



**Municipality of Anchorage  
Geotechnical Advisory Commission**

**A G E N D A**

**Tuesday, July 23, 2024  
12:00 Noon – 1:30 p.m.**

**Regular Meeting  
(Hybrid format)**

**In-Person Physical Location**

Planning Conference Room 170  
Planning and Development Center  
4700 Elmore Road  
Anchorage, Alaska

**via Microsoft Teams**

[Click here to join the meeting](#)

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

**Meeting ID: 238 552 937 650, Passcode: rSL6pw**

**Or call in (audio only): +1 907-519-0237**

**Conference ID: 309 649 142#**

**I. CALL TO ORDER**

- A. Establishment of Quorum
- B. Disclosures

**II. MEETING SUMMARIES**

- A. June 25, 2024

**III. OLD BUSINESS**

- A. Scope of Potential Project for Seismic Hazard Analysis and Mapping
- B. Letter of Support for Strong Motion Instrumentation at Port of Alaska Terminal 1
- C. Update on Academic Research on Building Code (Daniel King)
- D. Geopier Site Visit (Commissioner Halcomb)

**IV. NEW BUSINESS**

- A. South Addition Neighborhood Plan Hazard Mitigation Discussion  
(Tom Davis & Karlie Lamothe, Long-Range Planning)

**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 – August 27, 2024**



**Municipality of Anchorage  
Geotechnical Advisory Commission**

**A G E N D A**

**Tuesday, June 25, 2024**

**12:00 Noon – 1:30 p.m.**

**Regular Meeting**

**(Hybrid format)**

**Planning Conference Room 170**

**4700 Elmore Road**

<b>Commissioners</b>	<b>MOA Staff</b>	<b>Guests</b>
<ul style="list-style-type: none"> <li>• Dennis Berry (<i>Excused</i>)</li> <li>• Kyle Brennan</li> <li>• Steven Halcomb, Vice Chair</li> <li>• David Hemstreet</li> <li>• Cody Kreitel (<i>Excused</i>)</li> <li>• Keri Nutter</li> <li>• Amy Steiner</li> <li>• John Thornley, Chair</li> </ul>	<ul style="list-style-type: none"> <li>• Daniel Mckenna-Foster, Long-Range Planning</li> <li>• Susan Perry, Long-Range Planning</li> <li>• Ryan Yelle, Long-Range Planning</li> <li>• Amanda Loach, Office of Emergency Management</li> <li>• Daniel King, Development Services</li> <li>• Wayne Bolen, Development Services</li> </ul>	<ul style="list-style-type: none"> <li>• John Daley, Port of Alaska</li> <li>• Colin Maynard, Alaska Seismic Hazard Safety Commission</li> </ul>

**I. CALL TO ORDER**

**A. Establishment of Quorum**

**B. Disclosures**

**Chair Thornley** explained that he might recuse himself over old business item D.

**Chair Thornley** proposed moving new business item A. “Port of Alaska Progress Report (*John Daley*)” to the top of the agenda. All agreed.

**II. MEETING SUMMARIES**

**A. May 28, 2024**

**Commissioner Steiner** moved; **Commissioner Nutter** seconded. Passed unanimously.

**III. OLD BUSINESS**

**A. Scope of Potential Project for Seismic Hazard Analysis and Mapping**

No updates available

**B. Discussion: AMC 23.85.R401.4 Soil Tests – Existing Amendment Regarding Seismic Hazard Zones 4 and 5**

**Daniel King** provided an overview of progress on this project and invited Commissioners to join the code committee that would look at these questions. The GAC discussed limiting up to triplexes based on square footage, but the actual risk may be more closely related to something else. Geometry (length/width) might be more important than square footage.

Perhaps property owners could obtain a letter of acceptance from an engineer. Daniel King recommends not removing criteria.

**C. Discussion: Letter in Support of a Statewide, Enforceable Building Code**

- **Information on Connecting with the Statewide Liaison, Colin Maynard (Commissioner Berry)**

**Colin Maynard** explained that the concept didn't pass. It might come back next year. **Daniel King** mentioned that there will be research coming out on how different areas fared with and without building codes. Discussion of the GAC waiting until the next legislative session for writing a letter. **Commissioner Hemstreet** moved to write a standing letter in support. **Commissioner Steiner** seconded. Discussion. GAC generally agreed to keep this in mind for slow agendas.

