PLANNING COMMISSION REGULAR SESSION AGENDA
Monday, September 24, 2018 - 7:00 PM
City Hall, Council Chambers, 169 SW Coast Hwy, Newport, OR 97365

The meeting location is accessible to persons with disabilities. A request for an interpreter for the DEAF AND HARD OF HEARING, or for other accommodations for persons with disabilities, should be made at least 48 hours in advance of the meeting to Peggy Hawker, City Recorder at 541.574.0613.

The agenda may be amended during the meeting to add or delete items, change the order of agenda items, or discuss any other business deemed necessary at the time of the meeting.

1. CALL TO ORDER AND ROLL CALL

2. APPROVAL OF MINUTES

2.A Approval of the Planning Commission Work Session Meeting Minutes of September 10, 2018
Draft PC Work Session 9-10-18.pdf

2.B Approval of the Planning Commission Regular Session Meeting Minutes of September 10, 2018
Draft PC Minutes 9-10-18.pdf

3. CITIZENS/PUBLIC COMMENT
A Public Comment Roster is available immediately inside the Council Chambers. Anyone who would like to address the Planning Commission on any matter not on the agenda will be given the opportunity after signing the Roster. Each speaker should limit comments to three minutes. The normal disposition of these items will be at the next scheduled Planning Commission meeting.

4. ACTION ITEMS

5. PUBLIC HEARINGS

5.A 3-Z-18: Text Amendment for Extended Stay Hotels and Motels.
File 3-Z-18.pdf

5.B File 3-VAR-18 (Continued): Sign Variance for Pacific Communities Health District.
File 1-VAR-18.pdf

5.C File 1-GP-18-A: Appeal of Geologic Permit (File 1-GP-18) West of NW Spring St (Lincoln County Assessor's Tax Map 11-11-05-BC, Tax Lots 1800, 1900 & 1903)
File 1-GP-18-A.pdf

6. NEW BUSINESS

7. UNFINISHED BUSINESS

8. DIRECTOR COMMENTS

9. ADJOURNMENT

***Draft* MINUTES**
City of Newport Planning Commission
Work Session
Newport City Hall Council Chambers
September 10, 2018
6:00 p.m.

Planning Commissioners Present: Jim Patrick, Lee Hardy, Mike Franklin, and Jim Hanselman.

Planning Commissioners Absent: Bob Berman, Rod Croteau, and Bill Branigan (*all excused*)

PC Citizens Advisory Committee Members Present: Dustin Capri.

City Staff Present: Community Development Director (CDD) Derrick Tokos; and Executive Assistant, Sherri Marineau.

1. **Call to Order.** Chair Patrick called the Planning Commission work session to order at 6:00 p.m.

2. **Unfinished Business.**

3. **New Business.**

A. **Review DOGAMI's Tsunami Time and Distance Modeling Results.** Tokos introduced Laura Gabel with the Oregon Department of Geology. Gabel reviewed her PowerPoint presentation with the PC. She noted the four "Beat the Wave" products that would be coming out of the modeling: Evacuation Routes, Pedestrian Walking Speeds, Evacuation "Communities", and Tsunami Wave Arrival Time maps. She covered what could be done with the data.

Gabel reviewed the XXL Wave Arrival Maps for the different areas in Newport. She noted the time it took for waves to arrive in the different areas.

Gabel covered the landslide and liquefaction potential for the Bayfront. She noted all of the routes that were blocked with the understanding of previous maps and slopes in the area. She noted that lateral spreading of sand on Bay Blvd will make would cause the road to separate and make passing on the road difficult. Patrick thought that the City should punch some trails on right-of-ways that were undeveloped as evacuation routes and suggested Canyon Way. Franklin asked why they wouldn't encourage running. Gabel said there were concerns that yellow meant a slow walk and they were working on a version of a public interfacing map. This would not tell people to slowly walk. Franklin was concerned that a slow walk gave the false sense of safety. Hanselman was concerned with the use of yellow because some of the sections were heavily wooded and would have trees that would fall. He thought a slow walk wouldn't work because it would be shut off. Patrick thought the banks were steep enough for people to get outside of the hazard zone.

Jenny Demaris, Emergency Manager for the Lincoln County Sheriff's Office, addressed the PC and said that there would be multiple options for evacuating and noted that thirty minutes was the best case scenario. She said they needed to look for multiple evacuation routes incase ones were blocked. Demaris thought that having multiple routes was great news instead of having only one evacuation route. She said that these routes illustrated that people had enough time to evacuate instead of just giving up. Gabel said the work illustrated areas that needed improvement and the XXL Map was used to illustrate the largest tsunami instead of what it could be, which would likely be much lower. Patrick asked if there were any lateral faults that were closer. Gabel said yes and it was more of an academic thing rather than what they were focused on. Demaris said they had instant notification for earthquakes and would know if it wasn't a subduction earthquake. Emergency management would push the messages quickly to let people know there wasn't a tsunami. Gabel said that what Demaris was talking about was an onshore earthquake and was not in the subduction zone.

Gabel reviewed the Hatfield Marine Science Center evacuation zone scenario maps next. She noted the liquefaction map scenario and how it made surfaces much more difficult to walk on and would mean running to evacuate. Gabel noted that the evacuation of the Aquarium facility wasn't factored into the scenarios. She said it highlighted that they needed to get rid of as many obstructions to increase the ability to evacuate.

Patrick asked how the docks would hold up in a tsunami and asked if someone could evacuate on a boat. Gabel said there wasn't enough time to evacuate on a boat and thought they would need to get out at least 100 fathoms or around 2 miles to be safe. She said the wave arrival times would be included up the river to Toledo. Franklin asked if there were evacuation options of Bay Road. Gabel said the thought was that the road would most likely fall into the Bay if an

earthquake happened and thought that people caught on the road could scramble up the hill out of the tsunami zone. Gabel thought that the docks would be a difficult area to evacuate and it was hard to get out of a boat if pilings were bent. She thought it would be a good idea to talk to NOAA to see what sort of plans they had in place. Demaris said NOAA was very dialed in. She said that one idea for the dock was to retrofit them to be taller so they could rise with the water and not float away.

Gabel noted that the OSU MSI vertical evacuation structure changed the evacuation time in the area. Capri asked in terms of liquefaction, did they take into account that routes would be gone completely. Gabel said there was no way to guess what would be impassible. Capri asked what tsunami level the OSU MSI evacuation building would be built to. Gabel said their tsunami force was engineered to a strong degree and the height was built as high as an XXL.

Gabel asked for ideas from the PC. Tokos asked how they discounted for facilities like the Aquarium. Gabel said there was 10 minutes taken off to allow for the shaking to stop and to get out to the nearest street. She thought it was going to be a little harder to exit the Aquarium and wanted to talk to them about signage for evacuation. Tokos said the Nye Beach, hotel row, and Agate Beach areas hadn't been discussed. Gabel said she didn't show the results because they were like the Bayfront.

Gabel covered the South Beach area scenarios next and reviewed how the State Park addressed evacuation routes with their visitors. She noted the Cooper Ridge Trail would be difficult to pass depending on the time of the year or day. Gabel said that liquefaction would have an effect on the South Beach area. She reviewed other different scenarios for South Beach and showed the South Shore community scenarios next.

Gabel said the next steps was to get feedback from the PC on additional scenarios to run. She noted that she would pursue liquefaction plus vertical evacuation for Hatfield and Southbeach. Gabel said they would be putting together a report and noted that www.oregontsunami.org had links to reports they had done so far.

4. **Director's Comments.** No Director comments.

5. **Adjournment.** Having no further discussion, the meeting adjourned at 6:59 p.m.

Respectfully submitted,

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Sherri Marineau,
Executive Assistant

***Draft* MINUTES**
City of Newport Planning Commission
Regular Session
Newport City Hall Council Chambers
September 10, 2018

Planning Commissioners Present: Lee Hardy, Jim Patrick, Mike Franklin, Jim Hanselman,

Planning Commissioners Present: Bob Berman, Rod Croteau and Bill Branigan (*all excused*).

City Staff Present: Community Development Director (CDD), Derrick Tokos; and Executive Assistant, Sherri Marineau.

1. Call to Order & Roll Call. Commissioner Branigan called the meeting to order in the City Hall Council Chambers at 7:00 p.m. On roll call, Commissioners Hardy, Berman, Franklin, and Branigan were present.

2. Approval of Minutes.

A. Approval of the Planning Commission work session meeting minutes of August 13, 2018.

Hardy noted a change to the work session meetings to say that she said there had been seasonal changes, instead of that she thought there were.

MOTION was made by Commissioner Franklin, seconded by Commissioner Hardy to approve the Planning Commission work session meeting minutes of August 13, 2018 with one minor correction. The motion carried unanimously in a voice vote.

B. Approval of the Planning Commission regular session meeting minutes of August 13, 2018.

MOTION was made by Commissioner Hardy, seconded by Commissioner Franklin to approve the Planning Commission regular session meeting minutes of August 13, 2018 as presented. The motion carried unanimously in a voice vote.

3. Citizen/Public Comment. No public comments.

4. Action Items. No Action Items.

5. Unfinished Business. No Unfinished Business.

6. Public Notices. At 7:02 p.m. Chair Patrick opened the public hearing portion of the meeting by reading the statement of rights and relevance. He asked the Commissioners for declarations of conflicts of interest, ex parte contacts, bias, or site visits. Patrick reported a site visit. Patrick called for objections to any member of the Planning Commission or the Commission as a whole hearing this matter; and none were heard.

A. File No. 1-SUB-18/2-VAR-18/3-GP-18.

Patrick called for staff report. Tokos reviewed his staff report. He noted the public comment letters received for the hearing and said they had concerns about the geologic report and work being done adjacent to the Harbor Crescent subdivision. Tokos reported that the biggest issue with staff was the utility locations. He noted that the geologic report was specific to the subdivision. When individual homes were to be built, they would have to do individual geologic reports to address the build of each home. Tokos reviewed the variance next and why the development of the street would not meet the standard. He then reviewed the 15 conditions of approval for all three land use applications.

Franklin asked if the typography was more unstable than other subdivisions in the area and asked if the other subdivision have to go through the same process. Tokos explained that the area was a historic landslide block. He said couldn't say what its relative significance was for landslide history compared to other subdivisions. The City's requirement was that they needed a geologist to determine if the subdivision was suitable for the intended

development. If structural remediation was needed to make it suitable, that would be where a geo technical or civil engineer would get involved. Hanselman asked if the geological report was only good for 5 years. Tokos said yes and was why they did a supplemental memo to update the report. Hanselman asked if updated form was as detailed as the original report. Tokos said their letter said they did both reports and went through and decided what needed to be updated. Hanselman asked if the subdivision was approved would each lot have to do another geological report. Tokos said they would. They could do a report for multiple lots, if they were doing a couple of lots, and would be required under the code.

Patrick asked how the stormwater would be mitigated from the houses because he didn't see an easement for system. Tokos said the hydraulic analysis would have to do some worse case assumptions to analyze the amount of impervious surface on the lots commutatively. This would be done so they could analysis for a 25 year/24 hour storm event and determine if the city system had the capacity to add it to the system or not. He believed all of the lots were configured as such to get the stormwater to the city system in some capacity. Hanselman was concerned about the slope issue raised in the public comment letters and staff report. He asked how much of land mass had a slope of 12 percent or greater. Tokos said there were maps included in the application to show contours. The steeper slopes would affect the far east side adjacent to the Harbor Crescent subdivision and the northwest corner adjacent to RV park. He didn't calculate the percentage. Hanselman noted his concerns on the west side of the subdivision drainage. Hardy asked if the process required the impact on adjoining properties to be analyzed and addressed specifically with respect to drainage soil stability and those kinds of things. Tokos said yes and a geological report analysis would look at the site's suitability, and as part of the analysis they would look at how to construct without affecting the properties that were around the site.

Proponents: Curt Fisher from AKS Engineering & Forestry, LLC addressed the PC. He said he concurred with the staff report and appreciated the geologic overlay comments. He said they were careful to make sure the geo report responded in the applicable ways. Fisher noted that they fully intended to follow the recommendations followed in the production of the final construction plans and installation of the improvements for the subdivision. Fisher noted that this was just a subdivision application and said they had met the applicable city codes and standards. They were prepared with the recommendations of the geo report. He reviewed how the grading would need to be done with the geologic overlay. He requested that the PC approve their application.

Franklin asked if the removal of the sidewalk would be on the uphill side, the downhill side, or the entire subdivision. Fisher said it was only for the hammerhead section. To require the full street and sidewalks would mean more grading and felt it was why they should be removed. Patrick asked what the assumptions were for lot coverage. Fisher didn't know what the assumptions were. David Carr addressed the PC. He noted that he was the registered engineer for plans. Carr reported that typically a minimum size for a house was 2,500 square feet and they would be looking at 3,000 square feet of impervious area for each. Hanselman was concerned this meant there would be a lot of run off. He asked if the geo engineer could be required to be onsite when the foundations were being poured for each lot build. Fisher said they would engage the geo tech engineer in the subdivision application. There were no building permits at that time but they would be evaluated at the appropriate time.

Opponents: William Chadwick addressed the PC. He submitted a letter to the PC and read it for the record. Hardy and Franklin felt Chadwick was making a reasonable request.

Teresa Atwill addressed the PC. She noted that she had submitted a letter to the PC. Atwill said she was on the Coastal Natural Hazards Planning Group and knew it was challenging for cities to do something concerning geo reports because once they were written and certified by a State geologist, there wasn't a lot you could do about it. She said since this was in a landslide zone, it was an opportunity to make sure that they could set a protection for the surrounding homes by making sure they did an adequate job of analyzing the geology instead of leaving it up to the home builders. She noted that all the developer would be doing was prepping the property and the owner would still have to do a geological report with no guarantee that the slopes would be ok. She thought the geologic report should be something that would evaluate if each lot was buildable and the kinds of building people would have to do to protect the other properties. She felt they needed to do a more detailed survey instead of one done in a couple of hours. Atwill was concerned that they added fill to property in 2007 and 2008 that wasn't there when the original report was done. She asked that the property owner identify where the fill was and remove it. Atwill didn't want to see a landslide because of development on the bottom of the hill.

Karmen Vanderbeck addressed the PC. She read the letter she submitted to the PC for the record. Hanselman asked if the Harbor Crescent subdivision fell in the same geo hazards zone as new subdivision. Tokos said yes.

Eric Knutson. Cam Brant, Bernadette Salano addressed the PC and stated they agreed with the comments from the other neighbors and supported their recommendation.

Caroline Starsole addressed the PC and said when she purchased her home she had asked her realtor about the lots below her lot and was told it was in a no build zone. She attended the meeting to educate herself.

Laura Seager and Barbara Coyle. Supported the previous neighbors comments.

Atwill address the PC again and asked to have the record kept open for seven days in order to review the Planning Department staff report. She said the community members knew they were in a landslide hazards zone and was why they were so concerned about what was happening at the toe of the slope where it would be more likely to have a landslide.

Rebuttal: Fisher addressed the PC. He said in terms of the request to defer the decision until the geotechnical report was revised to specifically address the issue of long term slope stability, he said the report was intended to specifically address slope stability and the existence of the geologic overlay was intended to address long term slope instability. He said they had made great efforts to address the applicable criteria to insure long term slope stability. Fisher noted that it was not in the interest of the applicant to do a development that was on shifty ground or had the potential to slide away or bring down earth from adjacent properties. He said the request that the geotechnical report should include permanent engineering solutions wasn't in the scope of a geological report. They had presented a preliminary report to address these concerns as per code and the conditions. Permanent engineering solutions would be submitted with improvements of the streets prior to platting. Fisher encouraged the PC to let the process go forward. The soil deposit was referenced in the technical report with a recommendation to have it removed and treated appropriately. Fisher believed both the applicable criteria and provisions of the code in the review process would take place as the final construction was permitted and the plat was recorded and felt it would adequately address all the concerns.

Tokos suggested that the request to have the hearing be left open be kept open to the 17th of October PC meeting. He thought that if there was anything the applicant should analysis, it was a good time. He suggested the PC do deliberations at the current meeting and figure out what needed to be considered by applicant. The record would be left open for seven days until September 17th, then there would be an additional seven days for people to respond to new testimony. The applicant would then be entitled to final argument and would have another seven days. This would mean the PC would come back to continue the hearing on October 8th.

Franklin was concerned that there could be a landslide and asked why it wasn't an advantage for the developer to come up with a fix all solution on the back wall/back cut of the property so it was continuous and completed at the start to ease everyone's mind. Fischer said the plans that were in front of the PC were developed based on best engineering practices. This would be asking for over engineering of what they had developed for on the recommended engineer standards, and felt over engineering at that time was not warranted. Patrick asked if the engineering was for the road bed, sidewalks, and drainage but not individual lots. Fischer said yes, the area along the east side slopes were graded and finished according to the recommendation of the geo report. Hanselman asked if grading on the east side was done with the geo standards, what happened when a new owner came in to build and cut into the slope. Tokos said when people came in to develop they would have to do their own geo report specific to their build. They wouldn't have the right to just excavate the site. Hardy asked how much the City would take responsibility to disclose to potential buyers the potential risk of flawed development or messing up the engineering. Tokos said the City didn't take liability for this and was why they set us a geologic permitting process with an engineering geologist who signed off on it for suitability and a geotechnical engineer or civil engineer who signed off on structural remediation if needed to make a site suitable. They would put their stamp behind it and were qualified to do this. There were a couple of different statewide boards that were available for people to take issues to if the work was done poorly. Hardy asked if there could be deed restrictions put in place. Tokos said when updating the geo permit review, they decided it wasn't a provision that could be included in the updates.

Hearing closed at 8:02 p.m.

Hardy suggested the developer consider taking the initiate for deed restrictions to make sure there was a full clear understanding for buyers in terms of what they were looking at and what needs they would have to satisfy. Franklin agreed with Hardy's suggestion. Hanselman agreed with Hardy's suggestion. He was torn on how it because so much was at risk for so many people. He wanted the three missing PC members be included in the decision and said he

wasn't ready to vote on the matter. Hanselman proposed waiting even longer to make a decision until he felt more comfortable with the reports. Patrick agreed with Hanselman on his point on having the missing PC members be a part of the consideration. He was concerned about the current grading of the lots and wanted to see more details on this. Patrick liked the idea on the permanent builds but there was no way to know what people would want to build and how soon and didn't think it was feasible. He wanted the other PC members to review the record and asked if additional comments could be taken. Tokos said yes, the record would still be open. Hanselman said he would feel more comfortable with something along those lines. Patrick asked if the previous applicant for a subdivision was done before the geologic code. Tokos said yes, it was before the iteration of the code.

MOTION was made by Commissioner Hardy, seconded by Commissioner Hanselman to keep File No. 1-SUB-18/2-VAR-18/3-GP-18 record open for seven days, with another seven day response period, followed by seven days of final arguments, and a hearing continuation on October 8, 2018. The motion carried unanimously in a voice vote.

B. File No. 3-VAR-18.

Tokos gave his staff report for File 3-VAR-18 and noted his conclusions.

Proponents: Matthew Brown addressed the PC and noted the criteria that should be used to evaluate the approval. He explained that the intent of the signage was to create a user friendly environment. He noted that the letter height was part of the building architecture and photos from Highway 101 showed that it allowed for visibility from the highway. He noted the window of visibility and illumination was limited based on the building boxing it in. The orientation of the signs on 9th Street versus the adjacent street was placed according to function and entry points to the campus, and the placement would guide people to emergency. As far as the three square foot directional sign code variance, the intent was to give a visitor enough time to comprehend what was on the sign to make appropriate choices. He noted they were scaling down the signs and placement versus the existing pole signs.

Franklin said he didn't have a problem with the monument signs and emergency sign. He asked who the 6 foot by 85 foot sign benefited. Brown said it had target value to see it from a distance, and was for tourists and those who were unfamiliar with Newport. Franklin thought the sign could be half the size and questioned if it was needed. Hanselman said he didn't ever see signs the size they were requested He did think signage was important and wanted people were aware when driving and not distracted by signs. He wanted to have the minimalistic approach and had a problem with signs on corners where someone couldn't see traffic that was coming toward them. Hanselman had a problem when signs were too big. He wasn't certain the additional signs would help visitors and felt visitors would be looking for the emergency, not other departments. Brown said they set out to limit the number of destinations and each of the signs had information for guidance to the main entrance, emergency or destinations that the public wasn't meant to arrive at like receiving. He said they wanted signage to be effective.

Opponents: No were heard.

Hearing closed at 8:27 p.m.

Hanselman didn't see a need for anything that was 30 feet to the top of the sign and felt it would be overwhelming. Franklin had a problem with the 85 foot sign. Hardy didn't have a problem with the request. Patrick didn't have a problem with any wayfinding signage. He had concerns about the giant sign and noted the city hadn't done variances for anything that size. Tokos noted they could leave the hearing open for the applicant to provide a modification on size.

Patrick reopened the hearing at 8:31 p.m.

Brown said what he was hearing was the concern about size. Hanselman said it also could be the height of 30 feet. Brown said it was the height that was on the building and noted the sign was not freestanding. Patrick said the location was at the end of the building. Brown said that he could provide photos to show where the signs would be located. Tokos suggested continuing the hearing.

Hearing closed at 8:38 p.m.

MOTION was made by Commissioner Franklin, seconded by Commissioner Hardy, to continue File 3-VAR-18: Sign Variance for Pacific Communities Health District to the September 24, 2018 Planning Commission Meeting. The motion carried unanimously in a voice vote.

C. File No. 3-Z-18.

Patrick opened the hearing and closed the hearing at 8:36pm.

MOTION was made by Commissioner Hardy, seconded by Commissioner Franklin to continue File 3-Z-18: Zoning Text Amendments to NMC 14.01.020 and 14.03.060 Related to Extended Stay Motels to the September 24, 2018 Planning Commission Meeting. The motion carried unanimously in a voice vote.

7. New Business. None were heard.

8. Unfinished Business. None were heard.

9. Director Comments.

Tokos noted the next meeting would have a public hearing for a geologic report appeal and reviewed the process.

Tokos noted that the City Council approved the renaming of the public places code and the PC wouldn't see hearings for these anymore.

Tokos noted that Karmen Vanderbeck resigned as a Planning Commission Advisory Committee Member and would be supporting the PC as part of other city committees. He noted that the original advisory committee was formed as part of a project and asked the PC if they wanted to continue with a subgroup. Patrick found it useful but thought it was hard to find members. Hanselman wanted thank Vanderbeck and thought the PC should say a thank you for her time. Tokos asked the PC to think about this and they would take it up at the next work session.

Tokos noted that the updated work program showed that the first meeting about VRDS would be held on a coming work session meeting.

10. Adjournment. Having no further business, the meeting adjourned at 8:42 p.m.

Respectfully submitted,

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Sherri Marineau
Executive Assistant

City of Newport

Community Development Department

Memorandum

To: Planning Commission

From: Derrick I. Tokos, AICP, Community Development Director

Date: September 18, 2018

Re: Continued Hearing on File No. 3-Z-18, Proposal by Pacific Seafood Group to Amend the Newport Municipal Code to Allow Extended Stay (i.e. Non-Transient) Hotels/Motels

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This request was originally scheduled to be heard by the Planning Commission at its September 10, 2018 meeting. Unfortunately, notice of the hearing did not publish in the News-Times on the date the city requested meaning that the matter was not properly noticed in accordance with Newport Municipal Code (NMC) Section 14.52.060(F), which states:

"Published Notice. Notice of each Type III and Type IV hearing shall be published at least once in a newspaper of general circulation in the city at least 5 days, and no more than 14 days, prior to the date set for public hearing."

Enclosed is a copy of a notice for public hearing on this Type IV legislative amendment proposal, published in the September 14, 2018 edition of the Newport News-Times, along with a photocopy of the advertisement as proof of publication. This satisfies the public notice requirements.

On September 10th, the Planning Commission continued it consideration of this application to September 24th without taking testimony or deliberating on the application. With that in mind, I am enclosing with this memo the staff report from the September 10th meeting in its entirely for the Commission's consideration. The applicant has indicated that they may supplement their findings in support of the legislative amendment. If an updated set of findings is submitted by the end of the week, then we will upload them to the city website as a supplement to the Planning Commission packet. Any information received after close of business on Friday will be distributed at the meeting on Monday.

Attachments

Corrected hearing notice
Staff report from the 9/10/18 Planning Commission meeting

CITY OF NEWPORT
NOTICE OF A PUBLIC HEARING

The Newport Planning Commission will hold a continued public hearing on Monday, September 24, 2018, at 7:00 p.m. in the City Hall Council Chambers to consider File No. 3-Z-18, revisions to the Newport Municipal Code (NMC) 14.01.020 and 14.03.060 to provide for extended stay hotel and motel uses. Pursuant to Newport Municipal Code (NMC) Section 14.36.010, the Commission must find that the change is required by public necessity and the general welfare of the community in order for it to make a recommendation to the City Council that the amendments be adopted. Testimony and evidence must be directed toward the request above or other criteria, including criteria within the Comprehensive Plan and its implementing ordinances, which the person believes to apply to the decision. Failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to that issue precludes an appeal, including to the Land Use Board of Appeals, based on that issue. Testimony may be submitted in written or oral form. Oral testimony and written testimony will be taken during the course of the public hearing. The hearing may include a report by staff, testimony from the applicant and proponents, testimony from opponents, rebuttal by the applicant, and questions and deliberation by the Planning Commission. Written testimony sent to the Community Development (Planning) Department, City Hall, 169 SW Coast Hwy, Newport, OR 97365, must be received by 5:00 p.m. the day of the hearing to be included as part of the hearing or must be personally presented during testimony at the public hearing. The proposed code amendments, additional material for the amendments, and any other material in the file may be reviewed or a copy purchased at the Newport Community Development Department (address above). Contact Derrick Tokos, Community Development Director (541) 574-0626 (address above).

(FOR PUBLICATION ONCE ON WEDNESDAY, SEPTEMBER 14, 2018)

the team must do like running a mile, doing burpees or several minutes of planking.

After a handball was com-

up. That number has more than doubled and more players are on the way.

"I got two that need to get their paperwork, and I'm like

game in school history.

"It feels good," Fruechte said. "We did it so we are all proud of each other that we were able to pull off the win."

deep into the set. It wasn't until the very end that Toledo was able to pull away with a 25-18 win. Otis said the team became a little tired, but head coach Crystal Taylor saw something else.

"I don't want to say that they got comfortable," the first-year head coach said. "But we have to be more disciplined in that third set to make sure that we take care of the ball."

The Boomers have now won four-straight after winning only two of their first five games.

Hannah Fisher and Astrid Knott leap for a block during Toledo's 3-0 win over Myrtle Point on Tuesday, Sept. 11. (Photo courtesy of Aaron Wawrak)

"I think that they are really starting to play together, calling the ball and doing the things that we are asking them to do," Taylor said. "Defensively we have really worked hard to make sure that they are ready for any type of ball that comes over the net. They are talking. Offensively they are setting each other up really well and they are working together."

The challenge now for the Boomers with the remaining schedule coming against league opponents is keeping that same energy and excitement for the rest of the season to keep their postseason hopes alive. But Otis isn't worried about that.

"We all have that energy and passion for this game that other teams don't have," she said. "Our chemistry together, we just make each other excited for anything and that will help us in future games."

PUBLIC NOTICES

LEGAL DEADLINES:

WEDNESDAY EDITION: 5:00pm Thursday PRIOR

FRIDAY EDITION: 5:00pm Tuesday PRIOR

NOTICE OF SHERIFF'S SALE #18-1436

On October 2, 2018, at the hour of 10:00 a.m., at the Lincoln County Sheriff's Office, 225 W Olive St., Rm 203, in the City of Newport, Oregon, the defendant's interest will be sold, subject to redemption, in the real property commonly known as: 6340 N. Highway 101, Otis, OR 97368. The court case number is 17CV48999, J.P. Morgan Mortgage Acquisition Corp., plaintiff(s) vs. Brandi M. Sullivan; Parties in Possession, defendant(s). This is a public auction to the highest bidder for cash or cashier's check, in hand. For more details go to http://www.oregonsheriffssales.org/county/lincoln/

A-24, A-31, S-07, S-14 (87-14).

REQUEST FOR QUOTATIONS

The Port of Newport is requesting competitive quotations for hydraulic dredging at the NOAA Marine Operations Center – Pacific Facility starting November 2018. The scope of work includes maintenance dredging of 22,900 cubic yards to the design depths specified in the Joint Permit application. Bids are due by October 1st, 2018. All RFQ documents can be found at https://www.portofnewport.com/bids-rfps.php

S-7, S-14 (03-14)

PUBLIC SALE

Safe-Lock Storage located at 3639 SE Ash St, South Beach, OR 97366 will hold a public foreclosure sale on Saturday, September 29 at 10:00 AM. Personal property of the following people will be sold:

D03 – Carl Johnson, H19 – Mark Woods, T18 – Jesse Hanlin. The persons mentioned above may contact us prior to the sale at (541) 867-4607.

S-7, S-12, S-14, S-19 (06-19).

NOTICE OF SALE OF ABANDONED MANUFACTURED HOME

1Longview Hills MHC, LLC will sell the below-described manufactured home by private sealed bid for the highest offer received. The home has been abandoned. The home, tenant and owner are described below. Bids for cash payment will be accepted until 10:00 am, September 20, 2018. Interested parties may contact Longview Hills Manager at (541)265-3576 to make arrangements to inspect the home. Bids may be submitted to 1Longview Hills MHC, LLC, 1450 NE 58th Street, Newport, Oregon 97365, for the following home: 11990 Golden West Homes, Home ID #263686, X-Plate #X210641, manufacturer's ID #CC662R4AB; located at 1638 NE 59th Street, Space 38, Newport, Oregon 97365; owner/tenant: 1Betty Lucille Owens, Jack David Owens, David Owens, personal representative.

S-7, S-14 (12-14)

NOTICE OF A PUBLIC HEARING

The Planning Commission of the City of Newport, Oregon, will hold a public hearing to consider an appeal of an administrative decision approving a Geological Permit Application (#1-GP-18) submitted by Mona Linstromberg, Elaine Karnes, Christine Schneller, Robert Earle, Teresa Amen & Pat Linstromberg (Power of Attorney, Leslie Hogan) (Sean Malone, Attorney, Authorized Agent) for an appeal challenging the substantive elements of the applicant's June 29, 2018 geologic report, prepared by K&A Engineering, Inc., that concluded the site is suitable for the development of three home sites. Such report was the basis of the approved Geologic Permit. A peer review report, by Columbia Geotechnical, dated August 15, 2018, was submitted in support of the appeal. The property is located West of NW Spring St (Lincoln County Assessor's Tax Map 11-11-05-BC, Tax Lots 1800, 1900 & 1903). City of Newport regulations for development within mapped geologic hazards areas are contained in Chapter 14.21 of the Newport Municipal Code (NMC), and all standards listed in this chapter are relevant to the permit application on appeal. Pursuant to NMC Chapter 14.21.050(D), an application for a geologic permit must include a geologic report, prepared by a certified engineering geologist, establishing that the site is suitable for the proposed development. Further, an engineering report, prepared by a licensed civil engineer, geotechnical engineer, or certified engineering geologist (to the extent qualified), must be provided if engineering remediation is anticipated to make the site suitable for the proposed development (NMC 14.21.050(E)). Guidelines for the preparation of Geologic Reports are set forth in NMC 14.21.060 and require that reports be consistent with generally accepted scientific and engineering principals, including minimum standards identified in cited documents published by the Oregon State Board of Geologist Examiners and the Department of Land Conservation and Development. Appellants challenging substantive elements of a geologic report are required to submit their own analysis, prepared by a certified engineering geologist (NMC 14.21.120). Testimony and evidence must be directed toward the criteria described above or other criteria in the Comprehensive Plan and its implementing ordinances which the person believes to apply to the decision. Failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to that issue precludes an appeal, including to the Land Use Board of Appeals, based on that issue. Testimony may be submitted in written or oral form. Oral and written testimony will be taken during the course of the public hearing. Letters to the Community Development/Planning Department, City Hall, 169 SW Coast Hwy, Newport, OR 97365, must be received by 5:00 p.m. the day of the hearing or be personally entered into the record during the hearing. The hearing will include a report by staff, testimony (both oral and written) from those in favor or opposed to the application, rebuttal by the applicant, and questions and deliberation by the Planning Commission. Pursuant to ORS 197.763 (6), any person prior to the conclusion of the initial public hearing may request a continuance of the public hearing or that the record is left open for at least seven days to present additional evidence, arguments, or testimony regarding the application. The staff report may be reviewed or a copy purchased at the Newport Community Development Department seven days prior to the hearing. The application materials, the applicable criteria, and other file materials are available for inspection at no cost; or copies may be purchased for reasonable cost at the above address. Contact Derrick Tokos, Community Development Director, (541) 574-0626, d.tokos@newportoregon.gov (mailing address above).

S-14 (10-14)

BOARD MEETING

Community Services Consortium's Governing Board meeting will be held Monday, September 24,2018, at 10:00am in the Newport regional Office Hilan Castle Conference Room at 120 NE Avery Street. The meeting agenda will address adoption of Supplemental Budget #1 for Fiscal Year 2018-19, among other matters. The meeting is open to the public; all interested persons are welcome to attend.

S-14 (04-14).

PUBLIC NOTICE

The Pacific Communities Health District Board of Directors will hold a Regular meeting on Monday, September 17, at 4:00 p.m. in the Education Conference Room at Samaritan Pacific Communities Hospital, 930 SW Abbey St., Newport, Oregon. The meeting agenda includes meeting minutes, financial reports and facility reports.

/s/Lisa Ely, Recorder. PACIFIC COMMUNITIES HEALTH DISTRICT

For additional information contact 541-574-1803 or www.pchdistrict.org.

S-14 (17-14)

NOTICE OF A PUBLIC HEARING

The Newport Planning Commission will hold a continued public hearing on Monday, September 24, 2018, at 7:00 p.m. in the City Hall Council Chambers to consider File No. 3-Z-18, revisions to the Newport Municipal Code (NMC) 14.01.020 and 14.03.060 to provide for extended stay hotel and motel uses. Pursuant to Newport Municipal Code (NMC) Section 14.36.010, the Commission must find that the change is required by public necessity and the general welfare of the community in order for it to make a recommendation to the City Council that the amendments be adopted. Testimony and evidence must be directed toward the request above or other criteria, including criteria within the Comprehensive Plan and its implementing ordinances, which the person believes to apply to the decision. Failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to that issue precludes an appeal, including to the Land Use Board of Appeals, based on that issue. Testimony may be submitted in written or oral form. Oral testimony and written testimony will be taken during the course of the public hearing. The hearing may include a report by staff, testimony from the applicant and proponents, testimony from opponents, rebuttal by the applicant, and questions and deliberation by the Planning Commission. Written testimony sent to the Community Development (Planning) Department, City Hall, 169 SW Coast Hwy, Newport, OR 97365, must be received by 5:00 p.m. the day of the hearing to be included as part of the hearing or must be personally presented during testimony at the public hearing. The proposed code amendments, additional material for the amendments, and any other material in the file may be reviewed or a copy purchased at the Newport Community Development Department (address above). Contact Derrick Tokos, Community Development Director (541) 574-0626 (address above).

S-14 (18-14)

NOTICE OF SHERIFF'S SALE #18-1517

On October 23, 2018, at the hour of 10:00a.m., at the Lincoln county Sheriff's office, 225 W Olive St., Rm 203, in the city of Newport, Oregon, the defendant's interest will be sold, subject to redemption, in the real property commonly known as: 3174 NE Johns Loop, Neotsu, OR 97364. The court case number is 17CV46345, Nationstar Mortgage LLC D/B/A Mr. Coop, plaintiff(s) vs. James A. Fossum, Patricia Ann Fossum; Wells Fargo Bank, N.A.; Occupants of the Property defendant(s). This is a public auction to the highest bidder for cash or cashier's check, in hand. For more details to go http://www.oregonsheriffssales.org/county/lincoln/

S-14, S-21, S-28, O-05 (18-05)

9/14/18

Case File: 3-Z-18
Hearing Date: September 10, 2018/Planning Commission

PLANNING STAFF MEMORANDUM
FILE No. 3-Z-18

I. **Applicant:** Pacific Seafood Group (Michael Miliucci, authorized representative).

II. **Request:** The request before the Planning Commission is to review and provide a recommendation to the City Council on a proposal to amend the Newport Municipal Code to provide for extended stay (i.e. non-transient) hotel and motel uses. The purpose of the amendment is to allow workforce housing in the City's three commercial zoning districts to accommodate the unmet need for short-term housing for employees working for periods longer than 30-days.

III. **Findings Required:** This is a legislative action whereby the City Council, after considering a recommendation by the Newport Planning Commission, must determine that the changes to the Municipal Code are necessary and further the general welfare of the community (NMC 14.36.010).

IV. **Planning Staff Memorandum Attachments:**

Attachment "A" – Draft amendments to NMC 14.01.020 and 14.03.060, dated August 31, 2018
Attachment "B" – Application form
Attachment "C" – Applicant's findings of fact and conclusions
Attachment "D" – R-1 and R-2 Occupancy Classifications, 2014 Oregon Structural Specialty Code
Attachment "E" – Draft minutes from the August 13, 2018 Planning Commission Work Session
Attachment "F" – Newport Zoning Map
Attachment "G" – Notice of public hearing

V. **Notification:** The Department of Land Conservation & Development was provided notice of the proposed legislative amendment on August 6, 2018. Notice of the Planning Commission hearing was published in the Newport News-Times on September 5, 2018 (Attachment "H").

VI. **Comments:** No public comments have been received related to this proposal.

VII. **Discussion of Request:** The City of Newport received an application from Pacific Seafood Group to amend the Newport Municipal Code to provide for extended stay hotel and motel uses. They are interested in purchasing property that they can use in this manner to meet the needs of their workforce. The Municipal Code does not currently allow extended stay hotel and motel use of an entire building.

The proposal creates definitions for non-transient hotels and motels, distinguishing them from their transient counterparts. A change is also being made to the commercial use category section of the code, with non-transient hotel and motel uses, that is lodging with average lengths of stay that is 30 days or longer, being added to the personal service oriented retail category. Transient hotel and motel uses, where guests typically stay less than 30 days, will remain an entertainment oriented retail sales and service use. If the change is adopted, non-transient hotel and motel uses will become an outright permitted use in C-1, C-3 and I-1 zones. They would be conditional uses in the C-2 and I-2 zones. A copy of the proposed changes is enclosed as Attachment "A".

The Planning Commission reviewed the proposed changes at an August 13, 2018 work session. Coming out of that work session, staff amended the proposal to make the availability of cooking facilities in the units, or for a group of units, a distinguishing feature between transient and non-transient hotel and motel uses. The availability of cooking facilities becomes a more pressing issue when tenancy extends over 30-days, and requiring they be provided to units may prevent fire hazards attributed to tenants creating their own means of meeting their cooking needs, which may not be safe. The applicant reviewed the new language and has indicated that they are comfortable with the changes. A question was posed at the work session regarding the difference between an apartment use and an extended stay hotel or motel use. From a land use perspective, it would be length of tenancy and the availability of cooking facilities in each unit. The proposed definition for non-transient hotels and motels requires cooking facilities be provided in the individual units or for a group of units. The latter option would not be available for apartments. As for building code requirements, apartments and non-transient hotel/motel uses fall under the same R-2 occupancy classification (Ref: Attachment "D") and would be subject to the same general construction standards.

With respect to whether or not the amendment is necessary and furthers the general welfare of the community, there is ample evidence of the human and economic impact that a shortage of affordable housing has on employees and employers in Newport. The applicant addresses this in a number of their findings and it would be reasonable for the Commission to accept the applicant's analysis as satisfying these requirements.

The applicant's initial set of findings and conclusions are included with this report (Attachment "C"). They have indicated that they will be modifying them to more closely align with current draft set of amendments. That change will be helpful for the ordinance and supporting findings that will be prepared for the City Council hearing, but is not material to the question before the Commission at this hearing.

VIII. **Conclusion and Recommendation:** The Planning Commission should review the proposed amendments and make a recommendation to the City Council. The Commission recommendation can include suggested changes to the proposed amendments.

Derrick I. Tokos, AICP
Community Development Director
City of Newport

August 31, 2018

14.01.020 Definitions.

***

Hotel (transient). A building in which lodging is provided for guests for compensation and contains a common entrance and where lodging rooms do not have an entrance opening directly to the outdoors (except for emergencies), with or without cooking facilities, and where ~~more than~~ 50 percent or more of the lodging rooms are for rent to ~~transient~~ guests for a continuous period of less than 30 days. A bed and breakfast facility or a vacation rental conducted in a single family dwelling or individual dwelling unit is not a hotel use.*

Hotel (non-transient). A building in which lodging is provided for guests for compensation and contains a common entrance and where lodging rooms do not have an entrance opening directly to the outdoors (except for emergencies), where cooking facilities are provided within individual lodging rooms, or for groups of lodging rooms, and where 50 percent or more of the lodging rooms are offered for rent to guests for a continuous period of 30 days or longer. A bed and breakfast facility or a vacation rental conducted in a single family dwelling or individual dwelling unit is not a hotel use.*

***

Motel (transient). A building or group of buildings in which lodging is provided for guests for compensation, containing ~~guest units~~lodging rooms with separate entrances from the building exterior, with or without cooking facilities, and where ~~more than 40~~ 50 percent or more of the lodging rooms are for rent to ~~transient~~ guests for a continuous period of less than 30 days. A bed and breakfast facility or a vacation rental conducted in a single family dwelling or individual dwelling unit is not a motel use.*

Motel (non-transient). A building or group of buildings in which lodging is provided for guests for compensation, containing lodging rooms with separate entrances from the building exterior, where cooking facilities are provided within individual lodging rooms, or for groups of lodging rooms, offered for rent to guests for a continuous period of 30 days or longer. A bed and breakfast facility or a vacation rental conducted in a single family dwelling or individual dwelling unit is not a motel use.*

14.03.060 Commercial and Industrial Districts.

The uses allowed within each commercial and industrial zoning district are classified into use categories on the basis of common functional, product, or physical characteristics.

***

C. Commercial Use Categories

***

2. Retail Sales and Service

a. Characteristics. Retail Sales and Service firms are involved in the sale, lease or rent of new or used products to the general public. They may also provide

personal services or entertainment, or provide product repair or services for consumer and business goods.

b. Examples. Examples include uses from the four subgroups listed below:

i. Sales-oriented, general retail: Stores selling, leasing, or renting consumer, home, and business goods including art, art supplies, bicycles, books, clothing, dry goods, electronic equipment, fabric, fuel, gifts, groceries, household products, jewelry, pets, pet food, pharmaceuticals, plants, printed material, stationery, and videos; food sales. Sales oriented general retail includes the service but not repair of vehicles.

ii. Sales-oriented, bulk retail: Stores selling large consumer home and business goods, including appliances, furniture, hardware, home improvements, and sales or leasing of consumer vehicles including passenger vehicles, motorcycles, light and medium trucks, and other recreational vehicles.

iii. Personal service-oriented: Branch banks; urgency medical care; Laundromats; photographic studios; photocopy and blueprint services; printing, publishing and lithography; hair, tanning, and personal care services; tax preparers, accountants, engineers, architects, real estate agents, legal, financial services; art studios; art, dance, music, martial arts, and other recreational or cultural classes/schools; hotels (non-transient); motels (non-transient); taxidermists; mortuaries; veterinarians; kennels limited to boarding and training with no breeding; and animal grooming.

iv. Entertainment-oriented: Restaurants (sit-down and drive through); cafes; delicatessens; taverns and bars; hotels (transient), motels (transient), recreational vehicles, and other temporary lodging with an average length of stay less than 30 days; athletic, exercise and health clubs or gyms; bowling alleys, skating rinks, game arcades; pool halls; dance halls, studios, and schools; theaters; indoor firing ranges, miniature golf facilities, golf courses, and driving ranges.

v. Repair-oriented: Repair of TVs, bicycles, clocks, watches, shoes, guns, appliances and office equipment; photo or laundry drop off; quick printing; recycling drop-off; tailor; locksmith; and upholsterer.

c. Exceptions.

i. Lumber yards and other building material sales that sell primarily to contractors and do not have a retail orientation are classified as Wholesale Sales.

ii. The sale of landscape materials, including bark chips and compost not in conjunction with a primary retail use, is classified as Industrial Service.

iii. Repair and service of consumer motor vehicles, motorcycles, and light and medium trucks is classified as Vehicle Repair. Repair and service of industrial vehicles and equipment, and heavy trucks is classified as Industrial Service.

iv. Sales, rental, or leasing of heavy trucks and equipment is classified as Wholesale Sales.

v. When kennels are limited to boarding, with no breeding, the applicant may choose to classify the use as Retail Sales and Service.

vi. Uses where unoccupied recreational vehicles are offered for sale or lease, or are stored, are not included as a Recreational Vehicle Park.

Attachment "B"
3-Z-18

18 int Form

City of Newport
Land Use Application

PLEASE PRINT OR TYPE • COMPLETE ALL BOXES • USE ADDITIONAL PAPER IF NEEDED

Applicant Name(s): Pacific Seafood Group	Property Owner Name(s): If other than applicant N/A
Applicant Mailing Address: See attached.	Property Owner Mailing Address: If other than applicant N/A
Applicant Telephone No.: See attached. E-mail:	Property Owner Telephone No.: E-mail:
Authorized Representative(s): See attached.	
Authorized Representative Mailing Address: See attached.	
Authorized Representative Telephone No.: See attached.	E-Mail: See attached.

Project Information

Property Location: N/A	
Tax Assessor's Map No.: N/A	Tax Lot(s):
Zone Designation: N/A	Legal Description:
Comp Plan Designation: N/A	N/A
Brief Description of Land Use Request(s):	Amendment to the Newport Development Code (the "NDC") to allow hotels, motels and other temporary lodging with an average length of stay greater than 30 days in the C-1, C-2, and C-3 zones in NDC 14.03.060.C.2.iv and to amend the definitions of "hotel" and "motel" in NDC Section 14.01.020 to remove the length of stay requirements.
Existing Structures: If any	
Topography and Vegetation:	

APPLICATION TYPE (please check all that apply)

- ☐ Annexation
- ☐ Appeal
- ☐ Comp Plan/Map Amendment
- ☐ Conditional Use Permit
  - ☐ PC
  - ☐ Staff
- ☐ Design Review
- ☐ Geologic Permit
- ☐ Interpretation
- ☐ Minor Replat
- ☐ Partition
- ☐ Planned Development
- ☐ Property Line Adjustment
- ☐ Shoreland Impact
- ☐ Subdivision
- ☐ Temporary Use Permit
- ☐ UGB Amendment
- ☐ Vacation
- ☐ Variance/Adjustment
  - ☐ PC
  - ☐ Staff
- ☑ Zone Ord/Map Amendment
- ☐ Other_____

FOR OFFICE USE ONLY

File No. Assigned: 3-Z-18

Date Received: _____ Fee Amount: 1262— Date Accepted as Complete: _____

Received By: _____ Receipt No.: 2417 Accepted By: _____

425-18-000069-PLNG

(SEE REVERSE SIDE)

I understand that I am responsible for addressing the legal criteria relevant to my application and that the burden of proof justifying an approval of my application is with me. I also understand that this responsibility is independent of any opinions expressed in the Community Development & Planning Department Staff Report concerning the applicable criteria.

I certify that, to the best of my knowledge, all information provided in this application is accurate.

Pacific Seafood Group Applicant Signature(s)	7-30-19 Date Signed
Pacific Seafood Group Property Owner Signature(s) *(If other than applicant)*	7-30-19 Date Signed
Michael Milicich Authorized Representative Signature(s) *(If other than applicant)* Michael Milicich, Corporate Counsel	7-30-19 Date Signed

Please note application will not be accepted without all applicable signatures.

Please ask staff for a list of application submittal requirements for your specific type of request.

BEFORE THE PLANNING COMMISSION

AND THE CITY COUNCIL

FOR THE CITY OF NEWPORT, OREGON

In the Matter of a Type IV Application to Amend Newport Development Code ("NDC") Sections 14.01.020 and 14.03.060.2.b.iii to Allow Work Force Housing (the "Application") in the C-1, C-2 and C-3 Zoning Districts	))))))	FINDINGS OF FACT AND CONCLUSIONS OF LAW DEMONSTRATING SATISFACTION OF THE APPLICABLE APPROVAL CRITERIA

I. Request.

This Type IV legislative amendment Application to the text of the NDC, the City's land use regulations, requests that the Planning Commission recommend approval of, and that the City Council approve, two amendments:

- to NDC Section 14.01.020 to amend the definitions of "hotel" and "motel" to remove the reference to the percentage of lodging rooms available for rent to transient guests for a continual period of less than thirty days; and

- to NDC Section 14.03.060.2.b.iii, to amend the uses in the retail sales and service, personal service-oriented land use category, whereby hotels, motels and other temporary lodging are allowed with guests having an average length of stay less than thirty days in the C-1, C-2 and C-3 zoning districts.

The purpose of the text amendment is to allow work force housing in the City's three commercial zoning districts to accommodate the unmet need for short-term housing for employees for longer than thirty days.

II. Classification of Application and Procedure.

A. Authority to Initiate the Application.

NDC 14.36.020.C provides that a legislative amendment to the City's land use regulations may be initiated by a property owner. **Exhibit 1** to this Application is a completed "City of Newport Land Use Application" form signed by the authorized representative of Pacific Seafood Group, a property owner within the City of Newport, Oregon.

B. Characterization of Application as a Legislative Application.

This Application is characterized as a legislative application and is not a quasi-judicial application. The application is properly characterized as a legislative application because it makes new law as opposed to applying existing law.

C. Procedure Type.

This Application is characterized as a Type IV Application because the final decision is made by the Newport City Council following a recommendation by the Newport Planning Commission and involves a land use action, such as a text amendment to the NDC. NDC 14.52.020.

This Application meets the requirements of NDC 14.52.040, "Application for a Land Use Action", by providing information relevant to a legislative amendment. The Application includes the name and address of the Applicant as required by NDC 14.52.040.A, and findings of fact and other information to support the request and addresses all applicable approval criteria, as required by NDC 14.52.040.K.

D. Proposed Amendments.

Exhibit 2 shows the proposed amendments:

1. NDC 14.01.020, "Definitions".

These amendments modify the definitions of "hotel" and "motel". The definitions currently limit the percentage of guests who may occupy rooms for more than thirty days. The proposed amendments remove this restriction. However, hotel and motel operators retain the choice of how long to rent rooms to guests.

2. NDC 14.03.060.2.b.iii, "Commercial Use Categories, Personal Service-Oriented."

This amendment modifies this use category by allowing hotels, motels and other temporary lodging establishments to offer rooms to guests with an average stay longer than thirty days.

E. Public Review Procedure for the Application.

After the City accepts the Application, the City is required to provide notice of the Planning Commission hearing to the Oregon Department of Land Conservation and Development ("DLCD") thirty-five (35) days before the Planning Commission hearing. The City is not required to mail notice of the hearing to surrounding property owners. The Planning Commission will hold a public hearing on the Application and make a recommendation to the Newport City Council. The Newport City Council will hold a public hearing on the Application and provide notice of its decision within twenty (20) days to DLCD and anyone who testified orally or in writing before either the Planning Commission or the City Council.

III. Reasons for the Amendments.

Pacific Seafood Group makes this Application because it is a large employer in the City and has found it difficult to keep existing employees and hire new employees because of the lack of affordable housing. Pacific Seafood Group maintains two processing plants in the City, employing about 430 persons. The peak demand for work force housing occurs during the

Shrimp, Whiting and Crab seasons, about six to eight months each year. As explained in Part IV, "Applicable Approval Criteria", the City has an acknowledged need for work force housing. In this case, the lack of housing at affordable prices, acknowledged in the Newport Comprehensive Plan (the "Plan"), makes it difficult for Pacific Seafood Group's employees to find acceptable housing for needed rental periods at affordable prices. Pacific Seafood Group has determined that it must provide work force housing for its employees.

This amendment to the NDC is necessary to allow Pacific Seafood Group to purchase buildings in one of the City's three commercial zoning districts and to provide work force housing in those buildings without a limitation on the percentage of occupants who must stay fewer than thirty days. The proposed amendment, discussed with the City's Planning Director prior to submittal of this Application, amends the definitions of "hotel" and "motel" and the retail sales, personal service-oriented use category, to accomplish this purpose. If adopted by the Newport City Council, hotels and motels in the City's three commercial zoning districts can offer occupancy to guests without the current limitation on the number of guests staying more than thirty days. This amendment is a reasonable solution to the identified problem without requiring Pacific Seafood Group or another developer to construct additional multi-family dwelling units, or to compete with full-time residents for affordable housing.

IV. Applicable Approval Criteria.

This legislative amendment to the City's land use regulations requires the Applicant to demonstrate that the applicable approval criteria, including relevant Statewide Planning Goals (the "Goals"), administrative rules implementing the Goals (the "Rules"), and provisions of the acknowledged Newport Comprehensive Plan (the "Plan"), are satisfied. ORS 197.195(2)(d). This part of the Application addresses the relevant Goals, Rules and Plan goals and policies for the proposed legislative amendment.

A. Relevant Goals.

1. Goal 1, "Citizen Involvement":

"To develop a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process."

FINDING: The City can find that Goal 1 is satisfied because the City will follow its acknowledged Citizen Involvement Program in reviewing the proposed land use regulation amendments. The City will provide notice of the legislative amendment in the local newspaper of record and make public hearings available where persons can testify about the Application.

The City can find that Goal 1 is satisfied.

2. Goal 2, "Land Use Planning":

"To establish a land use planning process and policy framework as a basis for all decision and actions related to use

of land and to assure an adequate factual basis for such decisions and actions."

FINDING: The Application contains an adequate factual basis for the proposed legislative amendment to the City's acknowledged land use regulations. The adequate factual base includes a description of the problem and the proposed amendments to the NDC, to address the problem.

Additionally, the City must demonstrate that it has "coordinated" the Application, as "coordination" is defined in ORS 197.015(5), with affected governmental units including but not limited to local governments, special districts and state and federal agencies by providing them with notice of the Application, an opportunity to comment and considering their comments in the decision-making process as much as possible.

The City can also find that the proposed legislative amendment to the NDC do not require an amendment to the acknowledged Plan.

The City can find that Goal 2 is satisfied.

3. Goal 9, "Economic Development":

"To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens."

FINDING: The City can find that the proposed legislative amendments support the City's Goal 9 program by providing adequate work force housing to support Pacific Seafood Group and other employers in the City.

The City can find that Goal 9 is satisfied.

4. Goal 12, "Transportation":

"To provide and encourage a safe, convenient and economic transportation system."

FINDING: The City can find that Goal 12 is satisfied because the proposed text amendments do not add a new use to the City's three commercial zoning districts nor will the proposed legislative amendments add additional vehicle trips on local and state streets and highways.

The City can find that Goal 12 is satisfied.

B. Applicable Administrative Rules.

1. OAR Chapter 660, Division 9, "Economic Development".

FINDING: The City can find that this administrative rule implementing Goal 9 is inapplicable because it applies to amendments to comprehensive plans for areas within urban growth boundaries. OAR 660-009-0010(1). This Application does not amend the Plan.

2. OAR Chapter 660, Division 12, "Transportation Planning".

FINDING: OAR 660-012-0060 is entitled "Plan and Land Use Regulation Amendments." OAR 660-012-0060(1) provides that the administrative rule applies to amendments to existing land use regulations. The administrative rule requires a determination of whether a land use regulation amendment would "significantly affect" a transportation facility. OAR 660-012-0060(1)(a)-(c) identifies when a land use regulation amendment significantly affects a transportation facility. The City can find that OAR 660-012-0060 is inapplicable to this Application because none of the three situations constituting when a "significant affect" occurs are applicable to this Application.

The City can find that the Transportation Planning Rule is satisfied by this Application.

C. Newport Comprehensive Plan.

The acknowledged Plan contains two sections relevant to this Application: the Economy and Housing Sections.

1. "Economy".

FINDING: Plan Pages 24 and 25 note that the fishing and seafood processing industry in Newport generates one-third of the state's commercial fishing activities and one-third of the state's harvested seafood. In fact, the Plan identifies fishing and seafood processing as "potential growth industries." Plan Page 26 states that industrial employment in Newport will increase from 11% of employment in Newport in 2010 to 15% by 2032. Part of this increase in employment is attributable to the increase of seafood processing employment.

The City can find that fishing and seafood processing is an increasingly important part of the City's economy as noted in the Plan's Economic Opportunities Analysis (the "EOA"). The City can find that by supporting work force housing for Pacific Seafood Group's employees and other employers in the City, that industrial employment is strengthened, especially for seafood processing, which is considered a "potential growth industry."

The City can also find that Economy Policy 4 is relevant to this Application. Economy Policy 4 provides:

> **"The City shall encourage growth of businesses involving fishing and value-added seafood."**

The City can find that the evidence supports a conclusion that additional work force housing opportunities are needed for housing for employees in the seafood industry. This legislative amendment encourages the provision of additional work force housing so that the seafood industry has a readily available supply of workers and those workers have affordable and adequate housing.

The City can find that the Plan's "Economy" Section is satisfied.

2. "Housing".

FINDING: The Plan contains a Housing Opportunities Analysis (the "HOA"). The reason that this legislative amendment is needed is to provide for more opportunities for work force housing. The City lacks affordable, longer-term, work force housing. The HOA at Plan Page 114-B notes that while affordable housing has been decreasing, housing costs have been increasing. Further, the HOA at Plan Page 114-f notes that there are very few high density housing locations available in locations that are "ideal for workers." HOA Plan Page 114-f notes that another impediment to work force housing is the cost of rental housing.

Housing Policy 2 at Plan 114-h provides that:

> **"The City shall cooperate with private developers * * * in the provision and improvement of * * * work force housing."**

The City can find that this Application implements Housing Policy 2 in two ways. First, it allows for private developers to provide for work force housing without cost to the City or other governmental entities. Second, it provides an affordable housing solution for work force housing without competing for multi-family housing with permanent and seasonal residents.

The City can find that the Plan "Housing" Section is satisfied.

C. Conclusion.

The City can find that the acknowledged Plan supports both the Plan's acknowledgement of value-added seafood as a growth industry in the City and encourages private developers to provide solutions to the City's work force housing needs.

D. NDC.

FINDING: The NDC contains no approval criteria for an amendment to the City's acknowledged land use regulations.

V. CONCLUSION.

For the reasons contained in this Application, the Planning Commission and the City Council can find that the proposed text amendment to the NDC satisfy applicable Goals, Administrative Rules and Plan policies. By adopting the proposed text amendment, the City will encourage private employers to find a solution to work force housing needs for their employees.

The Applicant respectfully requests that the Planning Commission recommend approval to the City Council and that the City Council approve the text amendment as proposed.

EXHIBITS

Exhibit 1 "City of Newport Land Use Application" form

Exhibit 2 Proposed text amendments in redline format

Print Form

City of Newport
Land Use Application

PLEASE PRINT OR TYPE • COMPLETE ALL BOXES • USE ADDITIONAL PAPER IF NEEDED

Applicant Name(s): Pacific Seafood Group	Property Owner Name(s): N/A
Applicant Mailing Address: See attached.	Property Owner Mailing Address: N/A
Applicant Telephone No.: See attached. E-mail:	Property Owner Telephone No.: E-mail:
Authorized Representative(s): See attached.	
Authorized Representative Mailing Address: See attached.	
Authorized Representative Telephone No.: See attached.	E-Mail: See attached.

Project Information

Property Location: N/A	
Tax Assessor's Map No.: N/A	Tax Lot(s):
Zone Designation: N/A	Legal Description: N/A
Comp Plan Designation: N/A	
Brief Description of Land Use Request(s):	Amendment to the Newport Development Code (the "NDC") to allow hotels, motels and other temporary lodging with an average length of stay greater than 30 days in the C-1, C-2, and C-3 zones in NDC 14.03.060.C.2.iv and to amend the definitions of "hotel" and "motel" in NDC Section 14.01.020 to remove the length of stay requirements.
Existing Structures:	
Topography and Vegetation:	

APPLICATION TYPE (please check all that apply)

☐ Annexation	☐ Interpretation	☐ UGB Amendment
☐ Appeal	☐ Minor Replat	☐ Vacation
☐ Comp Plan/Map Amendment	☐ Partition	☐ Variance/Adjustment
☐ Conditional Use Permit	☐ Planned Development	☐ PC
☐ PC	☐ Property Line Adjustment	☐ Staff
☐ Staff	☐ Shoreland Impact	☑ Zone Ord/Map Amendment
☐ Design Review	☐ Subdivision	☐ Other_____
☐ Geologic Permit	☐ Temporary Use Permit	

FOR OFFICE USE ONLY

File No. Assigned:_____

Date Received: _____ Fee Amount: _____ Date Accepted as Complete: _____

Received By: _____ Receipt No.: _____ Accepted By: _____

(SEE REVERSE SIDE)

Applicant Mailing Address:

Mr. Michael Miliucci
Dulcich Realty, LLC
PO Box 97
Clackamas, OR 97015

Applicant Telephone Number and Email Address:

(503) 905-4500
mmiliucci@pacseafood.com

AUTHORIZED REPRESENTATIVE INFORMATION

1. The authorized representative is:

   Michael Miliucci
   Pacific Seafood Group
   PO Box 97
   Clackamas, OR 97015
   Telephone: (503) 906-4500
   Email: mmiliucci@pacseafood.com

2. The authorized representative is represented by:

   Michael C. Robinson
   Schwabe, Williamson & Wyatt, P.C.
   1211 SW Fifth Avenue, Suite 1900
   Portland, OR 97204
   Telephone: (503) 796-2756
   Email: mrobinson@schwabe.com

APPLICATION SUBMITTAL REQUIREMENTS

Zoning Ordinance Map or Text Amendment

The following information must be submitted with a City of Newport Land Use application for Zone Ordinance Map or Text Amendment:

Text Amendments:

❒1. A copy of the proposed language.

