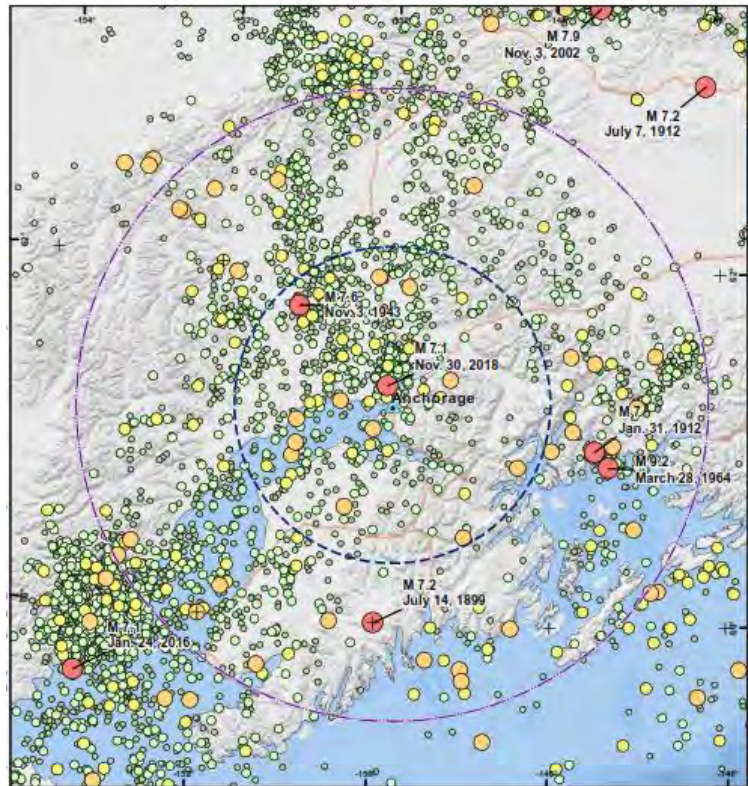
1000 Burnett Ave., Suite 350
Concord, CA 94520



**Meeting of the Geotechnical Advisory Commission
Anchorage, Alaska**

28 February 2023

Final Report Site-Specific Seismic Hazard Analyses and Development of Time Histories for the Port of Alaska



Prepared for:

Jacobs

Prepared by:

Ivan Wong, Nora Lewandowski, Brian Gray, Nesrin Yenihayat, Qimin Wu,
and Arash Zandieh

Lettis Consultants International, Inc.

1000 Burnett Avenue, Suite 350
Concord, CA 94520



14 December 2022



Municipality of Anchorage
Planning Department
Memorandum



Date: February 28, 2023
To: Geotechnical Advisory Commission
From: Tom Davis, AICP, Senior Planner
Subject: Scope of a Potential Project for Seismic Hazard Analysis and Mapping

The Municipality of Anchorage (MOA) has applied for a CDBG Disaster Recovery (DR) grant of \$750,000 to update seismic hazard mapping within the inhabited communities of the MOA. The Project Management & Engineering (PM&E), GIS, Planning, and Development Services Departments collaborated to submit the general project scope shown on the next page.

If the Municipality is awarded the grant, these agencies will form a working group to carry out the project with the assistance of professional consulting services and with the advice of the Geotechnical Advisory Commission. Tim Huntting would lead the agency working group with assistance from Tom Davis.

The general project scope shown on the next page is very broad for the purposes of the grant application submittal. A specific scope that identifies and prioritizes what kinds of hazard data, data collection tasks, and products needs to be determined. The project may include organizing existing data into an integrated spatial data application. It may include updating or expanding certain spatial data.

The agency working group requests guidance from the Geotechnical Advisory Commission in establishing requirements for deliverables, identifying specific tasks required to produce those deliverables, and developing specifications for a scope of services for contracting professional consulting services that are consistent with the stated goals to determine the most useful kinds of seismic hazard spatial data to collect, update, and map; and the products such as databases, reports, and/or mapping applications.

GENERAL PROJECT SCOPE:

Seismic Hazards Analysis and Mapping with Building Code Update for the purpose of updating seismic hazard spatial data used by the Municipality of Anchorage (MOA) and other agencies.

Description: This project includes geological/seismic hazard mapping and data integration and acquisition for seismic hazard mitigation activities. These updates will enable the MOA Development Services Department to revise the Anchorage Building Code (Title 23) such as code provisions to identify where geotechnical investigations would be required. This project may educate the public on the seismic zones and geological hazards within MOA by creating a website to clarify code requirements for communities by an advisory committee for overall communication review and guidance.

This project includes updating the seismic hazard data within the inhabited communities of the Anchorage Bowl, Chugiak-Eagle River, Turnagain Arm communities, and Girdwood, and evaluating structures and site development characteristics in each area. It will include research of all published geology, seismology, groundwater, and geotechnical reports applicable in the MOA communities. Examples of data that may be utilized includes:

- MOA soil boring data
- MOA geotechnical reports (site specific locations and PDF reports)
- MOA INFOR – November 2018 Earthquake building status
- MOA seismically induced ground failure hazard mapping (c. 1979 Harding-Lawson Report)
- USDA soils data
- USGS surficial geology
- Sheer wave velocity mapping

Deliverables

1. GIS data and maps (static and interactive), available on the MOA website for the public.
2. Final technical report document(s), including recommended next actions to be taken by the MOA.
3. Potential updated Building Code regulations with respect to seismic hazards.
4. Public outreach and engagement, including meetings with the Geotechnical Advisory Commission, Building Board, Planning and Zoning Commission, and Anchorage Assembly.

Goals: This project will increase knowledge and awareness by decision-makers in private- and public-sector development to reduce risks to public health, safety, and welfare from geological hazards, as follows:

- Improve accuracy, amount, integration, public access, and awareness of seismic hazard data identifying areas of geological hazard and relevant geological and soils characteristics in the inhabited areas of the MOA, and provide a data platform that can be expanded in the future to map other natural hazards.
- Inform infrastructure investments, private development decision-making, and MOA decision-making regarding proposed developments and area plans.

Timeline: July 2023 – December 2026.

Budget: \$750,000. The budget amount available to perform the actual work will be less.