**D. Discussion: Letter of Support for Strong Motion Instrumentation at Port of Alaska Terminal 1**

**Commissioner Thornley** recommended postponing it to the next meeting.

**IV. NEW BUSINESS**

**A. Port of Alaska Progress Report**

**John Daley** provided an overview of port projects, costs, and methods of upgrades at the Port of Alaska.

**V. PERSONS TO BE HEARD (3-minute limit)**

**VI. COMMITTEE REPORTS**

**A. Communications Committee**

The committee is now busy and needs more people. The committee will develop a statewide residential code letter (advocating for having a residential code *and* enforcing it), a strong-motion-instrumentation-at-the-Port letter, and will send Transit a thank-you note.

**B. Hazard Mitigation Committee**

No reports. **Amanda Loach** mentioned that the MOA will be getting a new Hazard Mitigation Planner.

**C. Seismic Hazard Committee USGS and EERI Workshop, June 26, 2024**

**VII. OTHER BUSINESS**

**Commissioner Halcomb** mentioned that Geopiers were going in at the FedEx facility and invited the GAC and staff to do a site visit in August.

**VIII. STAFF REPORTS**

**IX. ADJOURNMENT**

**Commissioner Hemstreet** moved to adjourn; **Commissioner Nutter** seconded. Adjourned at 1:19 pm.



# Municipality of Anchorage

## Planning Department

### Memorandum



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**Date:** July 23, 2024

**To:** Geotechnical Advisory Commission

**From:** Tom Davis, Senior Planner, Long-Range Planning Division  
Karlie Lamothe, Senior Planner, Long-Range Planning Division

**Subject:** Draft Provisions regarding Seismic Hazards the South Addition Neighborhood Plan

Planning staff preparing a draft *South Addition Neighborhood Plan (SANP)* request advisory feedback from the GAC regarding the earthquake and seismically induced ground failure hazard in South Addition, policies to guide future land use and development decisions mitigating this hazard, and a checklist of implementation strategies/actions.

The feedback from GAC may be verbal in the regular GAC meeting or in a letter or resolution, at your preference. Staff will use the feedback to refine or revise the draft provisions for inclusion in a public hearing draft *SANP*. The Planning Department will release the public hearing draft plan in September and then submit it along with a memo of staff recommendations to the PZC and Assembly for public hearings. The Assembly will take final action to adopt the *SANP* as an element of the Municipality's *Comprehensive Plan*. The *SANP* is a standard, area-specific land use, infrastructure, and urban growth plan. It will refine/update the guidance of the *Anchorage 2040 Land Use Plan* within its neighborhood planning area. It coordinates with the other area-specific plans such as adjoining *Downtown District Plan* and *Fairview Neighborhood Plan*.

#### **1. Working Draft Section to Summarize the Hazard and its Implications**

The "current conditions" chapter of the draft *SANP* includes a section called "Natural and Technological Hazards," which provides a summary assessment of the hazards that affect South Addition and their implications for planning. The working draft section covers most of the hazards identified in the Municipality's April 2022 *All-Hazards Mitigation Plan*. It draws most of its content from the *All-Hazards Mitigation Plan*. This section is intentionally brief but informational for educating the public regarding the hazard and typical ways to mitigate that hazard and avoid unnecessary risk to life and property.

Following (on pages 2 to 4) for GAC review and comment is an excerpt of the passages that address earthquakes and ground failure. Some questions for GAC:

- 1. Does the section convey the nature, severity, and probability of the hazard?**
- 2. Is the nature or severity of Ground Failure Hazard Zone 5 in western South Addition different from other areas within Zone 5 around Downtown because its topography is more level?**
- 3. GAC comments on the list of land use policies and strategies and hazards map at the end?**

## Section 3.10. Natural and Technological Hazards

The Municipality of Anchorage is vulnerable to a wide range of natural, technological, and societal hazards, a number of which are more prevalent in South Addition due to geographical location and soil structure. These hazards have the potential to endanger the health and safety of the South Addition and greater population as well as harm the economic and environmental vitality of the region.