❒2. Fee of $1,262.00.

Map Amendments:

❒1. A current 18" x 24" Lincoln County Assessor's tax map(s) showing the subject property and the notification area. The notification area is all properties within 300 feet of the subject property. *(Lincoln County Assessor's office is located in the Lincoln County Courthouse at 225 W Olive St, Newport)*

❒2. A list of names and addresses of property owners, as shown in the records of the Lincoln County Assessor, within the notification area described in #1 above.

❒3. Written findings of fact addressing the following criteria:

- ❒ (a) The change furthers a public necessity.
- ❒ (b) The change promotes the general welfare.

❒4. A written explanation of the requested change.

❒5. Fee of $1,262.00.

I understand that I am responsible for addressing the legal criteria relevant to my application and that the burden of proof justifying an approval of my application is with me. I also understand that this responsibility is independent of any opinions expressed in the Community Development & Planning Department Staff Report concerning the applicable criteria.

I certify that, to the best of my knowledge, all information provided in this application is accurate.

Pacific Seafood Group Applicant Signature(s)	7-30-19 Date Signed
Pacific Seafood Group Property Owner Signature(s)	7-30-19 Date Signed
Michael M. Authorized Representative Signature(s) Michael Milinucci Corporate Counsel	7-30-19 Date Signed

Please note application will not be accepted without all applicable signatures.

Please ask staff for a list of application submittal requirements for your specific type of request.

Definitions

Hotel. A building in which lodging is provided for guests for compensation and contains a common entrance and where lodging rooms do not have an entrance opening directly to the outdoors (except for emergencies), with or without cooking facilities, and ~~where more than 50 percent of the lodging rooms are for rent to transient guests for a continuous period of less than 30 days.~~ A bed and breakfast facility or a vacation rental conducted in a single family dwelling or individual dwelling unit is not a hotel use.*

Motel. A building or group of buildings in which lodging is provided for guests for compensation, containing guest units with separate entrances from the building exterior, with or without cooking facilities, ~~and where more than 40 percent of the lodging rooms are for rent to transient guests for a continuous period of less than 30 days~~. A bed and breakfast facility or a vacation rental conducted in a single family dwelling or individual dwelling unit is not a motel use.*

***

14.03.060 Commercial and Industrial Districts.

The uses allowed within each commercial and industrial zoning district are classified into use categories on the basis of common functional, product, or physical characteristics.

***

C. Commercial Use Categories

***

2. Retail Sales and Service

a. Characteristics. Retail Sales and Service firms are involved in the sale, lease or rent of new or used products to the general public. They may also provide personal services or entertainment, or provide product repair or services for consumer and business goods.

b. Examples. Examples include uses from the four subgroups listed below:

i. Sales-oriented, general retail: Stores selling, leasing, or renting consumer, home, and business goods including art, art supplies, bicycles, books, clothing, dry goods, electronic equipment, fabric, fuel, gifts, groceries, household products, jewelry, pets, pet food, pharmaceuticals, plants, printed material, stationery, and videos; food sales. Sales oriented general retail includes the service but not repair of vehicles.

ii. Sales-oriented, bulk retail: Stores selling large consumer home and business goods, including appliances, furniture, hardware, home improvements, and sales or leasing of consumer vehicles including passenger vehicles, motorcycles, light and medium trucks, and other recreational vehicles.

iii. Personal service-oriented: Branch banks; urgency medical care; Laundromats; photographic studios; photocopy and blueprint services; printing, publishing and lithography; hair, tanning, and personal care services; tax preparers, accountants, engineers, architects, real estate agents, legal, financial services; art studios; art, dance, music, martial arts, and other recreational or cultural classes/schools; hotels, motels, and other temporary lodging with an average length of stay greater than 30 days; taxidermists; mortuaries; veterinarians; kennels limited to boarding and training with no breeding; and animal grooming.

iv. Entertainment-oriented: Restaurants (sit-down and drive through); cafes; delicatessens; taverns and bars; hotels, motels, recreational vehicles, and other temporary lodging with an average length of stay less than 30 days; athletic, exercise and health clubs or gyms; bowling alleys, skating rinks, game arcades; pool halls; dance halls, studios, and schools; theaters; indoor firing ranges, miniature golf facilities, golf courses, and driving ranges.

v. Repair-oriented: Repair of TVs, bicycles, clocks, watches, shoes, guns, appliances and office equipment; photo or laundry drop off; quick printing; recycling drop-off; tailor; locksmith; and upholsterer.

c. Exceptions.

i. Lumber yards and other building material sales that sell primarily to contractors and do not have a retail orientation are classified as Wholesale Sales.

ii. The sale of landscape materials, including bark chips and compost not in conjunction with a primary retail use, is classified as Industrial Service.

iii. Repair and service of consumer motor vehicles, motorcycles, and light and medium trucks is classified as Vehicle Repair. Repair and service of industrial vehicles and equipment, and heavy trucks is classified as Industrial Service.

iv. Sales, rental, or leasing of heavy trucks and equipment is classified as Wholesale Sales.

v. When kennels are limited to boarding, with no breeding, the applicant may choose to classify the use as Retail Sales and Service.

vi. Uses where unoccupied recreational vehicles are offered for sale or lease, or are stored, are not included as a Recreational Vehicle Park.

GROUP HOME.

LODGING HOUSE. Any building or portion thereof containing not more than five guest rooms where rent is paid in money, goods, labor or otherwise. The total number of guests shall not exceed 16.

PERSONAL CARE SERVICE.

TRANSIENT.

310.3 Residential Group R-1. Residential occupancies containing *sleeping units* where the occupants are primarily *transient* in nature, including:

Boarding houses (*transient*) with more than 10 occupants
Congregate living facilities (*transient*) with more than 10 occupants
Hotels (*transient*)
Motels (*transient*)

310.4 Residential Group R-2. Residential occupancies containing *sleeping units* or more than two *dwelling units* where the occupants are primarily permanent in nature, including:

Apartment houses
Boarding houses (nontransient) with more than 16 occupants
Congregate living facilities (nontransient) with more than 16 occupants
Convents
Dormitories
Fraternities and sororities
Hotels (nontransient)
Live/work units
Monasteries
Motels (nontransient)
Vacation timeshare properties

Group R-2 occupancies providing 21 or more housing units for low-income elderly, which are financed in whole or in part by the federal or state fund, shall contain a multiservice room adequate in size to seat all the tenants (ORS 455.425). The multiservice room shall include adjacent toilet facilities for both sexes; a service area with a kitchen sink, countertop and upper and lower cabinets; and a storage room sized to store tables, chairs or benches and janitorial supplies and tools. The multiservice room and accessory rooms shall be accessible to disabled persons (see Chapter 11).

310.5 Residential Group R-3. Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

Adult care facilities that provide accommodations for six or fewer persons of any age for less than 24 hours
Adult foster homes, as defined in ORS Chapter 443, or family child care homes (located in a private residence), as defined in Section 310.2
Adult foster homes and family child care homes that are within a single-family dwelling are permitted to comply with the *Residential Code* in accordance with Section 101.2
Buildings that do not contain more than two *dwelling units*
Boarding houses (nontransient) with 16 or fewer occupants
Child care facilities that provide accommodations for six or fewer persons of any age for less than 24 hours
Congregate living facilities (nontransient) with 16 or fewer occupants
Lodging houses, as defined in this section, are permitted to comply with the *Residential Code* in accordance with Section 101.2

310.5.1 Care facilities within a dwelling. Care facilities for five or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the *Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or with Appendix T of the *Residential Code.*

310.6 Residential Group R-4. This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive *custodial care*. Buildings of Group R-4 shall be classified as one of the occupancy conditions indicated in Sections 310.6.1 or 310.6.2.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code.

310.6.1 Condition 1. This occupancy condition shall include buildings in which all persons receiving *custodial care*, who without any assistance, are capable of responding to an emergency situation to complete building evacuation. This group shall include, but not be limited to, the following:

Congregate living facilities
Halfway houses
Social rehabilitation facilities

310.6.2 Condition 2. This occupancy condition shall include buildings subject to licensure by the Oregon Department of Human Services in which there are any persons receiving *custodial care* who require limited verbal or physical assistance while responding to an emergency situation to complete building evacuation. This group shall include, but not be limited to, the following:

Alcohol and drug centers
Assisted living facilities with or without a Memory Care Endorsement
Residential care facilities with or without a Memory Care Endorsement
Residential treatment facilities
Group homes and facilities

***Draft* MINUTES**
City of Newport Planning Commission
Work Session
Newport City Hall Conference Room A
August 13, 2018
6:00 p.m.

Planning Commissioners Present: Jim Patrick, Lee Hardy, Bob Berman, Rod Croteau, Mike Franklin, Bill Branigan, and Jim Hanselman.

PC Citizens Advisory Committee Members Present: Dustin Capri.

PC Citizens Advisory Committee Members Absent: Karmen Vanderbeck (*excused*)

City Staff Present: Community Development Director (CDD) Derrick Tokos; City Attorney, Steve Rich; and Executive Assistant, Sherri Marineau.

1. **Call to Order.** Chair Patrick called the Planning Commission work session to order at 6:00 p.m.

2. **Unfinished Business.**

3. **New Business.**

A. **Conflict of Interest Presentation by City Attorney.** Steve Rich gave a presentation to the PC about conflicts of interest. He noted that he was presenting an annual update to all committees on conflicts. He clarified for the PC what the difference was between a conflict and bias. Rich also clarified the differences between a potential conflict of interest and actual conflict of interest. He then went on to discuss the overlays of the Newport Municipal Code and the State Ethics Code. Tokos explained the difference between legislative and qui-judicial conflicts of interest.

B. **Review of Amendments to NMC 14.01.020 and 14.03.060 Related to Extended Stay Motels.** Capri and Franklin noted that they had a potential conflict of interest. Tokos reviewed the application that was submitted by Pacific Seafood Group and the amendments to the NMC.

Berman asked if they bought the building and turned it into units, why it wouldn't be considered apartments. Tokos said it wouldn't be under a residential code. Croteau asked if it would no longer be used for commercial motel rental. Tokos said if their plans changed, they could use it or sell it to someone who wanted to use it as a motel. Franklin asked where the location of the unit was. Tokos said he couldn't say but was in one of the zones listed in memo and explained where the locations fell in the zones.

Hanselman thought it sounded like they were asking for dwellings to stay in for up to six months. Tokos said no, they weren't apartments and were in a different construction classifications. It would be no different from hotels/motels. Hanselman was concerned about safety for people who are in a lodging setting where they could cook. Tokos said it was a benefit to have a provision to allow a business to build an extended stay operation. Franklin asked if the units would have kitchens. Tokos wanted to encourage the PC to think in terms of any extended stay when considering the amendments. He said that some units may not have kitchenettes. Hanselman thought that more and more businesses would need more housing for the workforce and this is something that might become more common. Franklin asked if it would be a loop hole for affordable housing. Tokos said they weren't apartments and were different from dwellings. Hardy reminded the PC to not confuse seasonal housing with workforce housing as they were different. Hanselman was concerned that tourism was also seasonal and also looking for housing. Croteau thought it would set precedence for housing for employees. Berman saw it as a positive to free up some workforce housing. Croteau said that he had talked to different businesses who said that housing was an issue for hiring people. Hardy thought that there had been seasonal shortages for decades. Croteau said he had a number of people in important roles in the community that say that housing was an issue.

Patrick reminded the PC that they were looking at doing a standard for extended stay. He had a problem with converting a complex to an extended stay because he didn't know the state of the plumbing, electrical and the building. Tokos asked if the PC wanted info on the building codes for the PC hearing. Capri reminded that anytime they would be changing the use they would have to bring the building up to code. He said he could bring information on the distinction between hotel/motels and multi-family; and extended stay or not. The PC agreed it would be helpful. Berman was concerned that if someone bought an existing hotel, with these changes someone could either rent it as a motel or an

extended stay. Tokos said that it wasn't an accurate assumption that Pacific Seafoods was assuming they were buying an existing motel. Croteau asked if the existing motels met the existing code. Patrick said no because of the change in the code. A discussion ensued regarding what triggers projects being required to be put up to code.

Capri asked if Hatfield and Samaritan Hospital could build to do extended stays. Tokos said they may have been already been doing that and was already permitted under the current code. Patrick was more concerned about the conversion of the buildings for extended stay, not so much the changes to the amendments.

Ellen Bristow addressed the PC and asked if extended stay was considered a boarding house or a dorm room. Tokos said it was different from a boarding house which had a central common room. Bristow asked if a person would be in one room or more than one in a room. Tokos said there would be an occupancy limit based on size of room, but who was renting the unit wouldn't be determined.

Branigan asked if this would be allowed in I-3 zones. Tokos said no. Hanselman asked about room taxes for extended stay. Tokos said he could take a look at it and give the PC the information. Berman said they originally asked for it in the C-2 zone but the proposal was not for C-2. Tokos said this was a typo on the application. Patrick asked to have the map published split in half (North and South)with more color definition.

C. **Planning Commission Scope of Work Update.** Tokos reviewed the updated work program with the PC.

4. **Director's Comments.** No Director comments.

5. **Adjournment.** Having no further discussion, the meeting adjourned at 6:58 p.m.

Respectfully submitted,

_____

Sherri Marineau,
Executive Assistant

City of Newport Zoning Map

6/28/16

Legend

- City Limits
- Urban Growth Boundary

Zone District

- C-1 Retail and Service
- C-2 Tourist
- C-3 Heavy
- I-1 Light
- I-2 Medium
- I-3 Heavy
- P-1 Public Structures
- P-2 Public Parks
- P-3 Public Open Space
- R-1 Low Density Single-Family
- R-2 Medium Density Single-Family
- R-3 Medium Density Multi-Family
- R-4 High Density Multi-Family
- W-1 Water Dependent
- W-2 Water Related

N

0 2,500 5,000 10,000 Feet

NEWPORT OREGON
City of Newport
Community Development Department
169 SW Coast Highway Phone: 541.574.0629
Newport, OR 97365 Fax: 541.574.0644

CITY OF NEWPORT
NOTICE OF A PUBLIC HEARING

The Newport Planning Commission will hold a public hearing on Monday, September 10, 2018, at 7:00 p.m. in the City Hall Council Chambers to consider File No. 3-Z-18, revisions to the Newport Municipal Code (NMC) 14.01.020 and 14.03.060 to provide for extended stay hotel and motel uses. Pursuant to Newport Municipal Code (NMC) Section 14.36.010, the Commission must find that the change is required by public necessity and the general welfare of the community in order for it to make a recommendation to the City Council that the amendments be adopted. Testimony and evidence must be directed toward the request above or other criteria, including criteria within the Comprehensive Plan and its implementing ordinances, which the person believes to apply to the decision. Failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to that issue precludes an appeal, including to the Land Use Board of Appeals, based on that issue. Testimony may be submitted in written or oral form. Oral testimony and written testimony will be taken during the course of the public hearing. The hearing may include a report by staff, testimony from the applicant and proponents, testimony from opponents, rebuttal by the applicant, and questions and deliberation by the Planning Commission. Written testimony sent to the Community Development (Planning) Department, City Hall, 169 SW Coast Hwy, Newport, OR 97365, must be received by 5:00 p.m. the day of the hearing to be included as part of the hearing or must be personally presented during testimony at the public hearing. The proposed code amendments, additional material for the amendments, and any other material in the file may be reviewed or a copy purchased at the Newport Community Development Department (address above). Contact Derrick Tokos, Community Development Director (541) 574-0626 (address above).

(FOR PUBLICATION ONCE ON WEDNESDAY, SEPTEMBER 5, 2018)

City of Newport

Community Development Department

Memorandum

To: Planning Commission

From: Derrick I. Tokos, AICP, Community Development Director

Date: September 18, 2018

Re: Continued Hearing on File No. 1-VAR-18, Height Variance for Signage at Samaritan Pacific Communities Hospital

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The applicant has elected to submit further justification for the size of the proposed wall mounted sign. Attached is a series of slides submitted on September 17, 2018 by Matthew Brown with Innerface Architectural Signage, Inc. The first 5 slides are identical to material the Commission has already received from the applicant. Slides 6 through 28 are new.

As noted in the staff report for the September 10, 2018 hearing, the relevant approval standard is listed under NMC 10.10.130(A), which states:

> *Approval of the request is the minimum necessary to alleviate special hardships or practical difficulties faced by the applicant and that are beyond the control of the applicant.*

In regard to this criterion, the Planning Commission should consider whether the applicant has sufficiently demonstrated that the request is the minimum necessary to alleviate special hardships or practical difficulties faced by the applicant and that are beyond the control of the applicant.

If the Planning Commission finds that the applicant has met the criteria established in the Newport Municipal Code for granting a variance, then the Commission should approve the request and ask staff to prepare findings and a final order for consideration at its next meeting (October 8, 2018). As always, the Commission may attach reasonable conditions of approval necessary to carry out the purposes of the ordinance, as conditions of approval are permissible under NMC Section 10.10.130 (Variance Requirements – specifying that the Planning Commission utilizes the procedure and process of zoning variances, including conditions of approval). If, on the other hand, the Commission finds that the request does not comply with the criteria, then the Commission should share its reasons for why the application must be denied. Staff would then prepare findings and a final order to that effect for the Commission's consideration.

Attachments

Email from Matthew Brown, Innerface Architectural Signage, Inc., dated 9/17/18, with attachment

Derrick Tokos

From: mbrown@innerfacesign.com
Sent: Monday, September 17, 2018 3:40 PM
To: Derrick Tokos
Cc: Evonne Walls; Jon Conner; JeffJensen@innerfacesign.com; Joe Kunkel
Subject: RE: Additional information-signage submittal

Thank you!

Matthew Brown
Vice President | Design Services

O (510) 525-9156 | C (510) 504-9156

INNERFACE
ARCHITECTURAL
SIGNAGE, INC.

innerfacesign.com | mywayfinding.com

From: Derrick Tokos <D.Tokos@NewportOregon.gov>
To: '"mbrown@innerfacesign.com"' <mbrown@innerfacesign.com>
Cc: "JeffJensen@innerfacesign.com" <JeffJensen@innerfacesign.com>, Joe Kunkel <jkunkel@thehealthcarecollaborativegroup.com>, Jon Conner <jconner@samhealth.org>, Evonne Walls <ewalls@samhealth.org>
Date: 09/17/2018 03:39 PM
Subject: RE: Additional information-signage submittal

We will provide copies of the attached file to the Planning Commission.

Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

From: mbrown@innerfacesign.com [mailto:mbrown@innerfacesign.com]
Sent: Monday, September 17, 2018 3:37 PM
To: Derrick Tokos <D.Tokos@NewportOregon.gov>
Cc: JeffJensen@innerfacesign.com; Joe Kunkel <jkunkel@thehealthcarecollaborativegroup.com>; Jon Conner <jconner@samhealth.org>; Evonne Walls <ewalls@samhealth.org>

Subject: Additional information-signage submittal

Derrick-

As discussed, the link below supplies the previous slide show, with additional content addressing board comments. We will bring printed copies for the board and would like to include this in a media presentation.

Please call or write with any questions or concerns. Thank you.

https://AtlWeb1.Innerfacesign.com/IWeb/fileupld.nsf/0/634D439501C209ED8525830B00712354?OpenDocument

Matthew Brown
Vice President | Design Services

O (510) 525-9156 | C (510) 504-9156

INNERFACE
ARCHITECTURAL
SIGNAGE, INC.

innerfacesign.com | mywayfinding.com

P A R T N E R S H I P

TIMESAVINGS+COSTSAVINGS=MAXIMUMLIFECYCLEVALUE

Samaritan Health Services

INNERFACE ARCHITECTURAL SIGNAGE, INC.

1 The height of the Campus Identification sign E7/D.1 exceeds the 30-foot height limitation [(*NMC 10.10.095(J)*)]

2 The SW Bay Street frontage has four signs – two wall signs (the campus identification sign (E-9/A) and the "emergency" sign (E-6/A.1); and two freestanding signs (E-7/D.1 and E-8/C). *NMC 10.10.095(C)* requires that each street frontage shall be limited to not more than 2 signs, only one of which may be other than a wall sign unless there is more than 200 lineal feet of street frontage, in which case one additional sign is permitted. (That street frontage is more than 200 feet. So, only a maximum of three signs may be allowed on that frontage. Therefore, one of the four signs must be eliminated in order to be consistent with the code).

3 The proposed "directional" freestanding signs may not be exempt in that they each exceed 3 square feet in area and some of them are internally illuminated.

Variance

1

- The height of the Campus Identification sign E7/D.1 exceeds the 30-foot height limitation [(*NMC 10.10.095(J*)]

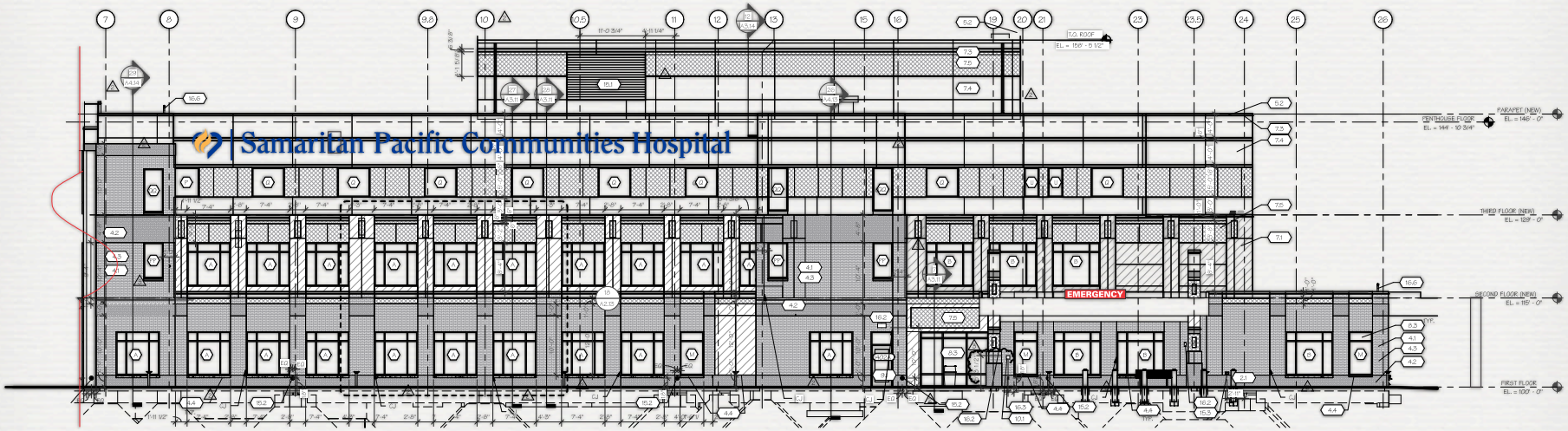
Variance

Detail View
Scale: 1/8" = 1'-0"

Campus Identification:

Internally illuminated individual pan channel letters/logo w/ translucent acrylic faces and LED illumination. Self-contained units with internal power packs

- 42" cap Letters
- 63" x 8" Accent Bar
- 66" x 63" Logomark



Partial West Elevation

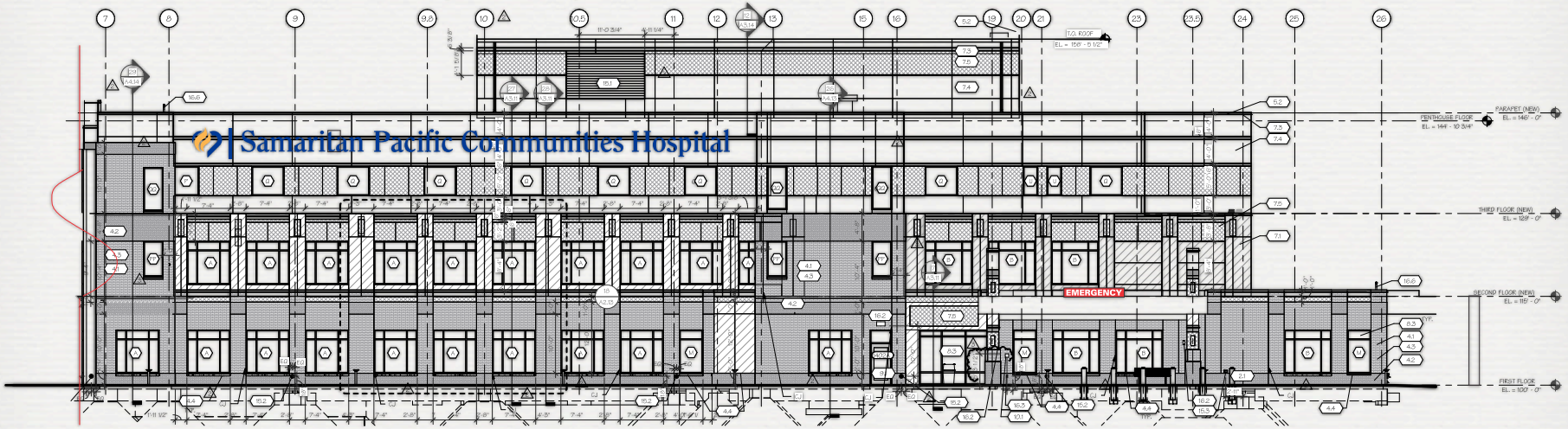
Building Mounted Signage

Detail View
Scale: 1/2" = 1'-0"

Entry Identification:

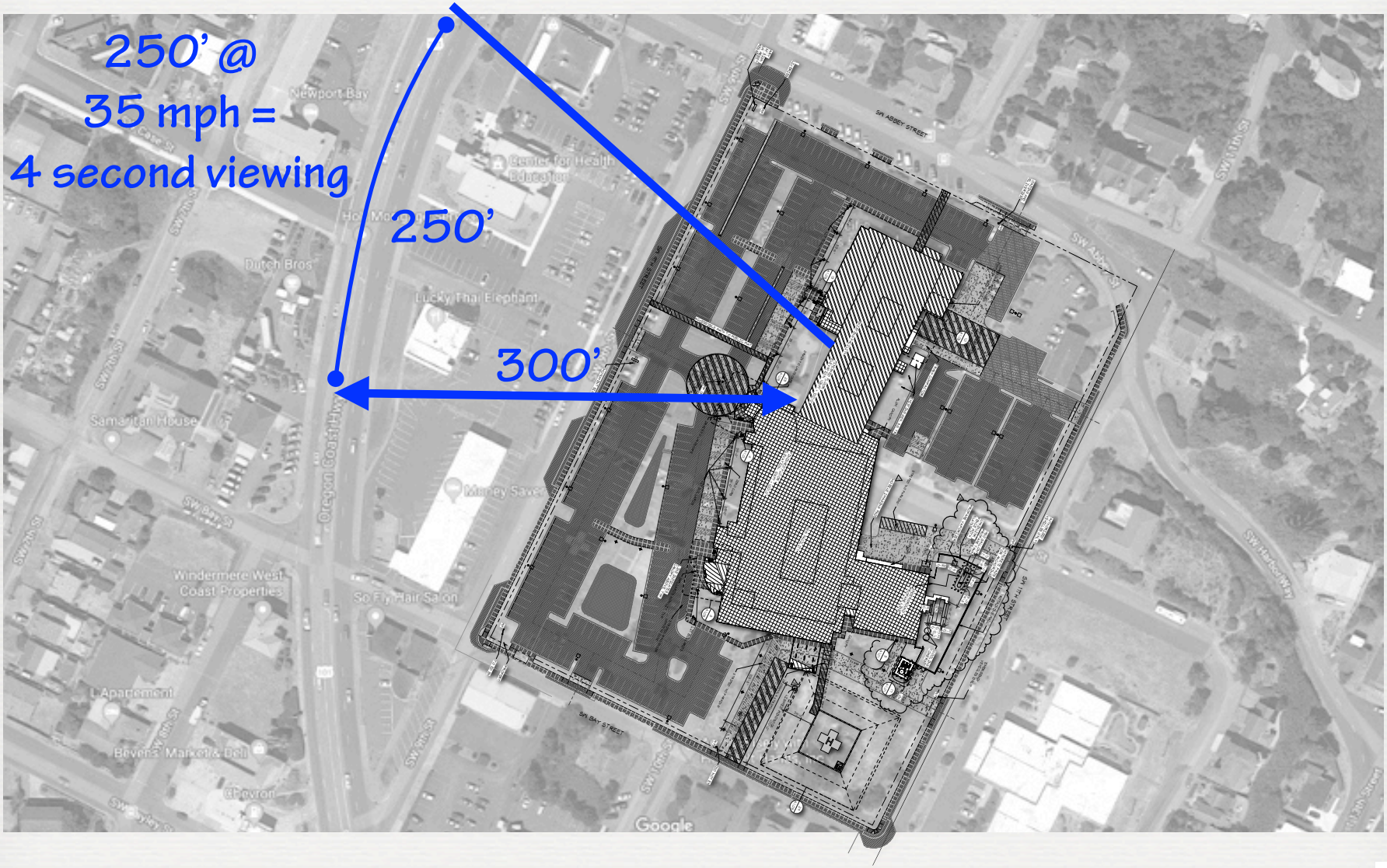
Internally illuminated cabinet
w/ translucent acrylic face and LED illumination.
Translucent red vinyl background w/ reversed white copy
Base mount to top of building canopy.

- 12" cap Letters
- 18" x 10'-0" Cabinet



Partial West Elevation

Building Mounted Signage



Signage Viewing

From SB 101


Center for Health Education
Samaritan Pacific Communities Hospital

From SB 101

From SB 101

From SB 101

A Channel Letters with Raceway

Manufacture and install one (1) set of face-lit channel letters with raceway.

1 Channel Letters
4" deep stock White aluminum coil
1" White trimcap
White acrylic faces w/ vinyl:
3M 230-157 Cobalt Blue
3M 230-125 Mango
White LED illumination

2 Raceway
4" deep fabricated aluminum
Paint to match wall (TBD)

Install
Attach to wall at location shown.
Use wall appropriate hardware.
Fill all penetrations with watertight sealant.

A Front View — Scale: 1/2" = 1' - 0" — 95.0 Sq.Ft.

Side View

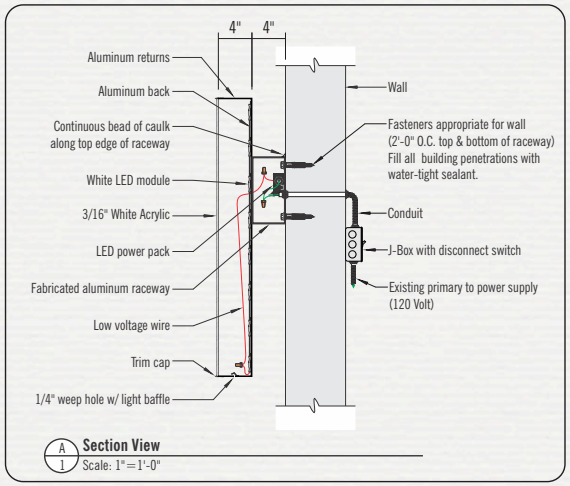
Vinyl Color Chart

230-157 Cobalt Blue (Sultan)
Pantone 287 C

230-25 Sunflower
Pantone 130 C

Paint Color Chart

P1 Paint T/M Building wall (TBD) with Satin finish



A 1 Section View — Scale: 1"=1'-0"

RAMSAY SIGNS **PRODUCTION PRINT**
DESIGN HAS BEEN REVIEWED FOR POTENTIAL PROBLEMS AND ACCURACY BY:
DESIGN: Bob Shaw DATE: 11/16/16
SALES: DATE:

RAMSAY SIGNS Est. 1911
9160 SE 74th Ave
Portland OR 97206
503.777.4555
800.613.4555
Fax 503.777.0220
ramsaysigns.com

Client:
SamFit
1111 SW 10th St.
Newport, OR

Date:
11/2/2016
Project Manager:
Kelly Reid
Designer:
Bob Shaw

Client Approval + Date

Landlord Approval + Date

Revisions:
r1) Add Logo channel 11/11/16 (BS)
r2) Removed options A2 & A3 11/14/2016 (BS)
p1) Changed Logo & Colors 11/21/2016 (BS)

L73 Grounding and Bonding Statement for each permanently connected sign the following statement or equivalent "This sign is intended to be installed in the accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign" should be either directly marked on the sign or label attached to the sign, included in the installation instructions, or provided on a separate sheet or tag shipped with the sign.

PAGE # 3
Number of pages: 5
16-942-R2-P1

Clinic ID


19'-0 5/8"
4" 4"
1
2
P1
A
1
8"
5'-0"
SamFit
1
2
A
Front View
Scale: 1/2" = 1' - 0"
95.0 Sq.Ft.
Side View

Clinic ID

Clinic ID

Comparable Application

55

Comparable Application

Comparable Application

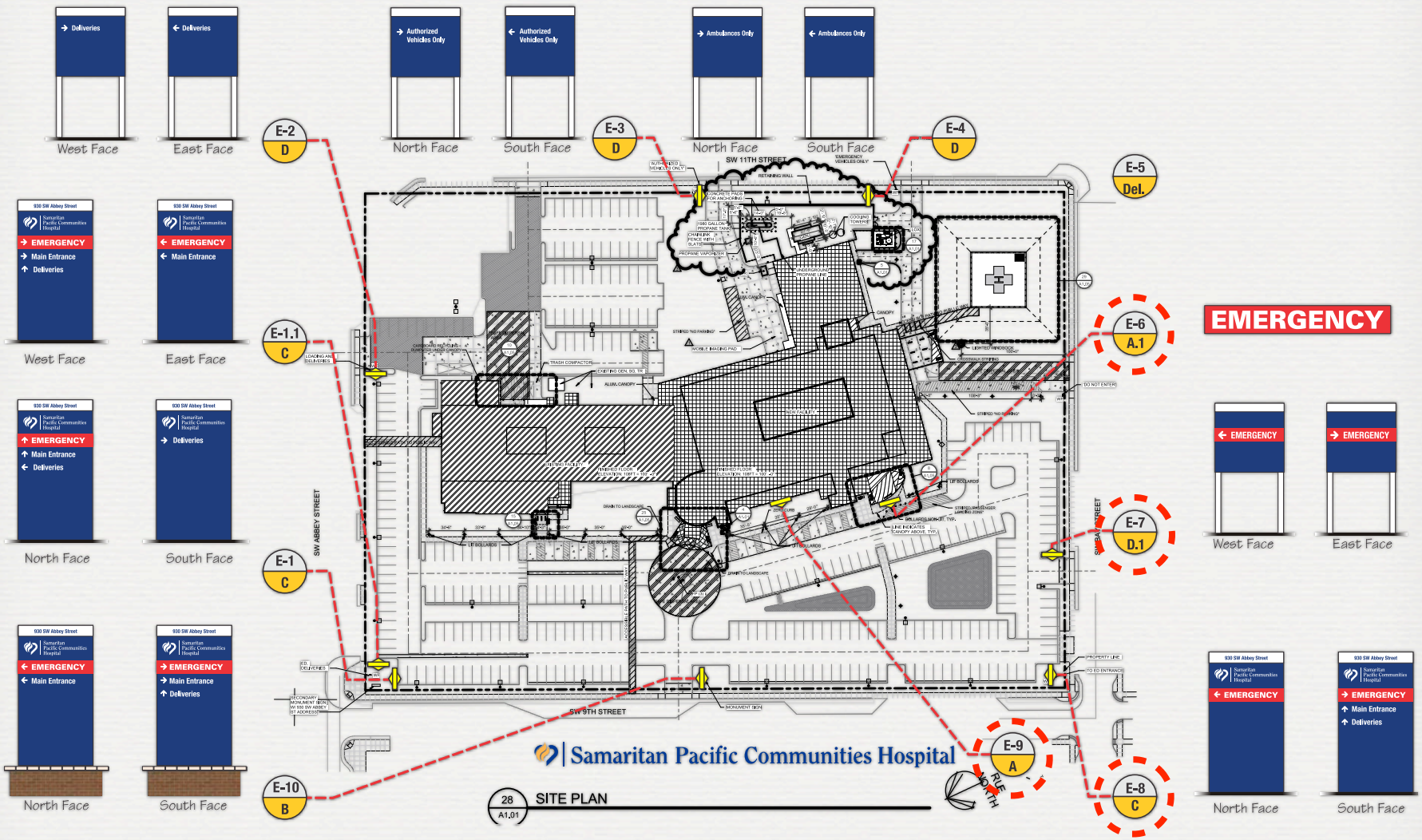
Comparable Application

58

2

- The SW Bay Street frontage has four signs.
- That street frontage is more than 200 feet.
- A maximum of three signs may be allowed on that frontage.

Variance

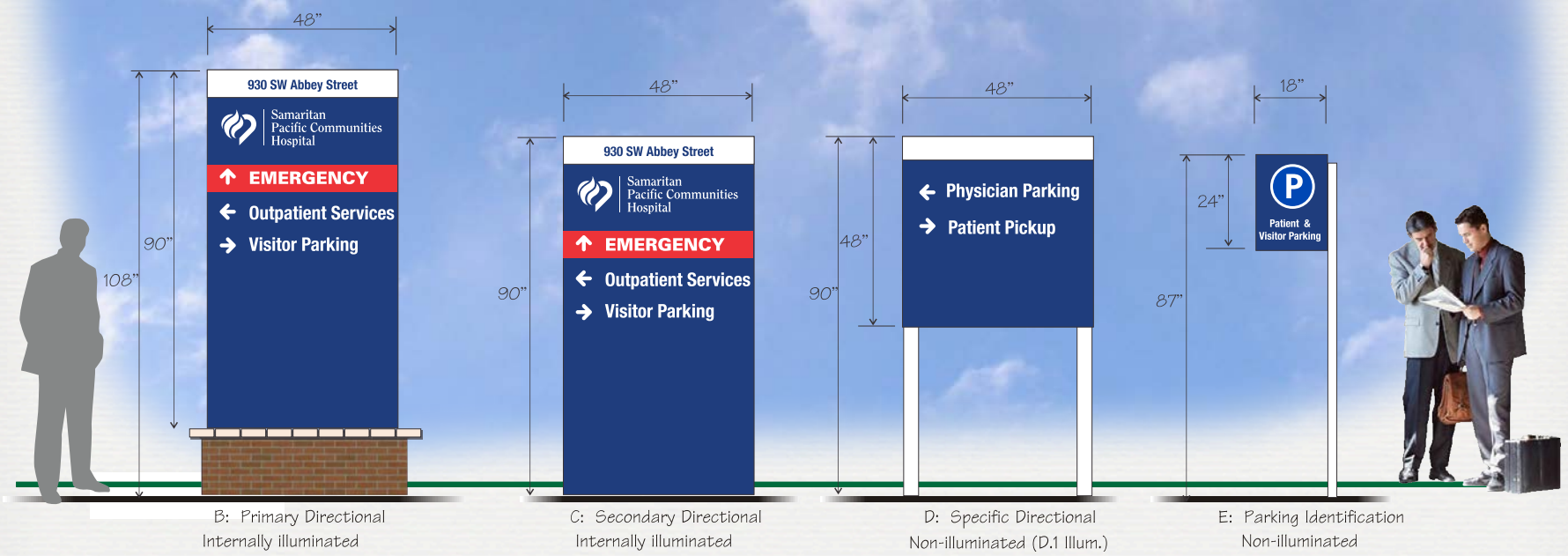


Signage Plan

3

- The proposed “directional” freestanding signs exceed 3 square feet in area and some of them are internally illuminated.

Variance



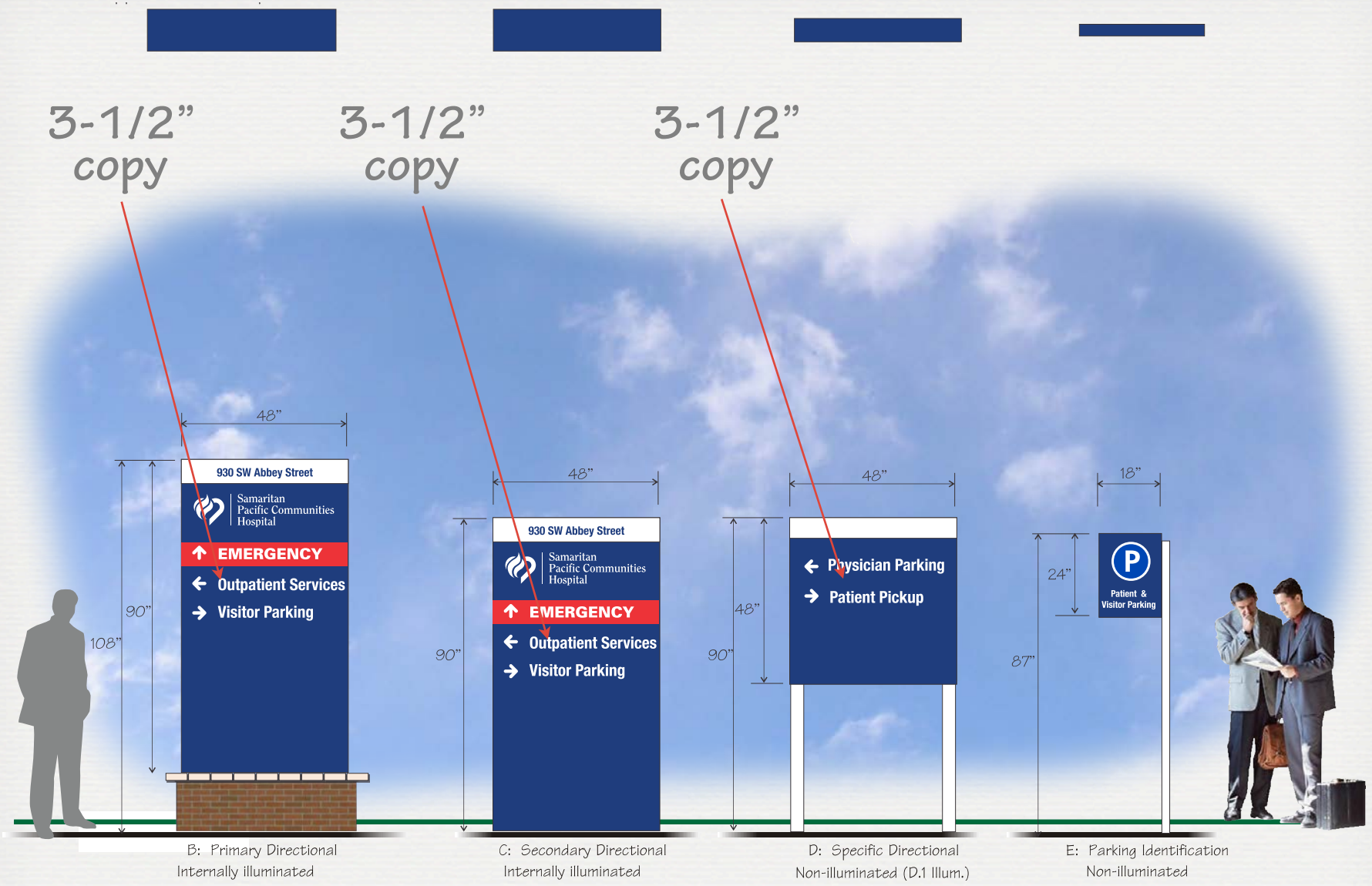
B: Primary Directional
Internally illuminated

C: Secondary Directional
Internally illuminated

D: Specific Directional
Non-illuminated (D.1 Illum.)

E: Parking Identification
Non-illuminated

Freestanding Signage



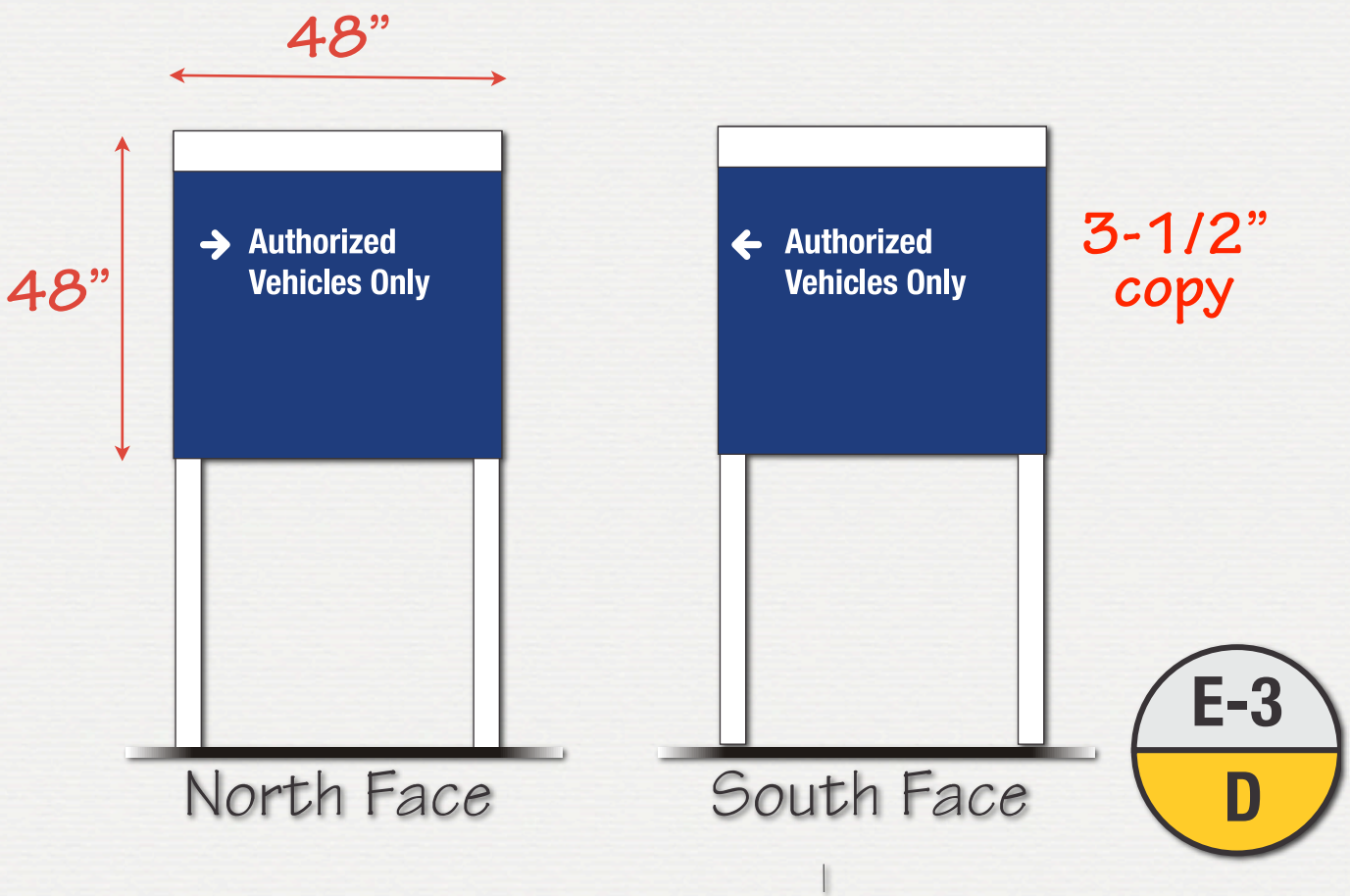
B: Primary Directional
Internally illuminated

C: Secondary Directional
Internally illuminated

D: Specific Directional
Non-illuminated (D.1 Illum.)

E: Parking Identification
Non-illuminated

Freestanding Signage



Signage Plan


EMERGENCY
VISITOR PARKING
Samaritan
Pacific
Communities
Hospital
EMERGENCY ENTRANCE
Walk-in
Clinic

65

66

67


6'-0"
3" copy
Samaritan
Pacific Communities Hospital
WALK-IN CLINIC

68

LETTER HEIGHT	READABLE DISTANCE FOR MAXIMUM IMPACT	MAXIMUM READABLE DISTANCE
1"	10'	30'
2"	20'	60'
3"	30'	90'
5"	50'	150'
7"	70'	210'
10"	100'	300'
12"	120'	360'
15"	150'	450'
18"	180'	540'
24"	240'	720'
30"	300'	900'
36"	360'	1080'

Example: If the sign will be viewed from 300', we recommend all copy to be in between 10" and 30" tall.

DURATION OF READABILITY (TIME IN SECONDS)

M.P.H.	Letter Height 4"	6"	8"	10"
25	5.5	8.2	10.9	13.6
35	3.9	5.8	7.8	9.7
45	3.0	4.5	6.1	7.6
55	2.5	3.7	5.0	6.2
65	2.1	3.1	4.5	5.7

Example: If a car passes the sign at 45 mph, 6" letters will be legible for 4.5 seconds.

City of Newport

Community Development Department

Memorandum

To: Newport Planning Commission

From: Derrick Tokos, Community Development Director

Date: September 17, 2018

Re: Appeal of Geologic Permit (File No. 1-GP-18)

Enclosed is a copy of the written record, including the staff decision and notice of appeal. Please treat the staff decision, and this memo, as the staff report for the appeal hearing. As this is a geologic permit, analysis performed by certified engineering geologists, geotechnical engineers, and licensed engineers is of particular relevance. To that end, the record includes submittals by K&A Engineering and K&D Engineering on behalf of the applicant, peer review by Columbia Geotechnical on behalf of appellants, and comments by H.G. Schlicker and Associates regarding reports they have authored involving the property and other parcels in the area. The subject site is situated on the west side of NW Spring Street, and is identified by the County Assessor as tax lots 1800, 1900, and 1903 of map 11-11-05-BC.

Appellants have challenged substantive elements of applicant's June 29, 2018 geologic report by K&A Engineering that concluded the applicant's property is suitable for the development of three home sites (Exhibit A-6). The August 15, 2018 peer review report by Columbia Geotechnical identifies potential issues with K&A Engineering's analysis (Exhibit E-6). K&A Engineering responded to the peer review comments in a letter dated September 12, 2018 (Exhibit E-3).

City of Newport regulations for development within mapped geologic hazards areas are contained in Chapter 14.21 of the Newport Municipal Code (NMC), and all standards listed in this chapter are relevant to the permit application on appeal. Applications for geologic permits must include a geologic report, prepared by a certified engineering geologist, establishing the site is suitable for the proposed development (NMC 14.21.050(D)). Further, an engineering report, prepared by a licensed civil engineer, geotechnical engineer, or certified engineering geologist (to the extent qualified), must be provided if engineering remediation is anticipated to make the site suitable for the proposed development (NMC 14.21.050(E)). Statements by these licensed individuals should be viewed by the Commission as expert testimony on these matters.

Staff concluded that the June 29, 2018 geologic report by K&A Engineering and accompanying conceptual site plan by K&D Engineering satisfied the approval standards with conditions and issued a decision to that effect on July 16, 2018 (Exhibit A-3). The decision was appealed on 7/31/18, with appellants asserting that the June 29, 2018 report by K&A Engineering contained inconsistencies, errors, and omissions that they would highlight with their own analysis prepared by a certified engineering geologist (Exhibit C-4). This was accomplished with the peer review report by Columbia Geotechnical, which appellants submitted on August 29, 2018. The appeal and peer review report were filed in accordance with the deadlines set forth in NMC 14.21.120. In deciding this appeal, the Planning Commission should consider any and all evidence in the record it believes to be relevant to criteria for approval of geologic permits, and may ask the applicant and/or the appellant to provide responses from K&A Engineering or Columbia Geotechnical to issues that it feels need clarification.

With respect to the procedures for Monday's hearing, a script will be prepared for the Planning Commission Chair addressing the conduct and order of the proceedings in a manner consistent with the City of Newport's

adopted procedures (NMC 14.52.080). Signup sheets will be provided for those wishing to speak at the hearing. The sheets will include a statement asking that persons identify the criteria they believe the applicant has or has not satisfied before they provide their testimony.

If, after taking testimony, the Commission believes that it has sufficient information to render a decision on the appeal then it may provide direction to staff to prepare findings of fact for consideration at its next meeting. The Commission should identify the direction it wants staff to take in preparing the findings (e.g. approve the application in a manner consistent with the staff decision, approve the application but include alternative findings addressing specific issues, or deny the application). If the Commission is inclined to deny the application, it is reasonable for it to ask that the appellant prepare the findings. The Commission must approve the application (i.e. deny the appeal) if it believes the approval standards have been met or can be met through the imposition of reasonable conditions. It must deny the application if it believes the approval standards cannot be met, even with reasonable conditions.

The Commission may, at the request of a participant or on its own accord, continue the hearing to a date certain to provide an opportunity for persons to present and rebut new evidence, arguments or testimony related to the approval criteria. If, after taking testimony, the Commission believes that additional information is needed in order for it to approve the application then this would be an option that it could pursue. In such a case, the Commission should be clear about the additional information that it wants to see submitted. Prior to the conclusion of the hearing, any participant may request an opportunity to present additional evidence, arguments or testimony. If such a request is made, the Commission must, at a minimum, leave the record open for receipt of written materials for a period of 7 days. Unless waived, the City must also afford the applicant at least 7 days after the record is closed to all other parties to submit final written argument in support of the application.

Exhibits

The case record is organized chronologically, with the most recently submitted information listed first. Documents submitted after the date of this memo will be distributed to Commission members at the hearing.

Materials Submitted After the Appeal

Exhibit #		Description
E-1		Email from Elaine Karnes, dated 9/17/18, expressing concern with the geologic report and slope stability, with attached photographs
E-2		Letter from Chris Schneller, dated 9/16/18, expressing that they believe the applicant has failed to establish the site is suitable for the proposed development
E-3		Letter from Michael Remboldt, P.E., G.E. and Gary Sandstrom, C.E.G., dated 9/12/18, responding to the peer review by Columbia Geotechnical
E-4		Email from Carol Reinhard, dated 9/11/18, expressing her opinion that the analysis by K&A Engineering was incomplete and faulty
E-5		Letter from Mona Linstromberg, dated 9/10/18, with comments on the conceptual site plan prepared by K&D Engineering, revised 7/2/18. Attached are full size copies of the plan to be distributed to the Commission members (plan to be distributed separately)
E-6		Geotechnical Peer Review by Ruth Wilmoth, C.E.G., P.E., with Columbia Geotechnical, dated 8/15/18 (submitted 8/29/18)

E-7		Email from Mona Linstromberg, dated 8/29/18, with chapter from a book by Paul Komar, titled Jump-off Joe Fiasco
E-8		Email from staff to Mona Linstromberg, dated 8/8/18, regarding issues with the notice of decision on the geologic permit
E-9		Email from Mona Linstromberg, dated 8/7/18, asking that a letter from the Oregon Shores Conservation Coalition related to the applicant's shoreland resource impact review application be included in the record (letter attached)
E-10		Email from Mona Linstromberg, dated 8/7/18, asking that a letter from Lisa Potter Thomas, related to the applicant's shoreland resource impact review application, be included in the record (letter attached)
E-11		Email from Mona Linstromberg, dated 8/7/18, asking that a letter she submitted related to the applicant's shoreland resource impact review application, be included in the record (letter attached)
E-12		Email from Mona Linstromberg, dated 8/7/18, asking that a letter she submitted with additional testimony related to the applicant's shoreland resource impact review application, be included in the record (letter attached)
E-13		Email from Mona Linstromberg, dated 8/7/18, asking that Tim Cross's credentials be included in the record. Includes enclosed resume
E-14		Email from Mona Linstromberg, dated 8/7/18, asking that Tim Cross's letter (Exhibit B-10) be included in the record
E-15		Email from Chris Schneller, dated 7/31/18, taking issue with Gary Sandstrom's conclusions related to the "design life of the structure"
E-16		Email from Chris Schneller, dated 7/31/18, expressing concerns with the design of the drainage system for the proposed development
E-17		Email from Ann Sigleo, dated 7/31/18, indicating that she believes the applicant's geologic report was thorough, but that additional details are needed for the beach access plan

Notice of the Appeal Hearing

Exhibit #		Description
D-1		Email from staff, dated 9/12/18, sent to persons on an email distribution list that asked to be kept appraised of land use matters involving the property. The email included the appeal hearing notice as an attachment
D-2		Notice of appeal hearing mailed to appellants, property owners within 200-feet of the subject property, and affected agencies. Notice was mailed on 8/31/18 and includes map and mailing list
D-3		Notice of the appeal hearing published in the Newport News-Times on 9/14/18

Appeal Documents

Exhibit #		Description
C-1		Email from Sean Malone, Attorney, dated 7/31/18, indicating that he is representing appellants in the appeal of the geologic permit
C-2		Email from Leslie Hogan advising of Pat Linstromberg's interest in signing on to the appeal. The email is dated 7/31/18
C-3		Email from Teresa Amen, dated 7/31/18 confirming that they own property on Spring Street
C-4		Appeal from Mona Linstromberg, Elaine Karnes, Christine Schneller, Robert Earle, Teresa, and Leslie Hogan (Power of Attorney for Pat Linstromberg), filed 7/31/18

Documents Submitted After Decision and Prior to Appeal

Exhibit #		Description
B-1		Email from Teresa Amen, dated 7/29//18, with attached letter from Robert Earle and Teresa Amen, Mary Bauman, and Nancy Luther opposing the proposed development
B-2		Email from Brent Bunker, dated 7/27/18, expressing concerns with the geologic stability of the subject property
B-3		Email from Ann Howell, dated 7/27/18 with an article about a house in Maryland that she views as an example of "just because you can do it, doesn't mean you should"
B-4		Email from staff to Chris Schneller, dated 7/27/18 related to road access permits the applicant will need to obtain if and when the geologic report becomes final
B-5		Email from Mona Linstromberg suggesting that K&A Engineering might want to revisit aspects of their report. The email is dated 7/26/18
B-6		Email from Mona Linstromberg, dated asking if the applicant might consider accepting an extension to the appeal period
B-7		Letter from Wayne Belmont, Attorney, Roy Kinion (Road Official) and Steve Hodge, P.E. with Lincoln County. The letter, dated 7/26/18, indicates that earthwork supported by an approved Geologic Permit can occur within County road right-of-way subject to an access permit. County Engineer comments relate to his conclusion that the geologic report is consistent with the 2014 Oregon Structural Specialty Code
B-8		Email from staff to the applicant, dated 7/26/18, with the letter from Mr. Cross regarding K&A Engineering's analysis
B-9		Email from Doug Gless, R.G., C.E.G, L.H.G., with H.G. Schlicker and Associates, dated 7/25/18, advising as to the relative weight readers should give to three reports that they prepared involving the subject property and adjacent parcels. Referenced reports are included with this exhibit

B-10		Letter from Tim Cross, dated 7/23/18, expressing concern with K&A Engineering's analysis
B-11		Email from Elaine Karnes, dated 7/20/18, summarizing issues discussed with staff

Record up to Issuance of City Decision

Exhibit #		Description
A-1		Email from staff, dated 7/16/18, to individuals that requested notice of the decision
A-2		Written notice and mailing list of individuals and agencies that received notice of the decision via first-class mail. Notice is dated 7/16/18
A-3		Notice of decision approving the geologic permit, dated 7/16/18
A-4		Email from Michael Remboldt, P.E., G.E., dated 7/6/18, transmitting the 6/29/18 report
A-5		Conceptual site plan for the subject property, prepared by K&D Engineering, Inc., dated 7/2/18 (11x17 reduced copy)
A-6		Geotechnical Engineering Report and Geologic Hazard Assessment, by Michael Remboldt, P.E., G.E. and Gary Sandstrom, C.E.G., R.P.G, dated 6/29/18 and received by the City on 7/6/18
A-7		Email from staff advising the applicant that the transmitted report, which was intended to be an update, was in fact an older version. Email is dated 7/5/18
A-8		Email from staff indicating that the application was incomplete, dated 6/21/18
A-9		Geotechnical Engineering Report and Geologic Hazard Assessment, by Michael Remboldt, P.E., G.E. and Gary Sandstrom, C.E.G., R.P.G, dated 6/12/18
A-10		Email from Bill Lund dated 5/4/18 requesting a meeting to discuss outstanding issues with the application
A-11		Email from Derrick Tokos, Newport Community Development Director (staff) to Mr. Lund, dated 5/4/18, advising that the application was incomplete
A-12		Email from Bill Lund seeking confirmation that the application is being processed. Email is dated 5/4/18
A-13		Copy of Newport Municipal Code (NMC) Chapter 14.21, Geologic Hazards Overlay
A-14		Geotechnical Engineering Report for property identified as Tax Lots 1800, 1900 and 1903, Tax Map 11-11—05-BC, by Michael Remboldt, dated 11/30/17
A-15		Letter from Michael Remboldt, P.E., G.E. related to the impact of the 60-foot Jump-off Joe road right-of-way on their 11/30/17 Geotechnical engineering Report
A-16		Land use application by William Lund, property owner, submitted 5/3/18

Derrick Tokos

From: Elaine Karnes <karnese@peak.org>
Sent: Monday, September 17, 2018 11:14 AM
To: Derrick Tokos
Cc: Ruth Wilmoth; Phillip Johnson, Oregon Shores/CoastWatch; Sean Malone; Mona Linstromberg
Subject: #1-GP-18-A: Testimony and Evidence
Attachments: #1.jpg; #2.jpg; #3.jpg; #4.jpg; #5.jpg; #6.jpg; #7.jpg; #8.jpg; #9.jpg; #10.jpg

TESTIMONY AND EVIDENCE #1-GP-18-A
September 17, 2018
Location Map 11-11-05BC. Tax Lots 1800, 1900, 1903.
Please enter in the record for the geologic permit appeal and confirm receipt.

The area proposed for development is in an active slide zone as identified by the State DOGAMI study. Our concern is that additional development could jeopardize the stability of Spring Street, the infrastructure (water lines, sewer lines, storm drain, and the buried utilities such as gas and electric), as well as existing homes in the area. A major geologic event that occurred in the 1960's is known as "The Spring Street Landslide".

On June 16, 1993, the Newport News-Times published an article concerning a proposed development on the same site. That article quoted Tom (Thomas) Branford (at that time a Lincoln County District Court Judge and since 1996 a Circuit Court Judge) who had previously owned a home across the street as stating: " ... just from walking down to the beach for the past 18 years through the property they're planning to develop...I believe that property is unstable." The 1993 article goes on to state: "Branford said that several years ago, in an area near the proposed development, 'a chunk of ground about 130 feet long and 10 feet wide simply cracked off, and it has sunk about six feet since that time. One owner had to alter their foundation... another lost a 10-foot chunk that was the full width of their lot.' " (That earlier development proposal was quickly abandoned.)

Since 1982, when the properties on either side of the proposed development were built, both homes have suffered significant damage to their foundations. The nearest house to the south (1245 NW Spring Street) required replacing much of its foundation with a cantilever support construction (see photos #1, #2, #3). A retaining wall was added on the west side of the house.

The house to the north (1409 NW Spring Street) required major work by "Ram Jack" during the summer of 2017. A large section of the driveway was removed and a concrete pour was done to support anchors attached to the house (see photos #4, #5). On the private trail going up from the beach to this house, the owners have posted a sign: "No Trespassing Private Beach Walkover ACTIVE GEOLOGIC HAZARD AREA" (see photo #6).

The extensive clearing and bulldozer work that was done by the current developer at the proposed Spring Street site obscured much of the evidence of recent slides. We had observed slumps on the site during the 27 years that we have lived in the neighborhood. A number of years ago the beach trail that starts near the memorial bench suffered a slide that brought down small trees and destroyed part of the trail during a single rain storm. From the county road right-of-way (that extends the eastern edge of the property) you can see clear indications of previous slides. (see

photos #7, #8, #9, #10)

The report submitted by the developer's geologic engineer states: "We do not warrant or guarantee site surface or subsurface conditions. Exploration test holes indicate soil conditions only at specific locations (i.e. the test hole locations) to the depths penetrated". Yet, none of these test holes were within the proposed development site, but rather are located within the City or County right-of-ways.

This same report states: "The scope of our service does not include construction safety precautions, techniques, sequences, or procedures...". This seems to suggest that there could be associated risks to the area during construction, such as the movement of heavy equipment, driving piles, expansive clearing of vegetation and additional earth movement.

Newport Municipal Code clearly states that the City's responsibility is to "promote the public health, safety and general welfare by minimizing public and private losses due to earth movement hazards and limiting erosion and related environmental damage..." and to "assure that the sensitive nature of beach and dune land forms is recognized and that development in these areas is designed so as to protect important natural values and reduce hazards to life and property." Newport residents have witnessed the erosion and slides along a section of Coast Street (just to the south of an earlier failed Jump-Off Joe development) resulting in its closure. We were Newport residents when the "Jump-Off Joe Fiasco" unraveled (as characterized by O.S.U. Professor Emeritus Paul Komar in this book The Pacific Northwest Coast). We ask only that the City fulfill its responsibility to protect the property and lives of the citizens of Newport.

Respectfully,
Elaine and Robin Karnes

attachments:
#1
#2
#3
#4
#5
#6
#7
#8
#9
#10


NO
TRESPASSING
PRIVATE BEACH WALKOVER

September 16, 2018

Re: Appeal of Geologic Hazard Permit 1-GP-18, West of NW Spring Street

To: Members of the Newport Planning Commission

Commissioners,

"Minimizing public and private losses due to earth movement hazards" is stated in the purpose declaration of the Geologic Hazards Overlay section of the Newport Municipal Code. In 1-GP-18, the applicant and his geotechnical advisers have failed to provide convincing evidence that the site is suitable for the proposed development or that engineering remediation can make it suitable.

It is not an accident that this property has never been developed. Simple common sense would recognize the significant risk of failure. It is clear that this development is not in the best interest of the City. The Geologic Permit should not be approved under any conditions.

Sincerely,

Chris Schneller

Chris Schneller
Homeowner
1234 NW Spring Street
Newport

EXHIBIT
E-3
PENGAD-Bayonne, N.J.

K & A ENGINEERING, INC.
91051 S. WILLAMETTE STREET
P. O. BOX 8486, COBURG, OR 97408
(541) 684-9399 · KAENGINEERS.COM

September 12, 2018 **Project: 17056**

Bill Lund
P. O. Box 22
Seal Rock, OR 97376

Subject: Response to Columbia Geotechnical Peer Review from Columbia Geotechnical
Proposed Residential Development
Tax Lots 1800, 1900, 1903; Tax Map 11-11-05-BC;
NW Spring St., Newport, Oregon

PURPOSE AND SCOPE

Our understanding is that the subject "peer review," written by Ruth A. Wilmoth, C.E.G., P.E. of Columbia Geotechnical, located in Vancouver, Washington, was requested, and paid for, by a Ms. Mona Lindstromberg of Tidewater, Oregon. This "peer review" discussed selected portions of our Geotechnical Report for the subject project, dated June 29, 2018.

At your request, we have reviewed Ms. Wilmoth's "peer review" and are submitting our response to her discussion in this letter.

RESPONSE

QUALIFICATIONS

Ruth A. Wilmoth is a licensed engineering geologist in the State of Oregon (license No. E1435) and a licensed professional engineer (civil engineering) but is not licensed in the state of Oregon as a geotechnical engineer. As such, she is not qualified to make a peer review of a report made by a professional geotechnical engineer.

As such, we assume that any valid peer review made by Ms. Wilmoth is limited to those aspects covered in the Geologic Hazard Assessment made by Mr. Gary C. Sandstrom, C.E.G., R.P.G. – a licensed professional engineering geologist and geologist in the state of Oregon.

DISCUSSION

- **Item 1 - Executive Summary.** Our study included the cited reference (OFR O-04-09 - see footnote 3, page 6). Our report also summarized, in detail, prior slope movement on and around the site (e.g. 3.1 Geologic Hazards). We agree that this is a high hazard zone for slope movement and, as such, warrants great caution, and was the basis for our detailed investigation of site-specific ground conditions for the project considered in this area.

Evidence provided by broad-scale mapping and lidar imagery must be verified in the field, which is what our study provided.

As far as the distress to adjacent homes, we are unaware of the nature of such "historical distress." Foundations move for a variety of reasons and it is an over-reach to assume that whatever distress has occurred is due to slope movement. K & A Engineering, Inc. has extensive experience in determining the nature, cause, and extend of foundation movement and developing foundation repair plans. Determining the nature, cause, and extent of foundation distress requires a detailed geotechnical investigation, surveying, structural analysis, and analysis. Wilmoth needs to reference geotechnical studies, measurements, engineering analysis, and written reports to support this statement.

- **Item 2 - Surface Conditions.** It is not clear where Wilmoth observed erosion. It is helpful to note that we did observe indications of an old logging, or some other type of access, road in the steep slope descending from NW Spring Street. Perhaps this is what Wilmoth observed.

We note that significant erosion occurred at the base of the old slide scarp and west of this area on the drill access constructed for our investigation. This erosion was addressed by construction erosion control measures on site. The monitoring Wilmoth recommends is most appropriate for deep-seated landslides – conditions not found at this site. The old slope movement was a shallow rotational/translational movement which has already occurred. Site observations (i.e. no tension cracks or other evidence of contemporary mass slope movement) and our stability analysis (based on actual field data and laboratory testing) indicates that the site is stable and safe for the proposed development if the recommendations for pile-supported building foundations are followed.

- **Item 3 – Zone I.** This zone was described as an old slide scarp. The vertical slopes in this area are cut embankments from some sort of narrow logging or access road. The alignment is easy to trace.

- **Item 4 – Geologic Setting.** Wilmoth did not provide the complete quote from the Schlicker report referenced (the original 1991 Report by Herbert G. Schlicker). H. G. Schlicker recommended 50-foot borings "unless drilling indicates competent material at a shallower depth." Our probes and borings found competent material at shallower depths. H. G. Schlicker also stated in the 1991 report that a "driving force is no longer present to activate a large slide" in the study area.

The 2016 Schlicker report Wilmoth cites (no referenced given) is actually, we believe, dated March 12, 2015 and was authored by Mr. J. Douglass Gless. For this study, Gless drilled the site, making two borings along the west side of NW Spring Street using a trailer-mounted auger rig. We did not mention this report because we did not have it at the time and, even if we did,

we would not have considered the report credible, since it recommended building on the upper bench supported by spread footings – the highest hazard zone of the entire site – with no reported analysis to confirm global slope stability of this recommendation (i.e. slope loaded with footings).

- **Item 5 – Slope Movement and Appendix C.** Our analysis of the existing (pre-development) conditions confirmed that, under the most extreme earthquake event, the factor of safety (FOS) is likely to be slightly below 1.0. Considering the relatively flat surface of mudstone in this area, slope failure would likely result small magnitudes of lateral movement of 1-foot or less. This is a magnitude that would not cause structural collapse.

  However, the analysis does not consider the stabilizing effect of the recommended foundation pile support which will improve global stability by the incorporation of battered micropiles. We have recommended that, once the development concept is approved, additional borings at the home sites will need to be made to extend the geologic profile, provide data for design of the foundation support system, and allow us to evaluate global stability in the constructed condition.

  The old slide surface is not a uniform slope of 15-degrees – it is much flatter overall, as depicted in the Field-developed Cross Section. This is due to the concave shape of the ancient slope movement that occurred. Also, mudstone dip angles in the are not uniformly 15-degrees and, to our knowledge, other than dip directions and strikes on geologic maps, no specific studies have been made to characterize the distribution of dip angles and directions for this site.

  Our probes consisted of a relatively sophisticated cone penetration test including tip pressure and side friction. N-values are calculated as well as a host of other correlated soil parameters well documented in the literature for evaluation of cone penetration testing. The test was summarized on our report and reduced data for tip pressure, friction ratio, and correlated N values are shown on the probe logs. We made conservative estimates of soil and rock shear strength based on published correlations and the tip pressure and friction ratios.

  Based on all the probes, borings, and shallow hand augers at the site, the groundwater regime was clearly delineated. Additionally, our investigation was made during the wet season when we would expect groundwater to be high.

- **Item 6 – Beach Regression.** If the 100-year average "sea cliff" retreat was 5-feet per year, then the retreat would be at least 500-feet in the last 100-years. This is approximately 200-feet greater than the measured distance of the beach to the east edge of NW Spring Street. This is extreme and does not represent the actual site condition.

The erosion rates discussed in the Geologic Hazard Assessment for this project (Gary C. Sandstrom, C.E.G., R.P.G.) are based on the more relevant and newer DOGAMI Open File Report O-04-09.[1] The estimated mean bluff toe erosion rate for fine-grained Tertiary rocks is 0.3-feet/year (see Table 7, page 34 of the report text). Priest and Allen also recommend a "conservative" erosion rate of 0.45-feet/year. The Komar publication referenced by Wilmoth is a much older publication (1998) and we assume that the recent research and DOGAMI publications are based on better data and analysis.

- **Item 7 – Liquefaction.** None of the borings or probes found conditions conducive to liquefaction – saturated loose sands. The unconsolidated soils below the groundwater table, encountered in the probes and borings consisted of silts and clays. Our findings confirm the Geologic Hazard Assessment that there is a low risk of liquefaction based on the HazVu mapping for the site.

- **Item 8 – Tsunami.** The known nature and probability of Tsunami elevation was amply discussed in the Geologic Hazard Assessment - 5.0 Geologic Hazard Mapping. While the site is well above the "statutory" 30-foot elevation, the area proposed for development is within the inundation area delineated by DOGAMI's Tsunami Inundation Map which is referenced in the Geologic Hazard Assessment. The statuary elevation limit is justified by large recurrence interval (i.e. low probability of occurrence) of Cascadian Subduction events.

  In the unlikely event of a maximum Cascadian event, inundation of the site as well as areas east of NW Spring Street is expected. However, due to the support of structures on piling embedded in underlying bedrock, the foundations will remain stable.

- **Item 9 – General Foundation Recommendations.** The scope of our June 29, 2018 Geotechnical Report was to provide general recommendations for delineating geologic hazards and site suitability for the project, with general recommendations for stabilization and foundation support.. K & A Engineering, Inc. will be providing specific design recommendations for pile support after the project concept is approved and we move forward to the design phase to prepare documents for construction and permitting.

- **Item 10 – General Recommendations.** Retaining walls, cut embankments, and other earthwork will be designed after the project concept is approved and we move forward to the design phase to prepare documents for construction and permitting. All designs and construction documentation will meet general criteria in our Geotechnical Report.

[1] George R. Priest and Jonathan C. Allan, Evaluation of Coastal Erosion Hazard Zones Along Dune and Bluf Backed Shorelines in Lincoln County Oregon: Cascade Head to Seal Rock – Technical Report to Lincoln County. 2004

- **Item 11 – Drainage.** The scope of our June 29, 2018 Geotechnical Report did not include detailed recommendations for designing facilities to handle storm runoff. This will be designed by a qualified civil engineer once the project concept is approved and we move forward to the design phase to prepare documents for construction and permitting. Drainage will meet City of Newport requirements and standards for erosion control and runoff.

- **Item 12 – Foundation Pads.** The scope of our June 29, 2018 Geotechnical Report was to provide general recommendations for delineating geologic hazards and site suitability. Qualified design professionals will be providing specific design recommendations for structures, grading, and access after the project concept is approved and we move forward to the design phase to prepare documents for construction and permitting.

- **Item 13 – Geotechnical Site Plan.** The concept was amply illustrated by the inclusion of both the Geotechnical Site Plan, Field-developed Cross Section, and Conceptual Site Plan.

- **Item 14 – Appendix C Slope Stability Analysis.** Slope stability calculations are very complex, lengthy, and difficult to interpret except for geotechnical professionals. Inclusion of printed calculation would add hundreds of pages to the report and would not serve the purpose of the report.

- **Item 15 – Appendix D Geologic Hazard Assessment.** Cited literature effectively states the high-hazard nature of slope movement in the vicinity that includes the project site. Such studies are not meant to be used as a tool to approve or deny development in the area. The correct use of these studies is to guide in the formulation of the scope and nature of in-depth site-specific geotechnical and geologic investigations for specific projects.

CONCLUSION

Our recommendations are based on:

- Careful, systematic, site investigations utilizing proper tools and techniques,
- Study of pertinent geologic and geotechnical maps and other studies published for the area,
- Years of experience in similar geology for similar projects,
- Successful implementation of geotechnical recommendations for similar construction projects in the north Oregon coastal environment,
- Systematic application of good engineering principles in analysis and developing recommendations.

The Wilmoth Peer Review does not present issues that have changed our opinions or recommendations regarding the subject project. We have recognized, in our Geotechnical Report for the subject project, that the site does indeed present significant geologic challenges. We recommend that these conditions can be successfully addressed by careful design and planning for the project that meets criteria in the Geotechnical Report and in subsequent geotechnical supplemental reports.

We have also recommended supplemental geotechnical investigations of the actual home sites to confirm subsurface conditions, prior to final design. This is necessary because the currently proposed home site locations changed from the original concept (which were considered in the Geotechnical Report) due to road rights-of-way issues, which were unknown at the time of the original geotechnical investigation.

We recommend that the City of Newport allow you to move forward with the supplemental geotechnical field work, project design, and application for permits for site development and building.

Thank you for the opportunity to respond to this peer review. Please don't hesitate to call if you have further questions.

Sincerely,

Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.

EXPIRES: DECEMBER 31, 2018

Derrick Tokos

From: Carol Reinhard <csreinhard@icloud.com>
Sent: Tuesday, September 11, 2018 10:59 AM
To: Derrick Tokos
Cc: Carol Reinhard
Subject: Spring Street Public Hearing, Sept 24

Hi Derek,
Thank you for sending me notice of the public hearing for September 24. Because I live in Central Oregon, I will be unable to attend the hearing & I am submitting to you my strong objects to the approval of Mr. Lund's Shoreland Resources Impact Review Application.

I believe that approval was based on geological data and conclusions from an incomplete and faulty study done by K&A Engineering. K&A did not have enough data to arrive at their conclusions regarding the build-ability of the site. Additionally, they should have taken a year or more (depending on annual rainfall of years in question) to monitor soils to come to that conclusion.

The stability of an entire neighborhood depends on the diligent scrutiny of the geological data by the city council.

Please include my comments in the official record to be shared on September 24 with the Newport City Council.

Carol Reinhard
Newport tax lot 3700

September 10, 2018

Re: 1-GP-18, appeal

To Derrick Tokos, Director Community Development:

Please find attached *Comment: Conceptual Site Plan (May 22. 2018) and Request for On-Site Visit* including seven packets with the comment and copies of the full sized conceptual site plans intended for the planning commissioners.

Thank you for your attention.

Regards,

Mona Linstromberg

September 10, 2018

File No. 1-GP-18, appeal
Applicant: William Lund
Location: Map 11-11-05BC, Tax Lots 1800, 1900, 1903

Comment: Conceptual Site Plan (May 22, 2018) and Request for On-Site Visit

Please find attached a full sized copy of the site plan included in the K & A Engineering, Inc. Geotechnical Engineering Report and Geologic Hazard Assessment (referred to as Geotechnical Report) dated June 29, 2018. [1] There is an intrinsic interconnectedness between the Shoreland Impact Review (1-SIR-18) and the approved geologic permit application. In the Conclusion portion of the approval of 1-SIR-18, it states:

> *4. Concerns that earthwork and clearing performed by the owner will destabilize nearby slopes or lead to excessive erosion are related to standards for geologic permits listed in Chapter 14.21 of the Newport Municipal Code. They have been raised in a pending appeal of the applicant's approved geologic permit, which is the appropriate forum to resolve those questions. They do not relate to the approval criteria for development within the City's Ocean Shorelands Overlay.*

Additionally, in an August 30 email from Mr. Tokos to me in response to my questions:

> *The shoreland review permit addresses the standards relevant to that type of permit, which is about protecting the Jump-off Joe Outstanding Natural Area by means of a 25-foot vegetated buffer. The geologic permit addresses issues relevant to slope stability and erosion. Mr. Lund must have both permits in place and final before he can proceed with developing the home sites.*

The crux of the interconnectedness is whether the geology in this geologic hazard zone and active slide area can support the proposed development as depicted on the site plan and as addressed in the detail of applicant's Geotechnical Report. The peer review report (addressing applicable criteria found in Chapter 14.21) by Columbia Geotechnical submitted by those in opposition to the proposed development addresses the science and flaws in the report submitted by the developer. The attached site plan provides the visual accompaniment to both reports, an extensive and intrusive development.

The site plan is really only half of the visual equation. I request that the Planning Commission members do an on-site visit. Since there are multiple factors impacting this particular proposal

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[1] August 3 2018 K & D Engineering submitted an altered site plan on which was based the approval of 1-SIR-18, Shoreland Impact Review. Mr. Tokos, in an August 9 email responding to Elaine Karnes' concerns, stated "(h)e modified the site plan to illustrate that they will not be clearing vegetation within the 25-foot buffer, and provided additional narrative. These changes are not material enough to warrant another notice prior to a decision being rendered." I am relying on the plans submitted in the Geotechnical Report to avoid more confusion when reviewing the Geotechnical Report.

(e.g. the old Jump-off Joe Road county right of way and multiple survey markers on-site), I recommend that someone either from either the County or City familiar with the subject property accompany the planning commission members when on-site.

The Conceptual Site Plan and an on-site visit are tools needed to more fully understand if the subject property can support the current development proposal.

Please enter into the record with each copy and comment (hand delivered) made available to members of the Newport Planning Commission.

Regards,

Mona Linstromberg
Family home: 1442 NW Spring St, Newport, OR 97365

Mailing address: 831 E. Buck Creek Rd., Tidewater, OR 97390

Attachment:

Conceptual Site Plan
For
William Lund
Located in
A Portion of Lot 1, and Lots 2, 3,
4 & 5 of Block 37 of Ocean View
Subdivision and a Portion of Vacated NW 14th Avenue
In the
City of Newport, Lincoln County, Oregon
May 22, 2018

Columbia Geotechnical, PO Box 87367, Vancouver, WA 98687 / (360) 944-7397 / fax (360) 94[illegible]t.net

August 15, 2018

CG18-1311

Mona Lindstromberg
831 East Buck Creek Road
Tidewater, OR 97390

Geotechnical Peer Review
Report by K & A Engineering, Inc.
Geotechnical Engineering Report and Geologic Hazard Assessment
Tax Lots 1800, 1900, 1903
West of NW Spring St roughly between NW 13th St and NW 14th St
Newport, Oregon 97365

This peer review has been completed at your request. I have reviewed the report that was provided, namely the June 29, 2018, Geotechnical Engineering Report and Geologic Hazard Assessment by K & A Engineering, Inc., including the appendices A through E. I also reviewed easily accessible reports and government websites that provide general and site-specific data that relates to the geology, groundwater, natural hazards, and the erosional history of the site and area. My comments are based on the information provided in the documents reviewed and my experience, limited in scope by the hours of our contract. I expect that a more thorough review would present additional comments.

Background
The scope of this report is to provide a summary of my review of the report referenced above that I understand was submitted to the City of Newport by the property owner, Bill Lund, in order to pursue the development of the three individual lots for new residential structures; duplexes are planned for the two southern lots (1900 and 1903) and a single-family house is planned for the north lot (1800).

The reason for this peer review is to provide an independent professional opinion based on the data that was presented and referenced in the owner's geotechnical report; although I did make a single site visit, no additional soil explorations or testing were performed as a part of this review.

Discussion
To provide easy reference to the owner's geotechnical report, this discussion is organized following the format of that report.

Section of K&A report	Page number	Comments
Executive Summary	2	In the summary of their scope, the last bullet item is "Pertinent hazard zones such as the 100-year flood zone and elevation." It appears in this summary that the site was not reviewed with consideration of the mapped Spring Street Landslide which is identified in the 2004 Oregon Department of Geology and Mineral Industries publication OFR O-04-09; the site is mapped in that report as a Holocene Active Landslide (Als). Evidence that supports the active landslide mapping includes: the disturbed terrain within the fallen landslide blocks indicative of recent slope movement; high contrast of lidar images that suggest landslide blocks that have had little time to erode since they last moved; tilted shore pine within the area of the planned new development; and historical distress to the two closest homes (roughly 15 ft north and 75 south of the project) on either side of the property caused by ground movement in the past 30 years or so. Later in the report, there is reference to "landslide debris extending to depths as

		much as approximately 16-feet below the ground surface." (Section 2.3.3, page 5)
2.2 Surface Conditions	4	In the second to last paragraph, "there is little evidence of on-going severe surface erosion or mass slope movement. We did not observe indications of slope movement in the roadway such as cracks with differential movement." In contrast to the report, at our brief site visit, we did observe deep erosion on and just downslope of the steep slide scarp (the steep slope immediately west of NW Spring Street) and in areas associated with both of the significant springs still flowing in August (roughly uphill of each of the planned new duplexes). Old landslide scarps and displaced material cannot effectively be judged to be stable based on isolated site observations alone, which represent just a snapshot in time even over the course of several months. It is common practice to set up a comprehensive monitoring system that can provide data over the course of one or more wet seasons to base the opinion of current slope stability. For this project, a system would likely include at least two slope movement sensors (in-place inclinometers or other in-ground methods that extend at least 20 ft below the suspected slide interface to continuously measure changes in slope at several locations relative to NW Spring Street and other stationary points east of NW Spring Street), numerous surface monitoring points that are routinely surveyed, vibrating wire piezometers to continuously measure shallow and deep groundwater pressures, and a continuous rain gauge (if continuous local rainfall is not available). Since landslides are most active during high rainfall years, the goal would be to install the geotechnical instrumentation as soon as possible and monitor over a duration that includes at least one high-rainfall season, (which may take more than one year). Premature conclusions on stability can only be avoided by monitoring through a season that exceeds normal rainfall, hopefully monitoring over a season of record rainfall. Global climate change may provide record rainfall as soon as this year or next year.
2.3.2 Zone 1	5	The report refers to the steep slope west of NE Spring St as a "steep embankment"; normally this word choice would not be an issue, but in this case, only the upper two feet or so is described as potential road fill and a better description of this steep slope is eroded "slide scarp" from the landslide(s) that resulted in the hummocky terrain and displaced blocks of sandstone and siltstone that currently form the lower slope. It is not known if the recent erosion causing some nearly vertical slopes on this scarp is associated with recent slope movement or just surface erosion, but these features should be properly described.
2.4.1 Geologic Setting	7	This report referenced a short, four-page, 1991 Schlicker report that summarized a reconnaissance site visit to the property and described the old landslide to have "apparently been stable for many years. The area west of Spring Street probably moved initially prior to the Jump Off Joe landslide that began about 1942 and continued until recently."

		It does not state that the "old landslide area on the site is relatively stable" as indicated in the K & A report. The 1991 Schlicker report also recommends at least two borings drilled to at least 50 ft in depth and laboratory tests to include direct shear on carefully obtained samples, which were not a part of the K & A analysis. References to slope stability and recommendations for potential development in the other published geological reports were not provided in the K & A report. A more recent report (i.e. 2016) on the adjacent property to the north by Schlicker that points out recent slope movements were not mentioned in the K& A report.
3.1.2 Slope Movement and Appendix C	7-9	The first half of this section provides a general summary of K & A's discussion on the active coastal erosion and landsliding at the site, as well as earthquake hazards, which, although brief, does acknowledge some of the real hazards at the site. They refer to the surveyed cross section that "indicates the overall concave shape of the ground surface due to the historic slope movement." Then on page 9, the narrative on the slope stability numerical analysis using Slide software concludes "In the current static condition, the site is stable, with minimum FOS (Factor of Safety) in the range of 1.4 to 1.6…within the generally-accepted limits for development" even though their modeled earthquake conditions will likely result in a slope failure. Even if the modeling is correct, it indicates failure during an earthquake, which should not be acceptable. The calculation sheets and assumptions in their model are not included in the report for our review, but there does appear to be some errors in the design model that would result in a reduced stability from that which is shown. The K & A model indicates the potential slide plane is along the geologic contact between the old landslide debris and the underlying siltstone (Nye Formation) based on their limited explorations, but actually, the old landslide interface is more likely dipping roughly 15° west along shear zone(s) within the Nye Formation mudstone layers; the past landsliding has been described as translational sliding on weak layers within the marine mudstone layers, which dip 15° to the west. Also, the ground water elevation shown on the model does not represent the surface water that flows across the middle section of the site as springs even during our mid-August site visit. We expect there are even more springs during the wetter half of the year when landslides are generally more active. Lastly, although soil samples were taken and tested for moisture, no N-values or other soil properties were tested that could be used to better refine the material properties (unit weight, cohesion, phi) that determine the soil strengths in the model. We expect that a model that better represents the actual site conditions would have a lower static and dynamic FOS.
3.1.3 Beach Regression	9	Although the K & A report cites a 0.3 to 0.4 feet per year general beach regression (DOGAMI source that was not referenced), the long-term (past 100 years) sea cliff retreat between the ocean and Spring

		Street and between NW 12th St and NW 14th St is closer to several feet a year, with a 100-year average up to five feet per year (Figure 9.2, The Pacific Northwest Coast, by Paul Komar).
3.1.6 Liquefaction	10	Although the K & A report "found no evidence of loose, saturated clean sands in the area investigated", the boring logs found SAND down to 6 ft close to one of the groundwater seeps and the dynamic probe identified sands down to 16 ft. It appears that the landslide debris has sufficient sand content and adequate high ground water to further investigate the potential for liquefaction.
3.1.7 Tsunami	10	The K & A report states that "the majority of the project site is situated above the statutory tsunami inundation line (at 30 ft elevation), but the current mapping by the Oregon Department of Geology and Mineral Industries has the entire property including NW Spring Street entirely within the area of influence of a local Cascadia Earthquake and Tsunami. Regardless of the current City or County codes, which we did not research, the current understanding of the hazards derived from the updated science should be considered for any new construction.
3.3.1 General Foundation Recommendations	11	The K & A report recommends deep foundation elements within the underlying siltstone for the planned structures. In addition to axial support of all future loads, the deep foundation elements (piles) should also be designed to withstand all lateral loads anticipated from landsliding (depths and displacements determined from long-term, in-ground monitoring system). Sufficient pile embedments into stable siltstone should be determined from the in-ground monitoring and appropriate pile design.
3.4.1 General Recommendations	14	The K & A report recommends site development with "the minimum amount of earthwork necessary for access and foundation construction." In addition to limiting grading to that which is absolutely necessary, it appears that any unbalanced cuts and/or fills have the potential to initiate future slope instability (both houses on either side of this planned development have experienced unexpected ground movement). All cuts that will require retaining walls, gabions, stone armoring, or fills (including MSE fill) of any height should be designed to transfer all surface loads to the underlying siltstone with similar pile embedments and surface grade beams as the deep foundations for the planned structures. No new surface loads should be allowed. All existing fill that was placed on the property should be removed from the site.
3.4.1 Drainage	15	Although the K & A report describes some sort of sheet flow design for storm runoff, it is our experience that otherwise stable slopes often fail when subjected to concentrated surface flow, including sheet flow from dissipater systems; roof and driveway runoff should be plumbed to an existing stormwater system and not allowed to "sheet-flow" anywhere on the sensitive property.
3.4.3 Foundation Pads	15	It appears from the elevations provided that the planned single-family residence on tax lot 1800 will require a suspended slab to access the

		house (garage) from the driveway at the planned elevation because the lower floor elevation is six feet higher than the existing adjacent grade. This detail should be better described. If fill was planned, additional piles and grade beam system should be planned.
Geotechnical Site Plan		The site plan should also have the planned structures and driveway access shown so that the actual locations can be reviewed.
Field Developed Cross Section		Relative to the edge of pavement, the horizontal locations for the borings do not agree with the previous Geotechnical Site Plan. Also, the groundwater elevation shown does not take into account the springs that emanate on the surface close to boring B-1 and west of FC-2. The geologic units should be estimated, including the contact between the disturbed and undisturbed siltstone. The 15° dip of the underlying undisturbed siltstone and the estimated slide plane of the past landsliding should be illustrated.
Conceptual Site Plan		The topographic map is not adequate and representative of the actual topography at the site. Elevation contours at least every two feet and proposed grading should be clearly shown on a more legible scale.
Appendix C Slope Stability Analysis		All calculation sheets and assumptions in the final slope stability models should be provided in the appendix.
Appendix D Geologic Hazard Assessment	6	Most of the details and literature research provided and the site observations in the Geologic Hazard Assessment suggests the slope is not stable. The report does not provide adequate support of a stable slope. Referencing a 1991 report when there are more recent and more thorough reports available does not provide enough basis to claim the slope is stable. In section 11.0 Recommendations, "continued translational movement of the landslide is relatively unlikely" is a highly debatable statement; what data is this statement based on?

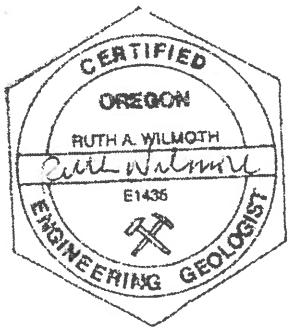
Summary of Professional Opinion

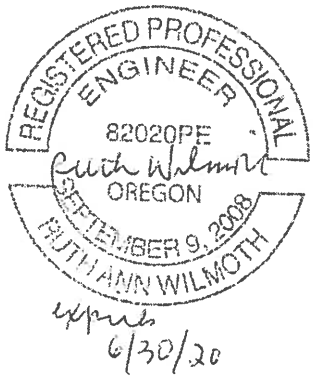
As a practicing geologist and civil engineer, I feel I must also add my professional opinion on coastal management policy that is intended to protect the coastal environment and private investments. Unless the ground can be proven to be stable and not at risk of causing or being affected by renewed landsliding and/or episodic coastal erosion, with current, accurate, and defendable data (see second comment above regarding a sample scope of a typical geotechnical instrumentation program), areas of old landslides that are highly suspected of historic movement and areas with historic ocean erosion as severe as at this site should be avoided for future development.

Please feel free to contact me for any questions you may have regarding this report. I expect subsequent report revisions will require additional review.

Sincerely,

Columbia Geotechnical, Inc.





By _____
Ruth A. Wilmoth, C.E.G., P.E.

INFORMATION ABOUT AND LIMITATIONS OF YOUR GEOTECHNICAL REPORT

The professional services provided are tailored to the needs of each client as we understand them, with the goal to contribute to the understanding and mitigation of the geotechnical aspects of the project and to maintain a long-term professional relationship based on communication, trust, and respect. The basis of our report includes site conditions revealed from the explorations, existing literature realized during our review, and the synthesis of the data during our analysis and report preparation. Our work is performed in accordance with generally accepted engineering principles and practices in this area at the time the report is prepared, but also limited by the scope approved by the owner. Geotechnical engineering (including geology and groundwater) is based extensively on judgment of limited data and opinion, and as a result, it is less exact than other design disciplines. Our work involves making a realistic estimate of the expected ground conditions before, during, and after construction. We make no warranty of present or future conditions, either expressed or implied and we are not responsible for any deviation from the intent of the report.

The report was written for the current owner(s), his/her contractor and designer, and for the development indicated as we understand it. However, the report may not be adequate for all needs of the project's contractors or design professionals. We recommend the entire geotechnical report is provided to others so that portions of the report are not taken out of context. We would be pleased to provide additional input during the design process, to explain the relevant geotechnical, geological, and hydrogeological findings, to review plans and specifications relative to these issues prior to construction, and to provide on-site observation and testing during construction. Since the observational method forms the basis of geotechnical services, liability and other problems can result when another firm is retained to provide construction or remediation observation. In addition, sharing the best available information between the owners, designers, and contractors helps prevent many costly construction problems. If there is a change in ownership or scope of construction than what is described in the report, if site conditions change, or if there is a lapse of time greater than three years between the date of the report and the start of construction, the report should be reviewed and updated or replaced with a revised geotechnical report.

The report was prepared within the limitations of the scope and budget approved. The judgment and recommendations pertain to the material tested/inspected only and are not intended to be nor should they be construed to represent a warranty of the subsurface conditions, but are forwarded to assist in the design and planning process. Actual soil and water conditions are documented at locations, depths, and times noted; the exploration logs illustrate our opinion of the subsurface conditions revealed by observation and sampling. Sample intervals may miss changes in geology or groundwater and the soil descriptions and interfaces between layers are interpretive and often gradual. Geotechnical sampling also generally produces large areas between explorations that may vary, though we use judgment to make assumptions regarding the overall subsurface soil and groundwater conditions. Unanticipated conditions are commonly encountered in construction and cannot be fully determined from soil explorations. If a more refined analysis is desired to confirm or refine some of our assumptions, we recommend additional explorations, soil sampling, and soil testing. If any conditions are discovered by the owner or contractor before or during construction that differ from those described in the report, we ask to be contacted for review of implications to our recommendations, with revised recommendations provided if necessary. Actual subsurface conditions may be determined only during the earthwork/foundation phase of construction, at which time geotechnical recommendations can also be refined, if necessary. When conditions are more favorable than initially assumed, we can provide design or construction changes that save money.

Steep or unstable slopes carry additional inherent risk that belongs to the owners; property owners are responsible for taking the risks associated with future development on their property. Based on his/her experience, the contractors should determine the best method for specific earthwork components; the safety of the site is the responsibility of the contractor.

Derrick Tokos

From: Mona Linstromberg <lindym@peak.org>
Sent: Wednesday, August 29, 2018 3:11 PM
To: Derrick Tokos
Subject: Spring St 1-MP-18 appeal, Komar
Attachments: Spring St Komar chapt 9 The Jump off Joe Fiasco.pdf

See attached, submitted with permission of the author (August 27, 2018): Paul D. Komar, Professor Emeritus of Oceanography at Oregon State University, Geology and Geophysics.
The Pacific Northwest Coast, Living with the Shores of Oregon and Washington.
1998, Third printing 2000. Duke University Press, Durham, NC.
The Living with the Shore series is funded by the Federal Emergency Management Agency.

The peer review report (see pages 3/4 under Beach Regression) by Columbia Geotechnical, Inc. (submitted 8/29/2018) includes a citation from the attached. The entire chapter, The Jump-off Joe Fiasco, is a cautionary tale with dire consequences, particularly applicable to the current proposal.

Please enter into the record and please acknowledge receipt.

Regards,

Mona Linstromberg

Family home - 1442 NW Spring St., Newport, OR 97365

Mailing address - 831 E. Buck Creek Rd., Tidewater, OR 97390

9 The Jump-Off Joe Fiasco

The rocky promontory called Jump-Off Joe was once one of the most picturesque spots on the Oregon coast (fig. 9.1). Legend has it that Joe, an Indian, jumped to his death while being pursued for a crime he had not committed. His lover, Mishi, who also jumped but survived, put a curse on the bluff. In view of subsequent events at Jump-Off Joe, the curse seems to have had its intended effect.

In 1942, a large landslide in the bluff at Jump-Off Joe carried more than a dozen homes to their destruction (Sayre and Komar 1988). In spite of continued slumping, a condominium was built on the remaining bluff in 1982. A certified geologist had determined that the site was stable even though it was adjacent to the 1942 landslide and in the area with the highest rate of erosion on the entire Oregon coast, and the Newport city government gave its approval to the project. Within three years, before the construction was even completed, slope retreat caused the foundation to fail, and the city ordered the destruction of the unfinished structure. The developers, the contractor, a lumber company, and the insurance company that had insured the project against slippage went bankrupt. Creditors with claims of $1 million were paid between 18 cents and 1 cent on the dollar. The consulting geologist lost his certification.

The debate over Jump-Off Joe was the most divisive land-use battle ever fought on the Oregon coast, and people still have strong feelings about the project. It was a classic confrontation between developers who thought their project would help a city grow and environmentalists who wanted to preserve the coastline. In the end, the issue was decided by Nature.

History of Erosion at Jump-Off Joe

Newport was founded in the 1860s by settlers who were attracted by the natural resources of the area, particularly the timber and abundant oysters.

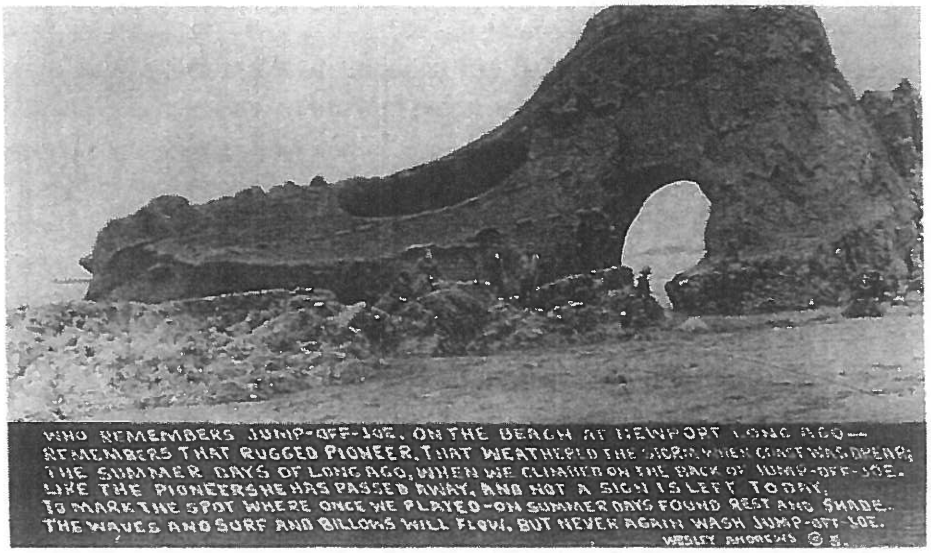


Figure 9.1 The picturesque Jump-Off Joe sea arch inspired early tourists to pen lines of descriptive poetry. From the Oregon Historical Society, Portland.

The beauty of the coast also attracted tourists, who began to arrive in significant numbers in the 1890s.

One of the major tourist attractions in the Newport area was Jump-Off Joe, a rocky promontory just north of Nye Beach (figs. 9.1 and 9.2). Through the years Jump-Off Joe has been a much-photographed spot, and its rapid erosion is thus well documented (fig. 9.3). The earliest photographs, taken in the late 1800s, show the promontory still connected to the coast. Later photos show its separation and development into an arch. The arch eventually collapsed, and the resulting stacks continued to erode, so that today only small nubs remain, visible at low tide. After the loss of the original promontory, the name Jump-Off Joe was adopted for the area in general and has been used to refer to the landslide that developed in the 1940s as well as to the small remnant of terrace left behind as a promontory.

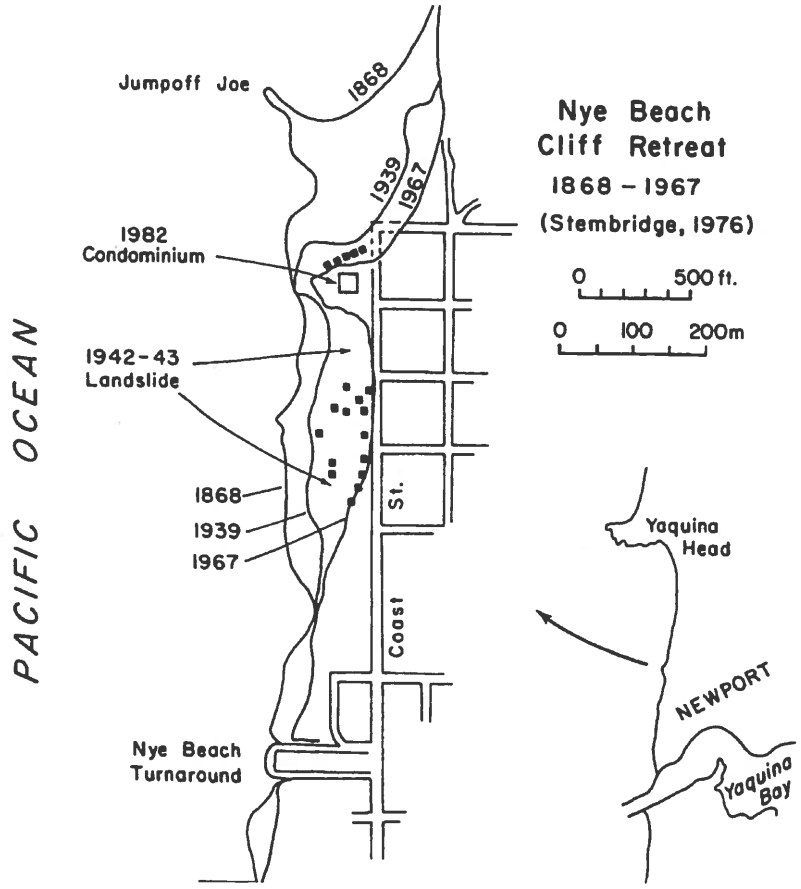
Development of the Jump-Off Joe area began in the early 1900s (Price 1975). Some landsliding endangered structures as early as 1921 (Baldwin 1985), but most of the damage occurred when a large slump developed over a period of months from late 1942 to spring 1943 (figs. 9.4 and 9.5). The slump is located between Sixth and Eleventh Streets, and the escarpment is west of and parallel to Coast Street (fig. 9.2). The 1942–43 slump involved about 15 acres and affected 15 houses. A few homes rode the slump block down intact and were occupied until 1966 (see figure 9.5). Eventually they were in danger of being undermined by wave erosion of the toe of the slide and were intentionally burned.

The *Yaquina Bay News* of March 11, 1943, made an interesting suggestion regarding the cause of the slump and earlier activity: "There was a forma-

tion of soapstone underneath and when the earth became saturated with water it would form a stream causing a crevice and pushing the ground up." The state geologist investigated the site a few weeks later and provided the earliest scientific account of the slump (Lowry and Allen 1945). The Jump-Off Joe bluff is a remnant of a marine terrace. Tertiary marine mudstones contained within the bluff are layered and dip steeply toward the sea (see fig. 8.10); most of the slumping takes place on shear zones within these mudstones.

The bluff retreat at Jump-Off Joe over the past century is documented in coastal charts and aerial photographs (Stembridge 1975c). Figure 9.2 shows the location of the cliff edge in 1868, 1939, and 1967. This diagram also shows that major slumping took place more than a century ago just north of the 1942–43 slump. The two slumps left a small segment of uneroded bluff between them, and it was this segment that became the site of condominium construction in 1982. Figure 9.2 indicates that the long-term sea cliff retreat

Figure 9.2 Cliff retreat at Nye Beach, Newport, from 1868 to 1976. Cliff edge lines were determined from old charts and aerial photographs (Stembridge 1975c). The black squares represent homes affected by the 1942–43 landslide.



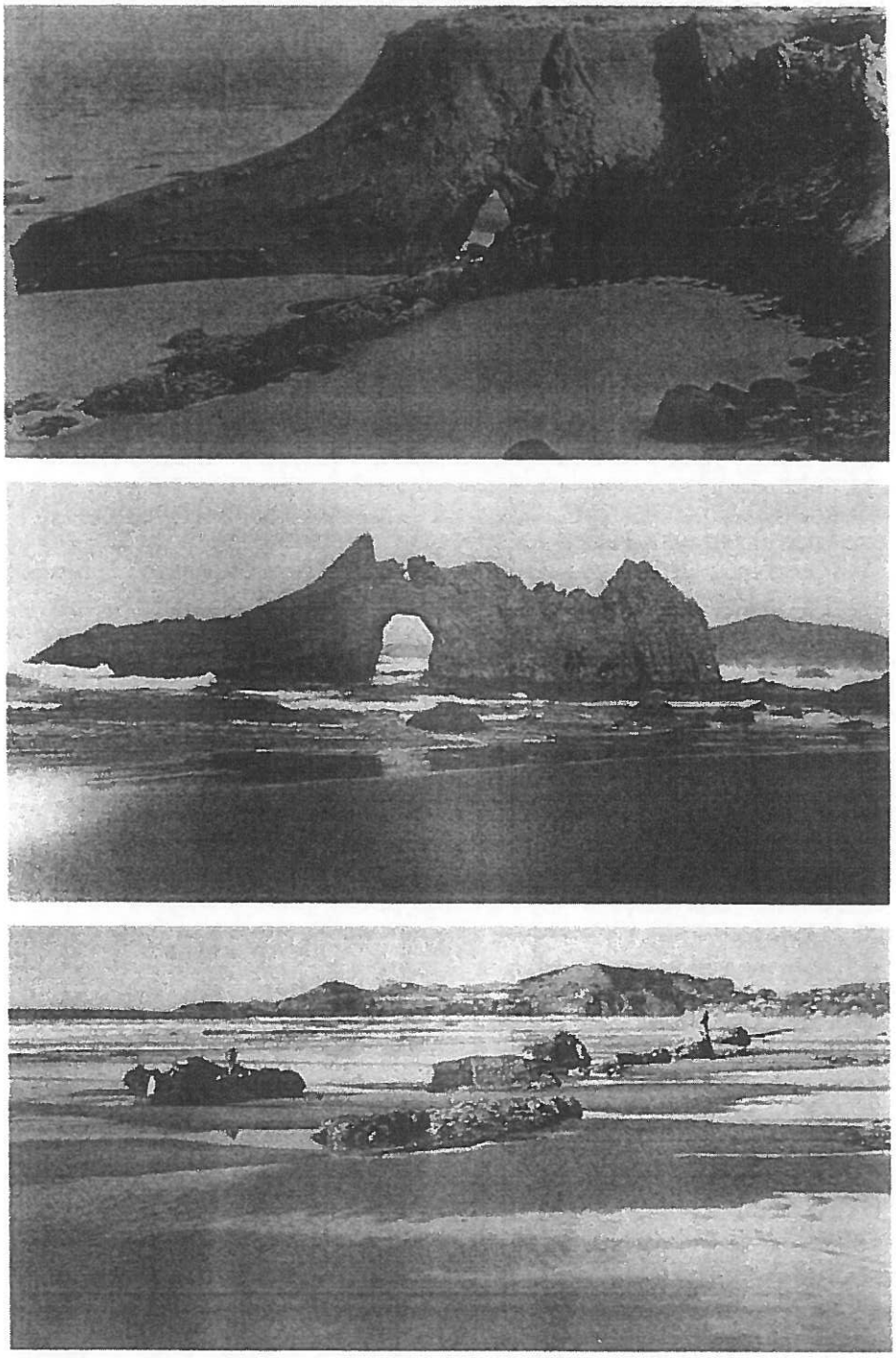


Figure 9.3 Photographs of Jump-Off Joe taken by tourists in 1880 (*top*), c. 1915 (*middle*), and 1978 (*bottom*). From the Lincoln County Historical Society, Newport.

was spatially variable but averaged several feet per year, a rate that is by far the highest on the Oregon coast.

An inventory of geological hazards along the Lincoln County coastline completed in 1975 gives an erosion rate of 7 feet per year for Jump-Off Joe and correctly concludes that such active landslides should remain undeveloped. This conclusion is ironic in view of the fact that the chief author of this report was to become the principal consulting geologist for the developers of Jump-Off Joe.

Figure 9.4 Photos taken on February 3, 1943, show some of the damage caused by the 1942–43 landslide at Jump-Off Joe. From the Lincoln County Historical Society, Newport, Oregon.

Figure 9.5 Aerial view of the 1942–43 landslide area in 1961. Some of the houses on the slump block were occupied until 1965. From the Lincoln County Historical Society, Newport, Oregon.

The Development of Jump-Off Joe

The story of condominium development at Jump-Off Joe begins in 1964 when the developers, Mr. and Mrs. Anderson of Newport, acquired the down-dropped block involved in the 1942–43 landslide and the adjacent uneroded bluff at the end of Eleventh Street (fig. 9.2; Sayre and Komar 1988). The city gave the Andersons these parcels in exchange for land to the north of the bluff.

The earliest geological investigation carried out for the developers, conducted by the well-known engineering firm of Shannon and Wilson, indicated that the down-dropped slump block was still active, as evidenced by fissures, its irregular hummocky topography, and back-tilted trees (see fig. 8.12). The investigators noted that wave erosion at the toe of the block was causing constant movement into the intertidal zone.

In spite of this reported slump activity and known high rates of erosion on the Jump-Off Joe bluff, the Andersons decided to go ahead with their plans for development. Grading and removal of vegetation on the down-dropped block began in December 1980 (fig. 9.6). Opposition to the project appeared along with the bulldozers. By mid-February 1981, the developers' attorney and geologist were meeting with neighboring homeowners to assure them of the appropriateness and benefits of the project.

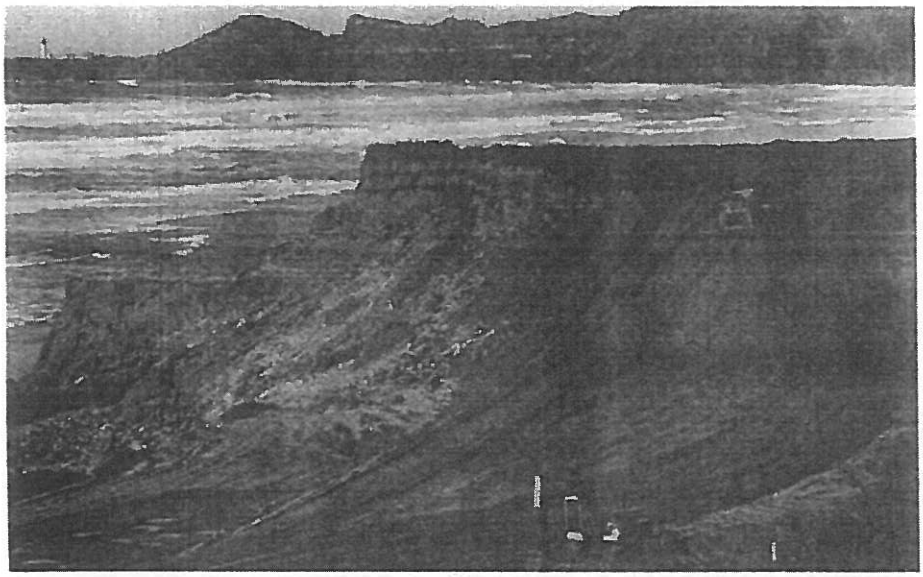
Shannon and Wilson prepared a geotechnical report of the site for the developers that acknowledged the geological hazards at the site but proposed three measures to stabilize it:

1. A drain field to control groundwater seepage
2. Reduction of the steep slope paralleling Coast Street to a 1:2 slope using a combination of cut and fill
3. Construction of a seawall at the toe of the 1942–43 slump

On the basis of this report, a plan for the construction of 39 single-family homes was submitted to the Newport Planning Commission in early March 1981. Several opponents of the project also made presentations to the Planning Commission, arguing that the project endangered nearby private property, questioning the plans for reducing the landslide hazard, and stating that development should not be considered so close to the beach. In addition, a representative of the Oregon Land Conservation and Development Commission (LCDC) indicated that statewide land-use planning goals were not being satisfied. Oregon requires that all cities and counties have comprehensive land-use plans and that all plans conform to goals set by the LCDC (see chapter 10).

The Newport Planning Commission found the project attractive because it proposed new homes for a part of the city characterized by smaller, older homes, but postponed a decision on the subdivision. The next meeting of the Planning Commission was held in mid-April and focused on geological and geotechnical testimony from experts on both sides of the issue. The opponents were now represented by the Friends of Lincoln County (FLC), a group formed in the 1970s to oppose the development of wetlands in the Newport area. The FLC brought several letters from geologists and oceanog-

Figure 9.6 Grading on the 1942–43 Jump-Off Joe slump block in December 1980 in preparation for its development. From the Lincoln County Historical Society, Newport.



raphers that raised questions about the proposed hazards mitigation. An engineering geologist from Oregon State University questioned whether the developers' consultants had located the toe of the 1942–43 slump. If the failure zone was deeper than suspected and the toe was actually seaward of the proposed seawall, construction of the wall would further destabilize the slump block rather than providing support. Once again the Planning Commission postponed its decision.

The developers finally convinced the Planning Commission at a meeting in late April, and the project was given tentative approval as long as certain conditions were met. These included the completion of a detailed geotechnical study, an independent review of the developers' plans for stabilizing the block, and the establishment of beach access. In response, the FLC hired legal counsel and a professional geologist and asked the Newport City Council to review the Planning Commission's decision, alleging that the project violated state land-use goals. The FLC's attorney charged that the city government was unresponsive to the involvement of citizen groups in its decision-making procedures. A prodevelopment member of the Planning Commission and City Council characterized the FLC as combative and unwilling to compromise (Sayre and Komar 1988). The developers' attorney felt that too many conditions were placed on the developers at this stage of their plans and that the City Council took too long in ratifying the Planning Commission's decision. The City Council was trying to balance the opposing points of view and did not see any need for urgency. It did not complete its review until January 1982, more than six months later.

In the meantime, in May 1981, the Andersons advertised the property for sale. They were unable to find a buyer and continued with their development plans.

The detailed geotechnical study of the site requested of the developers by the Planning Commission was completed by Shannon and Wilson in July 1981 (Sayre and Komar 1988). Deeper drilling *did* reveal an older failure zone which had been active when the slump was much larger than present. At the city's request, the engineering firm CH_2M-Hill reviewed the report. Their resulting assessment noted that adding fill to reduce the slope along Coast Street would place a large load on the slump block, reducing its stability as well as occupying space originally planned for development. Cutting this slope would also require the purchase of private property and would expose a larger area to surface water erosion. They recommended that the developers take additional measures to stabilize the scarp.

The engineering report also placed the rate of erosion in the Jump-Off Joe area at several feet per year and expressed concern that the site and its seawall might become a peninsula over time, requiring the construction of wing walls. The designed seawall was not tall enough to stop overtopping by ocean waves, which would saturate the backfill and increase the weight the

seawall was required to hold. Overtopping could also wash away some of the backfill. In addition, the report concluded that the footings were not deep enough to protect the structure from wave scour.

In early 1982, the developers applied to the Oregon Division of State Lands (DSL) for a permit to build a seawall, because Oregon's removal-fill law applied to the excavation and backfilling operations that would be involved in the construction. The DSL denied the application, stating that the seawall would produce only an illusion of safety in an area of known geological hazards, and that there would be no public benefit from its construction. The developers filed an appeal but later withdrew it.

In mid-January 1982, the City Council agreed with the Planning Commission's decision to allow the slump block to be resubdivided and developed, but then announced a few days later that it would reconsider its decision at a February 1 meeting. Most likely the council was going to postpone the decision once again because a cul-de-sac in the plan required a variance that had not been applied for. However, before the council could take that action, the Andersons suddenly withdrew their plans for development on the landslide itself and announced new plans to build 10 condominiums on the small remnant of bluff adjacent to the landslide. Their application for a building permit for that construction was granted a few days later.

A report written by the Andersons' consulting geologist was the first study prepared for the developers that focused on this small section of uneroded bluff. It was completed in the fall of 1981 while preliminary work was still under way on the down-dropped block. The report acknowledged the close proximity of massive landslides to the immediate north and south but concluded that the rate of cliff retreat was only 1 foot per year or less at the bluff itself, based on a comparison of aerial photographs taken in 1939 and 1972. The geologist did not explain the disagreement between this estimate and the 7-foot-per-year erosion rate given in the report he prepared for Lincoln County in 1975 (Rohleder et al. 1975), a rate that was confirmed by the 1981 CH_2M-Hill study. Based on his new lower rate of estimated erosion, the geologist established a setback line that would keep structures on the bluff safe from cliff retreat for 20 years. This setback line was followed in the later construction.

The 1981 report by the developers' geologist appears to have been critical in the City Council's decision to approve construction on the bluff (Sayre and Komar 1988). City Planner Jan Monroe said that "if (the geologist) hadn't issued that report, they would never have given the project a building permit. If a person meets all the requirements and goes through the steps, they are issued a (building) permit. We have no discretionary authority to deny a permit based on gut feeling or knowing it's not good sense" (*Oregonian*, July 21, 1985, E10).

Shannon and Wilson reviewed the hazards report prepared by the geolo-

gist for the developers and suggested that a drainage system be installed. A 6-inch pipe was placed beneath the condominium to control groundwater saturation. It would later burst and accelerate erosion on the site.

The opponents of the development were unable to stop the construction of the condominium on the remnant of uneroded bluff. Building began in earnest in March 1982 (fig. 9.7), and by the end of the year all but the interior was completed. The precarious position of the building, on a rapidly eroding bluff with landslides on both sides (fig. 9.8), should have been ample warning to potential buyers. Opponents of the development who lived near the construction site placed signs in their front yards as an additional warning of the landslide hazard (fig. 9.9).

Each unit was to sell for $250,000, but sales were slow. The early 1980s was a time of high interest rates and a depressed real estate market. Construction was halted in December 1982 before the interior was completed. The developers had been unable to obtain a construction loan and ran out of money. Most of the subcontractors had placed liens on the condominium. An appraisal placed the value of the unfinished project at $1 million (Sayre and Komar 1988).