The Disaster Mitigation Act of 2002 requires that local governments have a mitigation plan approved by the Federal Emergency Management Agency, which is the Municipality’s All Hazards Mitigation Plan Update, henceforth referred to as the “All Hazards Plan.” The All Hazards Plan has both natural and technological hazards mapped in a *Hazard Probability and Priority Ranking Chart for the Municipality of Anchorage*, which summarizes the probability of any given hazard with its priority ranking and impact.

This section provides an assessment of natural hazards and technological (human-made) hazards local to South Addition or that affect South Addition, and the mitigation assets and strategies currently in place. It concludes with a listing of goals and strategies for consideration in neighborhood planning. Information from this section supports the integration of hazard mitigation into the policy goals and implementation strategies of this Plan.

### Natural Hazards

Natural hazards are unexpected or uncontrollable events caused by nature, such as earthquakes, floods, or volcanic eruptions. While natural, the impact of these hazards can be exacerbated by human development and changes to the landscape.

#### **Earthquake and Ground Failure**

The active geology of Alaska guarantees that earthquakes will be a continuous part of life in Anchorage, and while earthquakes cannot be predicted, scientists can estimate where large earthquakes will do the most catastrophic damage. Earthquakes have a higher potential for injuries and fatalities than many of the other hazards present in the Municipality. Secondary hazards including tsunamis, landslides, and seismically induced ground failure are a major concern for the South Addition planning area specifically.

The *Hazard Probability and Priority Ranking Chart for the Municipality of Anchorage* ranks that minor earthquakes have a high probability, occurring every 1-4 years, and that severe earthquakes have a low probability, at 11-100 years. This study defines minor earthquakes as having a negligible impact, in minor injuries, no deaths, and less than 10% property damage; severe earthquakes have a catastrophic impact, with more than 50 deaths/injuries, and more than 50% property damage.

The Harding-Lawson Map ([\*Harding-Lawson Associates Maps Geotechnical Hazards Assessment Study, June 1979\*](#)) provides a definition of zones that are sensitive to seismically induced ground failure. There are several areas within South Addition that are within Seismic Ground Failure Zones 4 and 5, High Ground Failure Susceptibility and Very High Ground Failure Susceptibility, respectively, as shown on Map 10. These include areas with fine-grained geological conditions within the vicinity of steep slopes and areas of previous seismically-induced landslides. The areas

within Zones 4 and 5 have a hazard of all types of seismically-induced ground failure, including liquefaction, translational sliding, lurching, landspreading, cracking, and subsidence.

Additionally, a significant portion of South Addition is in the Bootleggers Cove Special Landslide Hazard Area, which is a deep transitional landslide hazard. Landslides can also trigger secondary effects and hazards, such as flooding, tsunamis, and seiches.

Unreinforced masonry buildings are at a higher risk to earthquake damage than wood framed buildings. Modern building codes and construction materials and methods also reduce the severity of earthquake damage to structures and property value. Human activities that trigger landslides are usually associated with construction, such as grading, which alters the slope of an area. Changing drainage patterns, groundwater level, or surface water can also increase the risk of landslide.

## Hazard Mitigation Assets and Strategies in Place

This subsection describes the current public facility assets in the neighborhood, mitigation strategies or programs in place, and the importance of hazard mitigation and preparedness.

### **Assets**

Central Middle School, located in South Addition, is identified as a shelter by the All Hazards Plan. There are no emergency services located within South Addition. The nearest AFD Fire Stations are Station 1 at 122 East 4<sup>th</sup> Avenue and Station 5 at 2207 McRae Road.

The Emergency Operation Center at 1305 E Street is the central point at which all municipal departments and agencies coordinate the response to a major disaster, managed by the Office of Emergency Management. OEM provides a number of services including emergency updates, preparedness planning, mitigation, response, and recovery to the hazards mentioned in this section, and more detailed in the All Hazards Plan.

### **Preparedness and Mitigation Strategies in Place**

The All Hazards Plan outlines the mitigation strategy for all potential dangers that the Municipality faces, detailed below.

- Goal 1: Implement and maintain the MOA All Hazards Mitigation Plan
- Goal 2: Inform the community on the local hazards and ways to be prepared if a hazard event occurs.
- Goal 3: Increase the survivability and resiliency of municipal structures and functions for local hazards.
- Goal 4: Improve the resiliency of essential private sector functions.
- Goal 5: Land Use Planning: Develop land use regulations to reduce the hazard risk to the general population and property.
- Goal 6: Reduce the flood risk to the community.
- Goal 7: Emergency Management: Create and maintain a community where people and property are safe.
- Goal 8: Reduce the urban and rural wildfire risk.