As early as September 1981, the Andersons had stopped making payments on a loan for the subdivision project, although this was not known publicly until near the end of 1982. Accumulated interest during the delay and demands by their lending institution ultimately led in late 1982 to foreclosure and auction of the down-dropped landslide block. The land was sold to the

Figure 9.7 Condominiums under construction in 1981 on the terrace remnant at Jump-Off Joe. From the *Newport News-Times.*

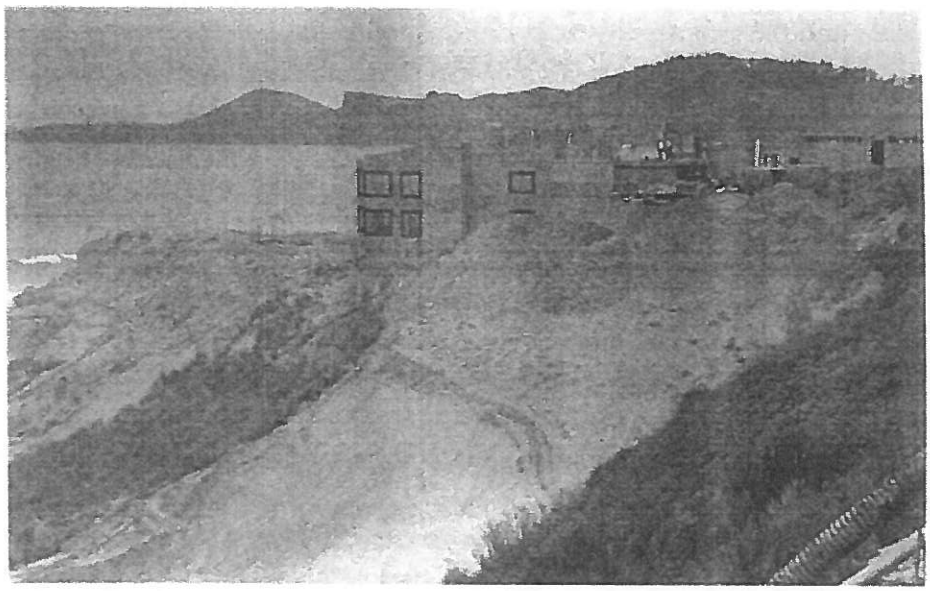


Figure 9.8 This site on a rapidly eroding bluff with landslides on both sides was extremely precarious for development. The southwestern portion of the structure (lower right) is already beginning to tilt.

bank for more than $850,000. Within a year, this bank found itself in trouble because of poor loan practices and was forced to merge with another bank.

The Andersons filed for bankruptcy in May 1983. Just prior to that, they purchased insurance against slippage of the condominiums. The insurance premiums were paid by a committee of the 19 secured creditors who held liens on the construction; among this group was the city of Newport (Sayre and Komar 1988).

By September 1984, sloughing of the bluff had undermined the perimeter fence around the condominium. The drainage pipe burst, probably due to

Figure 9.9 The Friends of Lincoln County erected lawn signs in the Jump-Off Joe area to discourage buyers. From the *Newport News-Times.*

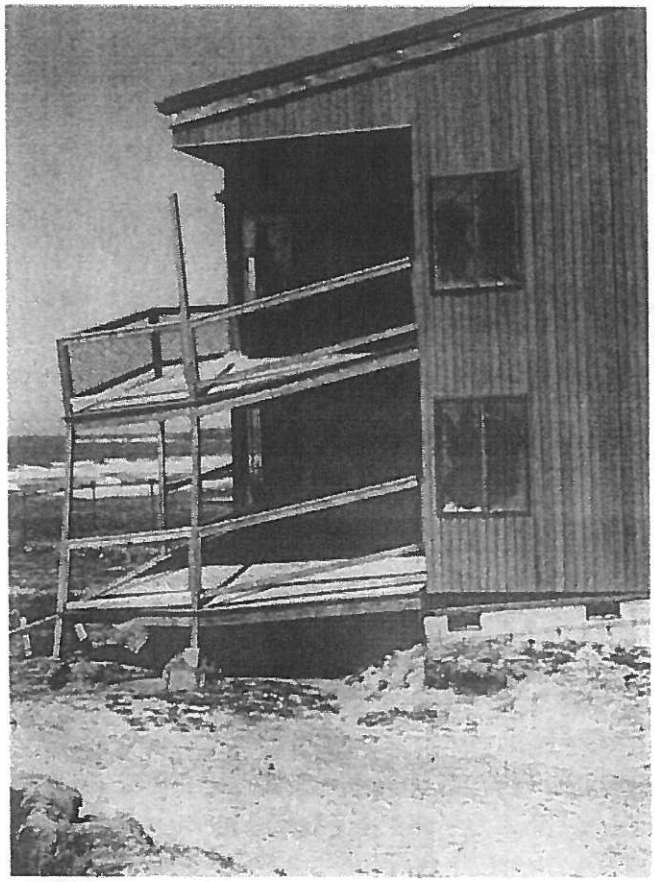


Figure 9.10 The foundation of this condominium failed during renewed slumping in 1985. The stress placed on the building by the ground movement and loss of support caused the windows to shatter.

Figure 9.11 The final demolition of the condominiums in October 1985 brought to an end the contention over developing the Jump-Off Joe landslide site. From the *Newport News-Times.*

slippage, exacerbating the problem. A larger slump developed on the remnant bluff, causing the foundation to fail (fig. 9.10). Slump movement was not directly seaward, but had a southerly component, suggesting that regrading of the 1942–43 slump surface during development may have been a contributing factor. In January 1985, the city ordered the demolition of the condominiums, and they were torn down later that year (fig. 9.11). The salvager paid the city $4,000.

The developers filed a $375,000 claim with the insurance company, but the claim was not settled for more than a year because the insurance company had also filed for bankruptcy. By the time the company was ready to investigate the claim, the condominium had been destroyed by the city. In the end, the insurance company paid out $225,000. After administrative expenses, legal fees, and other costs were subtracted, there was only $131,000 left to meet the secured creditors' claims, which totaled $720,000 (Sayre and Komar 1988). The largest settlements went to the contractor and the lumber company, both of which were also bankrupt. The 43 unsecured creditors, including the developers' attorney and their consulting geologist, requested a total of $283,000 but received only $3,544.

The Oregon State Board of Geologist Examiners filed a complaint against the developers' geologist over this and five other projects (Sayre and Komar 1989). The board decided to revoke his certification, citing in a news release his "incompetence and gross negligence." The Newport City Council adopted a new subdivision ordinance and a new comprehensive plan. Friends of Lincoln County was involved in the proceedings and contended that no development should be allowed at Jump-Off Joe. Nevertheless, the area remains zoned for high-density multifamily dwellings, although now with a geological hazards overlay that allows the city to request additional information and more exploration. The ownership of the bluff is still in question, but the down-dropped block is owned by a Los Angeles developer. The city hopes eventually to acquire the land.

EXHIBIT
E-8

Derrick Tokos

From: Derrick Tokos
Sent: Wednesday, August 08, 2018 9:35 AM
To: 'Mona Linstromberg'
Cc: Sean Malone
Subject: RE: Notice issues - 1-SIR-18 and 1-GP-18 - #1

I will include this email in the record. You are correct that the mail notice we issued didn't pick up the six properties listed. Of those six, three received the notice via email because they were on the city's distribution list of interested parties. The remaining three will receive notice of the appeal hearing for the Geologic Permit (along with everyone else) once that hearing date is set. With regards to the Shoreland Review... we will reach out to those owners to see if they would like to provide comment.

Derrick

From: Mona Linstromberg [mailto:lindym@peak.org]
Sent: Tuesday, August 07, 2018 10:07 PM
To: Derrick Tokos <D.Tokos@NewportOregon.gov>
Cc: Sean Malone <seanmalone8@hotmail.com>
Subject: Fw: Notice issues - 1-SIR-18 and 1-GP-18 - #1

I do apologize in that my notes on the files for 1-SIR-18 and 1-GP-18 made sense to me yesterday. This is the first of multiple emails. Maybe they will be easier to track.

First is my observation that K and D Engineering and Mr. Lund submitted comment after the July 31 deadline. This information should be most appropriately considered in an appeal of your decision.

Also, I didn't see the following email include in the record of either 1-SIR-18 or 1-GP-18. If not included in both, please do so. A procedural error is a procedural error.

Thank you,

Mona Linstromberg
Sent via my totally safe HARD WIRED internet connection

From: Derrick Tokos
Sent: Tuesday, July 31, 2018 1:51 PM
To: 'Mona Linstromberg'
Cc: Sean Malone ; Oregon Shores/CoastWatch Phillip Johnson
Subject: RE: Notice issues - 1-SIR-18 and 1-GP-18

Hi Mona,

I will follow-up with Sherri who prepared the notice to see how she calculated the notification area. The individual you listed, Chris Schneller, provided comment on both applications. She is on the email distribution list of interested stakeholders that I used to distribute copies of the decision involving the geologic permit (File No. 1-GP-18) and the notice and opportunity to comment on the Shoreland Review (File 1-SIR-18). If there are any property owners that did not receive notice by mail or email, then we will reach out to them so that they are aware of the land use applications.

Thank you for bringing this to my attention. At this time, we do not intend to re-notice either of the permits.

Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

From: Mona Linstromberg [mailto:lindym@peak.org]
Sent: Tuesday, July 31, 2018 1:12 PM
To: Derrick Tokos <D.Tokos@NewportOregon.gov>
Cc: Sean Malone <seanmalone8@hotmail.com>; Oregon Shores/CoastWatch Phillip Johnson <orshores@teleport.com>
Subject: Notice issues - 1-SIR-18 and 1-GP-18

Derrick, when you sent me the 18 page 1-SIR-18 land use application, I shared it with Elaine Karnes. Shortly thereafter, Elaine commented how odd it was that Chris Schneller wasn't on the notice list. Today when we were trying to determine (to err on the side of caution) the names of those within 200', it was determined using the County website that not only was Chris left off the formal notice for people within 200 ft. but also five other properties were not noticed (see following list). It appears the City **only** used tax lot 1800 as the lot determining those within 200'

Notice for the 1-DG-18 appeal was sent to those of us who were on the City's email list. We have not seen the formal notice list for those within the 200' required to be noticed. I can only guess that the same notice list was mailed as was mailed re 1-SIR-18.

Twenty percent seems a significant number not noticed. I request that both the 1-DP-18 appeal (if, indeed, the list was the same) and comment period for 1-SIR-18 be re-noticed.

Thank you for your attention to this matter.

Mona Linstromberg

11-11-05-BC-02400-00
1310 NW Spring St.
Bauman, Mary E.
PO Box 1355
Newport, OR 97365

11-11-05-BC-03600-00
1242 NW Spring St.
Deliseo, Patricia A.
1242 NW Spring St.
Newport, OR 97365

11-11-05-BC-03701-00
1245 NW Spring St.
Weatherill, James G. & Weatherill, Lana R.
25804 NE Olson Rd.
Battle Ground, WA 98604

11-11-05-BC-03700-00
1235 NW Spring St.
Reinhard, Carol S. Trustee
21680 Butte Ranch Rd.
Bend, OR 97702

11-11-05-BC-03500-00
1234 NW Spring St.
Waffenschmidt, John L. & Schneller, Christine C.
1234 NW Spring St.
Newport, OR 97365

11-11-05-BC-03800-00
1225 NW Spring St.
Spectrum Properties LLC
301 S. Redwood St.
Canby, OR 97013

Sent via my totally safe HARD WIRED internet connection

Derrick Tokos

From: Mona Linstromberg <lindym@peak.org>
Sent: Tuesday, August 07, 2018 10:42 PM
To: Derrick Tokos
Cc: Sean Malone; Oregon Shores/CoastWatch Phillip Johnson
Subject: Fw: Spring St. Oregon Shores - #7
Attachments: Lund Shoreland Impact Review Comment 7.30.2018.pdf

Derrick, please see the attached submitted into the record 1-SIR-18. Please enter into the record 1-GP-18.

Thank you,

Mona Linstromberg
Sent via my totally safe HARD WIRED internet connection

OREGON SHORES
CONSERVATION COALITION

July 30, 2018

Derrick Tokos
Community Development Director
Newport Community Development Department
169 SW Coast Hwy
Newport, Oregon 97365

Via Email to: D.Tokos@NewportOregon.gov

Re: File No. 1-SIR-18, Lund Shoreland Resources Impact Review Application Comments of Oregon Shores Conservation Coalition

Dear Mr. Tokos:

Please accept these comments from the Oregon Shores Conservation Coalition ("Oregon Shores") to be included in the record for File No. 1-SIR-18. Oregon Shores is a non-profit organization dedicated to preserving the natural communities, ecosystems and landscapes of the Oregon coast while conserving the public's access. Please notify me of any decisions related to the permit.

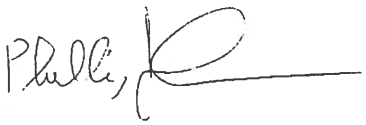
The applicant, William Lund, seeks approval for development of three homesites adjacent to the Jump Off Joe Park and outstanding natural area boundary. Pursuant to NMC Section 14.38.050(B), development adjacent to a park or outstanding natural area must be located no closer than 25 feet from the boundary. Within the setback area, the development shall maintain natural vegetation whenever possible. If natural vegetation cannot be maintained, it shall be replaced within one year and a bond may be required to cover the cost of re-vegetation.

It appears that Mr. Lund's proposed development would remove vegetation within the 25-foot setback. The Planning Department should carefully evaluate the rationale for why natural vegetation will not be maintained and ensure compliance with re-vegetation requirements.

The preservation of natural vegetation is particularly important given the topography and location of the subject property. According to the geologic report prepared for this property, the site contains "[l]oose, poorly-graded sandy soils on the ground surface which, if left un-vegetated, could result in a severe surface erosion hazard." (K&A Engineering Report, June 29, 2018, at 3). The site is within the area of high coastal erosion hazard and existing land sliding identified by DOGAMI. (Open-file report O-04-09).

Given the increases in storm surge and wave height we are already experiencing on the Oregon Coast, and given what we know of further predicted changes on the coast resulting from long-term climate change and cyclical climatic events such as El Niño, coastal erosion of shorefront properties is likely to increase. Preservation of natural features such as parks and outstanding natural resource areas is not only mandated by Newport's Comprehensive Plan, but also serves to protect our public beaches in the face of a changing climate. Oregon Shores believes a broader policy change is needed to adequately address these issues in light of our improved understanding of the dynamic forces on Oregon's coast and the ways these landscapes are responding to climate change. Meanwhile, addressing the present case under the existing policy, that policy should be applied strictly to achieve the maximum benefit in terms of protecting shoreline natural areas.

Sincerely,



Phillip Johnson
Executive Director
Oregon Shores Conservation Coalition
P.O. Box 33
Seal Rock, OR 97376
(503) 754-9303
phillip@oregonshores.org

Derrick Tokos

From: Mona Linstromberg <lindym@peak.org>
Sent: Tuesday, August 07, 2018 10:36 PM
To: Derrick Tokos
Cc: Sean Malone; Matt & Lisa
Subject: Fw: Shoreline Impact Permit testimony for Lund Development Proposal - #6
Attachments: Newport City Letter July 21.docx

Derrick, please see the attached submitted into the record 1-SIR-18. Please enter into the record 1-GP-18.

Thank you,

Mona Linstromberg
Sent via my totally safe HARD WIRED internet connection

From: Matt and Lisa Thomas
Sent: Saturday, July 21, 2018 4:40 PM
To: D.Tokos@NewportOregon.gov
Cc: Elaine Karnes ; Mona Linstromberg
Subject: Shoreline Impact Permit testimony for Lund Development Proposal

Hello Derrick,

Please find attached my comments relating to the potential impact of the Lund proposal to the adjacent Outstanding Natural Area.

Thank you,

Lisa Thomas
1437 Thompson St.

July 21, 2018

Derrick Tokos
Director, Community Development
Newport, Oregon

Dear Mr. Tokos,

First, thank you for keeping those of us who have expressed interest and concern re: the Lund development proposal informed. We very much appreciate the transparency.

I'm writing to provide testimony relating to the Shoreline Impact Permit associated with the Lund development proposal on Spring Street (Tax Lots 1800, 1900, 1903). I am opposed to the proposed development for several reasons, including the fact that it will likely have negative impacts to the city-owned Outstanding Natural Area to the West of his property. I am concerned that in this unstable and actively eroding substrate, a 25 ft. buffer would be insufficient to protect the adjacent natural area from potential impacts from the proposed development, such as the spread of erosional downcutting or slumping, deposition of erosional material from the property above, and invasion of non-native plants. I have expertise in these areas as an ecologist with the National Park Service (27 years, now retired) and as a former board member of the Natural Areas Association.

I am also opposed to the county vacating the Jumpoff Joe Road right of way on the east side of the Lund property. In addition to having historical significance as the old stage-coach route, this right of way could form an important piece of a proper beach access point for the surrounding neighborhood. It also provides a protective buffer to Spring Street, which could be vulnerable to slumping or erosion if the mitigation measure proposed in the geologic report for the proposed Lund development were not adequately implemented.

I have recently taken some time to familiarize myself with the City of Newport Comprehensive Plan. The Natural Features section lists two goals for Ocean Shorelands:

Goal 1: To protect life and property, to reduce costs to the public, and to minimize damage to the natural resources of the coastal zone that might result from inappropriate development in environmentally hazardous areas.

Goal 2: To protect and, where practical, enhance identified environmentally sensitive areas.

Under the Policy 1 section of Goal 1 (p. 47), the Comprehensive Plan states that it is the applicant's burden to show that construction in an environmentally hazardous area is feasible and safe. In a previous section of the plan (p. 28) Jumpoff Joe is cited as an example of a particularly unstable area.

> *In the vicinity of Jumpoff Joe [sic] in Newport, the sea coast has retreated as much as several hundred feet since the turn of the century. A number of homes have been destroyed or badly damaged in recent years [the 1940's] as a result of landslides in this area. Before any additional shoreline areas are developed, the stability of the slope should be studied by soil engineers and geologists. Often an apparently stable slope can be reactivated by the addition of houses and streets.*

I am not a geologist, and so am not specifically qualified to comment on the adequacy or flaws of the geologic assessment submitted by Mr. Lund. Perhaps the proposed mitigating actions will reduce the risk associated with development. However, given the long list of real geologic hazards for the site (slope movement, beach regression, tsunami-damage, earthquake-associated ground acceleration and lateral spreading, etc.), do they provide sufficient protection to both city property and infrastructure and that of neighboring landowners, should a natural hazard, or the construction project itself, re-activate landslide activity along the slope?

Given the likelihood and potential severity that earthquakes and tsunamis pose to Newport and surrounding coastal towns, conservative governance would ask public officials to prioritize protecting the city's existing infrastructure as well as public and private property over promoting more and more development, regardless of the associated risk. I would encourage the city to take a more proactive position by denying development on this small piece of shoreland, thus retaining its natural resistance to storm and earthquake damage through heavy vegetation cover. This has to be far more cost-effective than attempting to mitigate loss of infrastructure following storm, tsunami, or earthquake associated erosion and landslides. This course of action would both be in keeping with the goals of the Comprehensive Plan, as well as the 2040 Plan, and would be responsive to the concerns voiced by a large number of neighbors and community members who are committed to protecting the beach and shoreland that benefit us individually and as a community.

Newport is taking a number of steps to plan for this community's future, and I commend the city leaders for this. The Newport 2040 Vision and Strategic Plan acknowledges the surrounding natural beauty and access to nature as core values of our community and asks us to "prioritize conservation of significant open spaces and natural resource areas, including beaches and headlands, ..." More difficult than writing a strategic plan however, is applying the values and principles it expresses on a daily basis as small changes are proposed and considered.

Thank you for the opportunity to comment.

Sincerely,

Lisa Potter Thomas
1437 NW Thompson St.
Newport, OR 97365

Derrick Tokos

From: Mona Linstromberg <lindym@peak.org>
Sent: Tuesday, August 07, 2018 10:32 PM
To: Derrick Tokos
Cc: Sean Malone
Subject: Spring St comment Natural area - #5
Attachments: Spring St comment with attch Natural area.pdf

Derrick, please see attached comment submitted into the record 1-SIR-18. Please enter it into the record of 1-GP-18.

Thank you,
Mona LInstromberg

Sent via my totally safe HARD WIRED internet connection

July 31, 2018

File No. 1-SIR-18
Applicant: William Lund
Location: Map 11-11-05BC, Tax Lots 1800, 1900, 1903

Comment: Proposed development's adverse impact on Jump Off Joe Natural Area

Oregon Statewide Land Use Goal 17 speaks to conserving, protecting, where appropriate developing and, where appropriate, restoring *"the resources and benefits of all coastal shorelands, recognizing their value for protection and maintenance of water quality, fish and wildlife habitat, water-dependent uses, economic resources and recreation and aesthetics."* This proposed intrusive development, as evidenced by the site plan and "supported' by the approved Geotechnical Report issued by K&A Engineering, is not appropriate development in this area adjacent to the Jump Off Joe Natural Area.

See also the Newport Comprehensive Plan pages 48 and 49:

Goal 2: To protect and, where practical, enhance environmentally sensitive areas.

Policy 8: Development in beach and dune areas other than older, stabilized dunes shall only be permitted if the following issues are examined and appropriate findings are made:

>The type of use proposed and the adverse effects it might have on the site and adjacent areas;

>Temporary and permanent stabilization programs and the planned maintenance of new and existing vegetation;

>Methods for protecting the surrounding area from any adverse effects of the development; and

>Hazards to life, public and private property, and the natural environment that may be caused by the proposed use.

The Jump Off Joe Natural Area is such an environmentally sensitive area, and NMC Section 14.38.050 (B) is the codified response to Goal 17 (and 18) and Newport's Comprehensive Plan. The following aspects from the site plan (supported by the geotechnical report) illustrate how this proposed intrusive development will have adverse impacts on the Jump Off Joe Natural Area. These issues have not been thoroughly examined, if at all, with appropriate findings:

1. See page 9 Geotechnical Report, *3.1.3 Beach Regression:*
   ...For this site, we believe that long-term regression may be less than this range due to several mitigating features specific to the project site:
   Bullet 3: · High densities of existing vegetation in Zones 2 and 1.

Looking at the site plan, it is obvious that the proposed extensive road/retaining wall/driveway system will lay waste to a significant portion of existing vegetation. Add to that the ten inch and larger trees (to say nothing of the eight/nine inch trees not even listed) slated to be removed. These larger trees help anchor the soil/vegetation in this active slide area. [1] Removing them will seriously impact the Jump Off Joe Natural Area which is at the base of this active slide area and will be the depository of debris from inevitable beach regression (in addition to other hazard conditions) resulting in further collapse of this project site. Attached are two articles referencing the Jump Off Joe debacle. History repeating itself?

2. See pages 15 &16 Geotechnical Report, Foundation pads, second paragraph page 16:
   We recommend that all soils excavated from basement areas and foundation pad should be removed from the project site and disposed of off-site -or- utilized for MSE fill embankments for the driveway.

There are multiple mentions in the geotechnical report of "fill", discussing which should be used and which should not. If fill is removed from the site, as suggested above, and appropriate fill brought to the site, more detail is needed about the loaded weight of the trucks used to haul and the number of trips made in a day. The noise and commotion generated by this activity could adversely impact the Jump Off Joe Natural Area. An accommodation must be reached to lessen the impact to wildlife (especially nesting birds) in this natural habitat area during construction. Has the Oregon Department of Fish and Wildlife been contacted and apprised of specific concerns? Another worry is the impact of large loaded trucks on Spring Street itself throughout this project.

3. See page 15 Geotechnical report, Foundation pads:
   Our understanding is that, at the time of this report, two-story "daylight" designs for single-family residences are being considered.

The plan is to build two story single family dwellings (whether a "daylight" design or not) on this project site. Goal 17 and the Comprehensive Plan prioritize "protecting" natural areas. The City code does not allow development "in" a designated natural area. The Jump Off Joe Natural Area, a public space, can only be truly protected from adverse visual impact if the structures are limited to one story, typically 15 feet. Otherwise, as planned, these structures will be looming over the Jump Off Joe Natural Area, belying any pretense that this area is a natural haven for the public's use and enjoyment. In addition, the City requires development to have a setback of 25 feet to encourage preservation of vegetation and must therefore require a bond, given the developer's past performance, to ensure that vegetation in the buffer be replaced, as stipulated, covering the cost of such replacement.

If approved, this plan must include strict conditions that address site specific problems. This area is rich with history from the historic Jump Off Joe Road county ROW to the recent disastrous development in the area of Jump Off Joe directly south of this proposed development. We cannot add further disastrous development. Strict conditions are necessary to protect the Jump Off Joe Natural Area. Given the applicant's previous propensity to devastate vegetation, along with the site

[1] See pages 47 and 48 of the Newport Comprehensive Plan, Goal 1, Policy 6: *Nonstructural solutions to problems of erosion or flooding shall be preferred to structural solutions. Where flood and erosion control structures are shown to be necessary, they shall be designed to minimize adverse impacts on water currents, erosion, and accretion patterns*

plan's intent to continue removing vegetation, a plan more sensitive to preserving trees and vegetation is necessary. Given the heavy equipment needed at construction sites (exacerbated by the coming and going of fill) a plan to mitigate the impact of heavy traffic on the natural area and wildlife habitat is needed. And given the plan for extensive and intrusive structures so near the Jump Off Joe Natural Area, the height of such structures should be limited to fifteen feet.

For all the above reasons, this application should be denied, but, if not, the above conditions should be attached to the approval to better protect the Jump Off Joe Natural Area.

Please enter in the record.

Regards,

Mona Linstromberg

Slippery slope

Newport News-Times

Posted: Friday, Mar 26th, 2010
BY: Larry Coonrod

LEFT: Started in 1982, this condominium at the end of NW 11th Street in the Jump Off Joe area of Newport was starting to collapse by 1985. The structure was never completed. (Photo courtesy of the Lincoln County Historical Society)

RIGHT: All that remains of the Beachland condominiums today is part of the foundation. The project was one of the most controversial and contested developments ever undertaken in Newport. It would eventually leave several individuals and businesses bankrupt. (Photo by Larry Coonrod)

Historic Jump Off Joe development revisited in wake of proposed building code changes

It was one of the most contentious land use battles ever fought on the Oregon coast. Today, only part of a condominium foundation at the end of NW 11th Street remains of a development project at Jump Off Joe in Newport. But the memory of that nearly 30-year-old debacle is playing a fresh role in a controversial proposal by the City of Newport to put building restrictions on coastal property deemed to be in geologically hazardous areas.

Opponents and proponents of changes to the building code point to the episode to bolster their arguments.

A rock outcropping resembling a slipper with an archway in the middle, Jump Off Joe was once one of the most photographed landmarks on the Oregon coast. When settlers first came to the area in the 1860s, the rock formation jutted out from the base of the bluff. By the end of the 19th Century, erosion had separated the hill and the rock. After a series of fierce winter storms, the archway collapsed. Today, nothing remains.

Legend has it the area got its name after an Indian named Joseph being pursued by other Indians leapt to his death from the bluffs at the urging of an Indian maiden saying, "Jump Joseph."

The truth behind the tale is debatable. What is certain is that a development of the area by owners Richard and Barbara Anderson starting in 1980 carried professional reputations, personal fortunes and several businesses over the cliff.

The bulldozing of trees in the scenic headland in preparation for starting the 39 unit Shelter Cove subdivision sparked community outrage.

Richard Anderson answered back, saying, "You may have to make it look ugly before you make it look pretty."

Locals were incredulous anyone would build on the face of a known active geological hazard area.

And known it was. Landslides began endangering homes in the Jump Off Joe area as early as 1921. In 1943, the earth opened a massive hole between NW Sixth and NW 11th streets when a 1,000-foot long strip of land 200-feet wide slid away, destroying 15 homes. According to geological estimates, the shoreline has retreated close to 500 feet in some places since 1868.

A Waldport geologist produced a geological report attesting to the stability of the Anderson's building site. In fact, he said, the development would make the bluff more stable. Interestingly enough, while conducting a geological hazard survey for Lincoln County six years earlier, the same geologist had concluded the Jump Off area should never be developed, according to Paul D. Komar in his book "The Pacific Northwest Coast.

The group Friends of Lincoln County fought the development, but the Newport Planning Commission approved the development on March 9, 1981. The city council didn't give its final approval until February 1982, adding a new subdivision ordinance that would lead the Anderson's to drop plans for a subdivision and start construction on the 10-unit Beachside Estate condominiums at the top of the bluff.

During the council's deliberation, Councilor Clyde Hamstreet, the developer of the Embarcadero hotel and marina, was reported to have said of the development that, "It would be a lab experiment on a grand scale."

The Department of State Lands dashed the Anderson's hope of slowing the erosion of their property when it turned down their application to build a 21-foot high, 820-foot long sea wall.

The wall, DSL said, "could produce an illusion of safety and security in a known geological hazard area."

Work began on the Beachland condominiums in 1982 on the north end of the Jump Off Joe property. The Anderson's geologist said the building was setback far enough to be safe for 20 years. By 1985, nearly three years after the Anderson's had stopped construction because of financial woes, the condos were rapidly being destroyed as erosion weakened the building's foundation, causing it to visibly sink.

The Anderson's eventually ended up filing for bankruptcy. Much of the land went to a bank after they defaulted on over $800,000 in loans.

The Friends of Lincoln County was left owing money after the bruising battle.

Citing "incompetence and gross negligence" the Oregon State Board of Geology Examiners revoked the license of the geologist who claimed development would make the site more stable, according to Komar.

The contractor, a lumber company and an insurance company all went bankrupt from the debacle. Creditors received between a penny and 18 cents on the dollar, according to Komar.

After much legal wrangling with the Anderson's insurance company and others, the city had the building torn down.

How much the City of Newport spent on legal fees isn't readily determinable 30-years later, Community Development Director Derrick Tokos said.

The Jump Off Joe episode and other cases of severe erosion along the coastline is one reason the planning commission looked at building restrictions in high hazard areas, Tokos said.

"Should we be doing something more proactive in the highest risk areas, so that chances of something not being able to be removed from the property are reduced?" he said.

At a March 22 meeting, the planning commission moved toward adopting a geological hazard area ordinance that would recommend, but not mandate owners consider building readily removable structures in active hazard areas.

Newport attorney Chris Minor, whose firm represented the city at the time, said he remembers the episode as a battle of dueling geologists.

"The coast is a risky place. My personal view is that there should be some way of letting people find out what the risks are before they decide to buy or build," Minor said. "But government can't predict the future and tell us where the erosion is all going to be. If somebody can afford to take their chances, they should be allowed to do so, as long as it's not an outrageous risk."

Today, the city owns much of the Anderson's former property, which continues to erode. The only people ever likely to live there are transients who camp in the scrub brush along the bottom of the fallen bluff.

Reporter Larry Coonrod can be reached at 541-265-8571 ext 211 or larry@newportnewstimes.com

Lincoln County Leading Newspaper

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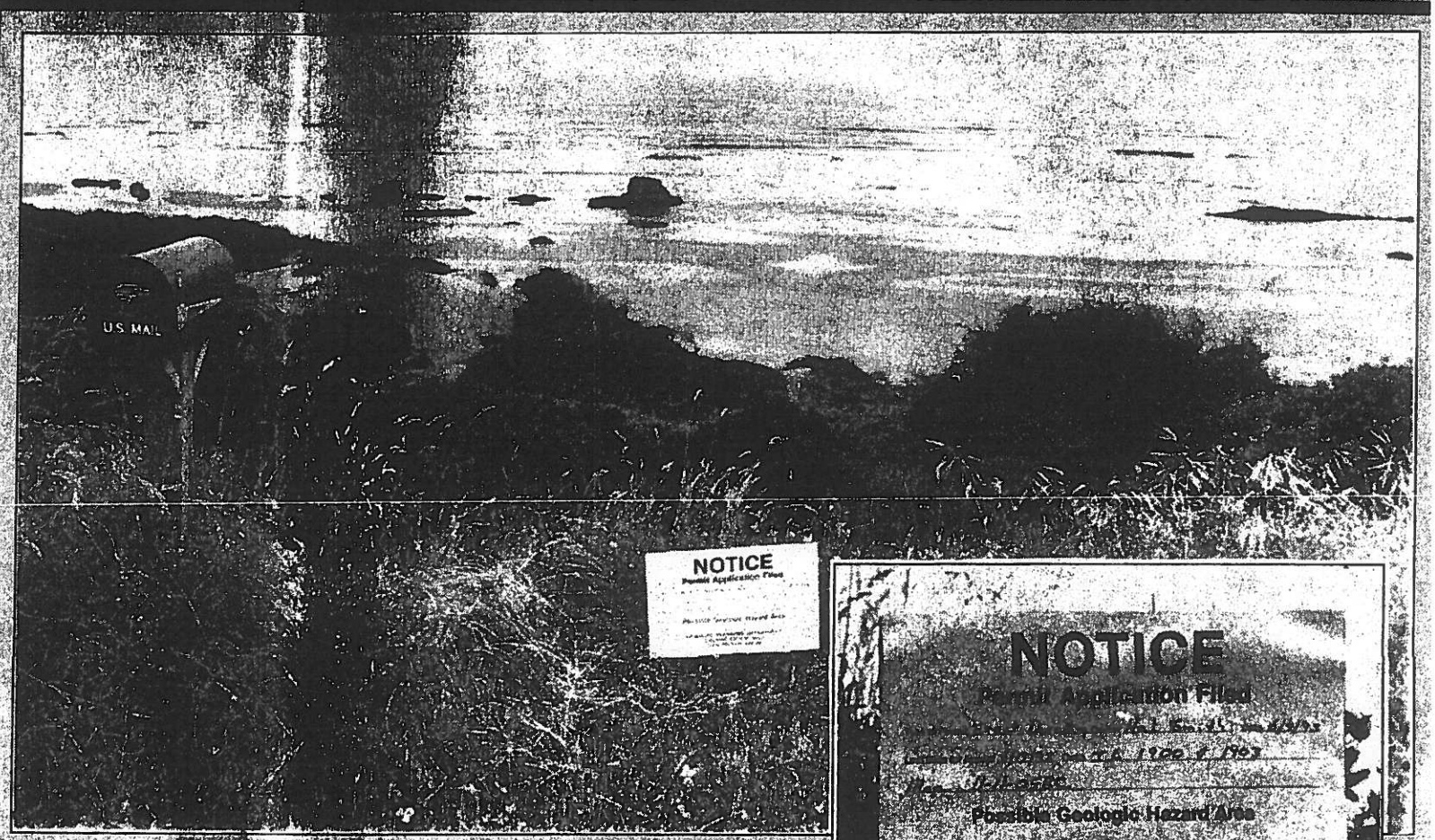

This parcel of property, located north of Jump-off Joe and west of Spring Street in Newport, is being planned for development of several single family homes. Nearby residents are concerned that development in this geologically sensitive area could jeopardize surrounding property. (Photo by Steve Card)

Neighbors concerned over proposed development near Jump-off Joe

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Neighbors concerned over proposed development near Jump-off Joe

By Steve Card

A plan by a Newport property owner to build several houses on a bluff overlooking the ocean has raised concerns from neighbors in the area, who think the development could jeopardize their homes.

Hal Smith is planning to build on a known geologically sensitive area just north of Jump-off Joe and west of Spring Street. Smith filed an application for a building permit with the city on June 4, and a sign declaring Smith's intentions has been posted at the site.

Several neighbors in that area are afraid that Smith's development plans could further destabilize ground that has already been subject to sliding. And, in addition to posing a hazard to individual properties, they think future development could jeopardize city streets and utilities in that area.

"I'm one who's real concerned about this development down below Spring Street," said Dick Mason, who lives on Thompson Street, a block east of the proposed building site.

"Spring Street wasn't named Spring Street by mistake. There were springs, and there's still all kinds of underground springs along there. The whole area is a landslide area," he said.

Mason added that he has walked the area for the past 24 years, and "it is deteriorating as it is, but thinking of anybody trying to build down there is just horrible."

"When an individual is contemplating building in a geologically sensitive area, the city requires a geologic report prior to the issuing of a building permit. That report has been submitted by Smith, and was prepared by H.G. Schlicker & Associates of Portland.

This preliminary investigation of the property was undertaken with the understanding that Smith plans to construct three or four single family homes in that area, according to the report. It states that no drilling or excavation was done for the preliminary study, and it further says that a geotechnical report will be necessary in order to define what needs to be done to safely develop the area.

Newport City Planner Mike Shoberg said on Tuesday that if the preliminary report indicates that further information is needed prior to developing the property, "we would require that before we issue the permit."

Shoberg added, however, that the city does not make the determination of whether the geologic study was adequately done. "We don't really determine the sufficiency," he said. "Basically, the city attorney has told us we aren't qualified to tell you what is sufficient, so it's dependent on geologists and the process we have set up."

When told that some of the neighbors are concerned about possible danger to property if Smith is allowed to develop, Shoberg responded, "That's an opinion that a non-expert has. If they want to bring in an expert, we have a process for them."

That process is to appeal the permit application, and in this case the appeal period expires on Saturday. In addition to the $150 cost of appeal, the appellants must bring in their own geologic report within 30 days. And this report must contradict, either in whole or in part, the original geologic report. "It's a major process," Shoberg acknowledged.

Tom Branford, who recently sold his home immediately south of the proposed development site, said, "I don't question the propriety of the procedure the city has. I understand it involves an expense, but it also involves an expense to the other party if the city says, 'no, you can't develop it,' and then they stand to lose their investment. It's a classic push and pull or tug of war over protecting existing development from being endangered by new development.

"So somebody stands to lose in a deal like this," Branford continued. "The question is, who's going to be the loser."

Personally, Branford agrees with the assessment that the property is unstable.

"We sold the house, (so) we're not trying to protect our investment or protect any view we have, that's not an issue," he said. "I recognize the right of people to develop property as long as it does not jeopardize existing homes or other lots or municipal improvement. (But) from my involvement as a neighbor, and just from walking down to the beach for the past 18 years through the property they're planning to develop, I believe that property is unstable."

Branford said that several years ago, in an area near the proposed development, "a chunk of ground about 130 feet long and 10 feet wide simply cracked off, and it has sunk about six feet since that time. One owner had to alter their foundation, another lost a 10-foot chunk that was the full width of their lot."

A path to the beach that winds its way through a portion of Smith's property has also dropped a couple of feet, Branford said.

"Look at Jump-off Joe now, and look at all the erosion down at the base of the cliff. There's probably nothing that could have been done to prevent that, no matter what happened on top," said Branford. "If that's the power of Mother Nature, wind and water, it doesn't just exist at Jump-off Joe. It exists a block and a half to the north."

The landslide area north of Jump-off Joe was acknowledged in Smith's geologic report. Schlicker & Associates stated that "the area from Jump-off Joe northward and from Spring Street west is old landslide. The slide debris appears to have moved toward the ocean as a unit, and a major slide mass lies

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Gay high school students isolated

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the park between Northwest High Street and Betty Wheeler field. This is the park that traverses the canyon between these two sites.

- $30,000 for participating with property owners in installation of new sidewalk projects.
- $20,000 for controlling erosion on the properties owned by the commission, which includes the Vietnam Memorial site.

The commission's executive director, Sam Sasaki, said that this year's budgeted expenditures are the same as last year, but the tax rate will actually go down, due to an increase in assessed property values.

the original estimated cost of this demolition.

He also said he is now looking at ways to secure the area from trespassers.

- Heard that the Oregon Division of State Lands has not accepted urban renewal's proposal for the seawall renovation on the Bayfront. DSL wants the city to mitigate for any wetland lost through the depositing of rock or other material into the bay during the course of rebuilding the wall. The commission authorized Sasaki to begin looking for mitigation property. It is estimated that about half an acre will be required.

Jump-off Joe Continued from Page A1

between the subject property and the beach."

However, this landslide, according to the report, now rests on a nearly level surface and is not capable of further sliding. "Rather it acts as a buttress to the toe of the subject property," the report states. It further states that movement in the vicinity of the site is limited to small local slumps, since the driving force is no longer present to activate a large slide.

In addition to recommending that a geotechnical study be performed, Schlicker & Associates suggest that:

- at least two test holes should be drilled approximately 50 feet in depth;
- laboratory tests include a direct shear being done;
- consideration be made for slope support, including crib walls;
- various foundations systems be considered if development of the site is feasible.

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Senator Stan Bunn, Governor Barbara Roberts, as well as many agencies support the JOBS program. These include the Employment Division, Community Services Consortium, Career Pathways, and Lincoln County Health Department. They support the JOBS program because it helps get people off welfare permanently.

I believe the JOBS program is a very important component to the success of many low-income individuals; therefore, the program needs continued support from the whole community, including state officials as well as businessmen and women. Working together, JOBS participants and the community help create a strong and educated work force. With continued support, this program is and will continue to be beneficial to the betterment of our whole country.

Carol L. Carroll
Yachats

Ultimate insult

To the editor,

For those individuals who stood up when their country called, then gave the ultimate sacrifice in Vietnam – for our president to show up at the Vietnam Memorial, this has to be the ultimate insult for those courageous individuals who gave their lives.

For 20 years, I've been hoping that my fellow comrades did not die in vain in Vietnam, but I now have my doubts, after watching President Clinton's appearance at the wall on television this Memorial Day. President Clinton is well known for his symbolism over substance and hypocritical rhetoric, but are there no limits and no shame for this president?

Vietnam veterans have long been annoyed that it's always those who have never been there that choose to speak the most about Vietnam. Now we have a president who did everything he could to avoid serving in Vietnam, even to the extent of running to our adversary and denouncing those unfortunate Americans who put it all on the line when our country asked them to.

A bumper sticker I saw the other day pretty much sums up this country's present lack of political leadership:

"Don't blame me, I didn't vote for the draft dodger."

But to try to finish on a positive note, things could be worse, Bill Clinton could have married Jane Fonda.

Keith Kruse
Lincoln City

Bowling alley permit

To the editor,

It seems strange the Newport politicians can't compromise and allow a conditional use permit for a much needed entertainment facility – one I'm sure would be used by many local individuals, from the very young to seniors, church and school groups, and area tournament teams.

Besides the zoning concerns by a few for the bowling alley, is the denial by the council because the business is not visitor-oriented enough?

Several years ago, the council was confronted by the illegal use, and not zoned as such, of the south jetty property as a campground and visitors RV park. The eye-sore is still there, but apparently we don't want to run off the visitors, so this can be over looked.

I know we can't go helter-skelter on zoning changes but my gosh, it seems the local people should be heard and we hedge a little when we have someone willing to build a business which would benefit and be enjoyed by many in our community.

Dallas Willison
South Beach

Page A6

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tody for Assault 4 Domestic and and lodged at the Lincoln County Jail. Flatt was also cited for Criminal Mischief 2.

10:54 a.m. Complainant reported to offi-

hicle accident near Milepost 3 on U.S. Highway 20. A rescue vehicle, two ambulances, and two officers responded.

The motor lifeboat Victory towed the 32-foot fishing vessel Swift Sure II due to an engine failure. Two persons were aboard.

June 12

June 13

The motor lifeboat 44400 towed the 25-foot pleasure craft Myster E due to engine failure. Five persons were aboard.

No more Jump-off Joes

News-Times EDITORIAL

Driving along some out-of-the-way road along the ocean shouldn't be the only way a person finds out that construction is being planned on a geologically hazardous zone.

But that's how the neighbors of what could be called Jump-off Joe Revisited learned about a plan to build houses north of the notorious landmark and west of Spring Street.

An application for a building permit has been filed with the city of Newport to build several residences on a bluff perched above the Pacific. Because the proposal does not involve a variance, no hearing before the city planning commission is required. Signs, however, were posted recently in the area to announce the developer's plans for a possible geological hazard area.

The city requires a geologic report for such building permits, and the developer has filed one, although it states a geotechnical report will be necessary in the future to define what needs to be done to safely develop in the area.

City staff acknowledge that when the report carries such a statement, the permit will not be issued until the additional information is obtained. But the city will not make a determination on whether the geologic report is adequate – just that it exists.

The only option left to those who think such a building site will destabilize the ground where they live is for the neighbors of the proposed development to pay $150 to appeal the permit application, and pay what it is safe to assume would be a lot more money to hire their own geologist to dispute the report.

Mike Shoberg, Newport city planner, called that "a major process."

We agree. And the burden is on the neighbors, who don't want their own property damaged by a development in a sensitive area, and who say that someone should have learned something from the ill-fated development several years ago just south at Jump-off Joe, where condominiums under construction had to be demolished because of unstable ground.

People in the neighborhood acknowledge that portions of the area have already cracked off and fallen away. Erosion and landslides are not unusual in the area.

And it's no longer an issue of "Let the buyer beware" or the foolishness of building houses on sand. It's no longer an issue of pro-development vs anti-development.

It's time for the city of Newport to look at its oceanfront property and evaluate the zoning in those areas. Does it make sense to allow building on geologically sensitive areas, unless people in the neighborhood have enough money to prove that such building would be hazardous?

We don't think so. It's time to recognize, as a former resident called it, "the power of Mother Nature." And the city of Newport needs to take the lead in looking at its zoning and acknowledging that not every piece of property in the city is prime development land.

Letters

Will miss Ovaitt

To the editor,

It is with great sadness that we, the Residents Of Old Town, (ROOT), write this "Letter of Commendation" for our friend and port manager, Lorrain Ovaitt.

Ovaitt brought a level of confidence and esteem to the Port of Alsea, which had never existed before, especially between the immediate neighbors and the port.

Her honesty and directness and above all, love for our beautiful bay, will long be remembered by those who realize what could have been, if all that bridge debris had not been removed. All the commissioners should be applauded, but it was the port manager who took the heat and struck an independent course leading to success.

Yet, it is the daily overseeing of Waldport's most lucrative asset, our wonderfully important river and bay during a time of funding turmoil, that is her "magnum opus."

If only other governmental bodies could come up to the Port of Alsea's high standards! We congratulate Ovaitt on a job well done, and look to a continuation of the "good neighbor" policy instituted during her tenure.

To the new and current commissioners and new manager, ROOT, Residents Of

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News Tim

Lincoln County's Leading Newspaper

Wednesday • June 16, 1993

Georgia-Pacific may face six-figure fine from OSHA

By Brooke Brannon

Georgia-Pacific Corp., which operates the Toledo pulp and paper mill, may face approximately $221,000 in fines from the state following an investigation into safety and health violations.

The potential fine is reportedly due in part to a Feb. 5 explosion at the Toledo mill that killed two mill workers and seriously injured two others.

An investigation was conducted

Willful violations are defined as those that are deliberate or have been pointed out to the company before, but have not been corrected.

OSHA media contact Jan Wagner would not discuss details, and said, "The investigation is not officially closed yet."

G-P's regional communications manager in Portland, Dave Odgers, confirmed that the conference had been held, but said he could not divulge details.

"They were investigating general

136

Derrick Tokos

From: Mona Linstromberg <lindym@peak.org>
Sent: Tuesday, August 07, 2018 10:26 PM
To: Derrick Tokos
Cc: Sean Malone
Subject: Spring St. 1,GP,18 incomplete Geotechnical report - #4
Attachments: Spring St 1,SIR,18 comment with attch incomplete geo report.pdf

Ooops, the previous email was #3. Please see attached my comment submitted into the record for 1-SIR-18. Please submit into the record 1-GP-18.

Thank you,

Mona Linstromberg
Sent via my totally safe HARD WIRED internet connection

July 31, 2018

File No. 1-SIR-18
Applicant: William Lund
Location: Map 11-11-05BC, Tax Lots 1800, 1900, 1903

Comment: Shoreland Resources Impact Review Application based on flawed and incomplete approved Geotechnical Report.

The conundrum is making comment on an application/site plan based on a flawed [1] and incomplete geotechnical report. Mr. Tokos' 12/13/17 comments on K and A's initial geologic report and his 6/21/18 comments on the revised geologic report provided insight into the review process. Not having the technical background, my review is based on inconsistencies, omissions and common sense.

1) See page 16 of the current K and A Geotechnical Report, 3.4.4.2 Cut Embankment : *Stability for cut embankments along the east side of the driveway should be provided a gravity retaining*

Information is missing as the above sentence/thought is incomplete.

2) On page 3 of the Geotechnical Report, Introduction: *This report documents our geotechnical investigation of site conditions that exist on tax lots 1900 and 1903 located on the west side of NW Spring Street just north of NW 13th Street in Newport, Oregon.*

Because the above statement omits mention of tax lot 1800, it alerted me to look for other omissions relating to tax lot 1800:

a. See Appendix C, Slope Stability Analysis. Information is provided for tax lots 1900 and 1903 but comparable information is not provided for tax lot 1800.
b. See Appendix E, Reference Reports. Not all the information provided for tax lots 1900 and 1903 is provided for tax lot 1800.

See also the July 26, 2018 communication from Lincoln County Counsel regarding File #1-GP-18 (approved) and Notice #1-SIR-18 which includes technical comments by the county's engineer (see attached). His comments enumerate omissions in the geotechnical review.

The above is evidence the approved K & A Geotechnical Report is flawed and incomplete. Information omitted could be significant. The Shoreland Resources Impact Review

[1] See 7/25/18 communication from Mr. Gless (G.H.Schlicker & Associates) entered in the record, and 7/26/18 comment submitted by Tim Gross. Dropbox documents linked in Mr/ Gless's email are included in the record: K &A Engineering Report is included by reference, G.H. Schlicker 1991 Report (Appendix E) is attached.. Also in the record are Gless' reports on TL 1800 and 1409 NW Spring St, adjacent to and north of TL 1800.

Application is intrinsically dependent on the report. As such, this application must be denied.

Please enter in the record.

Mona Linstromberg
831 E. Buck Creek Rd.
Tidewater, OR 97390

Family home:
1442 NW Spring St.
Newport, OR 97390

Office of Lincoln County Legal Counsel
225 West Olive Street, Room 110
Newport, Oregon 97365
(541) 265-4108
Fax: (541) 265-4176
www.co.lincoln.or.us/countycounsel

Wayne Belmont
County Counsel
Kristin Yuille
Assistant County Counsel
Jerry Herbage
Assistant County Counsel
Janet Harrison
Paralegal

To: Derrick Tokos, Newport Community Development Director

Re: Your File #1-GP-18 and Notice #1-SIR-18

Date: July 26, 2018

The following comments are offered by Lincoln County in response to the decision and notice above referenced. They are not appeals of either matter. Instead they are intended to address questions the County has received about the proposed development highlighted in the applications before the City of Newport.

It appears from the submitted conceptual site plan that the road improvements, retaining walls and driveway accesses are all located within the right of way of County Road 500. This is a public road right of way (County Road) under County jurisdiction; therefore these improvements would require a permit from the County. Public access on the improvements will be required to be allowed and maintained. After conferring with the City we understand a 20 foot road width would be acceptable under the City adopted fire code for these improvements. Assuming the geotechnical information is otherwise acceptable to and approved by the City as evidenced by the decision in File # 1-GP-18, structures or disturbance of the right of way related to road improvements (including but not limited to retaining walls, cut embankments, and fills) could be located within the right of way but would require separate applications and permits from the County. The County would also require that road improvements not impede or block possible future public access to the beach continuing north on the right of way. The technical comments of the County Engineer are attached.

The applicant and other property owners have filed a petition to vacate the County Road 500 right of way shown on the site plan. The vacation request includes proposed construction of an alternative replacement beach access (trail) by the applicant as generally shown on the site plan. The vacation process is separate from the city's permit process. The vacation procedures are outlined in ORS Chapter 368 and Lincoln County Code Chapter 6. If the vacation is approved by the County after public hearing, and including concurrence by the City as required under law, then no permits would be required by the County.

Please place these comments into the record.

Submitted on behalf of Lincoln County by:

Wayne Belmont, Lincoln County Counsel
Roy Kinion, Lincoln County Public Works Director (Road Official)
James "Steve" Hodge, Lincoln County Engineer

Comments of Steve Hodge:

I have reviewed the Geotechnical Engineering Report (GER) prepared and written by Michael Remboldt, P.E., G.E. and Gary Sandstrom, C.E.G. (K & A Engineering, Inc. and Gary C. Sandstrom, Geologist, LLC, respectively). This report was written to satisfy the requirements of the 2014 Oregon Structural Specialty Code. Chapter 18, *Soils and Foundations*, specifically addresses the reporting requirements of the above mentioned report.

While the field investigation addresses most of the issues regarding questionable soils, the GER does not provide all of the boring logs from their field work. The conceptual site plan indicates four borings were performed to describe the soil profile. Only boring log B-1 and B-3 were included in this report. Four hand auger profiles (HA-1, AH-2, HA-2 and HA-3) are presented as is the readings of the Dynamic Probe (FC-1, FC-2, FC-3, FC-4). Test results showing the Plasticity Index, Expansion Index, and ASTM D are not included in this report nor are there results of any compressive strength tests.

The report provides adequate review of Section 1803.5.5 *Deep Foundations.* Boring logs indicate a soil strata capable of supporting deep foundations lay in this area. The report describes type of pile, installation procedures, bearing pressures, and installation procedures. It does not speak to pile spacings or reductions for group action.

The report suggests MSE retaining walls for fill slopes and Gabion Baskets for cut slopes. The provided boring logs suggest these technologies would be sufficient for the intended purposes; however, additional analysis is required for design. Specifically, modeled lateral forces generated by earthquake against gabion wall.

It is my opinion that this report meets the requirements of the 2014 Oregon Structural Specialty Code however additional investigation and testing is necessary to support design.

Steve Hodge, P.E.
County Engineer
Lincoln County Public Works
880 NE 7th Street
Newport, OR 97365
541-574-1212
JHodge@co.lincoln.or.us

Derrick Tokos

From: Mona Linstromberg <lindym@peak.org>
Sent: Tuesday, August 07, 2018 10:18 PM
To: Derrick Tokos
Cc: Sean Malone; Tim Gross
Subject: Fw: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.
Attachments: TAC Short_Vitae_2018.docx

Derrick, please see the attached. The date on this is July 31 which was when I received it. Maybe it was paper clipped with another comment but I did not see it in the 1-SIR-18 file. Please include it in the record if it was not done so. Please also include it into the record of 1-GP-18.

Thank you,
Mona Linstromberg
Sent via my totally safe HARD WIRED internet connection

From: Tim Cross
Sent: Monday, July 30, 2018 9:07 AM
To: Derrick Tokos
Cc: Mona Linstromberg
Subject: Re: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Dear Derrick and Mona,

I don't see why my background and credentials are relevant, but if you insist . . .

I am a geologist (MSc-University of Michigan; PhD, University of Southern California). I retired from practice in 2016. I wrote to you as a homeowner, not as a consulting geologist. I wrote out of concern that the slope stability models run by K&A Engineering were based on incorrect boundary conditions, thus rendering the models meaningless (not wrong, not correct, rather meaningless). I am not employed by anyone for any reason. Attached is a resumé.

On Jul 26, 2018, at 11:36 AM, Derrick Tokos <d.tokos@newportoregon.gov> wrote:

Hi Mona,

Thank you for your comments. I'll forward your note, and the email from Mr. Cross, to Bill Lund and K&A Engineering to see what their thoughts are regarding your request for additional time.

Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

From: Mona Linstromberg [mailto:lindym@peak.org]
Sent: Thursday, July 26, 2018 11:13 AM
To: Tim Cross <timothyacross@comcast.net>; Derrick Tokos <D.Tokos@NewportOregon.gov>
Subject: Re: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Derrick, in discussion with Mr. Cross and other neighbors, we feel that the substantial comment provided by Mr. Cross justifies your extending the appeal date until K and A has an opportunity to address the information provided. We do realize that Mr. Lund would have to agree so we are preparing as if the July 31 deadline still holds but wanted to make this formal request.

Could you please acknowledge receipt of this email and also receipt of Mr. Cross' comment?

Please enter this in the record.

Thank you, Mona Linstromberg

Sent via my totally safe HARD WIRED internet connection

From: Tim Cross
Sent: Thursday, July 26, 2018 10:11 AM
To: D.Tokos@NewportOregon.gov
Cc: lindym@peak.org
Subject: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Dear Derrick and Mona,

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I am a geologist (MSc-University of Michigan; PhD, University of Southern California). I retired from practice in 2016. I wrote to you as a homeowner, not as a consulting geologist. I wrote out of concern that the slope stability models run by K&A Engineering were based on incorrect boundary conditions, thus rendering the models meaningless (not wrong, not correct, rather meaningless). I am not employed by anyone for any reason. Attached is a resumé.

> On Jul 26, 2018, at 11:36 AM, Derrick Tokos <d.tokos@newportoregon.gov> wrote:

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> Hi Mona,
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> Thank you for your comments. I'll forward your note, and the email from Mr. Cross, to Bill Lund and K&A Engineering to see what their thoughts are regarding your request for additional time.
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> Derrick I. Tokos, AICP
> Community Development Director
> City of Newport
> 169 SW Coast Highway
> Newport, OR 97365
> ph: 541.574.0626 fax: 541.574.0644
> d.tokos@newportoregon.gov <mailto:d.tokos@newportoregon.gov>
>
>
> From: Mona Linstromberg [mailto:lindym@peak.org]
> Sent: Thursday, July 26, 2018 11:13 AM
> To: Tim Cross <timothyacross@comcast.net>; Derrick Tokos <D.Tokos@NewportOregon.gov>
> Subject: Re: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.
>
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> Could you please acknowledge receipt of this email and also receipt of Mr. Cross' comment?
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> To: D.Tokos@NewportOregon.gov <mailto:D.Tokos@NewportOregon.gov>
> Cc: lindym@peak.org <mailto:lindym@peak.org>
> Subject: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Timothy A. Cross
1102 SW Russ Lane
McMinnville, OR 97128

timothyacross@comcast.net
tacross@mines.edu

Tim is Emeritus Professor of Geology at the Colorado School of Mines. He held positions in both academia and industry, and retired as a consulting geologist in 2016. He was a consultant to and advisor in stratigraphy with several petroleum companies. He holds two U.S. patents for stratigraphic inversion.

After a first career in structural geology and tectonics, his research of the past two-plus decades has pursued his goal of making stratigraphy a more accurate and predictive science. In collaboration with students and colleagues, he developed the discipline of high-resolution genetic stratigraphy and the new technology of stratigraphic inversion. Over the years, this research produced new concepts and systematic methods of stratigraphic analysis and correlation that supply objective, quantitative and more accurate predictions about petrophysical, geometric and volumetric arrangements of sedimentary rocks. He used these concepts and methods, along with stratigraphic inversion for: reservoir characterization, rezonation and production augmentation; stratigraphic prediction in exploration; and, as an aid to seismic interpretation.

Formal Education

Ph.D. (1976) University of Southern California (Geology). Dissertation: "Changing patterns of Cenozoic igneous activity in the western United States: Relation to absolute North American plate motion"
M.S. (1969) The University of Michigan (Geology). Thesis: "The Mississippian Lake Valley Formation of the Sacramento Mountains, New Mexico: An environmental interpretation"
B.A. (1967) Oberlin College (Geology). Honors Thesis: "Taxonomy, distribution and ecology of living benthic foraminifera, Barbados"

Professional Experience

9/86 – 2016	President, Strategic Stratigraphy, Inc.
10/02 – 7/16	Consulting Geologist
9/01 – 10/02	Senior Scientist, Platte River Associates, Inc.
10/01 – present	Emeritus Professor of Geology, Colorado School of Mines
1/90 – 6/90	Professeur Invité, Universite Louis Pasteur, Strasbourg, France
8/84 – 9/01	Professor of Geology, Colorado School of Mines
6/83 – 7/84	Research Associate, EPR Co.
4/81 – 5/83	Senior Research Specialist, EPR Co.
6/79 – 3/81	Research Specialist, EPR Co.
6/78 – 6/79	Associate Professor of Geology, Purdue University
9/75 – 5/78	Assistant Professor of Geology, University of North Dakota
9/72 – 8/75	Graduate studies, University of Southern California
1/70 – 8/72	Exploration Geologist, Texaco, Inc.
5/69 – 1/70	Development Geologist, Texaco, Inc.

Professional Interests and Specialization

SEDIMENTOLOGY: process-response sedimentology and high-resolution facies analysis of carbonate and siliciclastic sedimentary rocks from all environments; geology of sedimentary rocks associated with petroleum, coal and oil shale.
BASIN ANALYSIS: sedimentation and subsidence of rift, intracratonal and foreland basins; origin and development of the foreland fold and thrust belt and basement-involved uplifts of the Rocky Mountains; integration of well log, core, and seismic data for improved understanding of stratal geometries and basin architecture.

STRATIGRAPHY: development and application of genetic stratigraphic concepts for stratigraphic prediction; forward and inverse numerical stratigraphic models; stratigraphic prediction for petroleum exploration and production through stratigraphic inverse modeling; reservoir characterization, zonation and production enhancement; field verification of stratal architecture and facies distributions in sedimentary basins.

Industry Activities and Affiliations (reverse chronological order)

- Stratigraphic analysis and reservoir characterization, several blocks in Llanos basin, Colombia (Hocol)
- Stratigraphic analysis and reservoir characterization, San Francisco field, Colombia (Hocol)
- Stratigraphic analysis and reservoir characterization, Costayaco field, Putumayo basin, Colombia (Gran Tierra)
- Stratigraphic analysis and reservoir characterization, FuYu Formation, Daqing Anticline, China (Daqing Oilfield Company)
- Core and stratigraphic analysis of the Capella oilfield, Colombia (Emerald Energy)
- Stratigraphic analysis, reservoir characterization and stratigraphic inversion, FuYu Formation, Daqing oilfield, China (Daqing Oilfield Company)
- Reservoir rezonation of Statfjord Field, North Sea (Statoil)
- Reservoir reezonation of Snorre Field, North Sea (Statoil)
- Regional stratigraphic analysis of Oriente basin, Ecuador (Occidental)
- Reservoir characterization of Occidental fields, Oriente basin, Ecuador (Occidental)
- Director of the CSM Geoscience Inversion Consortium
- Developed and applied world's first stratigraphic inverse modeling technology and high-resolution correlation strategies to carbonate strata of the Mission Canyon Fm., Williston Basin, North Dakota (USA)
- Scientific Advisor (Stratigraphy, Sedimentology, Stratigraphic Modeling) for Elf Exploration Production, Pau, France
- Scientific Advisor (Stratigraphy, Sedimentology, Stratigraphic Modeling) for Statoil, Stavanger, Norway
- Developed and applied high-resolution stratigraphic correlation techniques for continental and shallow marine strata at exploration and reservoir scales to Cusiana Field, Llanos Basin, and Middle Magdalena Basin, Colombia (sponsored by Ecopetrol and ICP)
- Established correlations and reservoir zonation for Cusiana field, Llanos basin, Colombia (sponsored by Ecopetrol)
- Developed and applied world's first stratigraphic inverse modeling technology and high-resolution correlation strategies to continental and shallow marine strata of the Brent Group (North Sea) and Mesa Verde Group (San Juan Basin, USA) under the sponsorship of Statoil, Saga, Mobil, Conoco and Elf Exploration Production
- Developed and applied high-resolution stratigraphic correlation techniques for deep-marine strata, Tertiary, North Sea (sponsored by Statoil)
- Developed and applied high-resolution stratigraphic correlation techniques for deep-marine strata, Pennsylvanian, Anadarko Basin, USA (sponsored by Amoco)
- Applied high-resolution stratigraphic correlation techniques in shallow marine tidal strata for reservoir zonation and behind-pipe oil identification of the Carito Field, Venezuela (sponsored by PDVSA)
- Developed correlation strategies for aggrading braided stream strata and applied to the Sincor field, Orinoco heavy oil belt, Venezuela (sponsored by Sincor).

Recent Publications

Cross, T.A., and Kusumanegara, Y, 2017, Stratigraphic controls on petrophysical attributes and fluid-flow pathways in an exhumed fluvial reservoir: Mountain Geologist, v. 54, p. 129-145.

Feng Zhi-qiang, Zhang Shun, Cross, Timothy A., Feng Zi-hui, Xie Xi-nong, Zhao Bo, Fu Xiu-li, and Wang Cheng-shan, Lacustrine turbidite channels and fans in the Mesozoic Songliao Basin, China: Basin Research, v. 22, p. 96-107.

Feng Zhi-qiang, Jia Cheng-zao, Xie Xi-nong, Zhang Shun, Feng Zi-hui, and Cross, Timothy A., 2010, Tectonostratigraphic units and stratigraphic sequences of the nonmarine Songliao basin, northeast China: Basin Research, v. 22, p. 79-95.

Kjemperud, A.V., Schomacker, E.R., and Cross, T.A., 2008, Architecture and stratigraphy of alluvial deposits, Morrison Formation (Upper Jurassic), Utah: American Association of Petroleum Geologists Bulletin, v. 92, p. 1055-1076.

Gerhard, L.C., and Cross, T.A., 2005, Measurements of the generation and distribution of carbonate sediments of Buck Island Channel, St. Croix, U.S. virgin Islands, with observations about sediments in fringing lagoons: Atoll Research Bulletin, no 536, p. 157-176.

Gardner, M.H., Cross, T.A., and Levorsen, M., 2004, Stacking Patterns, Sediment Volume Partitioning, and Facies Differentiation in Shallow-Marine and Coastal-Plain Strata of the Cretaceous Ferron Sandstone, Utah: AAPG Studies in Geology, v. 50, p. 5-124.

Anderson, D.S., and Cross, T.A., 2001, Large-scale cycle architecture in continental strata, Hornelen basin (Devonian), Norway: Journal of Sedimentary Research, v. 71, p. 255-271.

Horn, B.W., Cross, T.A., Hornbeck, J.A., Vielma, M., and Zavala, M., 2001, Stratigraphic controls on reservoir strata: A comparison of fluvial and tidal reservoirs in the Almond Formation, Coal Gulch, Wamsuttter, Echo Springs and Table rock fields, Washakie Basin, Wyoming: Wyoming Geological Association Guidebook, 52nd Field Conference, p. 149-161.

Cross, T.A., 2000, Stratigraphic controls on reservoir attributes in continental strata: Earth Science Frontiers, v. 7, p. 322-350.

Cross, T.A., and Lessenger, M.A., 1999, Construction and application of a stratigraphic inverse model, *in* J.W. Harbaugh, W.L. Watney, E.C. Rankey, R. Slingerland, R.H. Goldstein, and E.K. Franseen, eds, Numerical Experiments in Stratigraphy: Recent Advances in Stratigraphic and Sedimentologic Computer Simulations: SEPM Special Publication 62, p. 69-83.

Cross, T.A., and Lessenger, M.A., 1998, Sediment volume partitioning: rationale for stratigraphic model evaluation and high-resolution stratigraphic correlation, in F.M. Gradstein, K.O. Sandvik, and N.J. Milton, eds., Sequence Stratigraphy Concepts and Applications: Norwegian Petroleum Society Special Publication 8, p. 171-195.

Cross, T.A., and Homewood, P.W., 1997, Amanz Gressly's Role in Founding Modern Stratigraphy: Geological Society of America Bulletin, v. 109, p. 1617-1630.

Cross, T.A., and Lessenger, M.A., 1997, Correlation strategies for clastic wedges, *in* E.B. Coalson, J.C. Osmond, And E.T. Williams, eds., Innovative Applications of Petroleum Technology in the Rocky Mountain Area: Rocky Mountain Association of Geologists, Denver, p. 183-203.

Deng Hongwen, Wang Hongliang, and Cross, T.A., 1997, Application of high-resolution stratigraphic correlation approaches to fluvial reservoirs: Proceedings of the 30th International Geological Congress, v. 11, p. 55-59.

Ramon, J.C., and Cross, T.A., 1997, Characterization and prediction of reservoir architecture and petrophysical properties in fluvial channel sandstones, Middle Magdalena Basin, Colombia: Ciencia, Tecnologia y Futuro, v. 1, no. 3, p. 19-46.

Lessenger, M.A., and Cross, T.A., 1996, An inverse stratigraphic simulation model—Is stratigraphic inversion possible?: Energy Exploration & Exploitation, v. 14, no. 6, p. 627-637.

Cross, T.A., 1994, Applications of high-resolution sequence stratigraphy to reservoir analysis: The Interstate Oil and Gas Compact Commission 1993 Annual Bulletin, p. 24-39.

Gardner, M.H., and Cross, T.A., 1994, Middle Cretaceous paleogeograpahy of Utah, *in* M.V. Caputo, J.A. Peterson, and K.J. Franczyk, eds., Mesozoic Systems of the Rocky Mountain region, USA: Rocky Mountain Section SEPM (Society for Sedimentary Geology), Denver, p. 471-502.

Cross, T.A., 1993, The geosciences in review: Coal: Geotimes, v. 38, p. 12.

Cross, T.A., Baker, M.R., Chapin, M.A., Clark, M.S., Gardner, M.H., Hanson, M.S., Lessenger, M.A., Little, L.D., McDonough, K.J., Sonnenfeld, M.D., Valasek, D.W., Williams, M.R., and Witter, D.N., 1993, Applications of high-resolution sequence stratigraphy to reservoir analysis, *in* R. Eschard, and B. Doligez, eds., Subsurface Reservoir Characterization from Outcrop Observations: Proceedings of the 7th IFP Exploration and Production Research Conference: Paris, Technip, p. 11-33.

Gardner, M.H., and Cross, T.A., 1993, Incorporating depositional and preservational process systems in reservoir characterization: Examples from the Upper Cretaceous Ferron Sandstone, Utah, USA, *in* R. Eschard, and B. Doligez, eds., Subsurface Reservoir Characterization from Outcrop Observations: Proceedings of the 7th IFP Exploration and Production Research Conference: Paris, Technip.

Sonnenfeld, M.D., and Cross, T.A., 1993, Volumetric partitioning and facies differentiation within the Permian Upper San Andres Formation of Last Chance Canyon, Guadalupe Mountains, New Mexico, *in* R.G. Loucks and J.F. Sarg, eds., Recent advances and applications of carbonate sequence stratigraphy: American Association of Petroleum Geologists Memoir 57, p. 435-474.

Books and Book Contributions

Cross, T.A., 2002, Genetic Stratigraphy: Geological Publishing House, PRC, 253 p. (in Chinese).

Cross, T.A., Dodge, R.L., Howard, J.C., and Siraki, E.S., 1995, Basin Analysis: IHRDC, Boston, 210 p.

Cross, T.A., 1993, Foreword to Subsurface Reservoir Characterization from Outcrop Observations: Proceedings of the 7th IFP Exploration and Production Research Conference: Paris, Technip, p. v-x.

Cross, T.A., and Raynolds, R.G., 1993, Illustration of Correlation Techniques, Facies Prediction and Reservoir Compartment Identification through Genetic Stratigraphy—Gallup Sandstone and Mesa Verde Croup (Cretaceous), Four-Corners Region, USA: Rocky Mountain Association of Geologists 1993 Fall Field Trip, 45 p.

Cross, T.A., 1993, Applications of High-Resolution Sequence Stratigraphy in Petroleum Exploration and Production—Short Course Notes: Canadian Society of Petroleum Geologists, Calgary, Alberta, August 15, 1993, 290 p.

Cross, T. A., 1990, ed., Quantitative Dynamic Stratigraphy: New Jersey, Prentice Hall, 622 p.

Patents

Cross, T.A., and Lessenger, M.A., 2001, Method for predicting stratigraphy: U.S. Patent **6,246,963**

Cross, T.A., and Lessenger, M.A., 2004, Method of predicting three-dimensional stratigraphy using inverse optimization techniques: U.S. Patent **6,754,588**

Professional Service

Editor-in-Chief, *Contributions to Sedimentary Geology* (1997-2006)
Associate editor, *Journal of Sedimentary Research* (1992-1998)
Associate editor, *Sedimentary Geology* (1988-current)
Associate editor, *Geological Society of America Bulletin* (1995-1999)
Associate editor, *Bulletin of Canadian Petroleum Geology* (1993-1996)
Associate editor, *Geological Society of America Bulletin* (1992-1995)
Associate editor, *Basin Research* (1990-1995)
Associate editor, *Sedimentology* (1986 - 6/91)

Professional Society Affiliations

American Association of Petroleum Geologists
Geological Society of America (Fellow)
International Association of Sedimentologists
Rocky Mountain Association of Geologists
Society of Economic Paleontologists and Mineralogists
Coal Geology Division, Geological Society of America
Sedimentology Division, Geological Society of America

Derrick Tokos

From: Mona Linstromberg <lindym@peak.org>
Sent: Tuesday, August 07, 2018 10:12 PM
To: Derrick Tokos
Cc: Sean Malone; Tim Gross
Subject: Fw: attachment included; sorry I forgot in first email - #2
Attachments: question about K&A Geotechnical Engineering Report.pdf

Derrick, please find attached Mr. Cross' comment submitted into the record for 1-SIR-1. Please enter into the record for 1-GP-18.

Thank you,

Mona Linstromberg
Sent via my totally safe HARD WIRED internet connection

From: Tim Cross
Sent: Thursday, July 26, 2018 11:56 AM
To: D.Tokos@NewportOregon.gov
Cc: lindym@peak.org
Subject: attachment included; sorry I forgot in first email

TO: Derrick Tokos, Community Development Director, City of Newport, OR
FROM: Timothy A. Cross, Homeowner, 1522 NW Spring St., Newport, OR
DATE: July 23, 2018
SUBJECT: Objection to the slope stability conclusion reached in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc., pertaining to Tax Lots 1800, 1900 and 1903

I have read this report with a focus on the geological assessment of potential hazards on these properties, specifically on the assessment of land stability. K & A Engineering used incorrect boundary assumptions in the slope stability equilibrium-limit models they ran, which led to their recommendation that the study site was stable.

I refer to their 'Field-Developed Cross Section' of the study site shown in Appendix A, and the subsequent slope stability analyses of Appendix C. The cross section plots the elevation of the top of the Nye Formation in borings B-1 and B-3, and establishes the structural dip of the top of the Nye Formation as 13° to 15° to the west. This structural dip is in complete agreement with all other structural dip values and directions published on the 1976 geological map in the Newport region.

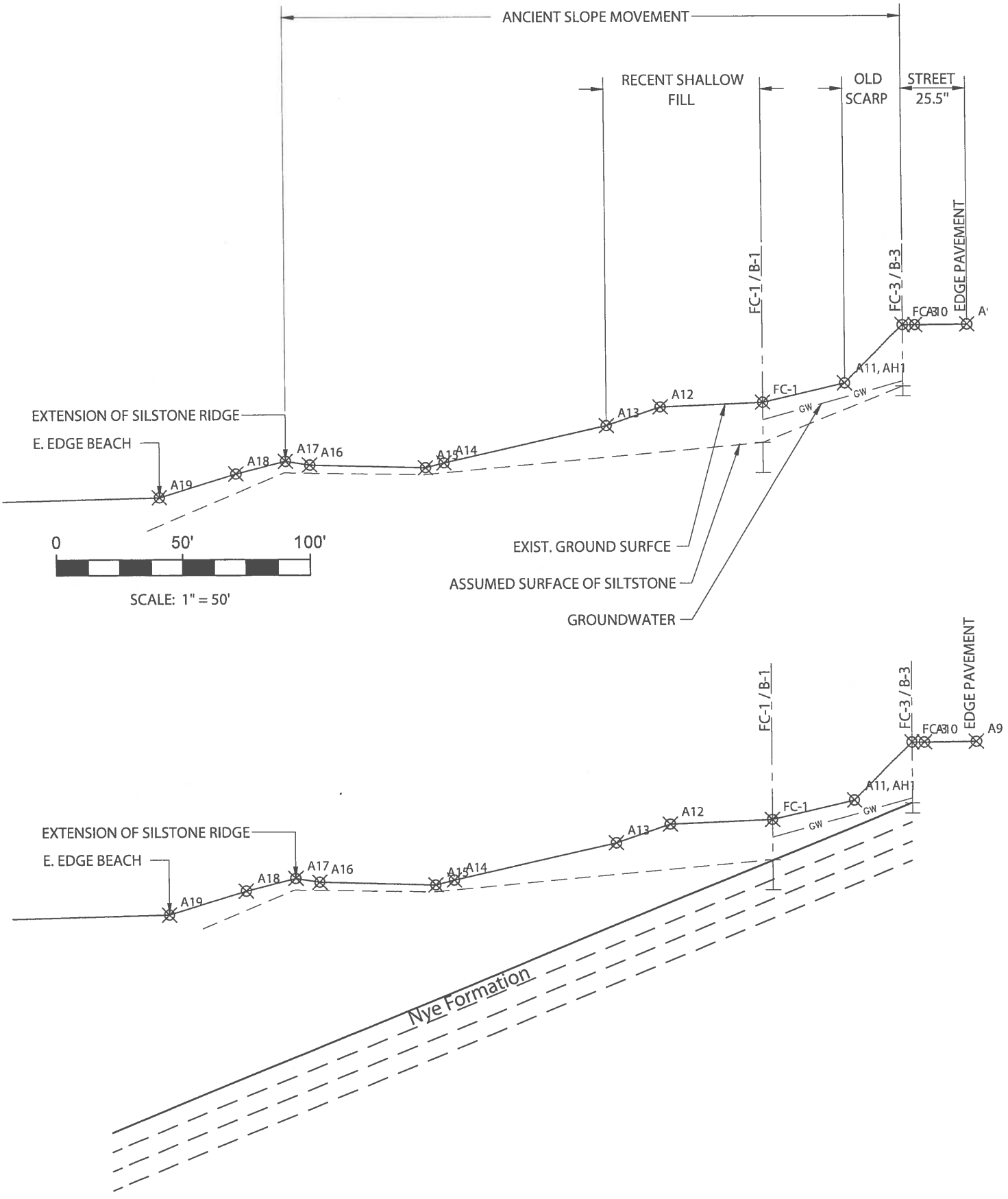
However, in assigning the boundary conditions for the computer model runs in their slope stability analysis, they assumed that the structural dip of the Nye Formation was approximately 0° instead of 13° to 15° to the west. There is absolutely no justification for this change in dip. It is curious that the change in dip occurs at the exact position of their borehole.

The projected 0° dip versus a projected 13° - 15° dip of the top of the Nye formation results in a huge change in the overburden ("marine terrace" plus dune sand) thickness and, therefore, a huge change in the volume of material susceptible to mass movement. In the appended illustration I show the original 'Field-Developed Cross Section' and a modified version with a 13° dip of the Nye Formation to the west. In the original version, thin "marine terrace" sediments sit on a stable, solid, sub-horizontal platform of Nye Formation. In the revised cross section, a thick, westward-facing wedge of unconsolidated sediment sits on a westward-inclined surface formed by the top of the Nye Formation. Alternations of more muddy and less muddy sand/silt layers within the Nye formation provide potential slip surfaces within the westward-dipping strata. Slip along such surfaces could easily provoke instability and mass movement of overlying "marine terrace" sediment. The westward-dipping top of the Nye Formation is another potential surface for slippage and consequent mass movement of the overlying "marine terrace" sediment. Water percolating through the unconsolidated sediment will pond on top of the significantly less porous and permeable Nye Formation, and effectively lubricate that surface. The increased volume of unconsolidated sediment above the Nye Formation, in contrast to that calculated in the original 'Field-Developed Cross Section,' increases the likelihood of mass failure should the toe-of-slope dune sand be removed or reduced by erosion.

The K & A Geotechnical Engineering Report used the geometry of their cross section as boundary conditions for their slope stability modeling. From their models, they concluded that in the current static condition, the slope is stable. Inasmuch as the geometry of their cross section is wrong, and therefore the boundary conditions for their models are incorrect, the models are meaningless and their conclusions are indefensible.

I hope this information is useful to you in your evaluation process. Please pass along this concern to K & A Geotechnical Engineering, Inc. so they can recalculate the slope stability probabilities using the more appropriate boundary conditions.

Sincerely,
Timothy A. Cross
303 885 8528 (mobile)
503 474 0322 (landline)


ANCIENT SLOPE MOVEMENT
RECENT SHALLOW FILL
OLD SCARP
STREET 25.5"
FC-1 / B-1
FC-3 / B-3
EDGE PAVEMENT
EXTENSION OF SILSTONE RIDGE
E. EDGE BEACH
A19
A18
A17
A16
A15
A14
A13
A12
FC-1
A11, AH1
GW
0
50'
100'
SCALE: 1" = 50'
EXIST. GROUND SURFCE
ASSUMED SURFACE OF SILTSTONE
GROUNDWATER
Nye Formation

Derrick Tokos

From: John and Chris <honekiri@gmail.com>
Sent: Tuesday, July 31, 2018 2:01 PM
To: Derrick Tokos
Subject: 1-GP-18 Lund Development Proposal

On page 7 of the Geologic Hazard Assessment by Gary C. Sandstrom, Geologist, which is page 49 of the Geotechnical Report, he states in "Section 10.0 Conclusions" "erosion will eventually undercut the cliff/bluff in the site vicinity, but in our opinion at a rate not likely to significantly effect the homesite vicinity within the design life of the structure if the recommended mitigations are followed".

There is no legal definition of "the design life of the structure". While individual components of a structure age and need to be replaced, as long as those components are maintained and replaced when necessary a structure has no "design life" and can perform its function for hundreds of years. Even in Newport, a relatively young city, there are already viable structures over 100 years old.

Mr. Sandstrom's basis for his conclusion regarding erosion and undercutting is flawed by his assumption of a "design life of the structure" as are any recommendations based on that conclusion.

Please acknowledge receipt of this email and enter it into the record for application 1-GP-18. Thank you in advance.

Sincerely,
Chris Schneller
Spring Street Homeowner

Derrick Tokos

From: John and Chris <honekiri@gmail.com>
Sent: Tuesday, July 31, 2018 1:11 PM
To: Derrick Tokos
Subject: 1-GP-18 Lund Development Proposal

The Conceptual Site Plan in the 1-GP-18 decision packet shows water being collected from the areas of development and routed to the lower level of the site near its boundaries with adjoining properties. There the water is released to the ground at three locations at a "Storm Drain Energy Dissipater and Level Spreader for 20 Year Rain Event". Concentrating the water from the site development and releasing back at these locations would put the adjoining properties at risk from saturated soils and potential surface runoff. If the development were allowed to proceed, the City should require that all storm water from the development be collected and routed offsite into the City's storm water system as is normally required for new development in the City.

Please acknowledge receipt of this email and enter it into the record for application 1-GP-18. Thank you in advance.

Sincerely,
Chris Schneller
Spring Street Homeowner

Derrick Tokos

From: Anne Sigleo <asigleo@yahoo.com>
Sent: Tuesday, July 31, 2018 11:50 AM
To: Derrick Tokos
Subject: Spring St Development File#1-GP-18

Mr Derrick Tokos
Community Development Director
City of Newport
169 SW Coast Hwy
Newport, Oregon 97365

Dear Mr Tokos,

I have read carefully the Geologic Report for File#1-GP-18 for Mr Lund by K&D Engineering, Inc and find that they have done a thorough job of studying both the site and previous geological reports including those of DOGOMI and Schlicker & Associates. My only addition would be a more complete description of the Beach Access Plan. I would strongly suggest to Mr Lund that if he were to make restoring beach access a priority it would go a long way towards appeasing the neighborhood concerns.

Sincerely Yours,

Anne C. Sigleo
Geoscientist (retired)
1541 NW Spring Street
Newport, Oregon 97365

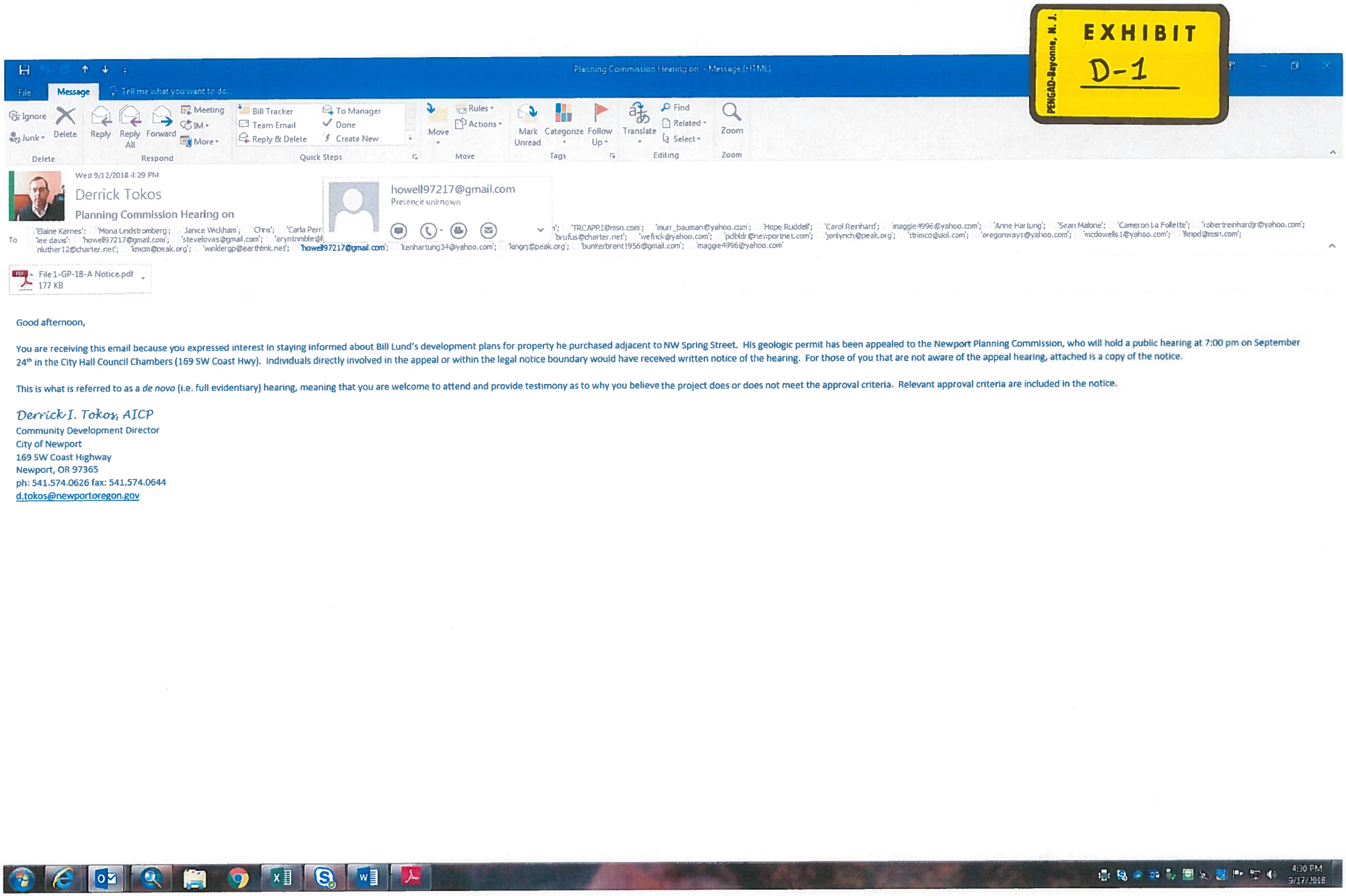


EXHIBIT
D-1
PENNSAUKEN-Bayonne, N. J.
Planning Commission Hearing on - Message (HTML)
File
Message
Tell me what you want to do...
Ignore
Junk
Delete
Reply
Reply All
Forward
Meeting
IM
More
Bill Tracker
Team Email
Reply & Delete
To Manager
Done
Create New
Move
Rules
Actions
Mark Unread
Categorize
Follow Up
Translate
Find
Related
Select
Zoom
Delete
Respond
Quick Steps
Move
Tags
Editing
Zoom
Wed 9/12/2018 4:29 PM
Derrick Tokos
Planning Commission Hearing on
howell97217@gmail.com
Presence unknown
To
File 1-GP-18-A Notice.pdf
177 KB
Good afternoon,
You are receiving this email because you expressed interest in staying informed about Bill Lund's development plans for property he purchased adjacent to NW Spring Street. His geologic permit has been appealed to the Newport Planning Commission, who will hold a public hearing at 7:00 pm on September 24th in the City Hall Council Chambers (169 SW Coast Hwy). Individuals directly involved in the appeal or within the legal notice boundary would have received written notice of the hearing. For those of you that are not aware of the appeal hearing, attached is a copy of the notice.
This is what is referred to as a de novo (i.e. full evidentiary) hearing, meaning that you are welcome to attend and provide testimony as to why you believe the project does or does not meet the approval criteria. Relevant approval criteria are included in the notice.
Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov
4:30 PM
9/17/2018

CITY OF NEWPORT
NOTICE OF A PUBLIC HEARING[1]

NOTICE IS HEREBY GIVEN that the Planning Commission of the City of Newport, Oregon, will hold a public hearing to consider an appeal of an administrative decision approving a Geological Permit Application (#1-GP-18).

File No: # 1-GP-18-A

Appellants: Mona Linstromberg, Elaine Karnes, Christine Schneller, Robert Earle, Teresa Amen & Pat Linstromberg (Power of Attorney, Leslie Hogan) (Sean Malone, Attorney, Authorized Agent).

Applicants: William Lund, P.O. Box 22, Seal Rock, Oregon 97376

Request: Appeal challenging the substantive elements of the applicant's June 29, 2018 geologic report, prepared by K&A Engineering, Inc., that concluded the site is suitable for the development of three home sites. Such report was the basis of the approved Geologic Permit. A peer review report, by Columbia Geotechnical, dated August 15, 2018, was submitted in support of the appeal.

Location: West of NW Spring St (Lincoln County Assessor's Tax Map 11-11-05-BC, Tax Lots 1800, 1900 & 1903).

Applicable Criteria: City of Newport regulations for development within mapped geologic hazards areas are contained in Chapter 14.21 of the Newport Municipal Code (NMC), and all standards listed in this chapter are relevant to the permit application on appeal. Pursuant to NMC Chapter 14.21.050(D), an application for a geologic permit must include a geologic report, prepared by a certified engineering geologist, establishing that the site is suitable for the proposed development. Further, an engineering report, prepared by a licensed civil engineer, geotechnical engineer, or certified engineering geologist (to the extent qualified), must be provided if engineering remediation is anticipated to make the site suitable for the proposed development (NMC 14.21.050(E)). Guidelines for the preparation of Geologic Reports are set forth in NMC 14.21.060 and require that reports be consistent with generally accepted scientific and engineering principals, including minimum standards identified in cited documents published by the Oregon State Board of Geologist Examiners and the Department of Land Conservation and Development. Appellants challenging substantive elements of a geologic report are required to submit their own analysis, prepared by a certified engineering geologist (NMC 14.21.120).

Testimony: Testimony and evidence must be directed toward the criteria described above or other criteria in the Comprehensive Plan and its implementing ordinances which the person believes to apply to the decision; failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to the issue precludes an appeal based on that issue; submit testimony in written or oral form; send letters to Planning Department (address under "Reports") by 5:00 p.m. the day of the hearing; oral testimony will be taken during the course of the public hearing.

Reports: The staff report may be reviewed or a copy purchased at the Newport Community Development Department, City Hall, 169 SW Coast Hwy, Newport, Oregon, 97365 seven days prior to the hearing. The application materials and the applicable criteria are available for inspection at no cost or copies may be purchased at this address.

Contact: Derrick Tokos, Planning Director, Community Development Department, (541-574-0629) (address above).

Time/Place of Hearing: Monday, September 24, 2018; 7:00 p.m.; City Hall Council Chambers (address above).

MAILED: August 31, 2018.

PUBLISH: September 14, 2018/News-Times.

[1]This notice is being sent to affected property owners within 200 feet of the subject property (according to Lincoln County tax records), affected public utilities within Lincoln County, and affected city departments.

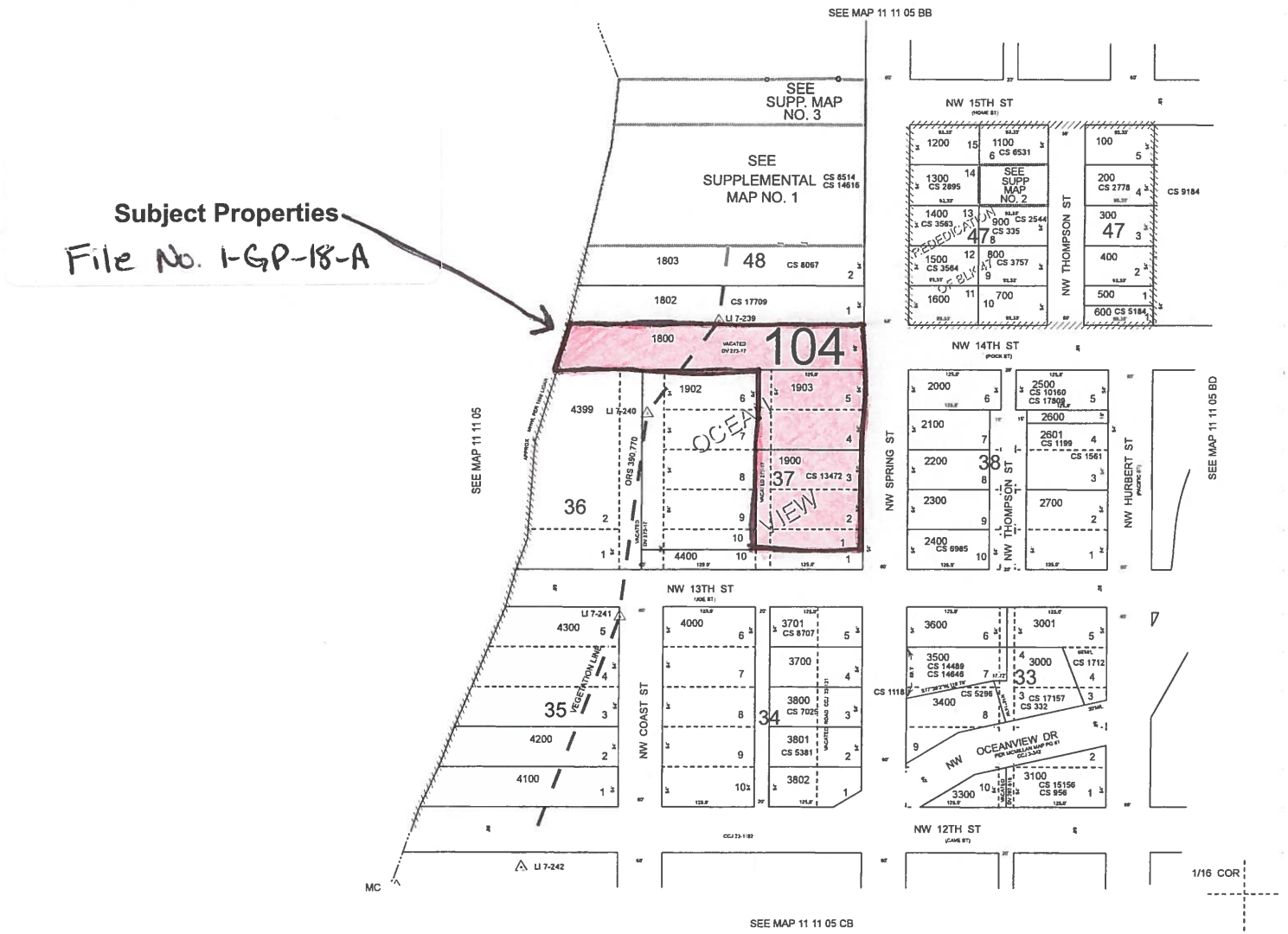
THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSE ONLY

0 50 100 150 200 Feet

S.W.1/4 N.W.1/4 SEC.5 T.11S. R.11W. W.M.
LINCOLN COUNTY
1" = 100'

11 11 05 BC
NEWPORT

Cancelled
1000
1700
1801
1901
2800
2900
3200
3201
3900
4001
80007



Revised: 08/25/2

NEWPORT
11 11 05 BC

AGATE BEACH CONSTRUCTION INC
PO BOX 39
SEAL ROCK, OR 97376

ANDERSON LONNA
PO BOX 6432
MIRAMAR BEACH, FL 32550

BAUMAN MARY E
PO BOX 1355
NEWPORT, OR 97365

BEWLEY LAURA SUE
393 NW CRESWELL LN
ALBANY, OR 97321

CITY OF NEWPORT
CITY MANAGER
169 SW COAST HWY
NEWPORT, OR 97365

COLE RONALD SCOTT TRUSTEE
9127 NW HERON ST
SEAL ROCK, OR 97376

DELISEO PATRICIA A
1242 NW SPRING ST
NEWPORT, OR 97365

EARLE ROBERT M &
AMEN TERESA D
3684 FELTON ST S
SALEM, OR 97302

FAHRENDORF JOSEPH B TSTEE &
FAHRENDORF JANET M TSTEE
1143 MANOR DR
SONOMA, CA 95476

FRANK BROTHERS IMPLEMENT CO
ADDRESS UNKNOWN,

GAUVIN JEFFREY M
1409 NW SPRING ST
NEWPORT, OR 97365

GREGORY DAVID E &
BENEDETTI CHRISTINE M
424 SW 297TH
FEDERAL WAY, WA 98023

HOFER VANDEHEY ROBERTA
20481 WINLOCK LN
FOSSIL, OR 97830

LARSEN STAURT
PO BOX 1759
NEWPORT, OR 97365

LINSTROMBERG PAT JOAN TTEE
ATTN LESLIE HOGAN
931 WASHINGTON SW
ALBANY, OR 97321

LOOKOUT CONDOMINIUM THE
ASSOCIATION OF UNIT OWNERS
433 N COAST HWY
NEWPORT, OR 97365

MARTIN ELENA KAY
1405 NW THOMPSON ST
NEWPORT, OR 97365

MCDOWELL MINDY &
MCDOWELL SCOTT
6553 S MADISON CT
CENTENNIAL, CO 80121

MOSSBARGER JOHN T &
MOSSBARGER MARCIA L
PO BOX 1362
NEWPORT, OR 97365

NEFF ROY S III
32655 GLAISYER HILL RD
COTTAGE GROVE, OR 97424

ORANGE LINDA J &
HUFFMAN ARDIS L
1420 NW SPRING ST
NEWPORT, OR 97365

PERKINS CAROL J
1417 NW THOMPSON ST
NEWPORT, OR 97365

PESTANA JANICE &
PESTANA RICKY
2450 SE TAYLOR ST
PORTLAND, OR 97214

POPE MAX A & ROBERTA I
PO BOX 86
NEWPORT, OR 97365

REINHARD CAROL S TRUSTEE
21680 BUTTE RANCH RD
BEND, OR 97702

SOTILLE MATT &
SOTILLE KAREN
3574 SE GRANT ST
PORTLAND, OR 97214

SPECTRUM PROPERTIES LLC
301 S REDWOOD ST
CANBY, OR 97013

STARK NEAL E TRUSTEE
5034 SW VERMONT ST
PORTLAND, OR 97219

STOROZHENKO OLENA
169 SE VIEW DR
NEWPORT, OR 97365

WAFFENSCHMIDT JOHN L &
SCHNELLER CHRISTINE C
1234 NW SPRING ST
NEWPORT, OR 97365

WETHERILL JAMES G &
WETHERILL LANA R
25804 NE OLSON RD
BATTLE GROUND, WA 98604

WHALES SPOUT CONDOMINIUM
HOMEOWNERS ASSOCIATION
370 SW COLUMBIA
BEND, OR 97702

WILLETT CONRAD J &
GAIL E
1426 NW SPRING ST
NEWPORT, OR 97365

KARNES ELAINE
PO BOX 1754
NEWPORT, OR 97365

LINSTROMBERG MONA
831 E BUCK CK RD
TIDEWATER, OR 97390

SEAN MALONE, ATTORNEY
259 E 5TH AVE
EUGENE, OR 97401

Exhibit "A"
Adjacent Property Owners Within 200 FT

File No. 1-GP-18-A

Email: Lisa Phipps
DLCD Coastal Services Center
lisa.phipps@state.or.us

Oregon Dept of Parks & Recreation
By email
park.info@oregon.gov

Oregon Division of State Lands
775 Summer St NE
Salem OR 97310-1337

Joseph Lease
Building Official

Rob Murphy
Fire Chief

Tim Gross
Public Works

Victor Mettle
Code Administrator/Planner

Mark Miranda
Police Chief

Mike Murzynsky
Finance Director

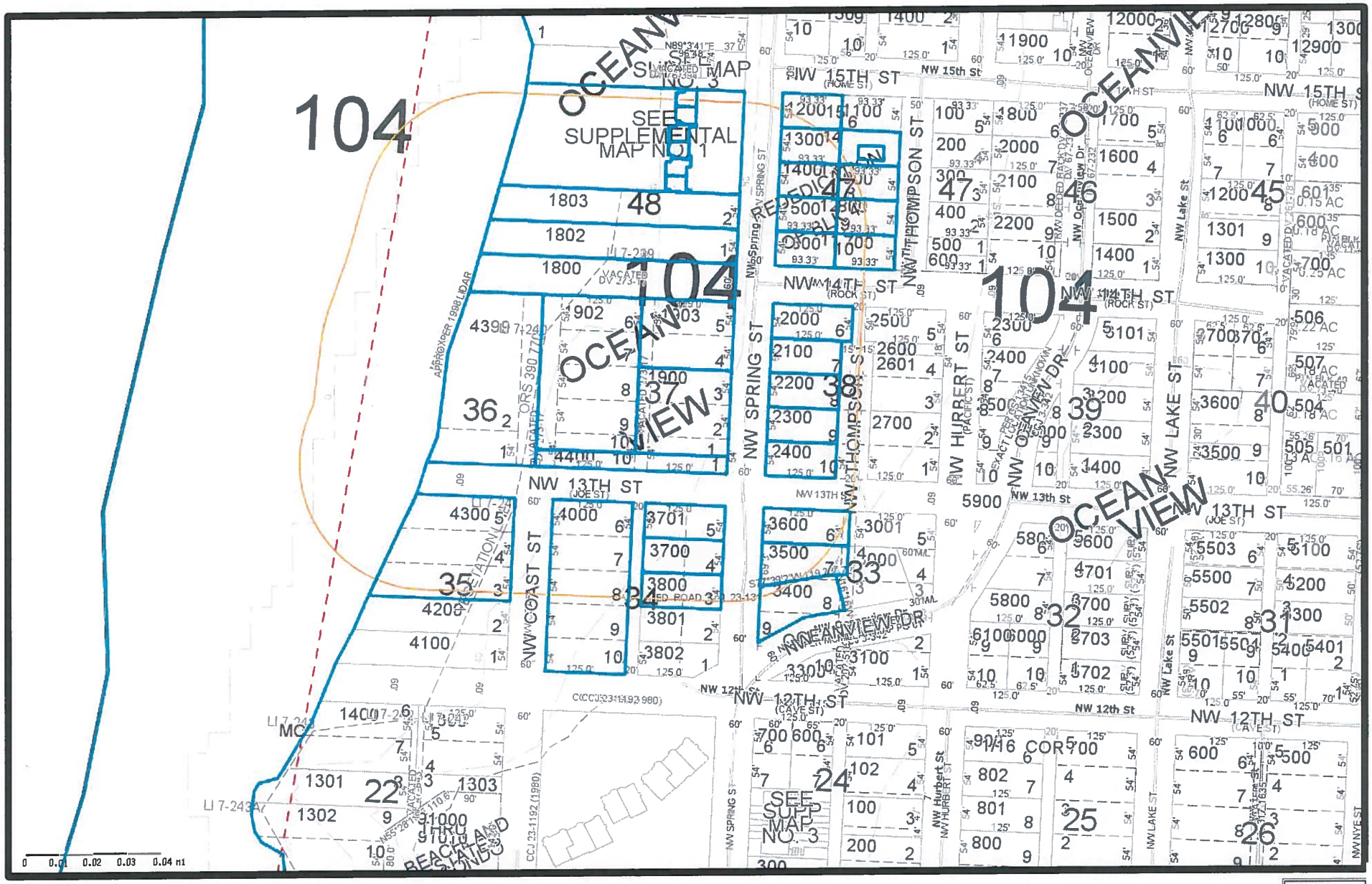
Ted Smith
Library

Jim Protiva
Parks & Rec

Spencer Nebel
City Manager

EXHIBIT 'B'
(Affected Agencies)

Tax Lots 1800, 1900 & 1903 200 Ft Adjacent Property Owners



Printed 08/31/2018

Lincoln County government use only. Use for any other purpose is entirely at the risk of the user.
This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users should review the primary information sources to ascertain their usability.

CITY OF NEWPORT
NOTICE OF A PUBLIC HEARING

The Planning Commission of the City of Newport, Oregon, will hold a public hearing to consider an appeal of an administrative decision approving a Geological Permit Application (#1-GP-18) submitted by Mona Linstromberg, Elaine Karnes, Christine Schneller, Robert Earle, Teresa Amen & Pat Linstromberg (Power of Attorney, Leslie Hogan)(Sean Malone, Attorney, Authorized Agent) for an appeal challenging the substantive elements of the applicant's June 29, 2018 geologic report, prepared by K&A Engineering, Inc., that concluded the site is suitable for the development of three home sites. Such report was the basis of the approved Geologic Permit. A peer review report, by Columbia Geotechnical, dated August 15, 2018, was submitted in support of the appeal. The property is located West of NW Spring St (Lincoln County Assessor's Tax Map 11-11-05-BC, Tax Lots 1800, 1900 & 1903). City of Newport regulations for development within mapped geologic hazards areas are contained in Chapter 14.21 of the Newport Municipal Code (NMC), and all standards listed in this chapter are relevant to the permit application on appeal. Pursuant to NMC Chapter 14.21.050(D), an application for a geologic permit must include a geologic report, prepared by a certified engineering geologist, establishing that the site is suitable for the proposed development. Further, an engineering report, prepared by a licensed civil engineer, geotechnical engineer, or certified engineering geologist (to the extent qualified), must be provided if engineering remediation is anticipated to make the site suitable for the proposed development (NMC 14.21.050(E)). Guidelines for the preparation of Geologic Reports are set forth in NMC 14.21.060 and require that reports be consistent with generally accepted scientific and engineering principals, including minimum standards identified in cited documents published by the Oregon State Board of Geologist Examiners and the Department of Land Conservation and Development. Appellants challenging substantive elements of a geologic report are required to submit their own analysis, prepared by a certified engineering geologist (NMC 14.21.120). Testimony and evidence must be directed toward the criteria described above or other criteria in the Comprehensive Plan and its implementing ordinances which the person believes to apply to the decision. Failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to that issue precludes an appeal, including to the Land Use Board of Appeals, based on that issue. Testimony may be submitted in written or oral form. Oral and written testimony will be taken during the course of the public hearing. Letters to the Community Development/Planning Department, City Hall, 169 SW Coast Hwy, Newport, OR 97365, must be received by 5:00 p.m. the day of the hearing or be personally entered into the record during the hearing. The hearing will include a report by staff, testimony (both oral and written) from those in favor or opposed to the application, rebuttal by the applicant, and questions and deliberation by the Planning Commission. Pursuant to ORS 197.763 (6), any person prior to the conclusion of the initial public hearing may request a continuance of the public hearing or that the record is left open for at least seven days to present additional evidence, arguments, or testimony regarding the application. The staff report may be reviewed or a copy purchased at the Newport Community Development Department seven days prior to the hearing. The application materials, the applicable criteria, and other file materials are available for inspection at no cost; or copies may be purchased for reasonable cost at the above address. Contact Derrick Tokos, Community Development Director, (541) 574-0626, d.tokos@newportoregon.gov (mailing address above).

FOR PUBLICATION ONCE ON FRIDAY, September 14, 2018)

the team must do like running a mile, doing burpees or several minutes of planking.

After a handball was com-

up. That number has more than doubled and more players are on the way.

"I got two that need to get their paperwork, and I'm like

game in school history.

"It feels good," Fruechte said. "We did it so we are all proud of each other that we were able to pull off the win."

deep into the set. It wasn't until the very end that Toledo was able to pull away with a 25-18 win. Otis said the team became a little tired, but head coach Crystal Taylor saw something else.

"I don't want to say that they got comfortable," the first-year head coach said. "But we have to be more disciplined in that third set to make sure that we take care of the ball."

The Boomers have now won four-straight after winning only two of their first five games.

Randa Fisher and Astrid Knott leap for a block during Toledo's 3-0 win over Myrtle Point on Tuesday, Sept. 11. (Photo courtesy of Aaron Wawrak)

"I think that they are really starting to play together, calling the ball and doing the things that we are asking them to do," Taylor said. "Defensively we have really worked hard to make sure that they are ready for any type of ball that comes over the net. They are talking. Offensively they are setting each other up really well and they are working together."

The challenge now for the Boomers with the remaining schedule coming against league opponents is keeping that same energy and excitement for the rest of the season to keep their postseason hopes alive. But Otis isn't worried about that.

"We all have that energy and passion for this game that other teams don't have," she said. "Our chemistry together, we just make each other excited for anything and that will help us in future games."

PUBLIC NOTICES

LEGAL DEADLINES:

WEDNESDAY EDITION: 5:00pm Thursday PRIOR

FRIDAY EDITION: 5:00pm Tuesday PRIOR

NOTICE OF SHERIFF'S SALE #18-1436

On October 2, 2018, at the hour of 10:00 a.m., at the Lincoln County Sheriff's Office, 225 W Olive St., Rm 203, in the City of Newport, Oregon, the defendant's interest will be sold, subject to redemption, in the real property commonly known as: 6340 N. Highway 101, Otis, OR 97368. The court case number is 17CV48999, J.P. Morgan Mortgage Acquisition Corp., plaintiff(s) vs. Brandi M. Sullivan; Parties in Possession, defendant(s). This is a public auction to the highest bidder for cash or cashier's check, in hand. For more details go to http://www.oregonsheriffssales.org/county/lincoln/

A-24, A-31, S-07, S-14 (87-14).

REQUEST FOR QUOTATIONS

The Port of Newport is requesting competitive quotations for hydraulic dredging at the NOAA Marine Operations Center – Pacific Facility starting November 2018. The scope of work includes maintenance dredging of 22,900 cubic yards to the design depths specified in the Joint Permit application. Bids are due by October 1st, 2018. All RFQ documents can be found at https://www.portofnewport.com/bids-rfps.php

S-7, S-14 (03-14)

PUBLIC SALE

Safe-Lock Storage located at 3639 SE Ash St, South Beach, OR 97366 will hold a public foreclosure sale on Saturday, September 29 at 10:00 AM. Personal property of the following people will be sold:

D03 – Carl Johnson, H19 – Mark Woods, T18 – Jesse Hanlin. The persons mentioned above may contact us prior to the sale at (541) 867-4607.

S-7, S-12, S-14, S-19 (06-19).

NOTICE OF SALE OF ABANDONED MANUFACTURED HOME

1Longview Hills MHC, LLC will sell the below-described manufactured home by private sealed bid for the highest offer received. The home has been abandoned. The home, tenant and owner are described below. Bids for cash payment will be accepted until 10:00 am, September 20, 2018. Interested parties may contact Longview Hills Manager at (541)265-3576 to make arrangements to inspect the home. Bids may be submitted to 1Longview Hills MHC, LLC, 1450 NE 58th Street, Newport, Oregon 97365, for the following home: 11990 Golden West Homes, Home ID #263686, X-Plate #X210641, manufacturer's ID #CC662R4AB; located at 1638 NE 59th Street, Space 38, Newport, Oregon 97365; owner/tenant: 1Betty Lucille Owens, Jack David Owens, David Owens, personal representative.

S-7, S-14 (12-14)

NOTICE OF A PUBLIC HEARING

The Planning Commission of the City of Newport, Oregon, will hold a public hearing to consider an appeal of an administrative decision approving a Geological Permit Application (#1-GP-18) submitted by Mona Linstromberg, Elaine Karnes, Christine Schneller, Robert Earle, Teresa Amen & Pat Linstromberg (Power of Attorney, Leslie Hogan) (Sean Malone, Attorney, Authorized Agent) for an appeal challenging the substantive elements of the applicant's June 29, 2018 geologic report, prepared by K&A Engineering, Inc., that concluded the site is suitable for the development of three home sites. Such report was the basis of the approved Geologic Permit. A peer review report, by Columbia Geotechnical, dated August 15, 2018, was submitted in support of the appeal. The property is located West of NW Spring St (Lincoln County Assessor's Tax Map 11-11-05-BC, Tax Lots 1800, 1900 & 1903). City of Newport regulations for development within mapped geologic hazards areas are contained in Chapter 14.21 of the Newport Municipal Code (NMC), and all standards listed in this chapter are relevant to the permit application on appeal. Pursuant to NMC Chapter 14.21.050(D), an application for a geologic permit must include a geologic report, prepared by a certified engineering geologist, establishing that the site is suitable for the proposed development. Further, an engineering report, prepared by a licensed civil engineer, geotechnical engineer, or certified engineering geologist (to the extent qualified), must be provided if engineering remediation is anticipated to make the site suitable for the proposed development (NMC 14.21.050(E)). Guidelines for the preparation of Geologic Reports are set forth in NMC 14.21.060 and require that reports be consistent with generally accepted scientific and engineering principals, including minimum standards identified in cited documents published by the Oregon State Board of Geologist Examiners and the Department of Land Conservation and Development. Appellants challenging substantive elements of a geologic report are required to submit their own analysis, prepared by a certified engineering geologist (NMC 14.21.120). Testimony and evidence must be directed toward the criteria described above or other criteria in the Comprehensive Plan and its implementing ordinances which the person believes to apply to the decision. Failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to that issue precludes an appeal, including to the Land Use Board of Appeals, based on that issue. Testimony may be submitted in written or oral form. Oral and written testimony will be taken during the course of the public hearing. Letters to the Community Development/Planning Department, City Hall, 169 SW Coast Hwy, Newport, OR 97365, must be received by 5:00 p.m. the day of the hearing or be personally entered into the record during the hearing. The hearing will include a report by staff, testimony (both oral and written) from those in favor or opposed to the application, rebuttal by the applicant, and questions and deliberation by the Planning Commission. Pursuant to ORS 197.763 (6), any person prior to the conclusion of the initial public hearing may request a continuance of the public hearing or that the record is left open for at least seven days to present additional evidence, arguments, or testimony regarding the application. The staff report may be reviewed or a copy purchased at the Newport Community Development Department seven days prior to the hearing. The application materials, the applicable criteria, and other file materials are available for inspection at no cost; or copies may be purchased for reasonable cost at the above address. Contact Derrick Tokos, Community Development Director, (541) 574-0626, d.tokos@newportoregon.gov (mailing address above).

S-14 (10-14)

BOARD MEETING

Community Services Consortium's Governing Board meeting will be held Monday, September 24,2018, at 10:00am in the Newport regional Office Hilan Castle Conference Room at 120 NE Avery Street. The meeting agenda will address adoption of Supplemental Budget #1 for Fiscal Year 2018-19, among other matters. The meeting is open to the public; all interested persons are welcome to attend.

S-14 (04-14).

PUBLIC NOTICE

The Pacific Communities Health District Board of Directors will hold a Regular meeting on Monday, September 17, at 4:00 p.m. in the Education Conference Room at Samaritan Pacific Communities Hospital, 930 SW Abbey St., Newport, Oregon. The meeting agenda includes meeting minutes, financial reports and facility reports.

/s/Lisa Ely, Recorder.
PACIFIC COMMUNITIES HEALTH DISTRICT
For additional information contact 541-574-1803 or www.pchdistrict.org.

S-14 (17-14)

NOTICE OF A PUBLIC HEARING

The Newport Planning Commission will hold a continued public hearing on Monday, September 24, 2018, at 7:00 p.m. in the City Hall Council Chambers to consider File No. 3-Z-18, revisions to the Newport Municipal Code (NMC) 14.01.020 and 14.03.060 to provide for extended stay hotel and motel uses. Pursuant to Newport Municipal Code (NMC) Section 14.36.010, the Commission must find that the change is required by public necessity and the general welfare of the community in order for it to make a recommendation to the City Council that the amendments be adopted. Testimony and evidence must be directed toward the request above or other criteria, including criteria within the Comprehensive Plan and its implementing ordinances, which the person believes to apply to the decision. Failure to raise an issue with sufficient specificity to afford the city and the parties an opportunity to respond to that issue precludes an appeal, including to the Land Use Board of Appeals, based on that issue. Testimony may be submitted in written or oral form. Oral testimony and written testimony will be taken during the course of the public hearing. The hearing may include a report by staff, testimony from the applicant and proponents, testimony from opponents, rebuttal by the applicant, and questions and deliberation by the Planning Commission. Written testimony sent to the Community Development (Planning) Department, City Hall, 169 SW Coast Hwy, Newport, OR 97365, must be received by 5:00 p.m. the day of the hearing to be included as part of the hearing or must be personally presented during testimony at the public hearing. The proposed code amendments, additional material for the amendments, and any other material in the file may be reviewed or a copy purchased at the Newport Community Development Department (address above). Contact Derrick Tokos, Community Development Director (541) 574-0626 (address above).

S-14 (18-14)

NOTICE OF SHERIFF'S SALE #18-1517

On October 23, 2018, at the hour of 10:00a.m., at the Lincoln county Sheriff's office, 225 W Olive St., Rm 203, in the city of Newport, Oregon, the defendant's interest will be sold, subject to redemption, in the real property commonly known as: 3174 NE Johns Loop, Neotsu, OR 97364. The court case number is 17CV46345, Nationstar Mortgage LLC D/B/A Mr. Coop, plaintiff(s) vs. James A. Fossum, Patricia Ann Fossum; Wells Fargo Bank, N.A.; Occupants of the Property defendant(s). This is a public auction to the highest bidder for cash or cashier's check, in hand. For more details to go http://www.oregonsheriffssales.org/county/lincoln/

S-14, S-21, S-28, O-05 (18-05)

9/14/18

Derrick Tokos

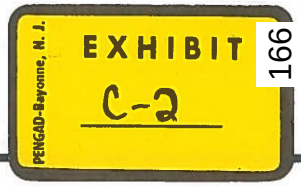
From: Sean Malone <seanmalone8@hotmail.com>
Sent: Tuesday, July 31, 2018 3:03 PM
To: Derrick Tokos; Elaine Karnes; Mona Linstromberg
Subject: Appeal of Geologic Permit # 1-GP-18

Dear Mr. Tokos,

I am writing to confirm that I represent the appellants in the appeal of Geologic Permit #1-GP-18. My contact information and phone number are below my signature. If you have any questions, please do not hesitate to contact me.

Thank you,

Sean Malone
Attorney at Law
259 E. Fifth Ave.
Suite 200-C
Eugene, OR 97401
ph. 303.859.0403
seanmalone8@hotmail.com



Derrick Tokos

From: James Hogan <qwizats@peak.org>
Sent: Tuesday, July 31, 2018 9:31 AM
To: Derrick Tokos
Subject: appeal of approved geotechnical report, 1-gp-18

Dear Derrick Tokos:

Pat Linstromberg wants to sign on to the the appeal of the approved Geotechnical Report, 1-GP-18. She received notice from the City.

I, Leslie Hogan, have Pat Linstromberg's (mother) Power of Attorney.

Pat Linstromberg can be reached in care of me at the following address:
931 Washington St. SW
Albany, OR 97321

Phone 541-924-0130
email qwizats@peak.org

Derrick Tokos

From: Teresa Amen <teresa.amen22@gmail.com>
Sent: Tuesday, July 31, 2018 9:44 AM
To: Derrick Tokos
Subject: Re: Response to notice of Decision and City of Newport Public Notice

Derrick Tokos, AICP
Community Development Director
City of Newport

July 31, 2018

Mr. Tokos,

Robert Earle and I, Teresa Amen, property owners of 1320 NW Spring St., Newport, OR, are e-mailing you to be added to the Land Use Application submitted to appeal File Number 1-GP-18, regarding property west of Spring St., Tax Assessor's Map Number 11-11-05-BC, Tax Lots 1800, 1900 & 1903.

Our contact information is as follows:
Robert Earle
Teresa Amen

Mailing address:
3684 Felton St. S
Salem, OR 97302

Phone Numbers:
Cell 503-580-5972 - Robert Earle
Cell 503-551-5982 - Teresa Amen
Home 503-585-2681

E-mail address:
Teresa.Amen22@Gmail.com

If you have any questions, or concerns regarding this request please contact us ASAP.

Respectively,

Robert Earle
Teresa Amen

On Mon, Jul 30, 2018 at 8:59 AM, Derrick Tokos <D.Tokos@newportoregon.gov> wrote:

> Hi Teresa,

Please accept this response as confirmation that your email and the attached letter are included in the case record of both permit applications.

Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

From: Teresa Amen [mailto:teresa.amen22@gmail.com]
Sent: Sunday, July 29, 2018 3:33 PM
To: Derrick Tokos <D.Tokos@NewportOregon.gov>
Subject: Response to notice of Decision and City of Newport Public Notice

Mr. Tokos,

Attached is the response to the Notice of Decision and City Of Newport Public Notice regarding property to the west of NW Spring St.

Please note the response includes three property owners, who live in their dwellings and DO NOT rent them for income. We have each owned our properties for many years. An example of the years we have owned our properties, the property owned by my husband, Robert Earle, and I has been in his family since 1970.

We are each sincerely concerned about the proposed development and the negative impact to the community and all neighboring properties.

Please submit the attached as comments to File Number 1-GP-18 and File Number 1-SIR-18.

Thank-you,

Teresa Amen

EXHIBIT C-4

CITY OF NEWPORT
JUL 31 2018
RECEIVED

City of Newport
Land Use Application

Applicant Name(s):	Property Owner Name(s) *if other than applicant*
(see attachment #1)	William Lund
Applicant Mailing Address:	Property Owner Mailing Address:
(#1)	PO Box 22, SealRock, OR 97376
Applicant Phone No.	Property Owner Phone No.
(#1)	541-979-9560
Applicant Email	Property Owner Email
(#1)	wlund_albany@yahoo.com

Authorized Representative(s): *Person authorized to submit and act on this application on applicant's behalf*

(see attachment #2)

Authorized Representative Mailing Address:

(#2)

Authorized Representative Telephone No.

(#2)

Authorized Representative Email. (#2)

Project Information

Property Location: *Street name if address # not assigned*

west of NW Spring St.

Tax Assessor's Map No.: 11-11-05-BC

Tax Lot(s): 1800, 1900, 1903

Zone Designation:

Legal Description: *Add additional sheets if necessary*

Comp.Plan Designation:

Brief description of Land Use Request(s):

Examples:

1. *Move north property line 5 feet south*
2. *Variance of 2 feet from the required 15-foot front yard setback*

Appeal Decision #1-GP-18 (attachment #3)

Existing Structures: if any

Topography and Vegetation:

sloping shoreland, native trees & vegetation, black berries

Application Type (please check all that apply)

☐ Annexation	☐ Interpretation	☐ UGB Amendment
☑ Appeal	☐ Minor Replat	☐ Vacation
☐ Comp Plan/Map Amendment	☐ Partition	☐ Variance/Adjustment
☐ Conditional Use Permit	☐ Planned Development	☐ PC
☐ PC	☐ Property Line Adjustment	☐ Staff
☐ Staff	☐ Shoreland Impact	☐ Zone Ord/Map
☐ Design Review	☐ Subdivision	☐ Amendment
☐ Geologic Permit	☐ Temporary Use Permit	☐ Other

FOR OFFICE USE ONLY

File No. Assigned: 1-GP-18-A

Date Received: 7/31/18 Fee Amount: ~~$~~ 250 Date Accepted as Complete:

Received By: DT Receipt No. 2420 Accepted By:

City Hall
169, SW Coast Hwy
Newport, OR 97365
541.574.0629

I understand that I am responsible for addressing the legal criteria relevant to my application and that the burden of proof justifying an approval of my application is with me. I also understand that this responsibility is independent of any opinions expressed in the Community Development & Planning Department Staff Report concerning the applicable criteria.