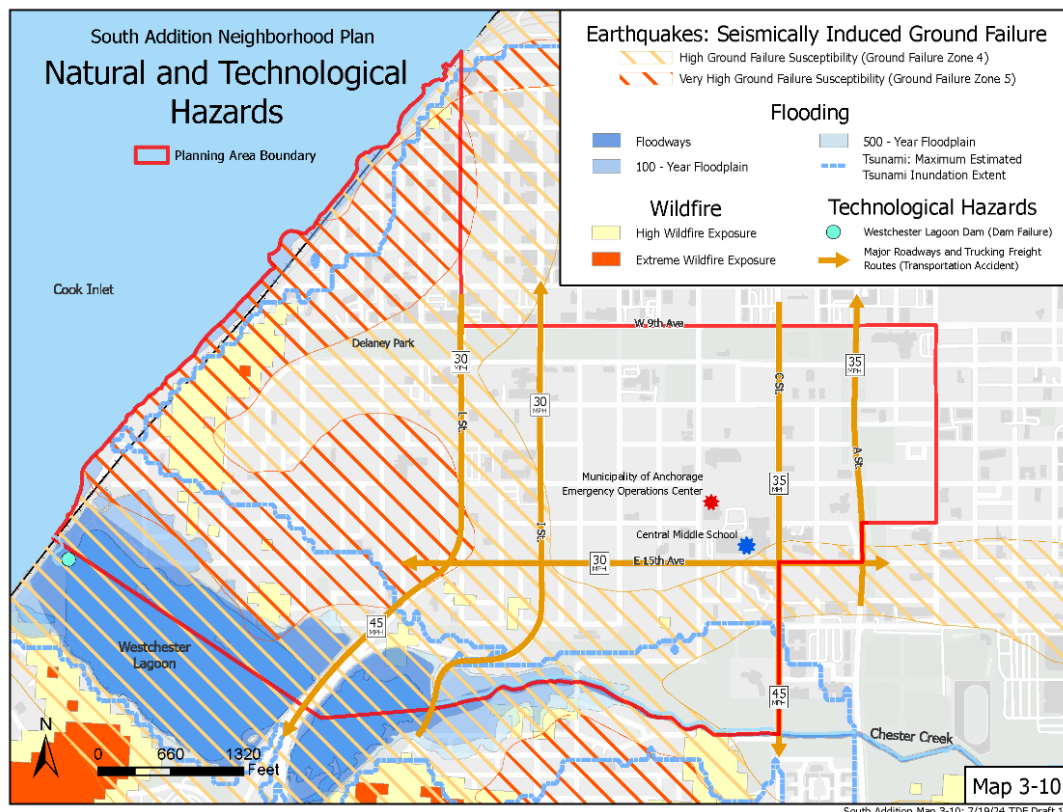
The goals that are most pertinent to the South Addition neighborhood planning area specifically are Goals 5, 6, and 8, items that can be addressed at a relatively small-scale in a realistic timeline.

Zoning and land use mitigation items that the All Hazards Plan recommends to address these goals are as follows:

- Prevent new development in hazard-prone areas.
- Preserve or establish low densities in hazard-prone areas.
- Open space preservation as a tool to keep existing open spaces in hazard-prone areas from being development.
- Acquisitions involving the purchase of property in high-risk areas.
- Maintaining building code requirements to ensure safe and resilient structures.
- Update hazard mapping (including dam, seismic, flood, and tsunami mapping).
- Conduct fire-wise home assessments.
- Develop an emergency response plan at the household level.

Existing land use related hazard mitigation strategies already in place in South Addition include:

- Existing zoning code requirements limiting development within floodway and floodplain areas along Chester Creek and Westchester Lagoon.
- Building code requirements for a geotechnical engineering study for proposed developments in Seismically Induced Ground Failure Zones 4 and 5.
- Zoning districts with relatively lower maximum allowed residential densities in some areas of South Addition in the Very High Seismically Induced Ground Failure Hazard (Zone 5).
- Vegetation buffers and limited access to major rail and highway transportation routes.
- Acquisition and retention of public lands and vegetated open space in flood-prone areas and along the coastline of South Addition.