I certify that, to the best of my knowledge, all information provided in this application is accurate.

Christine Schneller Elaine Karnes [signature]	7/31/2018 7/31/2018 7/31/2018
~~Applicant~~ Signature(s)	Date Signed
Property Owner Signature(s) (if other than applicant)	Date Signed
Authorized Representative Signature(s)	Date Signed

Please note application will not be accepted without all applicable signatures.

Please ask staff for a list of application submittal requirements for your specific type of request.

CITY OF NEWPORT
JUL 31 2018
RECEIVED

Print Form

City of Newport
Land Use Application

PLEASE PRINT OR TYPE · COMPLETE ALL BOXES · USE ADDITIONAL PAPER IF NEEDED

Applicant Name(s):	Property Owner Name(s): If other than applicant
Applicant Mailing Address:	Property Owner Mailing Address: If other than applicant
Applicant Telephone No.: E-mail:	Property Owner Telephone No.: If other than applicant E-mail:
Authorized Representative(s): Person authorized to submit and act on this application on applicant's behalf	
Authorized Representative Mailing Address:	
Authorized Representative Telephone No.:	E-Mail:

Project Information

Property Location: Street address or assigned	
Tax Assessor's Map No.:	Tax Lot(s):
Zone Designation:	Legal Description: Add additional sheets if necessary
Comp Plan Designation:	
Brief Description of Land Use Request(s):	
Existing Structures: If any	
Topography and Vegetation:	

APPLICATION TYPE (please check all that apply)

- ☐ Annexation
- ☐ Appeal
- ☐ Comp Plan/Map Amendment
- ☐ Conditional Use Permit
  - ☐ PC
  - ☐ Staff
- ☐ Design Review
- ☐ Geologic Permit
- ☐ Interpretation
- ☐ Minor Replat
- ☐ Partition
- ☐ Planned Development
- ☐ Property Line Adjustment
- ☐ Shoreland Impact
- ☐ Subdivision
- ☐ Temporary Use Permit
- ☐ UGB Amendment
- ☐ Vacation
- ☐ Variance/Adjustment
  - ☐ PC
  - ☐ Staff
- ☐ Zone Ord/Map Amendment
- ☐ Other_____

FOR OFFICE USE ONLY

File No. Assigned:_____

Date Received:_____ Fee Amount:_____ Date Accepted as Complete:_____

Received By:_____ Receipt No.:_____ Accepted By:_____

(SEE REVERSE SIDE)

Attachment #1 to Appeal of #1-GP-18

Applicant Name
Applicant Mailing Address
Applicant Telephone No.
Applicant E-mail

Mona Linstromberg
831 E. BuckCk. Rd.,Tidewater, OR 97390
541-528-3512
lindym@peak.org

Elaine Karnes
P.O. Box 1754, Newport, OR 97365
541-961-0340
karnese@peak.org

Christine Schneller
1234 NW Spring St, Newport OR 97365
541-265-9882
honekiri@gmail.com

Robert Earle &
Teresa Amen
3684 Felton St. S, Salem OR 97302
teresa.amen22@gmail.com

Pat Linstromberg
(Power of Attorney, Leslie Hogan)
931 Washington SW, Albbany, OR 97321
541-924-0130
qwizats@peak.org

Attachment #2 to Appeal of #1-GP-18

Authorized Representative

Authorized Representative Mailing Address

Authorized Representative Telephone No.

Authorized Representative E-mail

Sean Malone, Attorney

259 E 5th Ave, Eugene, OR

303-859-0403

seanmalone8@hotmail.com

Attachment #3 to Appeal of #1-GP-18

(Application Submittal Requirements)

(1) #1-GP-18, July 16, 2018

(2) Standing to Appeal: Since there was no notice allowing public comment or public hearing allowing public comment, the appellants are relying on our standing as aggrieved parties and affected neighbors. Applicants have issued comment to the record on an associated application.

(3) The appellants contend that the Geologic Engineering Report and Geologic Hazards Assessment (dated June 29,2018, prepared by Michael Remboldt and Gary Sandstrom) contains inconsistencies, errors and omissions. The appellants will submit a geologic report and citizen comment to support the appeal.

(4) Appeal to be heard de novo.

Derrick Tokos

From: Teresa Amen <teresa.amen22@gmail.com>
Sent: Sunday, July 29, 2018 3:33 PM
To: Derrick Tokos
Subject: Response to notice of Decision and City of Newport Public Notice
Attachments: Derrick Tokos.docx

Mr. Tokos,

Attached is the response to the Notice of Decision and City Of Newport Public Notice regarding property to the west of NW Spring St.

Please note the response includes three property owners, who live in their dwellings and DO NOT rent them for income. We have each owned our properties for many years. An example of the years we have owned our properties, the property owned by my husband, Robert Earle, and I has been in his family since 1970.

We are each sincerely concerned about the proposed development and the negative impact to the community and all neighboring properties.

Please submit the attached as comments to File Number 1-GP-18 and File Number 1-SIR-18.

Thank-you,
Teresa Amen

City of Newport
Att: Derrick Tokos
Community Development Director
Newport, Oregon 97365

Date: July 28, 2018

Subject: Development Proposal File Number 1-GP-18 and the Shoreland Resources Impact Review File Number 1-SIR-18

Dear Mr. Tokos,

We are writing in regards to the proposed development of the area west of NW Spring St. (Lincoln County Assessor's Tax Map 11-11-05-BC, Tax Lots 1800, 1900 & 1903) in the documented geologic hazard area and adjacent to an outstanding ocean shorelands natural area.

We strongly believe the proposed development will have a negative impact on the public health, safety and welfare, endangers the street and neighboring homes.

Respectively,

Robert Earle
Teresa Amen
1320 NW Spring St.
Newport, Oregon 97365

Mary Bauman
1310 NW Spring St.
Newport, Oregon 97365

Nancy Luther
1312 NW Thompson St.
Newport, Oregon 97365

Derrick Tokos

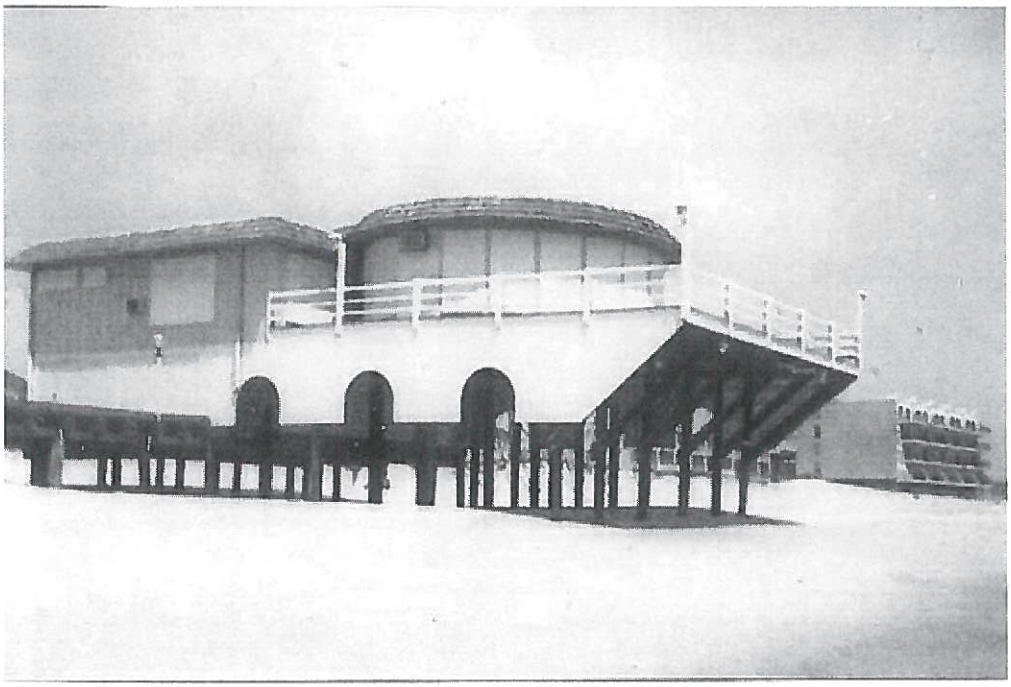
From: Brent bunker <bunkerbrent1956@gmail.com>
Sent: Friday, July 27, 2018 5:16 PM
To: Derrick Tokos
Subject: Spring Street development

Follow Up Flag: Follow up
Flag Status: Flagged

It is sad to see that someone wants to build on something that had been used by the public as a beach access for the neighborhood that I have lived in for the past 29 years. It seems that it would be an eyesore and doesn't look like a stable area. I have seen lots of changes in the geology of the area since I have lived here. Hope it doesn't happen. Brent Bunker

Derrick Tokos

From: Ann Howell <howell97217@gmail.com>
Sent: Friday, July 27, 2018 3:54 PM
To: Derrick Tokos
Subject: Bill Lund and his project in Nye Beach



The Dispatch Like Page
November 13, 2012 ·

Vanishing Ocean City With Bunk Mann
(A Continuing Series Looking Back At Ocean City's Rich History.)

Legendary developer James B. Caine built his summer home known as "Crystal House" directly on the beach just north of the Carousel Hotel in 1968. The cottage featured a living room with a fountain in the middle, three bedrooms and three bathrooms with sunken tubs and square toilets. Built on piling, the Crystal House extended into the surf during high tides.
Caine's cottage created controversy from the beginning and played a role in arguments about public beach access vs. private ownership rights. Bobby Baker of the Carousel Hotel and Washington, D.C. political fame unsuccessfully filed suit to have it declared a public nuisance and torn down.
Caine sold the house in the 1980s and the State of Maryland bought it from a later owner. In July of 1990, the state had it quietly removed and today no trace of the Crystal House remains on the beach at 118th Street.
Photo courtesy Ann Showell

Mr Tokos,
At the public meeting held a while ago for the neighborhood to hear about Mr. Lund's plans and offer some thoughts, I spoke about a house in Ocean City, Maryland, and suggested that just because you can, doesn't mean you should.
He is a brief article about that house.

I still feel this way about Mr. Lund's houses, even more so, since there were some earthquakes recently off the southern Oregon Coast.
I know there are lots of other opportunities in Newport/Nye and wish Mr Lund could finance one of them instead.

Sincerely,
Ann Howell
1535 NW Hurbert St

Derrick Tokos

From: John Waffenschmidt <honekiri@gmail.com>
Sent: Friday, July 27, 2018 9:37 AM
To: Derrick Tokos
Cc: rkinion@co.lincoln.or.us
Subject: Re: Jump Off Joe County Road

Follow Up Flag: Follow up
Flag Status: Flagged

Derrick,
Thank you for your response. The way I am understanding what you said is that permits to use the county road must be obtained, but not until after the geologic review is final.
Chris Schneller

On Jul 26, 2018, at 3:04 PM, Derrick Tokos <D.Tokos@newportoregon.gov> wrote:

> Hi Chris,
>
> Please accept this response as confirmation that I received your email and that it is a part of the official record. The geologic permit that you reference was found to have satisfied the approval standards. That decision will be final, if not appealed, on July 31, 2018.
>
> Recommendations contained in geologic reports inform the engineering and design that goes into the preparation of construction drawings and specifications, which is what Mr. Lund will have to submit, and the City and County Public Works Departments will review, if and when the geologic report becomes final. That is why geologic reviews occur before applicants obtain road access permits.
>
> *Derrick I. Tokos, AICP*
> Community Development Director
> City of Newport
> 169 SW Coast Highway
> Newport, OR 97365
> ph: 541.574.0626 fax: 541.574.0644
> d.tokos@newportoregon.gov
>
> **From:** John and Chris [mailto:honekiri@gmail.com]
> **Sent:** Thursday, July 26, 2018 9:21 AM
> **To:** Derrick Tokos <D.Tokos@NewportOregon.gov>
> **Cc:** rkinion@co.lincoln.or.us
> **Subject:** Fwd: Jump Off Joe County Road
>
> Derrick,
>
> Mr. Lund has applied to the City for a Geologic Hazard Permit for his development on Spring Street. It is my understanding that before Mr. Lund could access his property from the County Road as outlined in his Geologic Hazard Permit application he would have to obtain a road access permit from Lincoln County. Mr. Lund's application also described construction of a road

bed and retaining walls within the County Road Right of Way. I understand that such construction would also require a permit from the County.

Below is an email from Roy Kinion, Lincoln County Public Works Director, responding to my inquiry as to if Mr. Lund had applied for a permit for access onto Jump Off Joe County Road or for a permit for construction in the County Road Right of Way. Mr. Kinion states that the County has not received applications for the permits.

Since Mr. Lund has not applied for either permit and both would be required for Mr. Lund to proceed with the development as specified in his application it would seem premature for the City to process the application for a Geologic Hazard Permit until such time as the County approves permits for access onto and construction within the County Road.

In addition, it should be noted that without the permits from the County, the application fails to meet the standard outlined in Newport Municipal Code 14.21.070 (A(2)) "Properties shall possess access of sufficient width and grade to permit new buildings to be relocated or dismantled and removed from the site."

Thank you in advance for your consideration of this matter.

Please send an acknowledgment of receiving this email.

Sincerely,
Chris Schneller
Spring Street homeowner

---------- Forwarded message ----------
From: **Roy Kinion** <rkinion@co.lincoln.or.us>
Date: Tue, Jul 24, 2018 at 3:30 PM
Subject: Re: Jump Off Joe County Road
To: John and Chris <honekiri@gmail.com>

Mr. Lund has not applied for any access permits or construction within a County right-of-way permit at this time.

Roy L. Kinion
Public Works Director
Lincoln County, Oregon
541-574-1211
rkinion@co.lincoln.or.us

On Mon, Jul 23, 2018 at 8:03 AM, John and Chris <honekiri@gmail.com> wrote:

> Has Mr. Lund applied for an access permit onto Jump Off Joe County Road? Has he applied for a permit for construction within the right of way? If so, have either permit or any others regarding Jump Off Joe County Road been approved by Lincoln County?
>
> Thank you in advance,
> Chris Schneller
> honekiri@gmail.com

Derrick Tokos

From: Derrick Tokos
Sent: Thursday, July 26, 2018 1:56 PM
To: 'Mona Linstromberg'
Subject: RE: Spring Street Slide Development

Will do.

From: Mona Linstromberg [mailto:lindym@peak.org]
Sent: Thursday, July 26, 2018 12:14 PM
To: Derrick Tokos <D.Tokos@NewportOregon.gov>
Subject: Fw: Spring Street Slide Development

Derrick, in tandem with Mr. Cross' comment submitted today, this email from Mr. Gless might be useful to K and A in reconsidering its report as issued. Please enter Mr. Gless' comments into whatever record is being built wherever appropriate.

Thank you.
Mona Linstromberg

Sent via my totally safe HARD WIRED internet connection

From: J. Douglas Gless
Sent: Wednesday, July 25, 2018 4:50 PM
To: Mona Linstromberg ; Bill Lund
Cc: D.Tokos@NewportOregon.gov
Subject: Spring Street Slide Development

Dear Mona and Bill,
Both of you have contacted HG Schlicker and Associates, Inc. regarding a proposed development at Tax Lots 1800, 1900, and 1903; Map 11-11-05BC along Spring Street in Newport, Oregon. Please find three reports that we have completed through the years in that immediate vicinity at this Dropbox link https://www.dropbox.com/sh/cvy95b3m8eda1vx/AAABuXd8b-sjznzD9larRkQwa?dl=0 . Essentially, we have identified the area as what appears to be active landslide, meaning that we have seen what appears to be evidence of the area having had movement of the ground within the last few decades. In the past couple of decades there has been a buildup of the dunes at the toe of the slope which has had a stabilizing influence on the site but we don't believe it would be prudent to rely on the assured continuation of this dune growth as these loose dune sands are highly susceptible to erosion by storm waves and rip currents. Any substantial erosion of the dunes would have a large impact on stability models that don't account for the eroded condition.

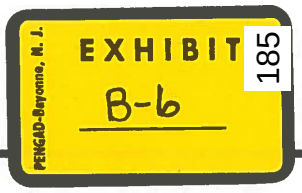
Of the three reports, the 2016 report pertaining to TL 1800 should be considered the most up to date. That report basically concludes that the Spring Street Slide is active as mapped by DOGAMI. The 1991 report prepared by Herbert Schlicker for Mr. Hal Smith should be considered greatly out of date and I cannot agree with the conclusions drawn in it relative to the statement, "the landslide rests on a nearly level surface and is not capable of further sliding."

It is important to understand that any landslide that toes out at beach level and is subject to erosion is typically at a greater risk than non-landslide oceanfront ground. It is also important to note that nearly any landslide can be stabilized, however it is frequently not cost effective.

I hope this information helps in your decision making process.

Respectfully,
Doug

J Douglas Gless, RG, CEG, LHG
President/Principal Engineering Geologist
H.G. Schlicker & Associates, Inc.
607 Main Street, Suite 200
Oregon City, Oregon 97045
(503) 655-8113 Office
(503) 655-8173 Fax
(503) 807-3510 Cell
hgsa@teleport.com
www.hgschlicker.com



Derrick Tokos

From: Derrick Tokos
Sent: Thursday, July 26, 2018 11:36 AM
To: 'Mona Linstromberg'; Tim Cross
Subject: RE: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Hi Mona,

Thank you for your comments. I'll forward your note, and the email from Mr. Cross, to Bill Lund and K&A Engineering to see what their thoughts are regarding your request for additional time.

Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

From: Mona Linstromberg [mailto:lindym@peak.org]
Sent: Thursday, July 26, 2018 11:13 AM
To: Tim Cross <timothyacross@comcast.net>; Derrick Tokos <D.Tokos@NewportOregon.gov>
Subject: Re: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Derrick, in discussion with Mr. Cross and other neighbors, we feel that the substantial comment provided by Mr. Cross justifies your extending the appeal date until K and A has an opportunity to address the information provided. We do realize that Mr. Lund would have to agree so we are preparing as if the July 31 deadline still holds but wanted to make this formal request.

Could you please acknowledge receipt of this email and also receipt of Mr. Cross' comment?

Please enter this in the record.

Thank you, Mona Linstromberg

Sent via my totally safe HARD WIRED internet connection

From: Tim Cross
Sent: Thursday, July 26, 2018 10:11 AM
To: D.Tokos@NewportOregon.gov
Cc: lindym@peak.org
Subject: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Office of Lincoln County Legal Counsel
225 West Olive Street, Room 110
Newport, Oregon 97365
(541) 265-4108
Fax: (541) 265-4176
www.co.lincoln.or.us/countycounsel

...nt
County Counsel
Kristin Yuille
Assistant County Counsel
Jerry Herbage
Assistant County Counsel
Janet Harrison
Paralegal

To: Derrick Tokos, Newport Community Development Director

Re: Your File #1-GP-18 and Notice #1-SIR-18

Date: July 26, 2018

The following comments are offered by Lincoln County in response to the decision and notice above referenced. They are not appeals of either matter. Instead they are intended to address questions the County has received about the proposed development highlighted in the applications before the City of Newport.

It appears from the submitted conceptual site plan that the road improvements, retaining walls and driveway accesses are all located within the right of way of County Road 500. This is a public road right of way (County Road) under County jurisdiction; therefore these improvements would require a permit from the County. Public access on the improvements will be required to be allowed and maintained. After conferring with the City we understand a 20 foot road width would be acceptable under the City adopted fire code for these improvements. Assuming the geotechnical information is otherwise acceptable to and approved by the City as evidenced by the decision in File # 1-GP-18, structures or disturbance of the right of way related to road improvements (including but not limited to retaining walls, cut embankments, and fills) could be located within the right of way but would require separate applications and permits from the County. The County would also require that road improvements not impede or block possible future public access to the beach continuing north on the right of way. The technical comments of the County Engineer are attached.

The applicant and other property owners have filed a petition to vacate the County Road 500 right of way shown on the site plan. The vacation request includes proposed construction of an alternative replacement beach access (trail) by the applicant as generally shown on the site plan. The vacation process is separate from the city's permit process. The vacation procedures are outlined in ORS Chapter 368 and Lincoln County Code Chapter 6. If the vacation is approved by the County after public hearing, and including concurrence by the City as required under law, then no permits would be required by the County.

Please place these comments into the record.

Submitted on behalf of Lincoln County by:

Wayne Belmont, Lincoln County Counsel
Roy Kinion, Lincoln County Public Works Director (Road Official)
James "Steve" Hodge, Lincoln County Engineer

Comments of Steve Hodge:

I have reviewed the Geotechnical Engineering Report (GER) prepared and written by Michael Remboldt, P.E., G.E. and Gary Sandstrom, C.E.G. (K & A Engineering, Inc. and Gary C. Sandstrom, Geologist, LLC, respectively). This report was written to satisfy the requirements of the 2014 Oregon Structural Specialty Code. Chapter 18, *Soils and Foundations*, specifically addresses the reporting requirements of the above mentioned report.

While the field investigation addresses most of the issues regarding questionable soils, the GER does not provide all of the boring logs from their field work. The conceptual site plan indicates four borings were performed to describe the soil profile. Only boring log B-1 and B-3 were included in this report. Four hand auger profiles (HA-1, AH-2, HA-2 and HA-3) are presented as is the readings of the Dynamic Probe (FC-1, FC-2, FC-3, FC-4). Test results showing the Plasticity Index, Expansion Index, and ASTM D are not included in this report nor are there results of any compressive strength tests.

The report provides adequate review of Section 1803.5.5 *Deep Foundations*. Boring logs indicate a soil strata capable of supporting deep foundations lay in this area. The report describes type of pile, installation procedures, bearing pressures, and installation procedures. It does not speak to pile spacings or reductions for group action.

The report suggests MSE retaining walls for fill slopes and Gabion Baskets for cut slopes. The provided boring logs suggest these technologies would be sufficient for the intended purposes; however, additional analysis is required for design. Specifically, modeled lateral forces generated by earthquake against gabion wall.

It is my opinion that this report meets the requirements of the 2014 Oregon Structural Specialty Code however additional investigation and testing is necessary to support design.

Steve Hodge, P.E.
County Engineer
Lincoln County Public Works
880 NE 7th Street
Newport, OR 97365
541-574-1212
JHodge@co.lincoln.or.us

Derrick Tokos

From: Derrick Tokos
Sent: Thursday, July 26, 2018 11:45 AM
To: 'Bill Lund'
Cc: P.E. Michael Remboldt
Subject: FW: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.
Attachments: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Hi Bill... attached is the email from Mr. Cross. Our office cannot unilaterally modify the 15-day appeal period specified in the Newport Municipal Code. If you want to provide additional time so that K&A can respond to the email from Mr. Cross before the appeal period closes, you would need to indicate in writing that you consent to some additional period of time.

Please note that you and/or K&A would have an opportunity to respond prior to a public hearing before the Planning Commission, if an appeal is filed within the 15-day period.

Derrick

From: Derrick Tokos
Sent: Thursday, July 26, 2018 11:36 AM
To: 'Mona Linstromberg' <lindym@peak.org>; Tim Cross <timothyacross@comcast.net>
Subject: RE: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Hi Mona,

Thank you for your comments. I'll forward your note, and the email from Mr. Cross, to Bill Lund and K&A Engineering to see what their thoughts are regarding your request for additional time.

Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

From: Mona Linstromberg [mailto:lindym@peak.org]
Sent: Thursday, July 26, 2018 11:13 AM
To: Tim Cross <timothyacross@comcast.net>; Derrick Tokos <D.Tokos@NewportOregon.gov>
Subject: Re: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Derrick, in discussion with Mr. Cross and other neighbors, we feel that the substantial comment provided by Mr. Cross justifies your extending the appeal date until K and A has an opportunity to address the information provided. We do realize that Mr. Lund would have to agree so we are preparing as if the July 31 deadline still holds but wanted to make this formal request.

Could you please acknowledge receipt of this email and also receipt of Mr. Cross' comment?

Please enter this in the record.

Thank you, Mona Linstromberg

Sent via my totally safe HARD WIRED internet connection

From: Tim Cross
Sent: Thursday, July 26, 2018 10:11 AM
To: D.Tokos@NewportOregon.gov
Cc: lindym@peak.org
Subject: concern about analysis of slope stability presented in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc.

Derrick Tokos

From: J. Douglas Gless <hgsa@teleport.com>
Sent: Wednesday, July 25, 2018 4:51 PM
To: Mona Linstromberg; Bill Lund
Cc: Derrick Tokos
Subject: Spring Street Slide Development

Dear Mona and Bill,
Both of you have contacted HG Schlicker and Associates, Inc. regarding a proposed development at Tax Lots 1800, 1900, and 1903; Map 11-11-05BC along Spring Street in Newport, Oregon. Please find three reports that we have completed through the years in that immediate vicinity at this Dropbox link https://www.dropbox.com/sh/cvy95b3m8eda1vx/AAABuXd8b-sjznzD9larRkQwa?dl=0 . Essentially, we have identified the area as what appears to be active landslide, meaning that we have seen what appears to be evidence of the area having had movement of the ground within the last few decades. In the past couple of decades there has been a buildup of the dunes at the toe of the slope which has had a stabilizing influence on the site but we don't believe it would be prudent to rely on the assured continuation of this dune growth as these loose dune sands are highly susceptible to erosion by storm waves and rip currents. Any substantial erosion of the dunes would have a large impact on stability models that don't account for the eroded condition.

Of the three reports, the 2016 report pertaining to TL 1800 should be considered the most up to date. That report basically concludes that the Spring Street Slide is active as mapped by DOGAMI. The 1991 report prepared by Herbert Schlicker for Mr. Hal Smith should be considered greatly out of date and I cannot agree with the conclusions drawn in it relative to the statement, "the landslide rests on a nearly level surface and is not capable of further sliding."

It is important to understand that any landslide that toes out at beach level and is subject to erosion is typically at a greater risk than non-landslide oceanfront ground. It is also important to note that nearly any landslide can be stabilized, however it is frequently not cost effective.

I hope this information helps in your decision making process.

Respectfully,
Doug

J Douglas Gless, RG, CEG, LHG
President/Principal Engineering Geologist
H.G. Schlicker & Associates, Inc.
607 Main Street, Suite 200
Oregon City, Oregon 97045
(503) 655-8113 Office
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H.G. Schlicker & Associates, Inc.
235 N.E. 122nd Avenue, Suite 300 • Portland, Oregon 97230
(503) 257-9666

Project #91-781

August 29, 1991

To: Mr. Hal Smith
P.O. Box 753
Newport, OR 97365

Subject: Geologic Reconnaissance
Lots 1, 2, 3, 4, 5, Block 37
N.W. Spring Street
Newport, Oregon

Dear Mr. Smith:

INTRODUCTION

This report presents the results of our preliminary investigation of the above referenced property. We understand that you plan to construct three or four single family homes adjacent to Spring Street, or possibly a cluster near the west side of the property.

The purpose for this report is to provide information concerning slope stability, foundation characteristics, and buildability of the site. A geotechnical report will be necessary providing the geologic conditions are reasonably favorable and mitigation costs will not exceed the final land value.

SCOPE

No drilling or excavation was be done for this preliminary study. Work included a site visit, review of published and unpublished geology and available reports of the area.

GEOLOGY

Regional Geology

The exposure along the sea cliffs at Jump Off Joe include the Nye Mudstone overlain by the Astoria Formation and unconformably overlain by the Coastal Terrace deposits. The Nye Mudstone and remnants of the Coastal Terrace deposits are present in the vicinity of the site.

Geologic Units

Nye Mudstone. The Nye is early Miocene in age. It is composed of siltstone, fine silty sand beds and occasionally with layers of volcanic sand and ash. It was deposited in marine environment and has been broadly folded with dips in the vicinity of 20 degrees or more except where distorted or modified by landsliding. Along the beach the Nye has been deeply weathered and fractured.

Astoria Formation. The Astoria, of middle Miocene age, overlies the older Nye Mudstone. It is composed of thin to thick bedded fine to medium grained sandstone. It contains limey concretions and sulfide nodules. In places it has convolute bedding formed by submarine landslides before the unit became consolidated. It crops out mainly in the surf in this area.

Coastal Terrace deposits. The Coastal Terraces are composed of Pleistocene to Recent age, flat lying beds of weakly consolidated fine sand and silty sand but with medium to coarse sand locally. The beds include brackish water deposits and occasionally peat or other organics. At the site a peat layer a foot or more thick is observed in the bluff exposures west of Block 37. The disrupted condition of the material is the result of landsliding.

SITE CONDITIONS

Typography

The site lies between Spring Street on the east and the Pacific Ocean on the west. The steepest slope adjacent to Spring street is about 24 degrees, however, the slope on lots 4 and 5 is only about 10 degrees. Elevations on the site lie between 40 and 80 feet MSL. The land rises to 57 feet about 90 feet to the west of the site and slopes to 10 feet MSL at the beach 110 feet west of the site.

Slope Stability

The area from Jump Off Joe northwards and from Spring Street west is old landslide. A prominent head scarp is present adjacent to Spring Street between 13th street and 14th street encompassing the eastern parts of lot 1 through 5, Block 37.

The slide debris appears to have moved towards the ocean as a unit and a major slide mass lies between the subject property and

the beach. It is highly broken and distorted from sliding and is being eroded by the ocean waves and driving rains. The landslide, as it now exists, rests on a nearly level surface and is not capable of further sliding. Rather it acts as a buttress to the toe of the subject property. Small local slumps can occur along the face of the bluff.

The east part of Lots 3, 4 and 5, Block 37 slope moderately steeply. The slope is probably overlain by a thin slide debris or other material which may be capable of slope movement unless toe support is provided.

SUMMARY AND CONCLUSIONS

The site is underlain by Coastal Terrace deposits, Nye Mudstone and possibly some Astoria rocks. The thickness of the overlying material is unknown but is believed to be a relatively thin deposit of landslide debris. Thick landslide debris, distorted Coastal Terrace and Nye formation lie between the site and the beach.

The bowl-shaped area present just east of Spring Street is an older landslide that has apparently been stable for many years.

The area west of Spring Street probably moved initially prior to the Jump Off Joe landslide that began about 1942 and continued until recently. Movement in the vicinity of the site is limited to small local slumps since the driving force is no longer present to activate a large slide.

Foundation conditions at the site depend upon the thickness of the debris and the character of the sediments to depths which might effect settlement or cause slope instability.

RECOMMENDATIONS

Because of the sensitive nature of old landslides and debris deposits, we recommend that:

1. A geotechnical study be performed to determine the thickness and engineering characteristics of the material to a depth of at least 50 feet unless drilling indicates competent material at a shallower depth.

Project #91-781

2. At least two test holes should be drilled to approximately 50feet in depth.

3. Laboratory tests include direct shear be done.

4. Slope stability calculations be made.

5. Consideration be made for slope support including crib walls.

6. Various foundations systems be considered if development of the site is feasible.

LIMITATIONS

Our investigation was based on geological reconnaissance and available published information. The date and recommendations presented in this report are believed to be representative of the site. The conclusions and recommendations herein are professional opinions derived in accordance with current standards of professional practice and no warranty is expressed or implied.

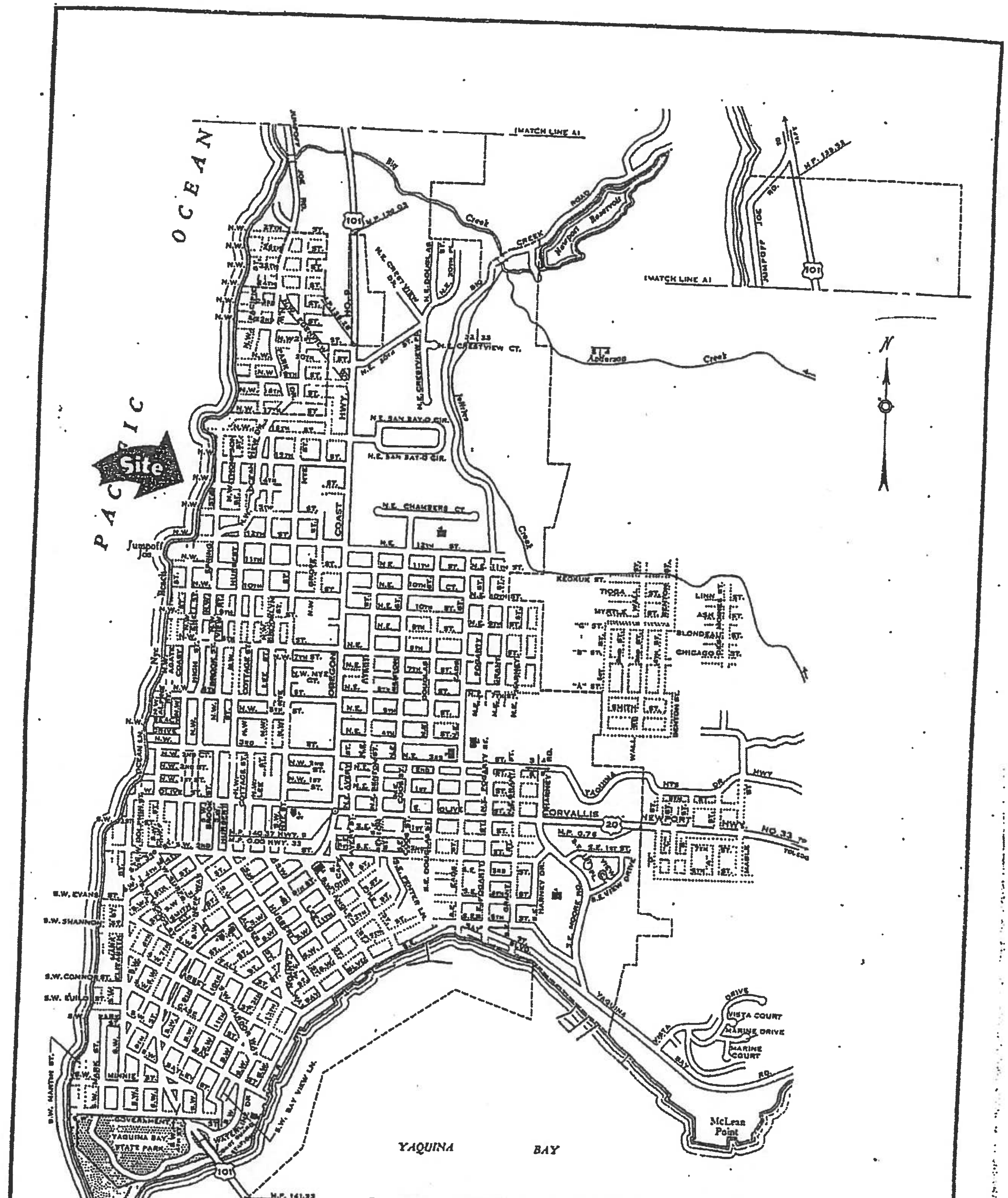
It has been our pleasure to serve you. If you have any questions concerning this report of the site, please contact us.

Respectfully submitted,

H.G. SCHLICKER AND ASSOCIATES, INC.

Herbert G. Schlicker, P.G., C.E.G.
President

HGS:mlr



Date: 08/29/91	VICINITY MAP PROJECT #91-781	Drawn By:
Scale: 1" = 1600'		Approved:

LOTS 1,2,3,4 & 5, BLOCK 37
N.W. SPRING STREET
NEWPORT, OREGON

Geologic Hazards Investigation
Tax Lot 1800, Map 11-11-05BC
Newport, Oregon

Prepared for:
Mr. Jon Lynch
306 E. Olive Street
Newport, Oregon 97365

Project #Y163915

April 14, 2016

H.G. Schlicker & Associates, Inc.

H.G. Schlicker & Associates, Inc.
607 Main Street, Suite 200 · Oregon City, Oregon 97045
(503) 655-8113 · FAX (503) 655-8173

Project #Y163915

April 14, 2016

To: **Mr. Jon Lynch**
306 E. Olive Street
Newport, Oregon 97365

Subject: **Geologic Hazards Investigation**
Tax Lot 1800, Map 11-11-05BC
Newport, Oregon

Dear Mr. Lynch:

The accompanying report presents the results of our geologic hazards investigation for the above subject site.

After you have reviewed our report, we would be pleased to discuss the report and to answer any questions you might have.

This opportunity to be of service is sincerely appreciated. If we can be of any further assistance, please contact us.

H.G. SCHLICKER & ASSOCIATES, INC.

J. Douglas Gless, MSc, RG, CEG, LHG
President/Principal Engineering Geologist

JDG:cjh

Project #Y163915 April 14, 2016

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H.G. Schlicker & Associates, Inc.
607 Main Street, Suite 200 · Oregon City, Oregon 97045
(503) 655-8113 · FAX (503) 655-8173

Project #Y163915 April 14, 2016

To: **Mr. Jon Lynch**
306 E. Olive Street
Newport, Oregon 97365

Subject: **Geologic Hazards Investigation**
Tax Lot 1800, Map 11-11-05BC
Newport, Oregon

Dear Mr. Lynch:

1.0 Introduction and General Information

At your request and authorization, the undersigned representative of H.G. Schlicker and Associates, Inc. (HGSA) visited the subject site on March 31, 2016 to complete a geologic hazards investigation report for Tax Lot 1800, Map 11-11-05BC in Newport, Oregon (Figures 1 and 2; Appendix A). It is our understanding that you are involved in a potential property transfer.

This report addresses the engineering geology and geologic hazards at the site. The scope of our work consisted of a site visit, site observations and measurements, a slope profile, limited review of the geologic literature, interpretation of topographic maps, Lidar and stereo aerial photographs, and preparation of this report which provides our findings, conclusions, and recommendations.

2.0 Site Description

The site is located in landslide terrain on an elevated marine terrace and west facing oceanfront slope in Newport, Oregon (Figures 1 and 2; Appendix A). The subject site consists of a vacant, rectangular lot (Tax Lot 1800) at elevations of approximately 50 to 80 feet MSL on its eastern side along N.W. Spring Street, which slopes steeply west from N.W. Spring Street down to more gentle slopes at an elevation of approximately 20 feet MSL on the west side, adjacent to the beach (Figures 3 and 4; Appendix A). The site is bound to its east by N.W. Spring Street, to its north by an adjacent lot with an existing home, to its south by an undeveloped lot, and to its west by the Pacific Ocean.

3.0 Geologic Mapping, Investigation and Descriptions

The site lies in an area which has been mapped as a westerly-dipping sequence of sedimentary rocks which include the Yaquina, Nye and Astoria Formations (Schlicker et al., 1973). A relatively flat-lying sequence of marine terrace deposits overlies these sedimentary rocks in a narrow band along the Pacific Ocean, generally mantling wave-cut benches on tilted strata of middle Miocene Astoria Formation (Schlicker et al., 1973; Priest, 1997). The Astoria Formation consists of thick to thin bedded, very fine to medium-grained, micaceous, carbonaceous, arkosic marine sandstone and sandy siltstone. These units are underlain by early Miocene Nye Mudstone Formation, which consists of indurated, massive to indistinctly bedded, gray, clayey siltstone and very fine-grained sandstone. Locally the Nye Mudstone and Astoria Formations dip to the west at approximately 15 to 23 degrees (Schlicker et al., 1973; Priest and Allan, 2004). The contact of the Nye and Astoria Formations is thought to be a primary cause of the well-documented Jumpoff Joe landslide approximately ¼ mile south of the site (where the two formations outcrop), and the Spring Street landslide (the northern portion of which the subject site lies on). The precise location of this contact at the subject site is not known. No faults or other structural features are known to occur at the site. Local faults mapped north and south of the site are not known to be active, and the geologic age of their last movement is not documented.

Outcrops at and near the site indicate that surficial materials in the area are dominated by marine terrace deposits that have been disrupted by landsliding. These deposits are commonly composed of iron-cemented sands, semi-consolidated sands, tuffaceous silts and gravels. Marine terrace deposits are extensively exposed along the bluff south of the site in the scarp, body and toe of the Spring Street landslide, and also on the bluff to the north of the site. The broad, dissipative beach slopes at approximately 2 degrees and is primarily comprised of fine grained sand. The back beach area of the western part of the site has transient dunes approximately 3 to 8 feet high.

Near surface materials on the western part of the site consist of disturbed marine terrace sands and sandy silts, overlain by sandy organic soils and windblown dune sand. Based on our site observations and HGSA's prior work on other nearby projects we believe that terrace sands are also present at depth on the western part of the site.

Fills are present adjacent to N.W. Spring Street where a small landslide has been partially stabilized with rock fill.

3.1 Structures

Structural deformation and faulting along the Oregon Coast is dominated by the Cascadia Subduction zone (CSZ) which is a convergent plate boundary extending for approximately 680 miles from northern Vancouver Island to northern California. This convergent plate boundary is defined by the subduction of the Juan de Fuca plate beneath the North America Plate, and forms

an offshore north-south trench approximately 60 miles west of the Oregon coast shoreline. A resulting deformation front consisting of north-south oriented reverse faults is present along the western edge of an accretionary wedge east of the trench, and a zone of margin-oblique folding and faulting extends from the trench to the Oregon Coast (Geomatrix, 1995).

A north-northwesterly trending fault is exposed along the eastern part of the Jumpoff Joe headland, located approximately 800 feet south of the site, which dips to the east at approximately 23 degrees. This fault is a normal fault with its upthrown side to the west. The fault cuts Tertiary units with no evidence of recent activity.

The nearest mapped potentially active faults are the Yaquina Bay Fault located approximately 1.3 miles south of the site, and the Yaquina Head Fault located approximately 1.9 miles north of the site. The Yaquina Bay Fault is a generally east-northeast trending oblique fault that also has left-lateral strike-slip and either contractional or extensional dip-slip offset components (Personius et al., 2003). This fault is believed to extend offshore for approximately 7 to 8 miles and may be a structurally controlling feature for the mouth of Yaquina Bay (Goldfinger et al., 1996; Geomatrix, 1995). At Yaquina Bay, a 125,000 year old platform has been displaced approximately 223 feet up-on-the-north by the Yaquina Bay Fault. This fault has the largest component of vertical slip (as much as 2 feet per 1,000 years) of any active fault in coastal Oregon or Washington (Geomatrix, 1995). Although the age for the last movement of the Yaquina Bay Fault is not known, the fault also offsets 80,000 year old marine terrace sediments. The Yaquina Head Fault is an east-trending oblique fault with left-lateral strike-slip and either contractional or extensional dip-slip offset components (Personius et al., 2003). It offsets the 80,000 year old Newport marine terrace in the area of the site by approximately 5 feet, indicating a relatively low rate of slip, if still active (Schlicker et al., 1973; Personius et al., 2003).

4.0 Slope Stability and Erosion

The slope on the eastern area of the subject lot is part of the headscarp of an active landslide, and the lower elevation western part of the site lies on a downdropped active landslide block (Appendix A). The mapped active landslide north of the Jumpoff Joe headland which has its northernmost lateral scarp located along the eastern property boundary of the adjacent lot to the north is generally referred to as the Spring Street landslide (Figure 4).

The subject site lies on a mapped active landslide block (Figure 4). The site is located about ¼ mile north of the Jumpoff Joe landslide, a well-documented translational landslide that was first noted in 1922 with substantial movement and damage to structures in 1942 and 1943; continued movement has been observed to the present date. As noted above, the site also lies at the northern part of the more recent, large Spring Street landslide (Figure 4). Significant movement of the Spring Street landslide occurred in the 1960s and unstable conditions continued at least into the 1970s (Schlicker et al., 1973). Evidence of more recent movement is difficult to discern due to foot traffic trampling young features and dense vegetation obscuring the site.

The site lies in an area mapped as undergoing critical erosion of marine terraces and sediments (Schlicker et al, 1973). Priest and others (1994) and Priest (1997) have determined the average annual erosion rate for the shoreline in the vicinity of the site as 1.35 ± 0.63 feet per year. This erosion rate was calculated by measuring the distance between existing structures to the toe of the slope and compared to distances measured on a 1939 or 1967 vertical aerial photograph (Priest et al., 1994).

Based on mapping completed by Priest and Allan (2004), the subject site lies within the Active Erosion Hazard Zone. The area to approximately 50 feet east of the eastern edge of N.W. Spring Street, lies in the High-Risk Coastal Erosion Hazard Zone; and the area approximately 150 feet further east to Hurbert Street, lies in the Moderate-Risk Coastal Erosion Hazard Zone. A site within the High-Risk Hazard Zone has a high probability that the area could be affected by active erosion in the next approximately 60 to 100 years, and a site within the Moderate-Risk Hazard Zone has a moderate probability that the area could be affected by active erosion in the next approximately 60 to 100 years (Priest and Allan, 2004). It should be noted that the mapping done for the 2004 study was intended for regional planning use, not for site specific hazard identification.

The City of Newport Geologic Hazards Map (June 17, 2011) shows the entire subject site lying in the area mapped as "Active Erosion Hazard Zone". All of the site located to the east of the beach and bluff toe is mapped as "Active Landslide Hazard Areas". Areas east of the site along N.W. Spring Street are mapped as "High Risk Bluff Hazard Zone". The City of Newport mapping is based on Priest's 1994 mapping.

5.0 Regional Seismic Hazards

Abundant evidence indicates that a series of geologically recent large earthquakes related to the Cascadia Subduction Zone have occurred along the coastline of the Pacific Northwest. Evidence suggests that more than 40 great earthquakes of magnitude 8 and larger have struck western Oregon during the last 10,000 years. The calculated odds that a Cascadia earthquake will occur in the next 50 years range from 7–15 percent for a great earthquake affecting the entire Pacific Northwest, to about a 37 percent chance that the southern end of the Cascadia Subduction Zone will produce a major earthquake in the next 50 years (OSSPAC, 2013; OSU News and Research Communications, 2010; Goldfinger et al., 2012). Evidence suggests the last major earthquake occurred on January 26, 1700 and may have been of magnitude 8.9 to 9.0 (Clague et al., 2000; DOGAMI, 2013).

There is now increasing recognition that great earthquakes do not necessarily result in a complete rupture along the full 1,200 km fault length of the Cascadia subduction zone. Evidence in the paleorecords indicates that partial ruptures of the plate boundary have occurred due to smaller earthquakes with moment magnitudes (Mw) < 9 (Witter et al., 2003; Kelsey et al., 2005). These partial segment ruptures appear to occur more frequently on the southern Oregon coast, as determined from paleotsunami studies. Furthermore, the records have documented that local

tsunamis from Cascadia earthquakes recur in clusters (~250–400 years) followed by gaps of 700–1,300 years, with the highest tsunamis associated with earthquakes occurring at the beginning and end of a cluster (Allan et al., 2015).

These major earthquake events were accompanied by widespread subsidence of a few centimeters to 1–2 meters (Leonard et al., 2004). Tsunamis appear to have been associated with many of these earthquakes. In addition, settlement, liquefaction and landsliding of some earth materials are believed to have been commonly associated with these seismic events.

Other earthquakes related to shallow crustal movements or earthquakes related to the Juan de Fuca plate have the potential to generate magnitude 6.0 to 7.5 earthquakes. The recurrence interval for these types of earthquakes is difficult to determine from present data, but estimates of 100 to 200 years have been given in the literature (Rogers et al., 1996).

Based on the 1999 Relative Earthquake Hazard Map of the Newport area (Madin and Wang, 1999), the subject site lies in an area designated as Zone B which is defined as an area with intermediate to high hazards associated with earthquakes. The degree of relative hazard was based on the factors of ground motion amplification, liquefaction, and slope instability. It is likely that deep-seated landsliding in the area of the site is, in part, associated with past seismic activity.

6.0 Flooding Hazards

Based on the 2009 Flood Insurance Rate Map (FIRM, Panel #41041C0368D) the subject site lies in an area rated as Zone X which is defined as determined to be outside the 0.2% annual chance floodplain. The western part of the site along the lower slope and beach lies in an area rated as Zone VE (EL 38) which is defined as a coastal flood zone with velocity hazard (wave action); base flood elevations determined. We observed a small stream drainage flowing westerly across the beach area to the north at the time of our site visit. A small spring was present at the western toe of the dunes along the beach at the site, and standing water was present in a closed depression east of the dunes.

Based on the Oregon Department of Geology and Mineral Industries mapping (DOGAMI, 2013) the subject site lies within the tsunami inundation zone resulting from an approximately 8.7 and greater magnitude Cascadia Subduction Zone (CSZ) earthquake. The 2013 DOGAMI mapping is based upon 5 computer modeled scenarios for shoreline tsunami inundation caused by potential CSZ earthquake events ranging in magnitude from approximately 8.7 to 9.1. The January 1700 earthquake event (discussed in Section 5.0 above) has been rated as an approximate 8.9 magnitude in DOGAMI's methodology. More distant earthquakes can also generate tsunamis.

7.0 Climate Change

According to most of the recent scientific studies, the Earth's climate is believed to be changing as the result of human activities which are altering the chemical composition of the atmosphere through the buildup of greenhouse gases, primarily carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons (EPA, 1998). Although there are uncertainties about exactly how and when the Earth's climate will respond to enhanced concentrations of greenhouse gases, scientific observations indicate that detectable changes are under way (EPA, 1998; Church and White, 2006). Global sea level rise, caused by melting polar ice caps and ocean thermal expansion, could lead to flooding of low-lying coastal property, loss of coastal wetlands, erosion of beaches and bluffs, and saltwater contamination of fresh groundwater. Global climate change and the resultant sea level rise will likely impact the subject site through accelerated coastal erosion and bluff retreat. It can also lead to increased rainfall which can result in an increase in landslide occurrence.

8.0 Conclusions and Recommendations

The main engineering geologic concerns at the site are:

1. The site lies on an ancient landslide that is mapped as a deep-seated active slide block. The headscarp of this active landslide, named the Spring Street landslide, is located along the eastern property boundary of the site (Figure 4). Nearby areas north and south of the site show signs of continued slow movement, and we expect the subject site to experience ongoing movement under existing conditions.

   Landslide movement at the subject site and/or in the site area can be exacerbated by a large earthquake, erosion at the bluff toe, or increased groundwater levels. As ocean wave erosion continues to erode the toe of the landslide mass, the risk of larger and more rapid movement increases. The site lies within the mapped Active Coastal Erosion Hazard Zone, defined as currently undergoing bluff recession and erosion, with a lesser risk (High-Risk Zone i.e. high risk of bluff recession within the next 60 years) in areas east of the site along N.W. Spring Street. These risks should be accepted by the owner, future owners, developers and residents/occupants of the site.

2. There is an inherent regional risk of earthquakes along the Oregon Coast which could cause harm and damage structures. It is unlikely that the site would be stable during a large earthquake event, particularly if the earthquake occurs during wet weather. The lower bluff slope and beach on the western part of the subject site is mapped in a coastal flood hazard zone, and the site also lies within a mapped tsunami inundation hazard zone. A tsunami impacting the Newport area could cause harm, loss of life and damage to structures. These risks must be accepted by the owner, future owners, developers and residents of the site.

Prior to any proposed development of the site, we recommend that an extensive program of mitigation analysis and design be completed. The site is on an active landslide and would be difficult and expensive to develop. Building permits for development of the site may also be difficult to obtain. The landslide at the site would need to be stabilized prior to construction.

9.0 Limitations

The Oregon Coast is a dynamic environment with inherent unavoidable risks to development. Landsliding, erosion, tsunamis, storms, earthquakes and other natural events can cause severe impacts to structures built within this environment and can be detrimental to the health and welfare of those who choose to place themselves within this environment. The client is warned that, although this report is intended to identify the geologic hazards causing these risks, the scientific and engineering communities knowledge and understanding of geologic hazards processes is not complete. This report pertains to the subject site only, and is not applicable to adjacent sites nor is it valid for types of development other than that to which it refers. Geologic conditions including materials, processes and rates can change with time and therefore a review of the site and/or this report may be necessary as time passes to assure its accuracy and adequacy.

Our investigation was based on engineering geological reconnaissance and a limited review of published information. The data presented in this report are believed to be representative of the site. The conclusions herein are professional opinions derived in accordance with current standards of professional practice, budget and time constraints. No warranty is expressed or implied. The performance of this site during a seismic event has not been evaluated. If you would like us to do so, please contact us. This report may only be copied in its entirety.

10.0 Disclosure

H.G. Schlicker & Associates, Inc. and the undersigned Certified Engineering Geologist have no financial interest in the subject site, the project or the Client's organization.

11.0 References

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It has been our pleasure to serve you. If you have any questions concerning this report, or the site, please contact us.

Respectfully submitted,

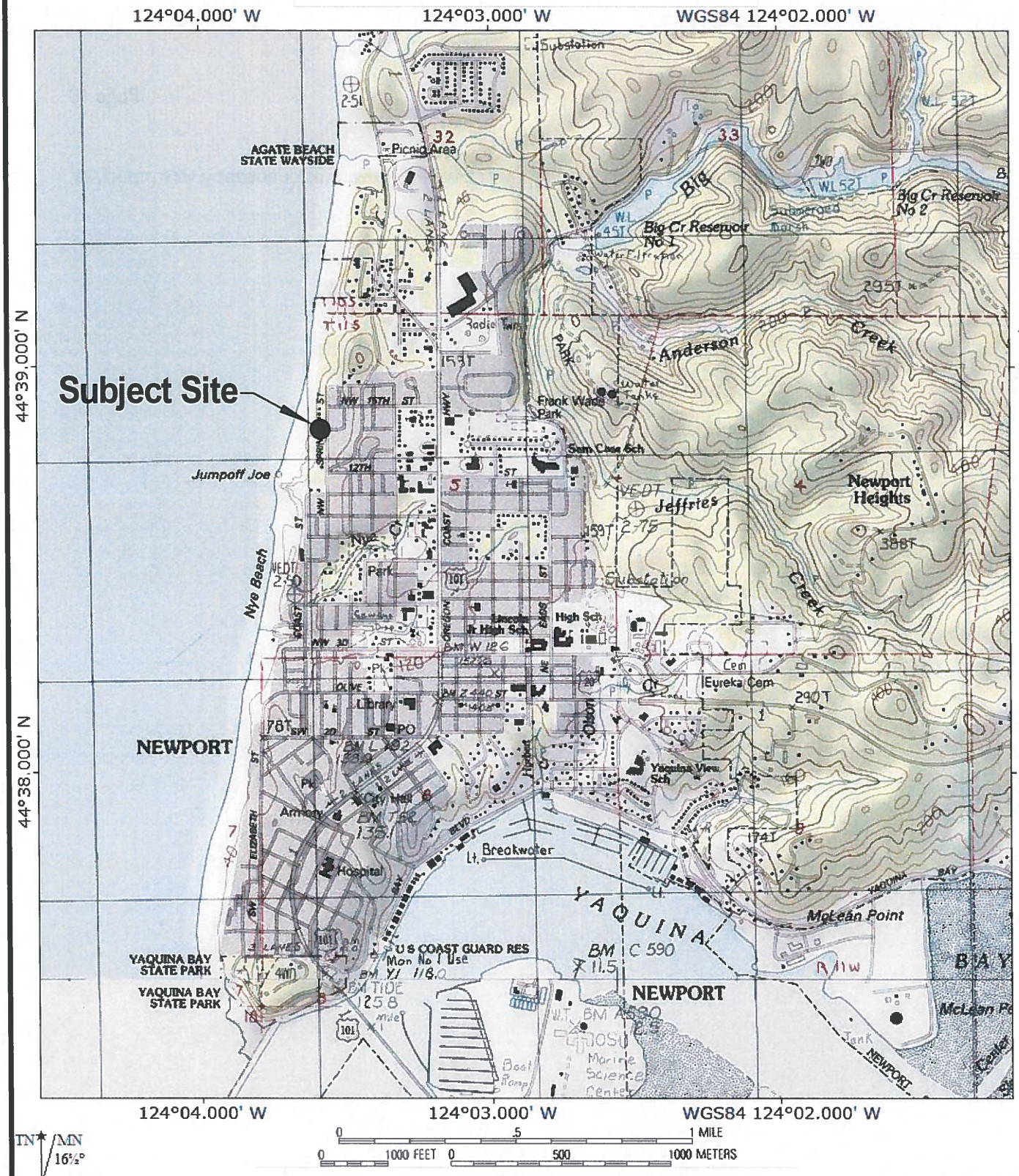
H.G. SCHLICKER AND ASSOCIATES, INC.

CERTIFIED
OREGON
J. DOUGLAS GLESS
E-902
ENGINEERING GEOLOGIST

EXPIRES: 10/31/2016

J. Douglas Gless, MSc, RG, CEG, LHG
President/Principal Engineering Geologist

JDG:cjh

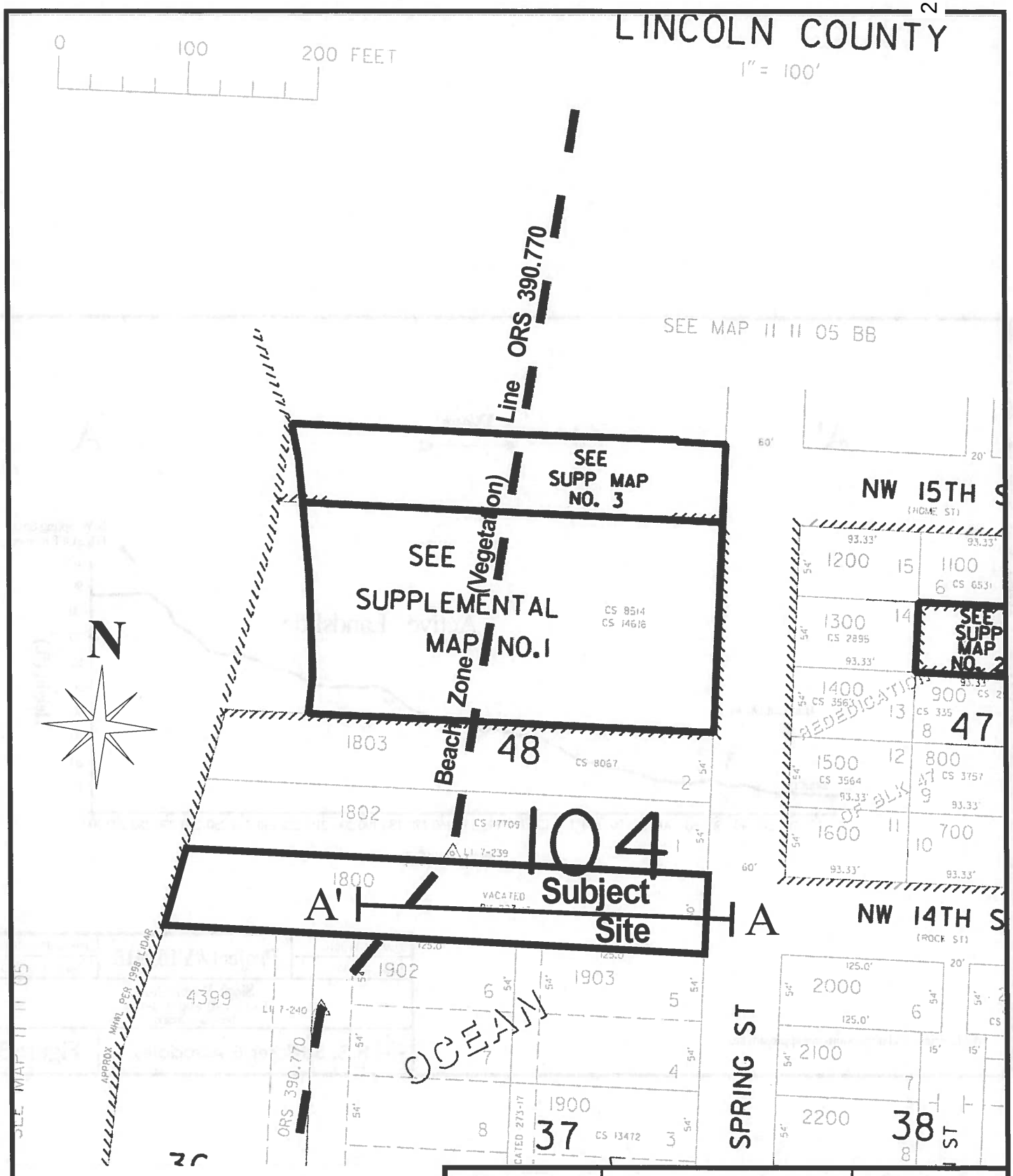


Date: 04/14/2016 Scale: 1" = 2,000'	**Project #Y163915**	Prepared by: CJH Approved by: JDG

Location Map
Tax Lot 1800, Map 11-11-05BC
Newport, Oregon

H.G. Schlicker & Associates, Inc.

Figure 1



0 20 40 60 80 100
Feet

A A' = Approximate trend of profile line

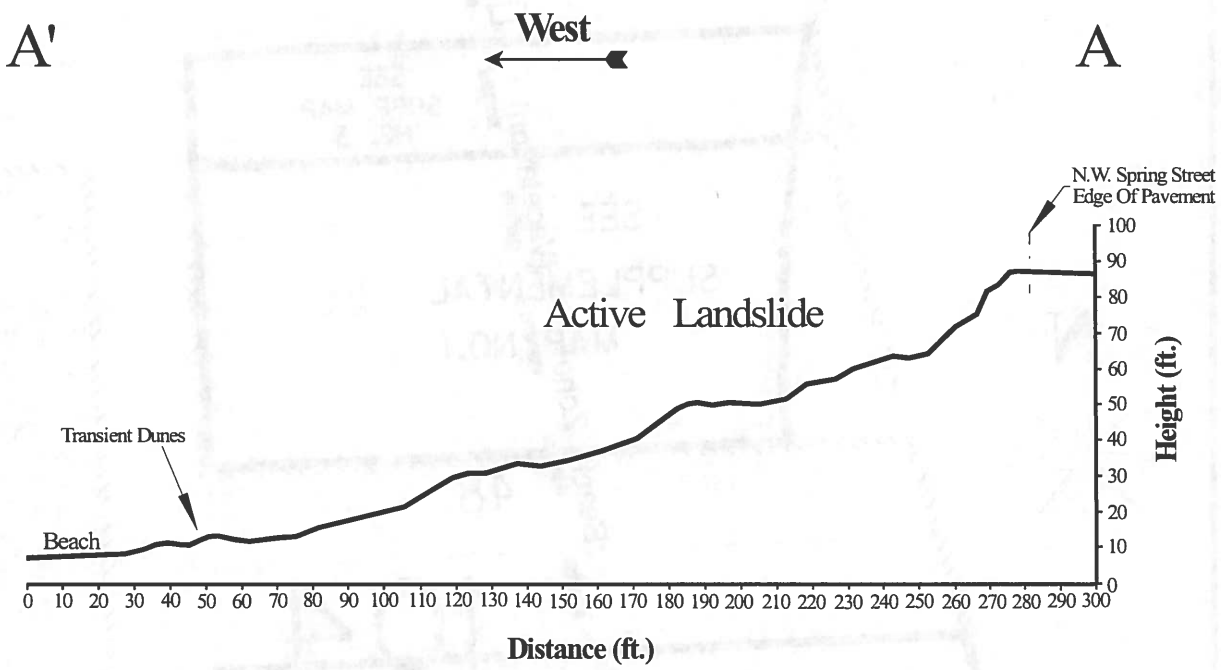
Modified from the Lincoln County assessor's plat
T11S, R11W, Sec. 5.
All locations and dimensions are approximate.

Date: 04/14/2016	**Project #Y163915**	Prepared by: CJH
Scale: 1" = 100'		Approved by: JDG

Plat Map
Tax Lot 1800, Map 11-11-05BC
Newport, Oregon

H.G. Schlicker & Associates, Inc.

Figure 2



Date: 04/14/2016	**Project #Y163915**	Prepared by: CJH
Scale: 1" = 40'		Approved by: JDG

Slope Profile A-A'
Tax Lot 1800, Map 11-11-05BC
Newport, Oregon

All locations and dimensions are approximate.

H.G. Schlicker & Associates, Inc.

Figure 3

Generalized Map Unit Descriptions

Shoreline Geology

Qtc - Quaternary Marine terrace deposit; (Pleistocene); unconsolidated to moderately consolidated gravel, beach and dune sand; locally contains minor consolidated clay-rich paleosol, colluvium, debris flows, and alluvial interbeds.

Ta - Tertiary Astoria Formation; (Miocene); thick to thin-bedded, very fine to medium-grained, micaceous and carbonaceous arkosic sandstone and massive sandy siltstone.

Tn - Tertiary Nye Mudstone; (lower Miocene); massive to poorly bedded gray fossiliferous marine mudstone to very fine grained silty sandstone; commonly highly fractured, weak and prone to landslides.

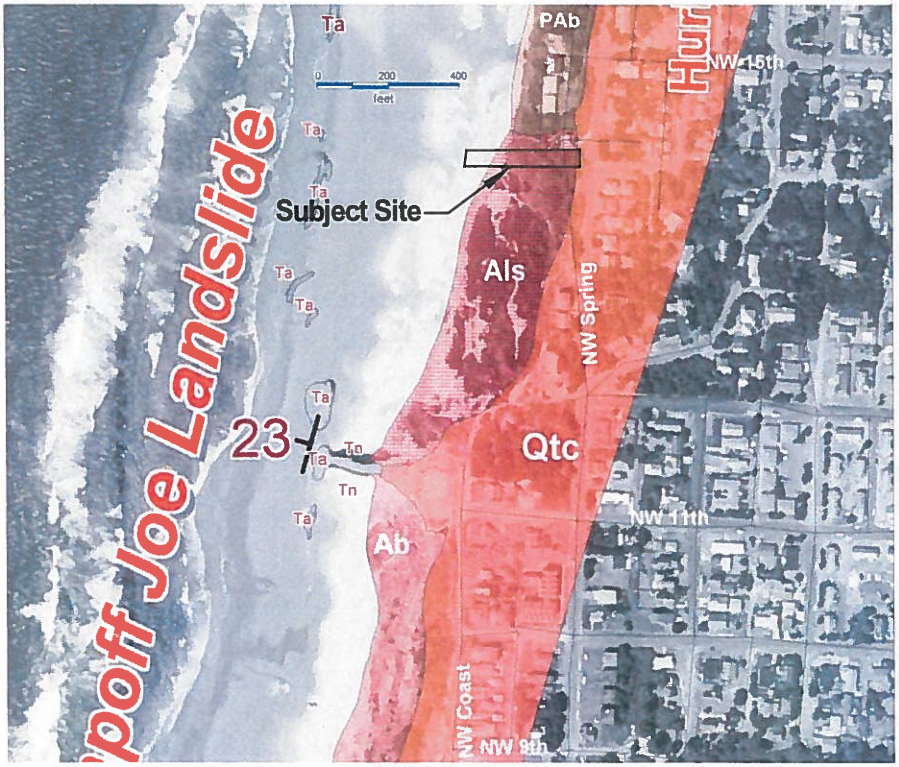
Mass Movement Hazards

Ab - Active slide block or slump.

Als - Holocene active landslide.

PAb - Potentially active slide block or slump.

Jumpoff Joe Landslide (close up)



Date: 04/14/2016	**Project #Y163915**	Prepared by: CJH
Scale: 1" = 400'		Approved by: JDG

Geologic Map Showing Landslides
Tax Lot 1800, Map 11-11-05BC
Newport, Oregon

H.G. Schlicker & Associates, Inc.

Figure 4

Mapping from OFR O-04-09 by Priest, G. R. and Allan, J. C. (2004).
All locations and dimensions are approximate.

Appendix A
- Site Photographs -

Photo 1 - Looking east from the beach towards the subject site (arrow).

Photo 2 - Ponded water at the site.

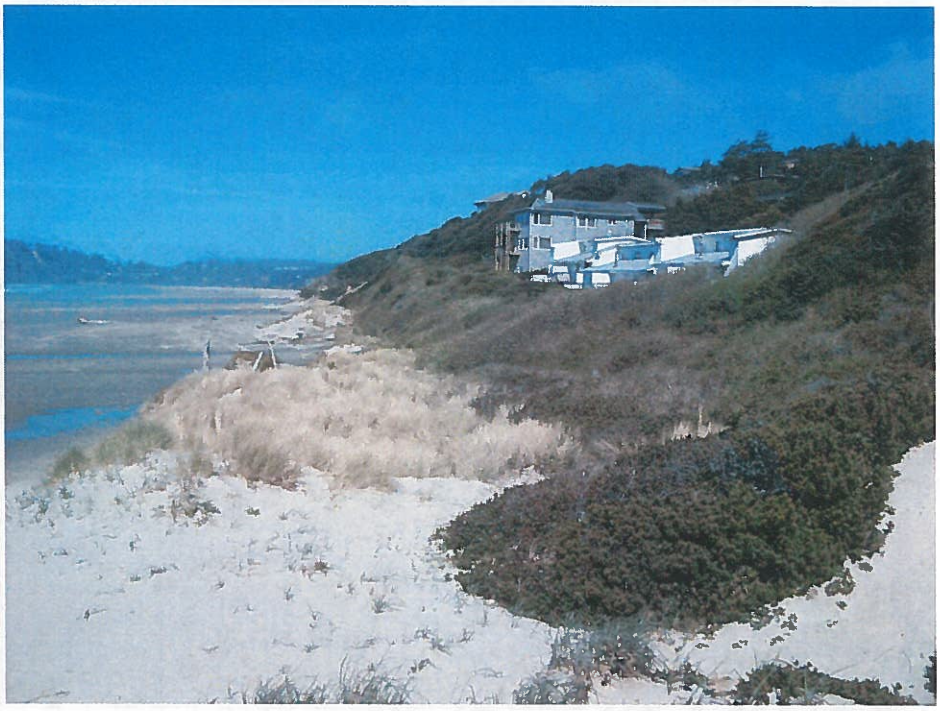


Photo 3 - Looking north along the dunes at the base of the bluff.

Photo 4 - Southerly view across the site and the active part of the Spring Street landslide.

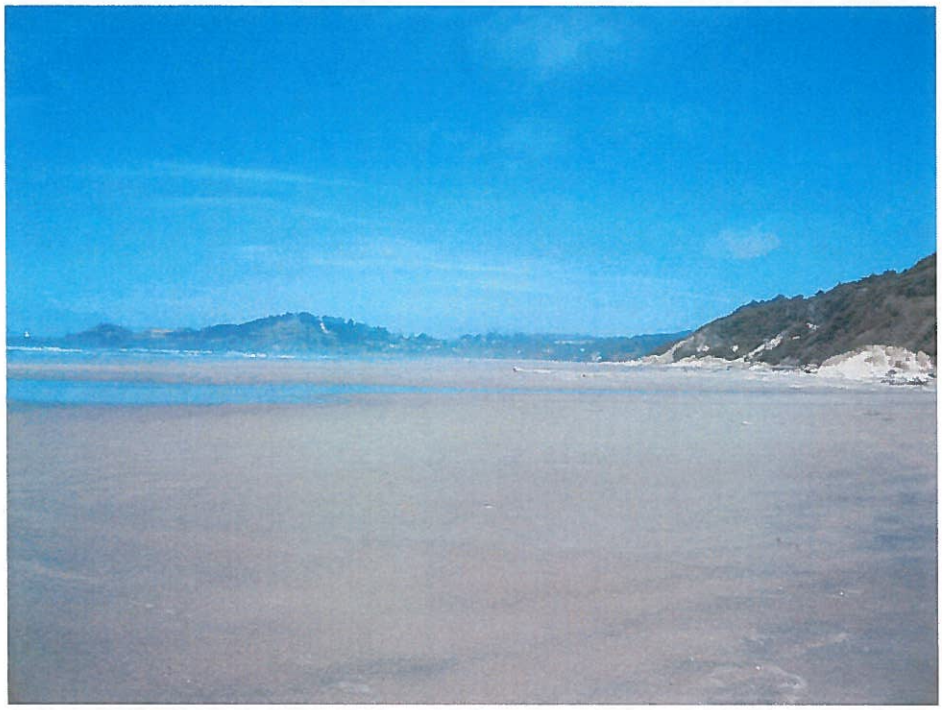


Photo 5 - Northerly view along the beach, with Yaquina Head in background.

Photo 6 - Looking south along the beach.

Engineering Geologic Hazards Investigation
Tax Lot 1802, Map 11-11-05BC
1409 N.W. Spring Street
Newport, Oregon

Prepared for:
Mr. Joe Imlach
2142 Tributary Circle
Anchorage, Alaska 99516

Project #Y163923

April 13, 2016

H.G. Schlicker & Associates, Inc.

H.G. Schlicker & Associates, Inc.
607 Main Street, Suite 200 · Oregon City, Oregon 97045
(503) 655-8113 · FAX (503) 655-8173

Project #Y163923

April 13, 2016

To: **Mr. Joe Imlach**
2142 Tributary Circle
Anchorage, Alaska 99516

Subject: **Engineering Geologic Hazards Investigation**
Tax Lot 1802, Map 11-11-05BC
1409 N.W. Spring Street
Newport, Oregon

Dear Mr. Imlach:

The accompanying report presents the results of our engineering geologic hazards investigation for the above subject site.

After you have reviewed our report, we would be pleased to discuss the report and to answer any questions you might have.

This opportunity to be of service is sincerely appreciated. If we can be of any further assistance, please contact us.

H.G. SCHLICKER & ASSOCIATES, INC.

J. Douglas Gless, MSc, RG, CEG, LHG
President/Principal Engineering Geologist

JDG:cjh

TABLE OF CONTENTS

H.G. Schlicker & Associates, Inc.
607 Main Street, Suite 200 · Oregon City, Oregon 97045
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Project #Y163923 April 13, 2016

To: **Mr. Joe Imlach**
2142 Tributary Circle
Anchorage, Alaska 99516

Subject: **Engineering Geologic Hazards Investigation**
Tax Lot 1802, Map 11-11-05BC
1409 N.W. Spring Street
Newport, Oregon

Dear Mr. Imlach:

1.0 Introduction and General Information

At your request and authorization, the undersigned representative of H.G. Schlicker and Associates, Inc. (HGSA) visited the subject site on March 31, 2016 to complete an engineering geologic hazards investigation for Tax Lot 1800, Map 11-11-05BC in Newport, Oregon (Figures 1 and 2; Appendix A). It is our understanding that you have requested this work in relationship to a property transfer.

This report addresses the engineering geology and geologic hazards at the site. The scope of our work consisted of a site visit, site observations and measurements, review of our previous report for the site (HGSA #Y052699), limited review of the geologic literature, interpretation of topographic maps, Lidar and stereo aerial photographs, and preparation of this report which provides our findings, conclusions, and recommendations.

2.0 Site Description

The site is located on an elevated marine terrace and west facing oceanfront slope in Newport, Oregon (Figures 1 and 2; Appendix A). The subject site consists of a rectangular lot (Tax Lot 1802) at elevations of approximately 50 to 80 feet MSL on its eastern side along N.W. Spring Street, which slopes steeply west near the center of the property down to an elevation of approximately 20 feet MSL on the west side, adjacent to the beach (Figures 3 and 4; Appendix A). The eastern part of the site has an existing two story home supported on a timber pile foundation with the western pile partially exposed above the ground surface (Appendix A). The site is bound to its east by N.W. Spring Street, to its north and south by adjacent undeveloped

lots, and to its west by the Pacific Ocean. The site is densely vegetated with salal, shore pine and beach grass.

2.1 Existing House Observations

During our site visit we observed the exposed foundation elements of the existing house for signs of distress. According to Lincoln County records the two story house with pile foundation was built in 1981. The house and attached western deck are elevated; the house is supported on timber piling and the deck is on wood posts with poured concrete footings. The lower story of the house abuts the bluff slope to its east and is daylighted and elevated to the west. The home has been remodeled since the time of our 2005 report. At the time of our November 2005 site observations the home's pile foundations appeared to be in generally good condition, although we observed that several of the pile were slightly tilted. The tops of the pile were generally tilting toward the east, but tilting orientations varied. It is unclear if the observed tilting occurred during the initial pile installation, or as a result of later ground movement. If the pile tips encountered a hard underlying unit at shallow depths during installation, tilting and deflection of the piles could have occurred which may account for the observed tilting; however, the tilting may also be the result of ground movement from landsliding. Based on our review of a home inspector's report by Spy Glass Home Inspection Service dated October 18, 2005, the inspector observed sloping of floors and cracking in sheetrock which was attributed to settlement of the pile. This type of distress is consistent with foundation movement. Additionally, HGSA observed substantial bracing and shoring between the exposed pile that may have been completed to reinforce distressed pile. The remodeling since the time of our earlier report has enclosed much of the foundation which limited our recent observations.

At the time of HGSA's observations for this report we did not identify any additional stress to the home.

3.0 Geologic Mapping, Investigation and Descriptions

The site lies in an area which has been mapped as a westerly-dipping sequence of sedimentary rocks which include the Yaquina, Nye and Astoria Formations (Schlicker et al., 1973). A relatively flat-lying sequence of marine terrace deposits overlies these sedimentary rocks in a narrow band along the Pacific Ocean, generally mantling wave-cut benches on tilted strata of middle Miocene Astoria Formation (Schlicker et al., 1973; Priest, 1997). The Astoria Formation consists of thick to thin bedded, very fine to medium-grained, micaceous, carbonaceous, arkosic marine sandstone and sandy siltstone. These units are underlain by early Miocene Nye Mudstone Formation, which consists of indurated, massive to indistinctly bedded, gray, clayey siltstone and very fine-grained sandstone. Locally the Nye Mudstone and Astoria Formations dip to the west at approximately 15 to 23 degrees (Schlicker et al., 1973; Priest and Allan, 2004). The contact of the Nye and Astoria Formations is thought to be a primary cause of the well-documented Jumpoff Joe landslide approximately ¼ mile south of the site (where the two formations outcrop), and the Spring Street landslide (the northern portion of which the

subject site lies on). The precise location of this contact at the subject site is not known. No faults or other structural features are known to occur at the site. Local faults mapped north and south of the site are not known to be active, and the geologic age of their last movement is not documented.

Outcrops at and near the site indicate that surficial materials in the area are dominated by marine terrace deposits. These deposits are commonly composed of iron-cemented sands, semi-consolidated sands, tuffaceous silts and gravels. Marine terrace deposits are extensively exposed along the bluff south of the site in the scarp, body and toe of the Spring Street landslide, and also in the bluff north of the site. The broad, dissipative beach slopes at approximately 2 degrees and is primarily comprised of fine grained sand. The back beach area of the western part of the site has transient dunes approximately 3 to 8 feet high.

At the time of our 2005 site visit, we explored the subsurface with two hand auger borings to depths of 5 feet in the approximate locations shown on Figure 3. A geologist from our office visually classified the soils encountered according to the Unified Soil Classification System (USCS) as follows:

B-1	Depth (ft.)	USCS	Description
	0 - 1.0	SP-SM	SAND, brown, moist, medium dense to dense, with minor silt and organics.
	1.0 - 3.0	SP	SAND, buff to brown, moist, dense.
	3.0 - 5.0	SM-SC	CLAYEY/SILTY SAND, brown to reddish brown to gray, mottled, moist, dense to very dense.

B-2	Depth (ft.)	USCS	Description
	0 - 0.5	OH-SM	ORGANIC SILTY SAND, dark brown, moist, loose.
	0.5 - 2.0	SP	SAND, light brown to gray, moist, dense, with minor silt.
	2.0 - 5.0	SM-SC	CLAYEY/SILTY SAND, brown/reddish brown/light gray, mottled, moist to wet, dense to very dense.

Near surface materials on the western part of the site consist of disturbed marine terrace sands and sandy silts, overlain by sandy organic soils and windblown dune sand. Based on our site observations and HGSA's prior work on other nearby projects we believe that terrace sands are also present at depth on the western part of the site.

3.1 Structures

Structural deformation and faulting along the Oregon Coast is dominated by the Cascadia Subduction zone (CSZ) which is a convergent plate boundary extending for approximately 680

miles from northern Vancouver Island to northern California. This convergent plate boundary is defined by the subduction of the Juan de Fuca plate beneath the North America Plate, and forms an offshore north-south trench approximately 60 miles west of the Oregon coast shoreline. A resulting deformation front consisting of north-south oriented reverse faults is present along the western edge of an accretionary wedge east of the trench, and a zone of margin-oblique folding and faulting extends from the trench to the Oregon Coast (Geomatrix, 1995).

A north-northwesterly trending fault is exposed along the eastern part of the Jumpoff Joe headland, located approximately 800 feet south of the site, which dips to the east at approximately 23 degrees. This fault is a normal fault with its upthrown side to the west. The fault cuts Tertiary units with no evidence of recent activity.

The nearest mapped potentially active faults are the Yaquina Bay Fault located approximately 1.3 miles south of the site, and the Yaquina Head Fault located approximately 1.9 miles north of the site. The Yaquina Bay Fault is a generally east-northeast trending oblique fault that also has left-lateral strike-slip and either contractional or extensional dip-slip offset components (Personius et al., 2003). This fault is believed to extend offshore for approximately 7 to 8 miles and may be a structurally controlling feature for the mouth of Yaquina Bay (Goldfinger et al., 1996; Geomatrix, 1995). At Yaquina Bay, a 125,000 year old platform has been displaced approximately 223 feet up-on-the-north by the Yaquina Bay Fault. This fault has the largest component of vertical slip (as much as 2 feet per 1,000 years) of any active fault in coastal Oregon or Washington (Geomatrix, 1995). Although the age for the last movement of the Yaquina Bay Fault is not known, the fault also offsets 80,000 year old marine terrace sediments. The Yaquina Head Fault is an east-trending oblique fault with left-lateral strike-slip and either contractional or extensional dip-slip offset components (Personius et al., 2003). It offsets the 80,000 year old Newport marine terrace in the area of the site by approximately 5 feet, indicating a relatively low rate of slip, if still active (Schlicker et al., 1973; Personius et al., 2003).

4.0 Slope Stability and Erosion

The steep slope on the east-central area of the subject lot is part of the headscarp of a landslide, and the lower elevation western part of the site lies on a downdropped landslide block (Figure 4; Appendix A). The mapped active landslide north of the Jumpoff Joe headland, and with its northernmost lateral scarp located along the northern and eastern property boundaries of the subject lot, is generally referred to as the Spring Street landslide.

The subject site lies on a mapped active landslide block (Figure 4). The site is located about ¼ mile north of the Jumpoff Joe landslide, a well-documented translational landslide that was first noted in 1922 with substantial movement and damage to structures in 1942 and 1943; continued movement has been observed to the present date. As noted above, the site also lies at the northern part of the more recent, large Spring Street landslide (Figure 4). Significant movement of the Spring Street landslide occurred in the 1960s and unstable conditions continued at least into the 1970s (Schlicker et al., 1973). Based on our 2016 site observations there does

not appear to have been identifiable movement at the subject lot since the time of our 2005 site visit, but this would be difficult to discern due to the home remodeling.

The site lies in an area mapped as undergoing critical erosion of marine terraces and sediments (Schlicker et al, 1973). Priest and others (1994) and Priest (1997) have determined the average annual erosion rate for the shoreline in the vicinity of the site as 1.35 ± 0.63 feet per year. This erosion rate was calculated by measuring the distance between existing structures to the toe of the slope and compared to distances measured on a 1939 or 1967 vertical aerial photograph (Priest et al., 1994).

Based on mapping completed by Priest and Allan (2004), the subject site lies within the Active Erosion Hazard Zone. The area to approximately 50 feet east of the eastern edge of N.W. Spring Street, lies in the High-Risk Coastal Erosion Hazard Zone; and the area approximately 150 feet further east to Hurbert Street, lies in the Moderate-Risk Coastal Erosion Hazard Zone. A site within the High-Risk Hazard Zone has a high probability that the area could be affected by active erosion in the next approximately 60 to 100 years, and a site within the Moderate-Risk Hazard Zone has a moderate probability that the area could be affected by active erosion in the next approximately 60 to 100 years (Priest and Allan, 2004). It should be noted that the mapping done for the 2004 study was intended for regional planning use, not for site specific hazard identification.

The City of Newport Geologic Hazards Map (June 17, 2011) shows the entire subject site lying in the area mapped as "Active Erosion Hazard Zone". All of the site located to the east of the beach and bluff toe is mapped as "Active Landslide Hazard Areas". Areas east of the site along N.W. Spring Street are mapped as "High Risk Bluff Hazard Zone". The City of Newport mapping is based on Priest's 1994 mapping.

Based on our 2016 observations the subject lot appears to have been generally stable since the time of our 2005 site observations. Lots to the south of the subject site, however appear to have had recent ground movement and landsliding activity.

5.0 Regional Seismic Hazards

Abundant evidence indicates that a series of geologically recent large earthquakes related to the Cascadia Subduction Zone have occurred along the coastline of the Pacific Northwest. Evidence suggests that more than 40 great earthquakes of magnitude 8 and larger have struck western Oregon during the last 10,000 years. The calculated odds that a Cascadia earthquake will occur in the next 50 years range from 7–15 percent for a great earthquake affecting the entire Pacific Northwest, to about a 37 percent chance that the southern end of the Cascadia Subduction Zone will produce a major earthquake in the next 50 years (OSSPAC, 2013; OSU News and Research Communications, 2010; Goldfinger et al., 2012). Evidence suggests the last major earthquake occurred on January 26, 1700 and may have been of magnitude 8.9 to 9.0 (Clague et al., 2000; DOGAMI, 2013).

There is now increasing recognition that great earthquakes do not necessarily result in a complete rupture along the full 1,200 km fault length of the Cascadia subduction zone. Evidence in the paleorecords indicates that partial ruptures of the plate boundary have occurred due to smaller earthquakes with moment magnitudes (Mw) < 9 (Witter et al., 2003; Kelsey et al., 2005). These partial segment ruptures appear to occur more frequently on the southern Oregon coast, as determined from paleotsunami studies. Furthermore, the records have documented that local tsunamis from Cascadia earthquakes recur in clusters (~250–400 years) followed by gaps of 700–1,300 years, with the highest tsunamis associated with earthquakes occurring at the beginning and end of a cluster (Allan et al., 2015).

These major earthquake events were accompanied by widespread subsidence of a few centimeters to 1–2 meters (Leonard et al., 2004). Tsunamis appear to have been associated with many of these earthquakes. In addition, settlement, liquefaction and landsliding of some earth materials are believed to have been commonly associated with these seismic events.

Other earthquakes related to shallow crustal movements or earthquakes related to the Juan de Fuca plate have the potential to generate magnitude 6.0 to 7.5 earthquakes. The recurrence interval for these types of earthquakes is difficult to determine from present data, but estimates of 100 to 200 years have been given in the literature (Rogers et al., 1996).

Based on the 1999 Relative Earthquake Hazard Map of the Newport area (Madin and Wang, 1999), the subject site lies in an area designated as Zone B which is defined as an area with intermediate to high hazards associated with earthquakes. The degree of relative hazard was based on the factors of ground motion amplification, liquefaction, and slope instability. It is likely that deep-seated landsliding in the area of the site is, in part, associated with past seismic activity.

6.0 Flooding Hazards

Based on the 2009 Flood Insurance Rate Map (FIRM, Panel #41041C0368D) the subject site lies in an area rated as Zone X which is defined as determined to be outside the 0.2% annual chance floodplain. The western part of the site along the lower slope and beach lies in an area rated as Zone VE (EL 38) which is defined as a coastal flood zone with velocity hazard (wave action); base flood elevations determined. We observed a small stream drainage flowing westerly across the beach area north of the subject lot at the time of our site visit. A small spring was present at the western toe of the dunes along the beach at the site, and standing water was present in a closed depression east of the dunes (Appendix A). We also observed a substantial spring on the slope west of the home.

Based on the Oregon Department of Geology and Mineral Industries mapping (DOGAMI, 2013) the subject site lies within the tsunami inundation zone resulting from an approximately 8.7 and greater magnitude Cascadia Subduction Zone (CSZ) earthquake. The 2013 DOGAMI mapping is based upon 5 computer modeled scenarios for shoreline tsunami inundation caused

by potential CSZ earthquake events ranging in magnitude from approximately 8.7 to 9.1. The January 1700 earthquake event (discussed in Section 5.0 above) has been rated as an approximate 8.9 magnitude in DOGAMI's methodology. More distant earthquakes can also generate tsunamis.

7.0 Climate Change

According to most of the recent scientific studies, the Earth's climate is believed to be changing as the result of human activities which are altering the chemical composition of the atmosphere through the buildup of greenhouse gases, primarily carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons (EPA, 1998). Although there are uncertainties about exactly how and when the Earth's climate will respond to enhanced concentrations of greenhouse gases, scientific observations indicate that detectable changes are under way (EPA, 1998; Church and White, 2006). Global sea level rise, caused by melting polar ice caps and ocean thermal expansion, could lead to flooding of low-lying coastal property, loss of coastal wetlands, erosion of beaches and bluffs, and saltwater contamination of fresh groundwater. Global climate change and the resultant sea level rise will likely impact the subject site through accelerated coastal erosion and bluff retreat. It can also lead to increased rainfall which can result in an increase in landslide occurrence.

8.0 Conclusions

The main engineering geologic concerns at the site are:

1. The site lies on an ancient landslide and on a mapped deep-seated active slide block. The headscarp of this active landslide, named the Spring Street landslide, is located along the northern and eastern property boundaries of the site (Figure 4). Nearby areas north and south of the site show signs of continued slow movement, and we expect the subject site to experience extremely small ongoing movement under existing conditions; however, we did not observe any conclusive evidence of this during our March 2016 site visit.

   Landslide movement at the subject site and/or in the site area could be initiated by a large earthquake, by erosion at the bluff toe, or as a result of high groundwater levels. Future landsliding in the area could impact and damage existing structures on the site. Ocean wave erosion can erode the toe of the landslide mass, increasing the risk of larger sized failures. The site lies within the mapped Active Coastal Erosion Hazard Zone, defined as currently undergoing bluff recession and erosion, with a lesser risk (High-Risk Zone i.e. high risk of bluff recession within the next 60 years) in areas east of the site along N.W. Spring Street. These risks should be accepted by the owner, future owners, developers and residents/occupants of the site.

2. There is an inherent regional risk of earthquakes along the Oregon Coast which could cause harm and damage structures. It is unlikely that the site would be stable during a large earthquake event, particularly if the earthquake occurs during wet weather. The lower bluff slope and beach on the western part of the subject site is mapped in a coastal flood hazard zone, and the site also lies within a mapped tsunami inundation hazard zone. A tsunami impacting the Newport area could cause harm, loss of life and damage to structures. These risks must be accepted by the owner, future owners, developers and residents of the site.

9.0 Recommendations

The site and nearby areas along the bluff slope should be monitored for signs of ground movement, fractures, sloughing, increased bluff recession, and sudden/rapid erosion events, particularly during times of heavy precipitation, inclement or severe weather, and major storms.

The existing pile foundation of the house has experienced some movement, possibly as the result of ground movement caused by landslide activity. Monitoring of the foundation is recommended to document any additional movement. Periodic floor elevation surveys can also help monitor for additional movement. All parts of the homesite and foundations should be regularly observed and monitored for signs of movement, settlement and/or cracking. Monitoring of this type can provide beneficial information for subsequent property transfers.

Stormwater runoff from the road and driveway should continue to be collected, tightlined and discharged to the beach. No stormwater should be discharged to the bluff/landslide area.

10.0 Limitations

The Oregon Coast is a dynamic environment with inherent unavoidable risks to development. Landsliding, erosion, tsunamis, storms, earthquakes and other natural events can cause severe impacts to structures built within this environment and can be detrimental to the health and welfare of those who choose to place themselves within this environment. The client is warned that, although this report is intended to identify the geologic hazards causing these risks, the scientific and engineering communities knowledge and understanding of geologic hazards processes is not complete. This report pertains to the subject site only, and is not applicable to adjacent sites nor is it valid for types of development other than that to which it refers. Geologic conditions including materials, processes and rates can change with time and therefore a review of the site and/or this report may be necessary as time passes to assure its accuracy and adequacy.

The boring logs and related information depict generalized subsurface conditions only at these specific locations and at the particular time the subsurface exploration was completed. Soil and groundwater conditions at other locations and times may differ from the conditions encountered in these borings.

Our investigation was based on engineering geological reconnaissance and a limited review of published information. The data presented in this report are believed to be representative of the site. The conclusions herein are professional opinions derived in accordance with current standards of professional practice, budget and time constraints. No warranty is expressed or implied. The performance of this site during a seismic event has not been evaluated. If you would like us to do so, please contact us. This report may only be copied in its entirety.

11.0 Disclosure

H.G. Schlicker & Associates, Inc. and the undersigned Certified Engineering Geologist have no financial interest in the subject site, the project or the Client's organization.

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It has been our pleasure to serve you. If you have any questions concerning this report, or the site, please contact us.

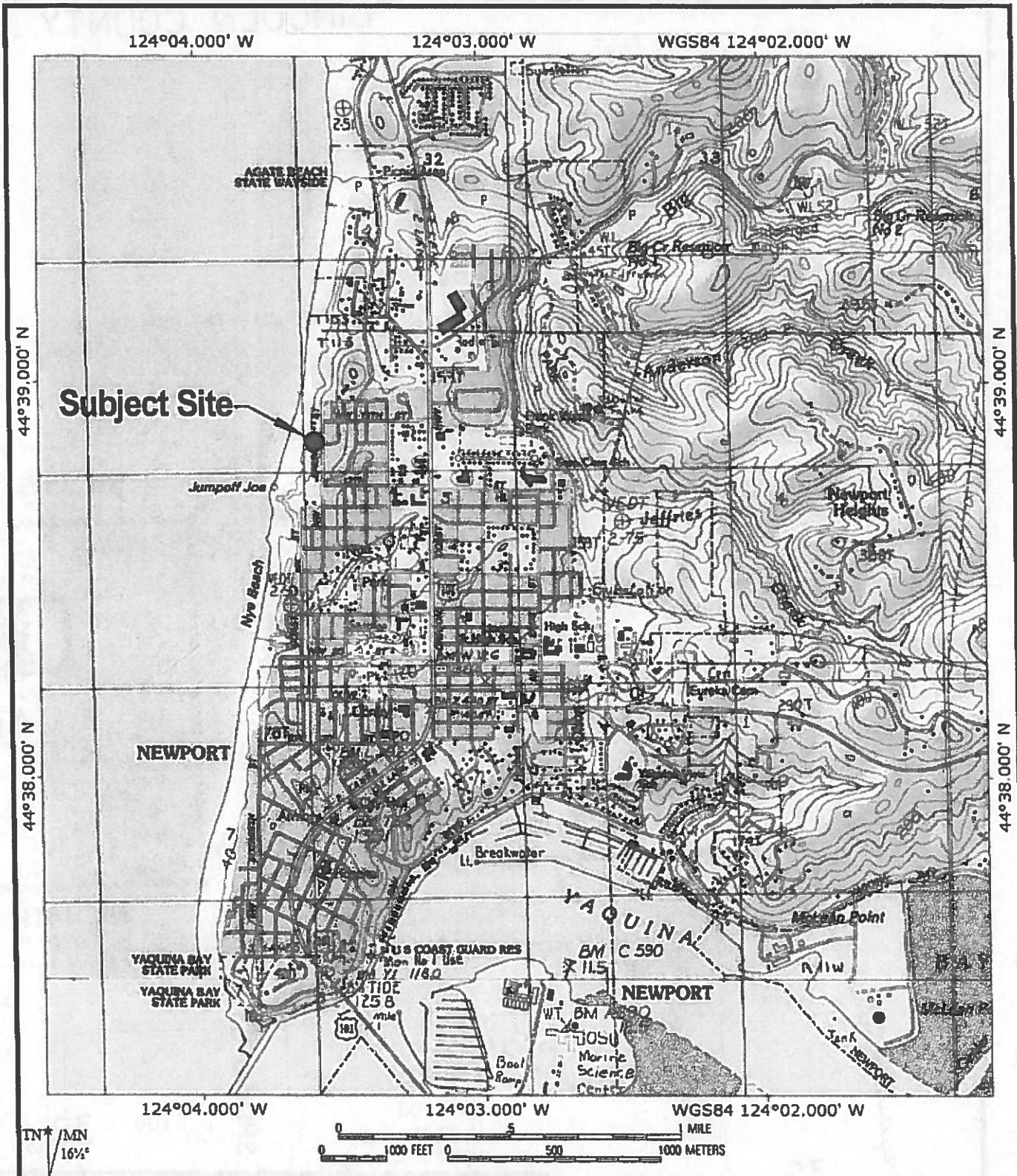
Respectfully submitted,

H.G. SCHLICKER AND ASSOCIATES, INC.

EXPIRES: 10/31/2016

J. Douglas Gless, MSc, RG, CEG, LHG
President/Principal Engineering Geologist

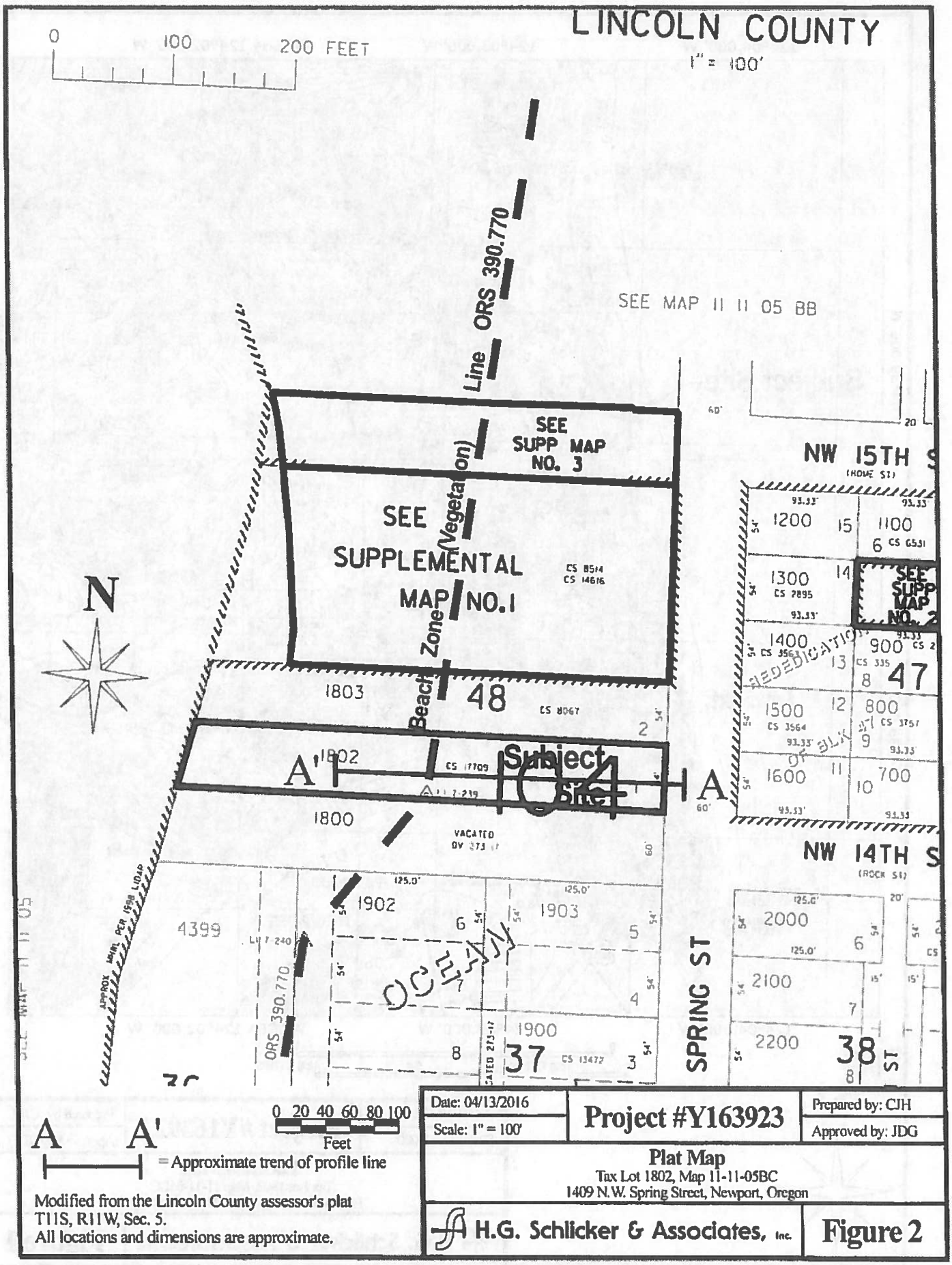
JDG:cjh

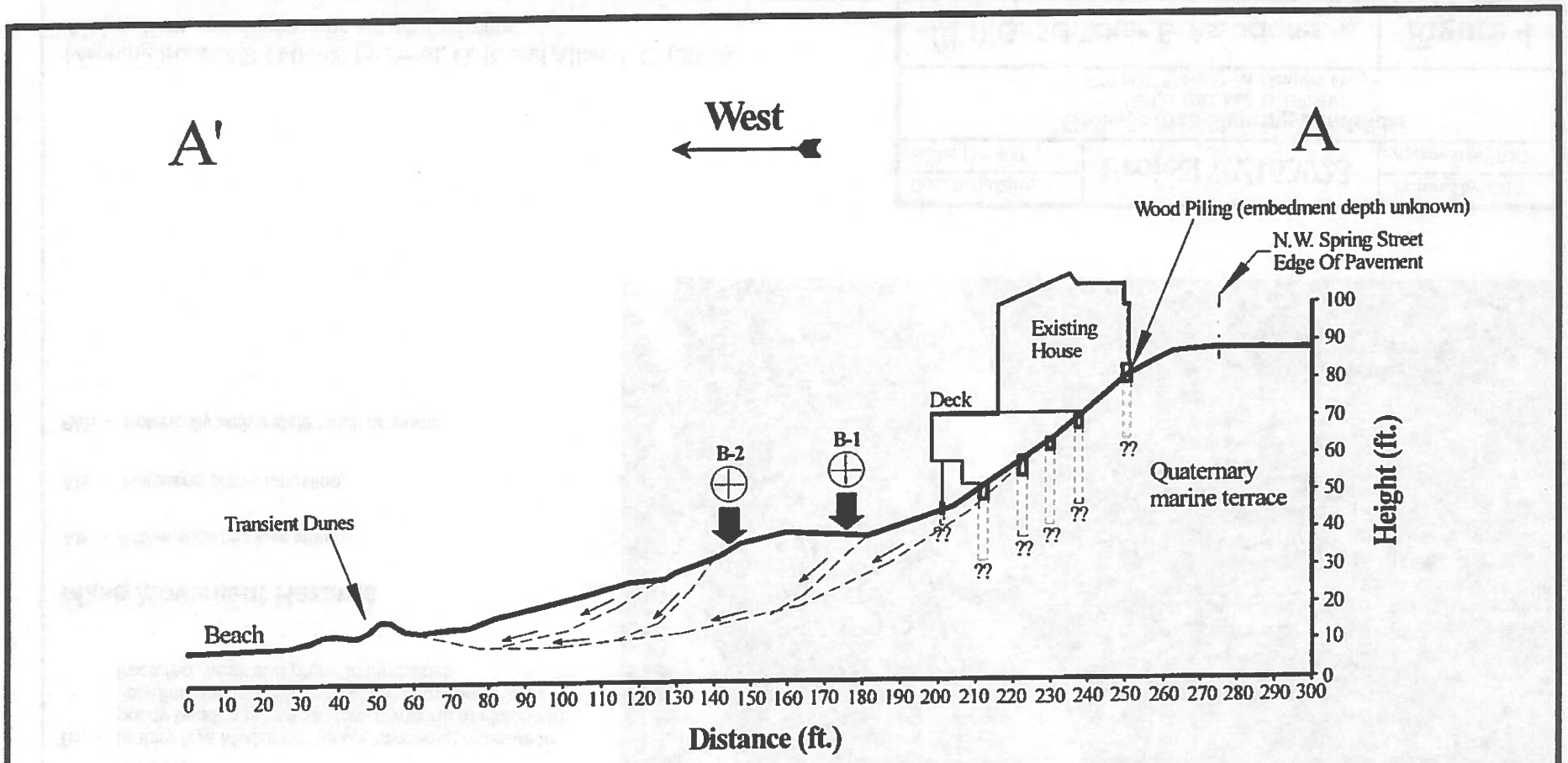


Date: 04/13/2016	**Project #Y163923**	Prepared by: CJH
Scale: 1" = 2,000'		Approved by: JDG

Location Map
Tax Lot 1802, Map 11-11-05BC
1409 N.W. Spring Street, Newport, Oregon

H.G. Schlicker & Associates, Inc. | **Figure 1**


LINCOLN COUNTY
1" = 100'
0 100 200 FEET
SEE MAP 11 11 05 BB
ORS 390.770 Line
SEE SUPP MAP NO. 3
SEE SUPPLEMENTAL MAP NO.1
(Vegetation)
Beach Zone
CS 8514
CS 14616
1803
48
CS 8067
1802
CS 17709
Subject Site
1800
VACATED
NW 15TH S
(HOWE ST)
1200
15
1100
6
CS 6531
1300
14
CS 2895
SEE SUPP MAP NO. 2
1400
CS 3563
900
CS 335
13
8
47
REDEDICATION
1500
12
CS 3564
800
CS 3757
9
OF BLK
1600
11
700
10
NW 14TH S
(ROCK ST)
2000
6
2100
7
2200
38
8
SPRING ST
1902
1903
1900
37
CS 13472
4399
ORS 390.770
APPROX. MHW PER 1998 LIDAR
A
A'
0 20 40 60 80 100
Feet
= Approximate trend of profile line
Modified from the Lincoln County assessor's plat
T11S, R11W, Sec. 5.
All locations and dimensions are approximate.
Date: 04/13/2016
Scale: 1" = 100'
Project #Y163923
Prepared by: CJH
Approved by: JDG
Plat Map
Tax Lot 1802, Map 11-11-05BC
1409 N.W. Spring Street, Newport, Oregon
H.G. Schlicker & Associates, Inc.
Figure 2



= Possible landslide slip planes
(diagrammatic - arrows point in direction of movement)

= Geologic contact (dashed where inferred)

B-1
= Approximate location of 2005 boring

All locations and dimensions are approximate.

Date: 04/13/2016	**Project #Y163923**	Prepared by: CJH
Scale: 1" = 40'		Approved by: JDG

Slope Profile A-A'
Tax Lot 1802, Map 11-11-05BC
1409 N.W. Spring Street, Newport, Oregon

H.G. Schlicker & Associates, Inc.

Figure 3

Generalized Map Unit Descriptions

Shoreline Geology

Qtc - Quaternary Marine terrace deposit; (Pleistocene); unconsolidated to moderately consolidated gravel, beach and dune sand; locally contains minor consolidated clay-rich paleosol, colluvium, debris flows, and alluvial interbeds.

Ta - Tertiary Astoria Formation; (Miocene); thick to thin-bedded, very fine to medium-grained, micaceous and carbonaceous arkosic sandstone and massive sandy siltstone.

Tn - Tertiary Nye Mudstone; (lower Miocene); massive to poorly bedded gray fossiliferous marine mudstone to very fine grained silty sandstone; commonly highly fractured, weak and prone to landslides.

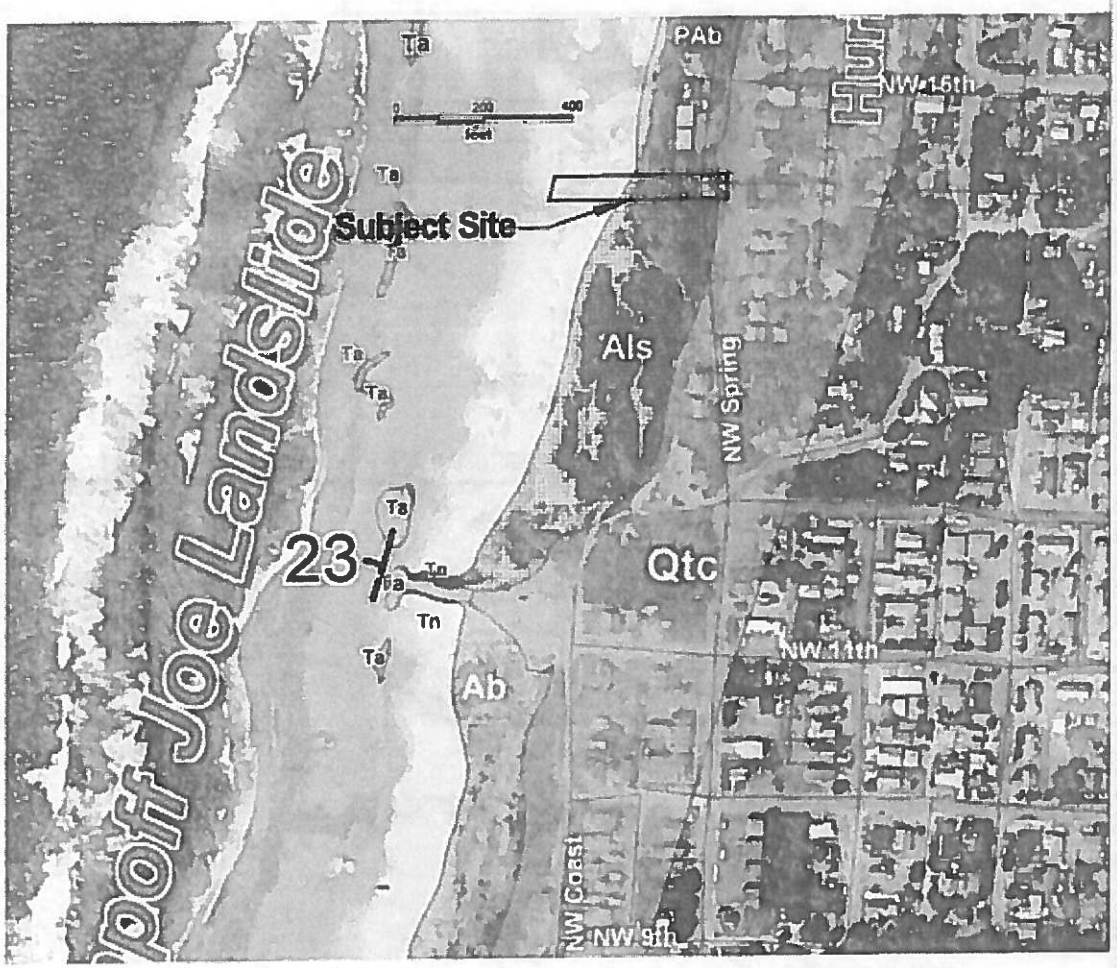
Mass Movement Hazards

Ab - Active slide block or slump.

Als - Holocene active landslide.

PAb - Potentially active slide block or slump.

Jumpoff Joe Landslide (close up)



Date: 04/13/2016 Scale: 1" = 400'	**Project #Y163923**	Prepared by: CJH Approved by: JDG
Geologic Map Showing Landslides Tax Lot 1802, Map 11-11-05BC 1409 N.W. Spring Street, Newport, Oregon		
H.G. Schlicker & Associates, Inc.		**Figure 4**

Mapping from OFR O-04-09 by Priest, G. R. and Allan, J. C. (2004).
All locations and dimensions are approximate.

Appendix A
- Site Photographs -

Photo 1 - Looking northwest from N.W. Spring Street at the front of the house.

Photo 2 - View west along the north side of the house at the site.

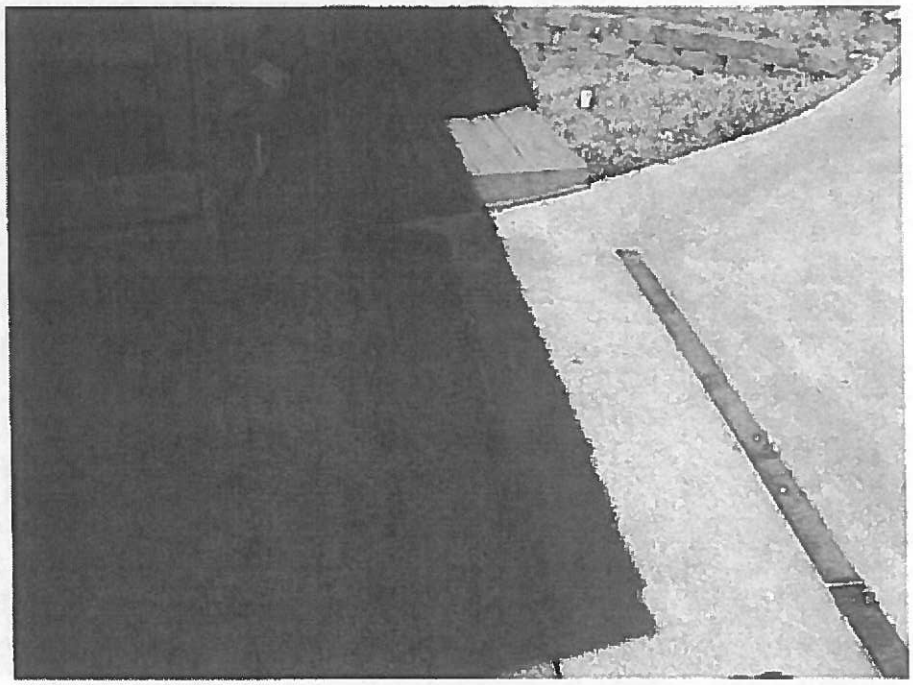


Photo 3 - Strip drain at the bottom of the driveway.

Photo 4 - Slight settlement of concrete driveway slab and a break in the concrete likely due to a soft subgrade.

Photo 5 - Pile beneath deck area of the house.

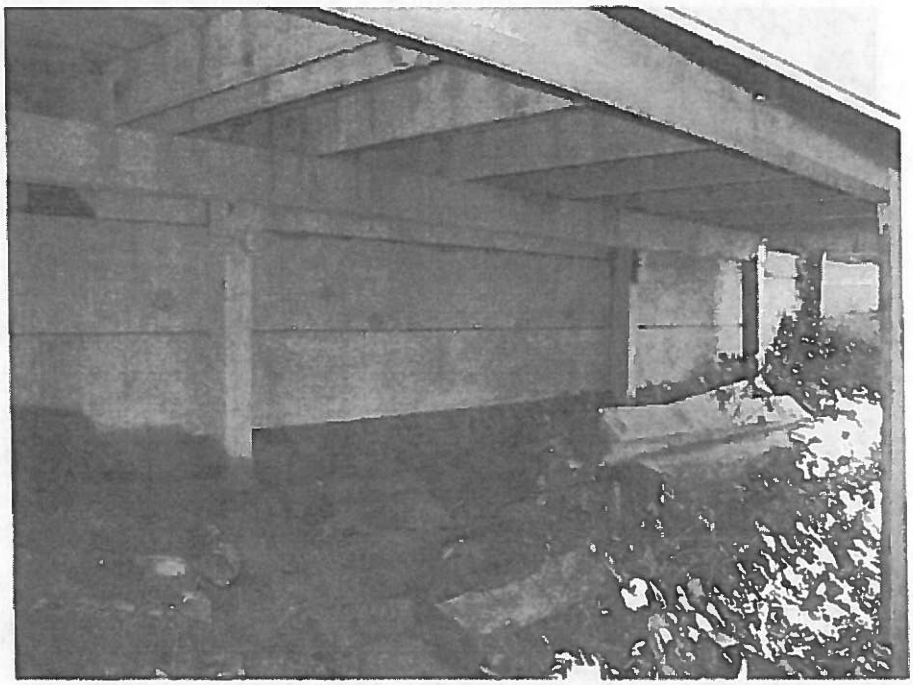


Photo 6 - Newer decking and supporting materials at the rear of the house.

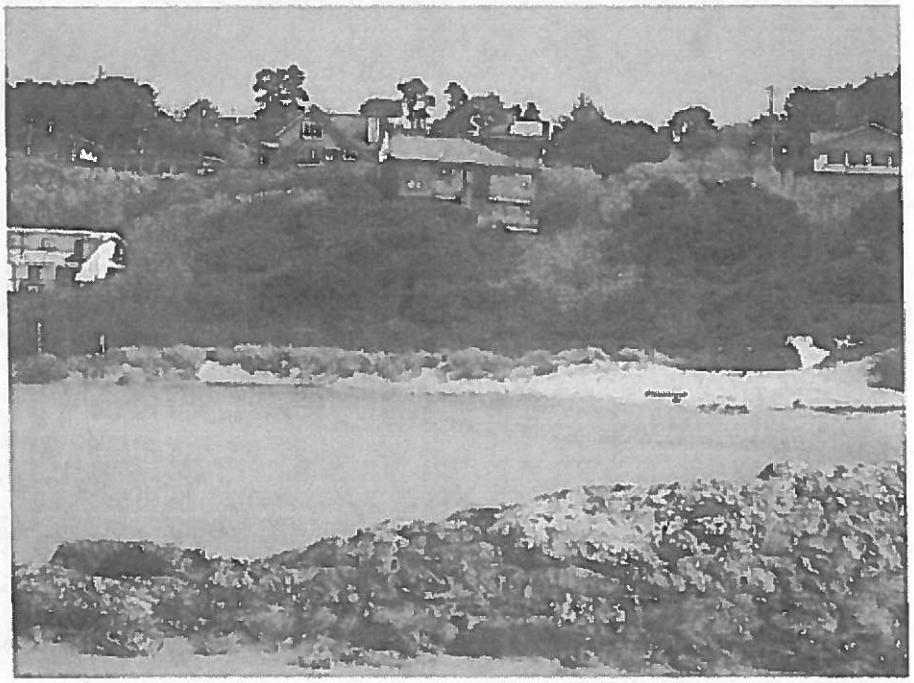


Photo 7 - Looking east from the beach towards the home at the site.

Photo 8 - Closer view of the west side of the house from the beach.

Photo 9 - View of springs on the beach.

Photo 10 - Looking easterly at the pathway from the house to the beach.

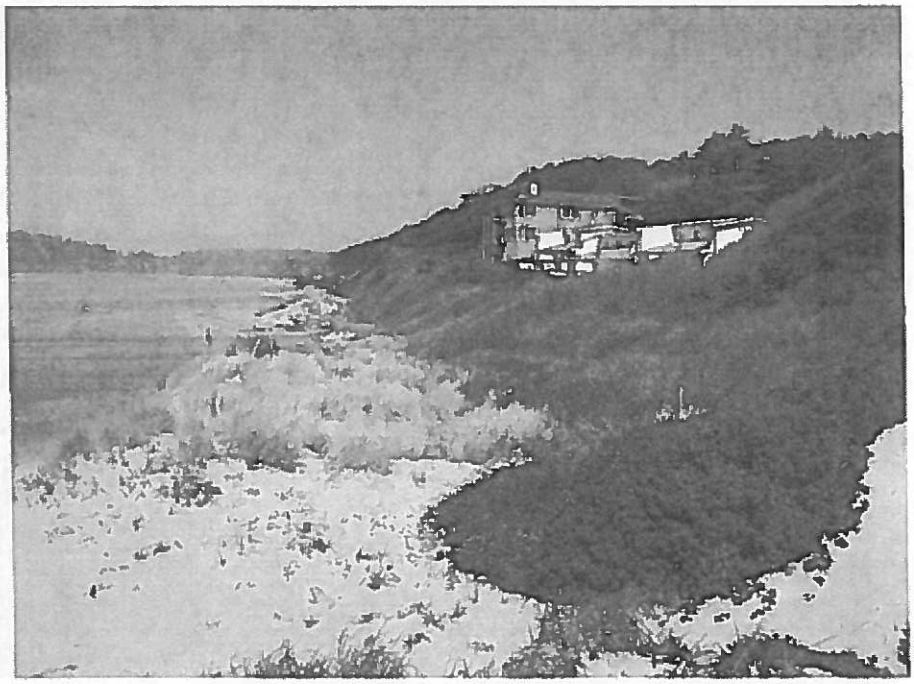


Photo 11 - Looking north along the dunes at the base of the bluff.

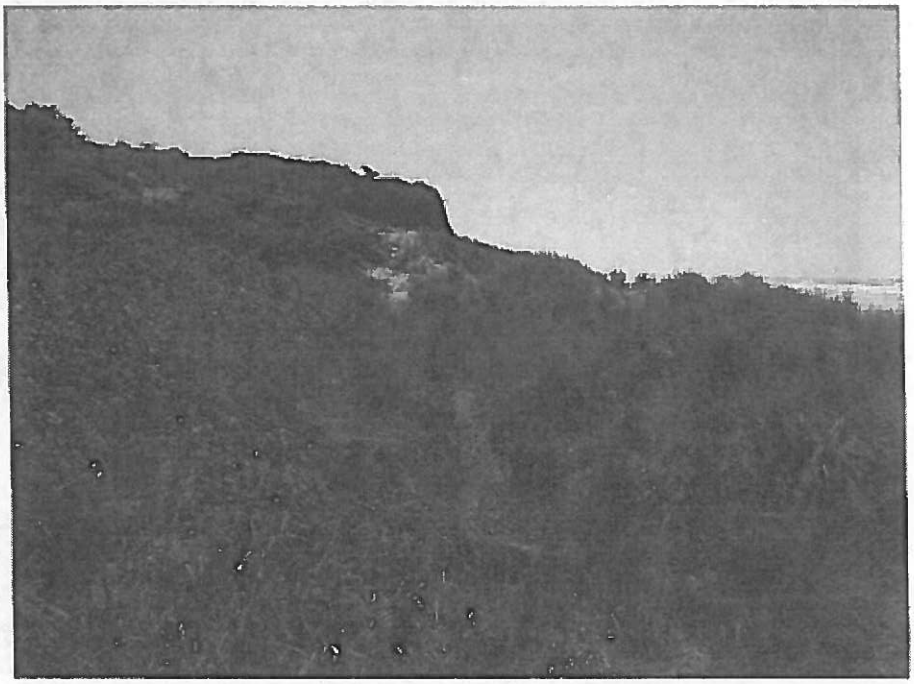


Photo 12 - Southerly view across the active part of the Spring Street landslide south of the subject site.