## 2. Draft Goal and Objectives (Policies) for Hazard Mitigation

The following is the SANP’s draft Goal and Objectives regarding hazard mitigation from the chapter that establishes its policy guidance for future land use, development, and infrastructure decision making. The policy guidance below is generalized and provides guidance for the more specific checklist of implementation strategies and actions listed in the next section. This section has undergone a round of public review and comment.

### Goal 5: Neighborhood Safety, Resiliency, and Hazard Mitigation

Minimize vulnerabilities in South Addition to natural hazards and other hazards that could endanger public health and safety and economic vitality.

- **Objective 5.1** Incorporate the Goals and Objectives of the Municipality of Anchorage *All Hazards Mitigation Plan* in decisions affecting neighborhood land use, development, public investments, and services.
- **Objective 5.2** Guide the growth, development, and construction of housing, employment, public facilities, and other land use activities in ways that minimize risks to life safety and property from natural hazards.
- **Objective 5.3** Improve disaster preparedness of the South Addition community including its residents, businesses, and other organizations.

## 3. Draft Implementation Actions

The following three tables are excerpts of the SANP’s implementation chapter that creates a checklist of strategies and actions to respond to the natural hazards documented in the previous pages and help carry out the Goals and Objectives above. This part of the plan has undergone a round of public review and comment.

Neighborhood Led Projects and Actions – Safety, Resilience, and Hazard Mitigation			
Project or Action	Timeframe	Key Actors	Related Plans
5-1 Educate and inform South Addition residents about emergency preparedness related to earthquakes, wildfires, floods and other disasters as outlined in the MOA All Hazard Mitigation Plan	Short	SACC	All Hazards Mitigation Plan
5-2 Create a neighborhood emergency support and advocacy group to maintain emergency preparedness plans and participate in any updates to MOA plans related to hazard mitigation	Short	SACC	All Hazards Mitigation Plan
5-3 Create a communications network with neighbors to report outages to Chugach Electric and educate neighbors on the benefits of lighting and motion detectors.	Short	SACC	



Municipality Led Projects and Actions – Safety, Resilience, and Hazard Mitigation			
Project or Action	Timeframe	Key Actors	Related Plans
5-4 In discretionary land use decisions such as rezonings, zoning code amendments, conditional use approvals, and changes to the land use plan amendments, consider natural hazards and avoid locating more people and property in areas where they would be at most risk.	Short; Ongoing	Planning, OECD, PZC, Assembly	2020, 2040, AHMP
5-5 Amend the land use regulations to place limitations on critical and sensitive land uses such as public and community facilities, medical facilities, or high-density housing in areas with the greatest hazards for seismically induced ground failure and flooding.	Medium	Planning, OECD, PZC, GAC, Assembly	2020, 2040, AHMP, Seismic
5-6 Continue to update and revise the All Hazard Mitigation plan with specific recommendations for individuals and neighbors.	Medium	OEM	All Hazards Mitigation Plan
5-7 Educate individuals and businesses about hazards, disaster preparedness and mitigation	Short	OEM, DevServ, GAC, Planning	All Hazards Mitigation Plan
5-8 Increase the availability of supportive housing, shelters, and other needed social services in South Addition residents.	Medium	MOA	
5-9 Guide the growth, development, and construction of housing, employment, public facilities, and other land use activities in ways that minimize risks to life safety and property from natural hazards.	Medium	MOA	All Hazards Mitigation Plan

Collaborative Projects and Actions – Safety, Resilience, and Hazard Mitigation			
Project or Action	Timeframe	Key Actors	Related Plans
5-10 Reduce vehicle speeds on A and C Streets, and I and L Streets, to 20-25 MPH to make new roadway improvements to create a safe multi-modal street environment.	Medium	DOT&PF, Traffic	Downtown
5-11 Improve disaster preparedness of the South Addition community including its residents, businesses, and other organizations.	Medium	MOA, SACC	All Hazards Mitigation
5-12 Incorporate the Goals and Objectives of the Municipality of Anchorage All Hazards Mitigation Plan in decisions affecting neighborhood land use, development, public investments, and services.	Medium	MOA, SACC	