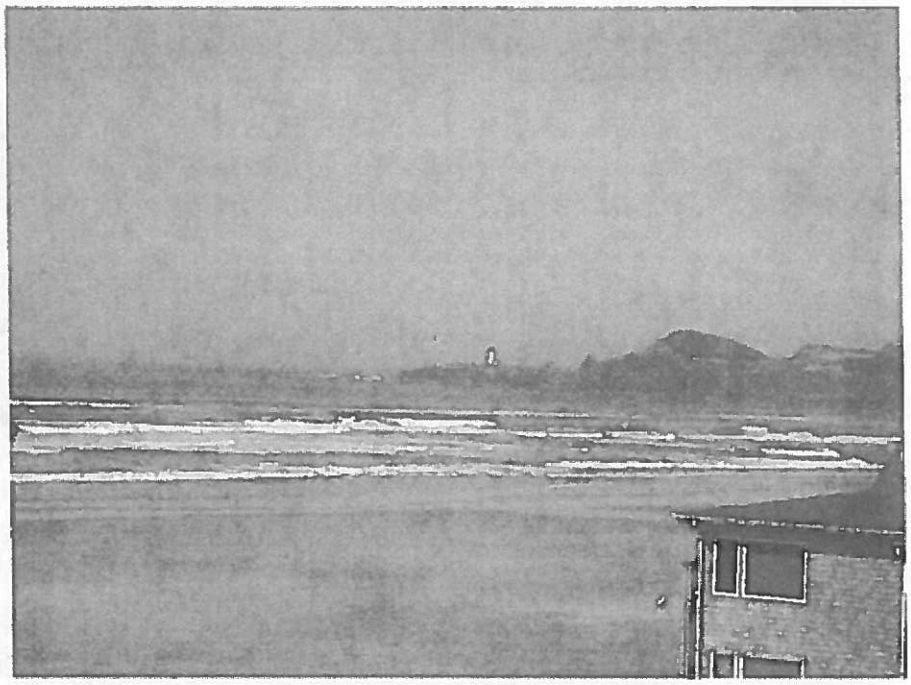


Photo 13 - Looking north-northwest at the Yaquina Head Lighthouse.

Photo 14 - Standing water on the adjacent property to the south.

TO: Derrick Tokos, Community Development Director, City of Newport, OR
FROM: Timothy A. Cross, Homeowner, 1522 NW Spring St., Newport, OR
DATE: July 23, 2018
SUBJECT: Objection to the slope stability conclusion reached in the Geotechnical Engineering Report (June 29, 2018) prepared by K & A Engineering, Inc., pertaining to Tax Lots 1800, 1900 and 1903

I have read this report with a focus on the geological assessment of potential hazards on these properties, specifically on the assessment of land stability. K & A Engineering used incorrect boundary assumptions in the slope stability equilibrium-limit models they ran, which led to their recommendation that the study site was stable.

I refer to their 'Field-Developed Cross Section' of the study site shown in Appendix A, and the subsequent slope stability analyses of Appendix C. The cross section plots the elevation of the top of the Nye Formation in borings B-1 and B-3, and establishes the structural dip of the top of the Nye Formation as 13° to 15° to the west. This structural dip is in complete agreement with all other structural dip values and directions published on the 1976 geological map in the Newport region.

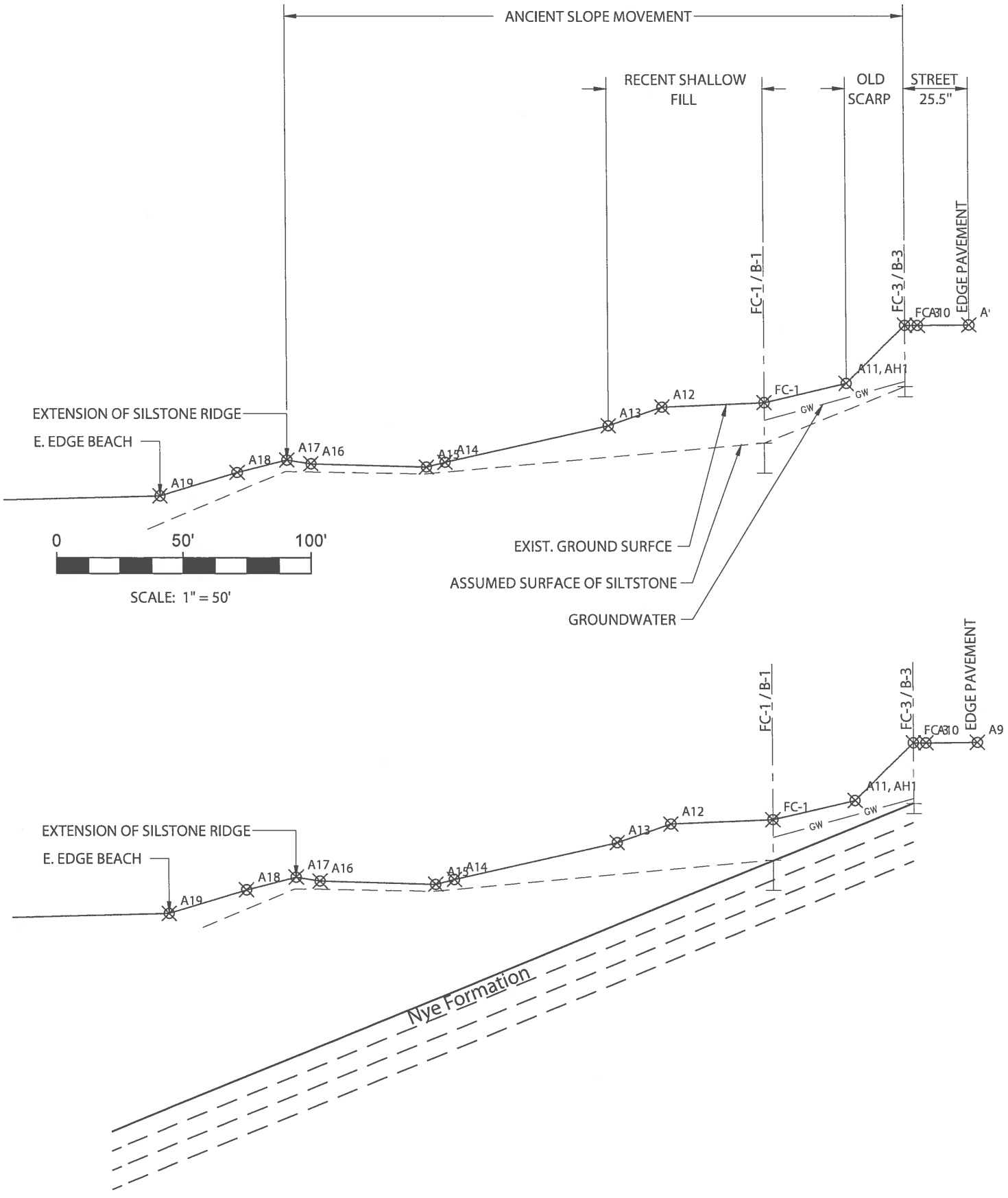
However, in assigning the boundary conditions for the computer model runs in their slope stability analysis, they assumed that the structural dip of the Nye Formation was approximately 0° instead of 13° to 15° to the west. There is absolutely no justification for this change in dip. It is curious that the change in dip occurs at the exact position of their borehole.

The projected 0° dip versus a projected 13° - 15° dip of the top of the Nye formation results in a huge change in the overburden ("marine terrace" plus dune sand) thickness and, therefore, a huge change in the volume of material susceptible to mass movement. In the appended illustration I show the original 'Field-Developed Cross Section' and a modified version with a 13° dip of the Nye Formation to the west. In the original version, thin "marine terrace" sediments sit on a stable, solid, sub-horizontal platform of Nye Formation. In the revised cross section, a thick, westward-facing wedge of unconsolidated sediment sits on a westward-inclined surface formed by the top of the Nye Formation. Alternations of more muddy and less muddy sand/silt layers within the Nye formation provide potential slip surfaces within the westward-dipping strata. Slip along such surfaces could easily provoke instability and mass movement of overlying "marine terrace" sediment. The westward-dipping top of the Nye Formation is another potential surface for slippage and consequent mass movement of the overlying "marine terrace" sediment. Water percolating through the unconsolidated sediment will pond on top of the significantly less porous and permeable Nye Formation, and effectively lubricate that surface. The increased volume of unconsolidated sediment above the Nye Formation, in contrast to that calculated in the original 'Field-Developed Cross Section,' increases the likelihood of mass failure should the toe-of-slope dune sand be removed or reduced by erosion.

The K & A Geotechnical Engineering Report used the geometry of their cross section as boundary conditions for their slope stability modeling. From their models, they concluded that in the current static condition, the slope is stable. Inasmuch as the geometry of their cross section is wrong, and therefore the boundary conditions for their models are incorrect, the models are meaningless and their conclusions are indefensible.

I hope this information is useful to you in your evaluation process. Please pass along this concern to K & A Geotechnical Engineering, Inc. so they can recalculate the slope stability probabilities using the more appropriate boundary conditions.

Sincerely,
Timothy A. Cross
303 885 8528 (mobile)
503 474 0322 (landline)


ANCIENT SLOPE MOVEMENT
RECENT SHALLOW FILL
OLD SCARP
STREET 25.5"
FC-1 / B-1
FC-3 / B-3
EDGE PAVEMENT
EXTENSION OF SILSTONE RIDGE
E. EDGE BEACH
A19
A18
A17
A16
A15
A14
A13
A12
FC-1
GW
A11, AH1
FCA10
A9
0
50'
100'
SCALE: 1" = 50'
EXIST. GROUND SURFCE
ASSUMED SURFACE OF SILTSTONE
GROUNDWATER
Nye Formation

Derrick Tokos

From: Elaine Karnes <karnese@peak.org>
Sent: Friday, July 20, 2018 11:21 AM
To: Derrick Tokos
Cc: Mona Linstromberg; Lee; Matt and Lisa Thomas; Rob & Teresa; Sean Malone; Phillip Johnson,Executive Director; Cameron La Follette; Janice Wickham; David Allen
Subject: 7-18-2018 Meeting notes
Attachments: Map Geotechnical Report NW Spring St 06 29 18-1.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Hi Derrick,

Thank you for meeting with Mona and me on Wednesday (July 18, 2018) and answering our many questions. Also thanks for getting copies for us of the K&D Conceptual Site Plan, a list of Oregon geologists, K&A Geo-technical Report (dated June 29, 2018) and correspondence from you to Mr. Lund reviewing his Geologic Engineering Report for Spring Street Properties. We did not get a copy of the form to appeal the geologic report. Is that available online or can you email that to us?

I am including a list of some of the issues we discussed, so that you can correct any misunderstanding.

1. Geologic Hazard Permits are frequently approved by your office, including those in active slide areas. However, since 2010 you are not aware of any approved permits that were appealed (and only infrequently before then). Your office has a log of geologic permits that can be viewed by the public.

2. In order to appeal an approved geologic permit, the appellant must provide a report from another geologist, pointing out errors and areas of concern in the original (approved) report.

3. The K&D Site Plan (attached) is presented without the vacation of the County road right-of-way. The 57% lot coverage (structure limitation allowed by City Code) would be the tax lot size less the 60 foot wide right-of-way.

4. Your office requires no additional permits before the removal of trees as shown on the Site Plan (10" or greater circumference).

5. The Site Plan includes some clearing of vegetation and soil within the 25 foot prescribed setback from the City-owned Outstanding Natural Area (ie., the area adjoining the western boundary of Lund's lots 1900 and 1903).

6. The Site Plan includes the construction of numerous retaining walls and driveways on the County right-of-way.

7. The Site Plan includes two duplex units and one single family home.

8. Once the appeal process is completed - and should the original permit prevail - only a city "grading permit" is required before further bulldozing is allowed at the property.

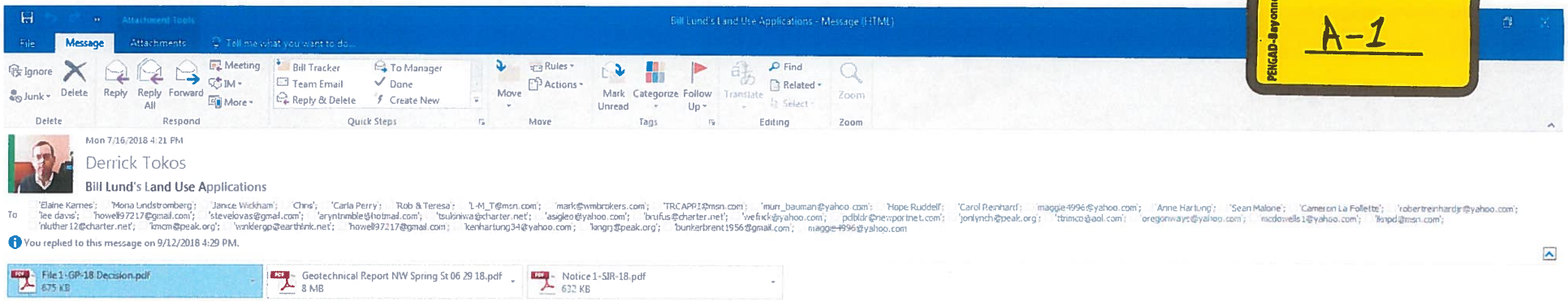
9. Any "Shoreline Impact Permit" testimony must be presented in writing prior to 5:00 P.M. July 31, 2018 to Derrick Tokos. You will make the administrative decision based on compliance with Newport's Comprehensive Plan (available on the City's web site). This is in addition to the Geologic Permit, which you have already approved (but which we can appeal by July 31, 2018).

10. Lund is currently working with Lincoln County officials on a petition to vacate the County right-of-way. The earliest the vacation process could commence before Lincoln County Commissioners is August 1, 2018.

11. If Lund's geologic report is appealed, the matter would go to the Planning Committee, with the Committee's recommendation subject to a public hearing before the City Council.

Again, thank you for all you time and attention to this issue.

Sincerely, Elaine Karnes



Mon 7/16/2018 4:21 PM

Derrick Tokos

Bill Lund's Land Use Applications

To 'Elaine Karnes'; 'Mona Lindstromberg'; 'Janice Wickham'; 'Chris'; 'Carla Perry'; 'Rob & Teresa'; 'L-M_T@msn.com'; 'mark@wmbrokers.com'; 'TRCAPPI@msn.com'; 'mum_bauman@yahoo.com'; 'Hope Ruddell'; 'Carol Reinhard'; maggie4996@yahoo.com; 'Anne Hartung'; 'Sean Malone'; 'Cameron La Follette'; 'robertreinhardjr@yahoo.com'; 'lee davis'; 'howell97217@gmail.com'; 'stevelovas@gmail.com'; 'aryntrimble@hotmail.com'; 'tsulsniwa@charter.net'; 'asigleo@yahoo.com'; 'brufus@charter.net'; 'wefrick@yahoo.com'; pdbldr@newportnet.com; 'jonlynch@peak.org'; 'tbrimco@aol.com'; oregonways@yahoo.com; 'mcdowells1@yahoo.com'; 'lknpd@msn.com'; 'nluther12@charter.net'; 'kmcm@peak.org'; 'wwildergp@earthlink.net'; 'howell97217@gmail.com'; 'kenhartung34@yahoo.com'; 'langrj@peak.org'; 'bunkerbrent1956@gmail.com'; maggie4996@yahoo.com

You replied to this message on 9/12/2018 4:29 PM.

File 1-GP-18 Decision.pdf 675 KB | Geotechnical Report NW Spring St 06 29 18.pdf 8 MB | Notice 1-SJR-18.pdf 622 KB

Good afternoon,

Attached is notice of the City land use decision approving Mr. Lund's geologic permit application, along with a complete copy of the geologic report. The notice includes the date by which an appeal would need to be filed.

Also, enclosed is a notice of a land use application that Mr. Lund submitted for a Shoreland Resources Impact Review. Unlike the geologic permit, a Shoreland Review includes a two week comment period before a decision is rendered, and we welcome any comments you may have regarding the request.

Thank you,

Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

MEMO

City of Newport
Community Development Department

NEWPORT
OREGON

distributed via email

Date: July 16, 2018

To: Spencer Nebel, City Manager
Tim Gross, Public Works
Rob Murphy, Fire
Jason Malloy, Police
Mike Murzynsky, Finance
Jim Protiva, Parks & Rec.
Ted Smith, Library
Victor Mettle, Planner/Code Administrator
Joseph Lease, Building Official
Public Utilities

From: Sherri Marineau, Executive Assistant

RE: Geologic Permit # 1-GP-18

Attached is a public notice concerning a land use request. The notice contains a brief explanation of the request, a property description and map, and a deadline for comments. Please review this information to see if you would like to make any comments.

We must have your comments prior to the last day of the comment period in order for your comments to be considered. **Should no response be received, a "no comment" response will be assumed.**

sm

Attachment

AGATE BEACH CONSTRUCTION INC
PO BOX 39
SEAL ROCK, OR 97376

ANDERSON LONNA
PO BOX 6432
MIRAMAR BEACH, FL 32550

BEWLEY LAURA SUE
393 NW CRESWELL LN
ALBANY, OR 97321

CITY OF NEWPORT
CITY MANAGER
169 SW COAST HWY
NEWPORT, OR 97365

COLE RONALD SCOTT TRUSTEE
9127 NW HERON ST
SEAL ROCK, OR 97376

EARLE ROBERT M &
AMEN TERESA D
3684 FELTON ST S
SALEM, OR 97302

FAHRENDORF JOSEPH B TSTEE &
FAHRENDORF JANET M TSTEE
1143 MANOR DR
SONOMA, CA 95476

FRANK BROTHERS IMPLEMENT CO
ADDRESS; UNKNOWN,

GAUVIN JEFFREY M
1409 NW SPRING ST
NEWPORT, OR 97365

HOFER VANDEHEY ROBERTA
20481 WINLOCK LN
FOSSIL, OR 97830

LINSTROMBERG PAT JOAN TTEE
ATTN LESLIE HOGAN
931 WASHINGTON SW
ALBANY, OR 97321

MARTIN ELENA KAY
1405 NW THOMPSON ST
NEWPORT, OR 97365

MOSSBARGER JOHN T &
MOSSBARGER MARCIA L
PO BOX 1362
NEWPORT, OR 97365

NEFF ROY S III
32655 GLAISYER HILL RD
COTTAGE GROVE, OR 97424

ORANGE LINDA J &
HUFFMAN ARDIS L
1420 NW SPRING ST
NEWPORT, OR 97365

PERKINS CAROL J
1417 NW THOMPSON ST
NEWPORT, OR 97365

POPE MAX A & ROBERTA I
PO BOX 86
NEWPORT, OR 97365

SOTILLE MATT &
SOTILLE KAREN
3574 SE GRANT ST
PORTLAND, OR 97214

STARK NEAL E TRUSTEE
5034 SW VERMONT ST
PORTLAND, OR 97219

STOROZHENKO OLENA
169 SE VIEW DR
NEWPORT, OR 97365

WHALES SPOUT CONDOMINIUM
HOMEOWNERS ASSOCIATION
370 SW COLUMBIA
BEND, OR 97702

WILLETT CONRAD J &
GAIL E
1426 NW SPRING ST
NEWPORT, OR 97365

Exhibit "A"
Adjacent Property Owners Within 200 Ft

File No. 1-GP-18

NW Natural
ATTN: Dave Sanders
1405 SW Hwy 101
Lincoln City, OR 97367

Charter Communications
ATTN: Keith Kaminski
355 NE 1st St
Newport OR 97365

Oregon Division of State Lands
775 Summer St NE
Salem OR 97310-1337

Central Lincoln PUD
ATTN: Randy Grove
PO Box 1126
Newport OR 97365

CenturyLink
ATTN: Corky Fallin
740 State St
Salem OR 97301

EMAIL
odotr2planmgr@odot.state.or.us

Email: Patrick Wingard
DLCD Coastal Services Center
patrick.wingard@state.or.us

Joseph Lease
Building Official

Rob Murphy
Fire Chief

Tim Gross
Public Works

Victor Mettle
Code Administrator/Planner

Jason Malloy
Police Chief

Mike Murzynsky
Finance Director

Ted Smith
Library

Jim Protiva
Parks & Rec

Spencer Nebel
City Manager

EXHIBIT 'B'
(Affected Agencies)

Sherri Marineau

From: Sherri Marineau
Sent: Monday, July 16, 2018 3:26 PM
To: 'patrick.wingard@state.or.us'; 'odotr2planmgr@odot.state.or.us'
Subject: Geologic Permit # 1-GP-18
Attachments: File 1-GP-18 Decision.pdf

Attached is a notice concerning a land use request. The notice contains an explanation of the request, a property description and map, and a date for the public hearing. Please review this information to see if you would like to make any comments. We must receive comments prior to the last day of the comment period in order for them to be considered. **Should no response be received, a "no comment" will be assumed.**

Sherri Marineau
City of Newport
Community Development Department
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0629 fax: 541.574.0644
s.marineau@newportoregon.gov

Sherri Marineau

From: Sherri Marineau
Sent: Monday, July 16, 2018 3:25 PM
To: Derrick Tokos; Spencer Nebel; Tim Gross; Robert Murphy; Michael Murzynsky; Jim Protiva; Ted Smith; Victor Mettle; Joseph Lease; Jason Malloy
Subject: Geologic Permit # 1-GP-18
Attachments: City Dept & Utilities Notification 1-GP-18.pdf; File 1-GP-18 Decision.pdf

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Sherri Marineau
City of Newport
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169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0629 fax: 541.574.0644
s.marineau@newportoregon.gov

CITY OF NEWPORT
169 SW COAST HWY
NEWPORT, OREGON 97365

COAST GUARD CITY, USA

254

574.0629
574.0644
http://newportoregon.gov

mombetsu, japan, sister city

NOTICE OF DECISION[1]

July 16, 2018

The Newport Community Development (Planning) Department received an application for a Geologic Permit as described herein, that the Community Development Director has determined was prepared in accordance with the criteria for the issuance of a Geologic Permit contained in Chapter 14.21 of the Newport Municipal Code (NMC).

FILE NO: # 1-GP-18

APPLICANT & OWNER: Bill Lund, P.O. Box 22, Seal Rock, Oregon 97376

LOCATION: West of NW Spring St (Lincoln County Assessor's Tax Map 11-11-05-BC, Tax Lots 1800, 1900 & 1903).

ACTION: Pursuant to NMC Section 14.21.030, all persons proposing development, construction, or site clearing within a known geologic hazard area shall obtain a Geologic Permit. The applicant applied for a Geologic Permit to establish three home sites on the property noted above. The application included a Geotechnical Engineering Report and Geologic Hazards Assessment dated June 29, 2018, prepared by Michael Remboldt, P.E., G.E. and Gary C. Sandstrom, C.E.G. and R.P.G (hereinafter collectively referred to as "Geologic Report"). The application materials, including the Geologic Report, are available for inspection or copies may be purchased at the Newport Community Development (Planning) Department.

CONDITIONS:

1. It shall be the responsibility of the property owner to adhere to the recommendations listed in the Geologic Report. Geologic Reports are only valid for the development plan addressed in the report.

2. Certification of compliance is required prior to final approval. NMC 14.21.130 states that no development requiring a Geologic Report shall receive final approval (e.g. certificate of occupancy, final inspection, etc.) until the city receives a written statement by a certified engineering geologist indicating that all performance, mitigation, and monitoring measures contained in the report have been satisfied. If mitigation measures involve engineering solutions prepared by a licensed professional engineer, then the city must also receive an additional written statement of compliance by the design engineer.

[1] The following are being notified of this action: (1) affected property owners within 200 feet of the subject property (according to Lincoln County Tax Records); (2) affected public/private utilities within Lincoln County; (3) affected city departments; (4) affected state agencies.

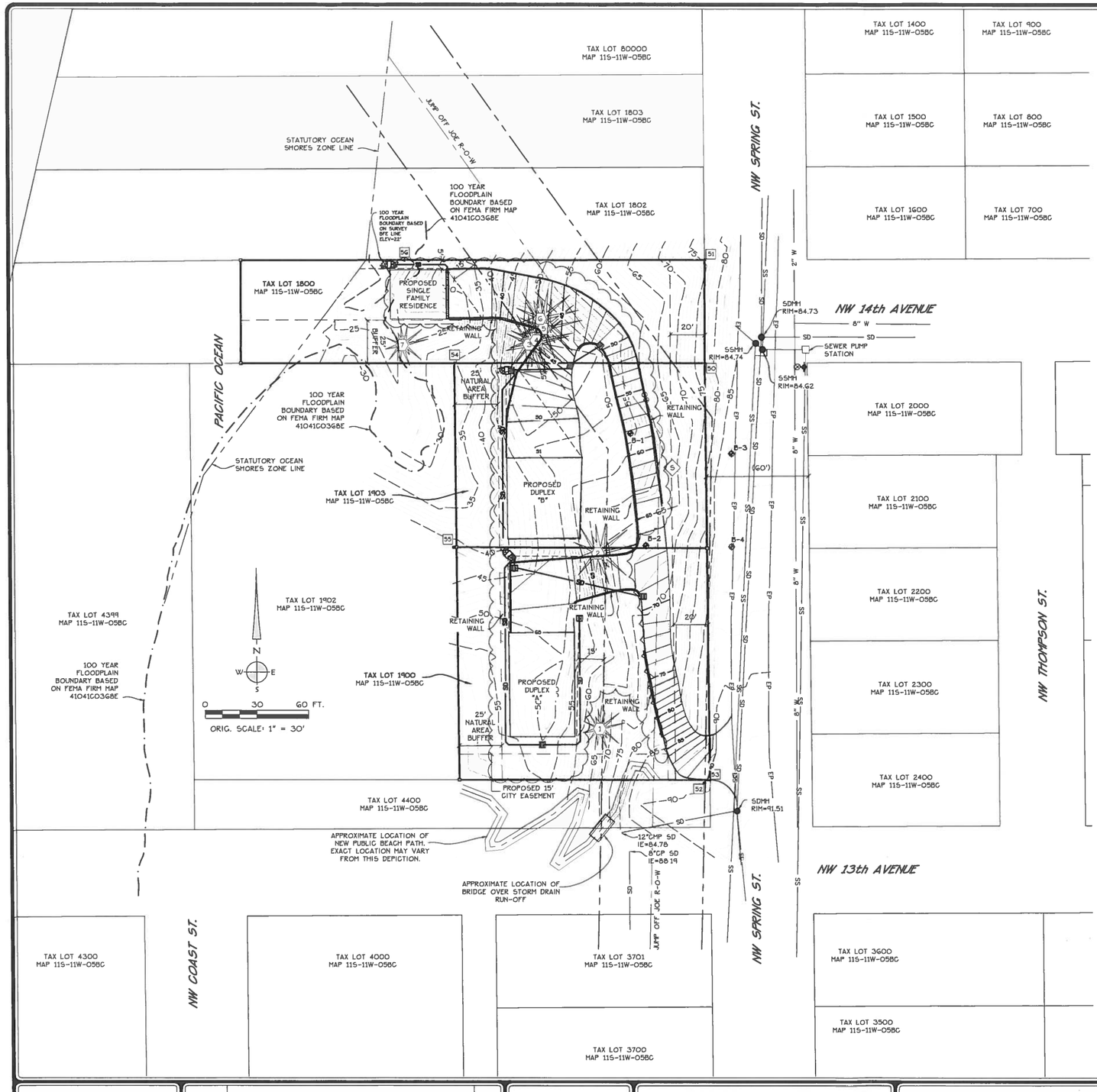
3. An on-site storm drainage system shall be designed and constructed to control the release rate and sedimentation of storm run-off from all impervious surfaces for storms having a 20-year reoccurrence frequency. The property owner shall obtain City Engineer approval of the drainage system, and associated retention facilities, prior to issuance of a building permit (NMC 14.21.100).

4. The new public beach path, and 15-foot city easement partially encumbered by the path, depicted on the July 2, 2018 conceptual site plan prepared by K & D Engineering, Inc. (attached), is not a part of the Geologic Permit. This same site plan is included in a proposal the property owner is making to Lincoln County to construct the trail in exchange for the vacation of an undeveloped portion of Jump-off Joe road right-of-way. A separate Geologic Permit may be required for earthwork attributed to the trail.

THIS DECISION MAY BE APPEALED TO THE NEWPORT PLANNING COMMISSION WITHIN 15 CALENDAR DAYS (by Tuesday, July 31, 2018) OF THE DATE THIS NOTICE WAS MAILED. Contact the Community Development Department, Newport City Hall, 169 SW Coast Hwy, Newport, Oregon 97365 (541-574-0629) for information on appeal procedures. Appellant's challenging substantive elements of a Geologic Report must submit their own analysis, prepared by a certified engineering geologist, within 30-days of the date the appeal is filed.

Sincerely,

Derrick I. Tokos, AICP
Community Development Director



CONCEPTUAL SITE PLAN
FOR
WILLIAM LUND
LOCATED IN
A PORTION OF LOT 1, AND LOTS 2, 3, 4, + 5 OF BLOCK 37 OF OCEAN VIEW SUBDIVISION AND A PORTION OF VACATED NW 14th AVENUE
IN THE
CITY OF NEWPORT, LINCOLN COUNTY, OREGON
MAY 22, 2018

FOUND MONUMENT LIST:

- [50] FOUND 5/8" I.R. (A) W/YPC STAMPED "DENISON SURVEYING, NEWPORT, OR"
- [51] FOUND 5/8" I.R. (B) W/YPC STAMPED "DENISON SURVEYING, NEWPORT, OR"
- [52] FOUND 1/2" I.R. (X) BENT, TIED SPIN HOLE
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RECORD REFERENCE LIST:

- (A) C.S. 17709
- (B) C.S. 13472
- (X) SURVEY UNKNOWN

LEGEND:

- ● FOUND MONUMENT, AS NOTED; SEE "FOUND MONUMENT LIST"
- ⊡ CALCULATED POINT FROM RECORD DATA
- ( ) RECORD DATA PER C.S. 17709 UNLESS NOTED; SEE "RECORD REFERENCE LIST"
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- I.P. IRON PIPE (INSIDE DIAMETER)
- YPC YELLOW PLASTIC CAP
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- JUMP OF JOE R-O-W
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- EASEMENT / BUFFER LINE
- STORM DRAIN ENERGY DISSIPATER AND LEVEL SPREADER FOR 20 YEAR RAIN EVENT

EARTHWORK VOLUME TABLE:

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1800	434 CY CUT 0 CY FILL	0 CY CUT 167 CY FILL
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FINISHED GRADE TO EXISTING GRADE EXCLUDING BUILDING FOOTPRINT

APPLICANT / ADDRESS:

WILLIAM LUND
P.O. BOX 22
SEAL ROCK, OR 97376

SURVEYOR / ENGINEER:

K+D ENGINEERING INC.
276 HICKORY ST. NW
ALBANY, OR 97321
541-928-2583

GEOTECHNICAL ENGINEER:

K+A ENGINEERING INC.
91051 S. WILLAMETTE ST.
COBURG, OR 97408
541-684-9399

PROPERTY INFORMATION:

TAX LOT 1800: (MAP 115-11W-05BC)
- LOT AREA: 13181±
- SITE ADDRESS: UNASSIGNED
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MINIMUM LOT AREA:
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BASE FLOOD ELEVATION = 22.00', ZONE "VE"
PER FEMA FIRM MAP 41041C0368E PRELIMINARY DATED 8-5-2016

VERTICAL CONTROL:

VERTICAL CONTROL IS BASED ON BENCHMARK QE1439 A STAINLESS STEEL ROD. ELEVATION = 153.21 FEET
DATUM = NAVD 88

VEGETATION NOTES:

A PORTION OF THE SITE LOCATED IN THE DRIVEWAY WAS PREVIOUSLY CLEARED. THE REMAINDER OF THE SITE IS COVERED WITH BRUSH AND TREES AS LISTED BELOW.

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Date: 7/2/2018 Time: 11:35
Scale: 1=1(F5)
File: dwg\2017\17-179\17-179_topo.dwg (George)

DATE	REVISIONS	BY

K & D ENGINEERING, INC.
276 N.W. HICKORY STREET
P.O. BOX 725
ALBANY, OREGON 97321
(541) 928-2583

CONCEPTUAL SITE PLAN
SPRING STREET, NEWPORT
CITY OF NEWPORT, LINCOLN COUNTY, OREGON

GEOTECHNICAL REPORT

HORZ. SCALE:	1" = 30'
VERT. SCALE:	
SIGN DATE:	5-23-2018
DSGN BY:	GMB
DRWN BY:	GSG
CHCK BY:	GMB
PROJECT No.:	17-179

SHEET No. 1 OF 1

Derrick Tokos

From: michael@kaengineers.com
Sent: Friday, July 06, 2018 9:39 AM
To: Derrick Tokos; 'Bill Lund'
Subject: Geotechnical Report - NW Spring St. Newport
Attachments: Geotechnical Report NW Spring St 06 29 18.pdf

Derrick and Bill,
Attached is what, I believe, is the latest revision for our report which addresses Derrick's review comments.

I apologize for the inconvenience. The report is so big that, with the many questions and revisions, it is obviously too easy for me to send the wrong version. To hopefully aid in this, I have taken the time to re—date all the pages to June 29th, which is when I finished this revision.

Please call me if you have any questions.

Mike

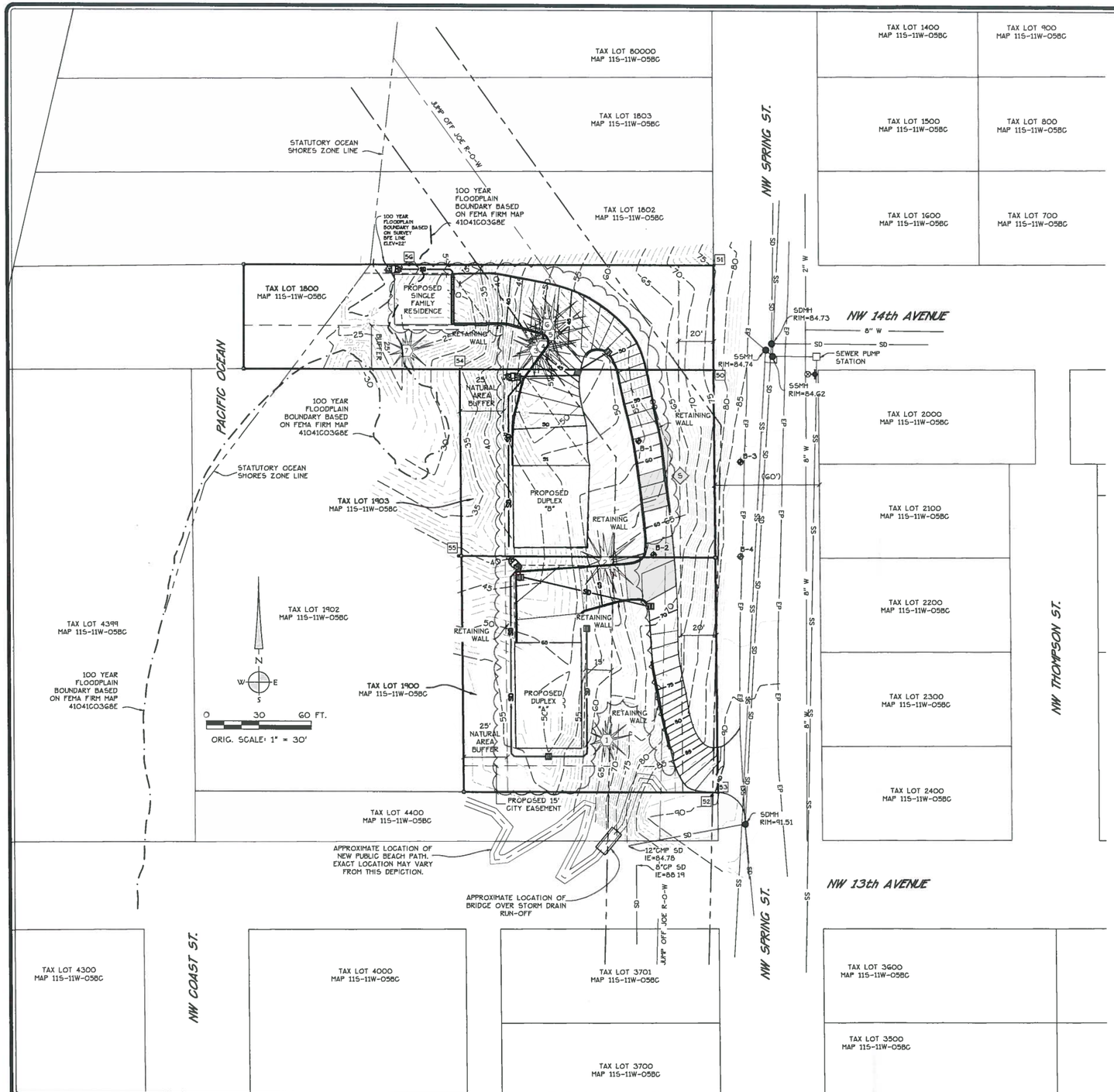
Michael Remboldt, P.E., G.E.

k·a engineering

K & A Engineering, Inc.
P. O. Box 8486
91051 S. Willamette St.
Coburg, OR 97408
541-684-9399
kaengineers.com

EXHIBIT A-5

PENGAD-Bayonne, N. J.



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APPLICANT / ADDRESS:

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276 N.W. HICKORY STREET
P.O. BOX 725
ALBANY, OREGON 97321
(541) 928-2583

CONCEPTUAL SITE PLAN
SPRING STREET, NEWPORT
CITY OF NEWPORT, LINCOLN COUNTY, OREGON

GEOTECHNICAL REPORT

HORZ. SCALE:	1" = 30'
VERT. SCALE:	
SIGN DATE:	5-23-2018
DSGN BY:	GMB
DRWN BY:	GSG
CHCK BY:	GMB
PROJECT No.:	17-179

SHEET No. 1 OF 1

Geotechnical Engineering Report

and

Geologic Hazard Assessment

Tax Lots 1800, 1900, 1903; Tax Map 11-11-05-BC;
NW Spring St., Newport, Oregon

Project: 17056
June 29, 2018

Prepared for:

Bill Lund
P. O. Box 22
Seal Rock, OR 97376

Prepared by:

Michael Remboldt, P.E., G.E.
Gary C. Sandstrom, C.E.G., R.P.G.
K & A Engineering, Inc.
Coburg, Oregon

K & A Engineering, Inc.
541·684·9399 · Kaengineers.com
Established 1998

k·a engineering

K & A Engineering, Inc.
91051 S. Willamette Street
P. O. Box 8486, Coburg, OR 97408
(541) 684-9399 Voice
(541) 684-9358 FAX
kaengineers.com

June 29, 2018 **Project: 17056**

Bill Lund
P. O. Box 22
Seal Rock, OR 97376

Subject: Geotechnical Site Investigation and Report and Geologic Hazard Assessment
Proposed Residential Development
Tax Lots 1800, 1900, 1903; Tax Map 11-11-05-BC;
NW Spring St., Newport, Oregon

K & A Engineering, Inc. is pleased to present our Geotechnical Engineering Report for the subject development.

Our Services were completed in accordance with our Contract for Engineering Services, dated October 20, 2017 and meet the requirements of 2014 Oregon Structural Specialty Code, Section 1803, Geotechnical Investigations. Our report:

- Presents a summary of the existing subsurface conditions at the subject project site,
- Provides a detailed Geologic Hazard Assessment,
- Identifies and characterizes geologic hazards, and
- Presents recommendations for the design and construction of foundation support for the proposed single-family residences.

Thank you for the opportunity to be involved with your project. Please call us if you have any questions.

GEOTECHNICAL REGISTERED PROFESSIONAL ENGINEER 19,474 OREGON SEPTEMBER 16, 1997 MICHAEL DENNIS REMBOLDT

EXPIRES: DECEMBER 31, 2018

Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.

CERTIFIED OREGON GARY C SANDSTROM E1452 ENGINEERING GEOLOGIST

Gary C. Sandstrom, C.E.G.
Gary C. Sandstrom, Geologist, LLC

Geotechnical Engineering Report

Geotechnical Site Investigation

Tax Lots 1800, 1900, 1903; Tax Map 11-11-05-BC; NW Spring St., Newport, Oregon

June 29, 2018

1 TABLE OF CONTENTS

Executive Summary

We have carefully evaluated the project site and your current proposal for development, which addresses an existing city road right-of-way that was discovered after we embarked on our site investigation. To address the existence of the road right-of-way, you have secured the services of a licensed civil engineer (K & D Engineering, Inc.) to delineate development features including:

- Location of the discovered road right-of-way ("Jump Off Joe Road"),
- Building pad locations,
- Access driveways,
- Retaining walls (approximate locations),
- Grades for driveway and building pads, and
- Pertinent hazard zones such as the 100-year flood zone and elevation.

Our original investigation was designed and executed prior to having knowledge of the existence of the "Jump Off Joe" right-of-way. This discovery forced relocation of the residence and duplex buildings to the west side of this right-of-way and requires driveway access for all three sites from the south end of the project site at NW Spring Street. This is shown in the "Conceptual Site Plan" attached to Appendix A of this report.

In the event of vacation of the "Jump Off Joe" right-of-way, our understanding is that the project site would be developed as originally intended such that:

- The size and nature of the development will remain essentially the same as shown on the Conceptual Site Plan for this report (Appendix A) with the exception that
- Some minor adjustments *may* be made for foundation pad location to accommodate access directly from driveway to the east side of the structures, rather than constructing individual driveways that provide access to the north side of the structures (as is currently shown on the grading plan in Appendix A).

Regardless of which site condition is determined and approved (i.e. with or without vacation of the right-of-way), we have determined that the site can be developed as proposed (either alternative) into individual home sites that provide the stability and safety normally expected for this use, provided that the recommendations in this report are implemented in design and construction.

Hazards that exist at the site include:

- Likely lateral movement during the extreme Cascadian subduction zone earthquake. This is evidenced by historic landslide activity including scarps, landslide debris, and uneven ground surface.
- Very high expected peak ground acceleration from the design earthquake.
- Undocumented fills and soft buried landslide debris which constitute hazards of differential foundation settlement.
- Loose, poorly-graded sandy soils on the ground surface which, if left un-vegetated, could result in a severe surface erosion hazard.

To mitigate these hazards and ensure reasonable reliability and safety to the development, occupants, and the surrounding infrastructure, we have made recommendations including:

- Support of all structures on deep foundation elements including battered piles to resist lateral earthquake loads and minimize the hazard of lateral spreading,
- Limitations on earthwork including no permanent unsupported fill embankments,
- Grading to encourage positive sheet-flow storm runoff,
- A 20-foot wide "no-build" zone extending west from the east property boundary,
- Gravity retaining wall systems including:
  - Support of fills required for access driveway and parking areas,
  - Support of cut embankment on the east side of the driveway,
- Vegetation of all disturbed areas to minimize surface erosion and improve soil strength and slope stability.

1 INTRODUCTION

This report documents our geotechnical investigation of site conditions that exist on tax lots 1900 and 1903 located on the west side of NW Spring Street just north of NW 13th Street in Newport, Oregon.

The purpose of our investigation included:

- Characterization of surface and subsurface soil, rock, and groundwater conditions,
- Evaluating current slope stability,
- Delineating geologic hazards, and
- Development of recommendations for suitable development of the properties for single-family residences.

The scope of our services included:

- Fieldwork to characterize subsurface conditions,
- Analysis of field data,
- Evaluation and determination of the nature of slope stability.
- Development of geotechnical design and construction criteria, and
- This written Geotechnical Engineering Report.

Our services meet the requirements of the 2014 Oregon Structural Specialty Code, Section 1803 – Geotechnical Investigations.

2 INVESTIGATION AND FINDINGS

2.1 SITE LOCATION

The project site, consisting essentially of tax lots 1900, 1903, and the east half of tax lot 1800, has a combined area of approximately 0.95-acres. The project site is located between the west edge of NW Spring Street and east shore/coast of the Pacific Ocean (west coast of the USA), just north of NW 13th Street. See the attached Vicinity Map.

2.2 SURFACE CONDITIONS

The project site generally consists of a west-facing slope descending from the east edge of the roadway (NW Spring Street) to the ocean beaches. The vegetation line at the east edge of the beach is approximately 250-feet west of the roadway, while the study area extends approximately 125-feet west of the roadway. See the attached Geotechnical Site Plan.

We surveyed a field-developed cross section across the study area to characterize general ground surface gradients and tie the ground surface shape with underlying soil and rock profiles. The site consists, generally, of three zones:

- Zone 1: Upper terrace containing the roadway (NW Spring Street) and the steep (approximately 1H : 1V) embankment descending down from the west edge of the roadway;
- Zone 2: A rolling mid-slope area extending from the toe of the steep embankment along the west edge of the roadway to a terminal siltstone ridge bordering the east edge of the beach. Slope gradients in this zone range from approximately 0 to 35-percent.
- Zone 3: Terminal area centered on a siltstone rock exposure bordering the east edge of the beach. The siltstone has a shallow cap of dune sand in some areas on the north end.

Dense-vegetation, consisting of native trees, understory shrubs, grasses, and non-native blackberry covers the ground surface of zones 1 and 2 of the study area.

Aside from erosion due to disturbance on the few foot-trails that exist on the site, there is little evidence of on-going severe surface erosion or mass slope movement. We did not observe indications of slope movement in the roadway such as cracks with differential movement.

In general, with the exception of some shallow subsidence of utility boxes on the east side of the road, it appears that the site is relatively stable in its current condition.

2.3 SUBSURFACE SOIL CONDITIONS

2.3.1 Methods of Investigation

We investigated subsurface soil conditions by making four (4) probes[1] (FC-1 through FC-4) and two (2) continuous sample boring[2] (B-1 and B-3) using our track-mounted geotechnical drill. Additionally, shallow borings were made using a 3.5-inch hand-auger to verify shallow soil conditions (HA-1 through HA-3, AH-2).

See the attached Geotechnical Site Plan for approximate locations of these probes and borings.

Graphic logs of the probes and borings are attached to this report. The approximate location of the probes and borings are shown on the attached Site Plan.

2.3.2 Zone 1

Subsurface Conditions on the upper terrace, Zone 1, generally consist of:

- 3-ft of loose and moderately dense, sand and gravel road FILL, over
- 1-ft of organic sandy-SILT (native topsoil), over
- 20-ft of light brown/tan/white, moderately dense, lightly-cemented, silts and sands (Marine Terrace Deposits), over
- Very stiff to hard, dark brown to gray, SILTSTONE (Nye Formation).

The cemented marine terrace deposits can be seen in isolated areas through breaks in the vegetation on the steep embankment descending from the roadway.

Groundwater was observed approximately 21-feet below the roadway surface.

2.3.3 Zone 2

For the mid-slope area, Zone 2, there are two distinct areas:

- Zone 2 North (generally tax lots 1903 and 1800) and
- Zone 2 South (generally tax lot 1900)

The north portion of Zone 2 contains includes landslide debris extending to depths as much as approximately 16-feet below the ground surface. The south portion does not exhibit similar landslide debris and bedrock is much shallower.

2.3.3.1 Zone 2 North

Subsurface condition on Zone 2 North, in the area investigated, consist of approximately:

- 5 to 6-ft of light brown/tan, loose, poorly-graded (dune) sands and sandy-FILL (we found glass and other fill debris), over

[1] A 3.55-in^2 cone is pushed into the soil using a 140-lb. hammer falling 30-in. The energy required to advance the cone is recorded in the field as the number of blows per 6-inches of penetration. Soil friction on the side of the cone is measured using a torque wrench. Calculated cone tip pressure is used to estimate soil engineering

[2] 1.5-inch diameter x 4-foot continuous samples obtained using a G7 2-3/8" direct push dual tube system manufactured by AMS, Inc.

- 10 to 12-feet of dark brown/black/tan, soft/loose, jumbled mixtures of sands, silts, clay, and gravelly-clay, over
- Very stiff to hard, dark brown to gray, SILTSTONE (Nye Formation).

Groundwater was observed (FC-1, B-1) at a depth of approximately 6.8-feet below the existing ground surface.

2.3.3.2 Zone 2 South

Subsurface conditions in this zone, in the areas investigated, consist of approximately:

- 1-ft of brown/tan, loose, organic-laden, SAND (topsoil), over
- 2 to 4-ft of white/gray with some orange staining, loose to moderately dense, poorly-graded SAND with trace of silt - Interpreted as weathered/decomposed Marine Terrace Deposits; over
- Very stiff to hard, dark brown to gray, SILTSTONE (Nye Formation).

Groundwater was observed (FC-3) at a depth of approximately 6.0-feet below the existing ground surface.

2.4 Local Geology

2.4.1 Geologic Setting

Surficial geology of the site is mapped in the geologic literature as consisting of Quaternary (less than 2.8 million years before present) Marine Terrace deposits overlying early Miocene (16.5-23.0 million years before present) Nye Mudstone[3].

The Marine Terrace deposits are variously described as consisting of:

- Semi-consolidated uplifted beach sand overlain locally by fine-grained dune deposits with occasional localized gravel lenses[4],
- Unconsolidated to moderately consolidated gravel, beach and dune sand; locally containing minor consolidated clay-rich paleosols, colluvium, debris flows, and alluvial interbeds; to thin-bedded sandstone, conglomerate and tuffaceous siltstone with thick glauconitic sandstone beds[5].

Nye Mudstone underlies the Marine Terrace deposits in much of the site vicinity. Nye Mudstone deposits are described as massive to thick-bedded, gray, clayey marine siltstone with sandstone interbeds, including calcareous concretions in places.

Middle Miocene (10.4-16.5 million years old) Astoria Formation deposits are mapped overlying the Nye Mudstone a short distance to the south and in the wave zone west of the site.

[3]See DOGAMI Bulletin 81-3, OFR-O-04-09, USGS-OF-72-352-1 and USGS I-867.
[4] DOGAMI Bulletin B-81-3
[5] DOGAM Open-file report O-04-09

Nye Mudstone bedding has been mapped in the vicinity to dip, generally, 11 to 15 degrees to the west/southwest and Astoria Formation deposits are mapped at 23 degrees to the west a few hundred feet to the south at "Jumpoff-Joe."

Our probes and borings confirm these two mapped geologic units – lightly cemented gravel and sand terraces overlying sedimentary mudstone – and the sloped surface of siltstone.

H.G. Schlicker investigated geologic conditions at the project site and wrote a report in 1991. Schlicker recommended:

- The old landslide area on the site is relatively stable, and
- A geotechnical investigation to confirm subsurface conditions.

This report summarizes our geotechnical investigation and verifies Schlicker's conclusions. A copy of the Schlicker report is attached in Appendix E.

3 Recommendations for Design and Construction

3.1 Geologic Hazards

3.1.1 General Discussion

The project site is located within a coastal environment that is documented to have active erosional processes at work on a continuous or intermittent basis. These processes include:

- Wave action which causes erosion of the toe of slopes ascending from beaches, eventually resulting in slope instability,
- Mass slope movement. These are more often the result of erosion but can also be caused by earthquake ground motion,
- Tsunami, and
- Surface erosion from concentrated surface runoff.

Other hazards typical for coastal geology include faulting, liquefaction, and lateral spreading.

We have developed a detailed geologic hazard assessment for the project site. The complete geologic hazard assessment report, by Gary C. Sandstrom, certified engineering geologist, is attached to this report, Appendix D.

3.1.2 Slope Movement

The project site is well within the area of high coastal erosion hazard and existing land sliding identified by the Oregon Department of Geology and Minerals Industries (DOGAMI)[6]. The project site is within the influence of the large "Jump-off Joe" landslide complex - a rather large, linear slide zone. See Figure 1. This landslide complex consists of numerous individual slope movements that likely occurred

[6] Open-file report O-04-09 and on-line geologic hazard viewer published by the Oregon Department of Geology and Minerals Industries (DOGAMI), HazVue. See http://www.oregongeology.org/hazvu/

individually over long periods of time – thus the overlapping appearance. Slope movement in the area including the project site is believed to be Quaternary in age (sometime in the last 2.8 million years).

Severe slope movement, associated with this general feature, has been observed south of the intersection of NW Spring Street and NW 12th Street at the northwest side of existing condominiums.

Evidence of old slope movement on the site include:

- The steep embankment descending from the roadway (transition between Zone 1 and 2). This is an upper scarp to the old slope movement(s), having a mean slope gradient estimated to be approximately 1H : 1V (based on our field observations). There are areas of near-vertical faces in this scarp area. In the south half of tax lot 1900, we see evidence of an isolated block of marine terrace deposit that has moved away from the main scarp;
- Uneven ground surface (Zone 2); and
- Finding of jumbled, mixed soil debris in Zone 2 North subsurface soils.

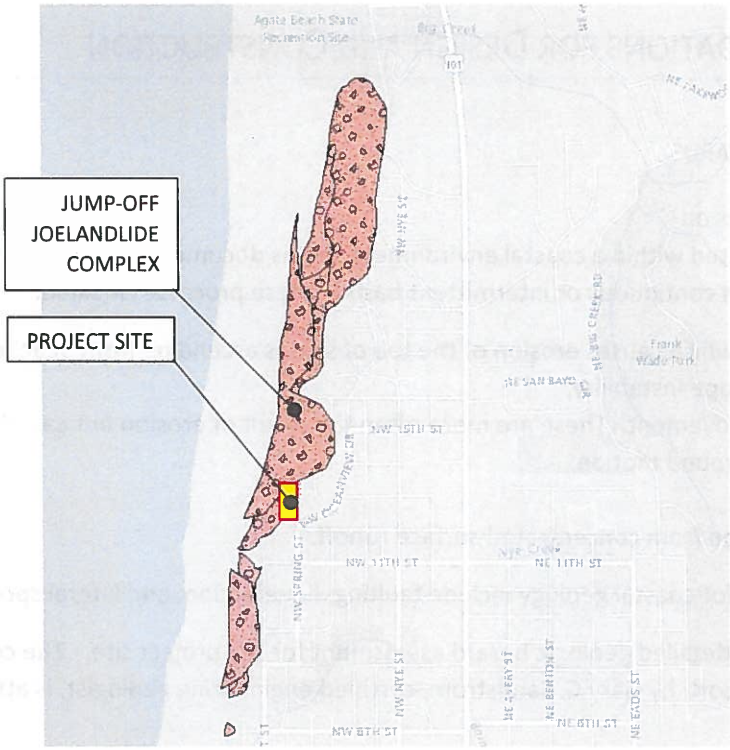

Figure 1 - HazVu Mapping of Jump-off Joe Landslide Area

Our field-developed cross section across tax lot 1903 indicates the overall concave shape of the ground surface due to the historic slope movement. See the attached drawing Field Developed Cross Section.

We have modeled slope stability using common methods of limit equilibrium analysis.[7] Limit equilibrium assesses stability based on a "factor of safety" (FOS) – the ratio of forces resisting movement to forces driving movement. Our modeling included:

- Ground surface boundaries defined by our field-developed cross section,
- Subsurface boundaries and material properties estimated from our probes and borings,
- Groundwater levels estimated from the probes and borings,
- Earthquake peak ground acceleration based on deaggregation of earthquake ground motion data.[8]

In the current static condition, the site is stable, with minimum FOS in the range of 1.4 to 1.6. This FOS is within the generally-acceptable limits for development.

In the event of the (extreme) Cascadian subduction-zone earthquake (475-year recurrence), peak ground accelerations are expected to exceed 30% of gravity, and our estimates of FOS for this condition are either slightly above or slightly below 1.0, depending on modeling method and estimates of groundwater and soil shear strength. We believe that there will be some lateral movement with this magnitude of earthquake ground motion.

Graphic summaries of our analysis are attached in Appendix C to this report.

3.1.3 Beach Regression

DOGAMI has estimated a general beach regression of in the approximate range of 0.3 to 0.4-feet/year in this area. This is an overall estimate for screening purposes and is not meant to be site-specific. For this site, we believe that long-term regression may be less than this range due to several mitigating features specific to the project site:

- The protection of the toe of the Zone 2 slope by the terminal siltstone exposure found at the east edge of the beach area,
- Overall low-gradients of the ground in the Zone 2 area, and
- High densities of existing vegetation in Zones 2 and 1.

3.1.4 Design Earthquake

The design earthquake was determined using criteria including an event having a 10-percent chance, or higher, of occurring within a 50-year period. Based on analysis using current modeling of local sources of earthquake ground motion (crustal, deep, and subduction zone)[9], the design earthquake has a (modal) magnitude of 9.08 with a peak ground acceleration of 0.32g.[10] A summary of the Deaggregation analysis is attached to this report in Appendix D.

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[7] We use proprietary software SLIDE, published by Roc Science, http://www.rocscience.com

[8] U.S. Geological Survey – Earthquake Hazards Program. https://earthquake.usgs.gov/hazards/interactive/

[9] 2014 Dynamic Conterminous NSHMP PSHA interactive deaggregation analysis, on-line at the USGS Geologic Earthquake Hazards Program. https://earthquake.usgs.gov/hazards/interactive/

[10] The analysis was made for a Site Class of 760 m/s shear velocity (B/C Boundary). Bedrock is shallow, and our probes indicated very high equivalent SPT "N" which would put this at a relatively high shear wave velocity and, hence, a lower Site Class. For structural design, we have provided spectral design criteria based on Site Class D to ensure an expected level of conservatism for the project.

3.1.5 Faulting and Lateral Spreading

Mapping by the State of Oregon Department of Geology and Minerals Industries (DOGAMI) of geologic hazards indicates that there is an ENE-WSW trending active fault approximately 1.5 miles southeast of the subject site. Direct rupture at the project site from this fault is unlikely.

Minor lateral spreading (several feet or less) at the site due to strong earthquake ground motion is likely, based on our pseudo-static stability analysis using the expected peak ground acceleration of 0.32g.

3.1.6 Liquefaction

We found no evidence of loose, saturated clean sands in the area investigated and it is our opinion that risks due to earthquake-induced liquefaction and resulting subsidence are low for the project site.

3.1.7 Tsunami

The majority of the project site is situated above the statutory tsunami inundation line (at 30 feet elevation). The exception is the western margin of lot 1800 near the vegetation line at the beach) which is below the inundation line, but our understanding is that proposed homesites are above and essentially in-line with development proposed for the remaining project site.

DOGAMI's Tsunami Inundation Map includes inundation scenarios for earthquakes of several different magnitudes and indicates that a tsunami induced by a Cascadia Subduction Zone earthquake[11] could reach an elevation of approximately 80 feet, which would extend above NW Spring Street. However, the map shows only (4) earthquakes in the last 10,000-years that may have produced tsunamis large enough to reach the proposed residence locations.

In general, aside from the aftermath of a Cascadia Subduction Zone earthquake, the site meets current criteria for tsunami.

3.1.8 Expansive Soils

Subsurface soils at this site are not expansive.

3.1.9 Foundation Settlement

Undocumented fills could represent a minor hazard of excessive differential settlement. We found undocumented sandy fill that has been placed over a relatively large area of the central portion of the project site. This hazard can easily be mitigated by following our recommendations for Foundations in this report.

[11] A rupture of the entire length of the fault zone from the southern Oregon to northern Washington costs, resulting in sub-marine landsliding.

3.2 Seismic Design Criteria

For designing lateral bracing systems and other structural elements for earthquake ground motion, we recommend that design criteria be selected based on a site class "D – Stiff soil profile."[12] The recommended design spectral response acceleration parameters[13] are shown on Table 2.

Table 1- Recommended Seismic Design Parameters

Design Parameter	Design Value
S_{MS} (site class "D")	1.729
S_{M1} (site class "D")	1.148
S_{DS} (site class "D")	1.153
S_{D1} (site class "D")	0.765

3.3 Foundations

3.3.1 General Foundation Recommendations

We assume that this site will be developed to support one or more conventional single-family residences.

To mitigate hazards associated with:

- Slope movement,
- Differential settlement from underlying slide debris, loose sands, and undocumented fills, and
- Erosion of loose sands;

We are recommending that all permanent structures be supported on a foundation system consisting of reinforced concrete grade beams or isolated reinforced concrete pads supported by deep foundation elements.

Deep foundation elements should find support for all loads within underlying siltstone.

Helical piles or micropiles are the most economical and efficient deep foundation elements for this site. These systems can easily be installed through the overlying unconsolidated fill and slide debris and embedded into underlying load-bearing siltstone.

Micropiles have an advantage of very high individual allowable load capacity in compression and tens tension and can be battered to provide the necessary resistance to lateral loads. Helical piles offer reasonable individual load capacity but, due to expected limited embedment in siltstone, should not be relied upon for uplift.

Deep foundation elements shall extend into the underlying native siltstone.

Battered deep foundation elements should be designed to resist lateral earthquake loads and provide additional security against lateral spreading.

[12] Section 1613.3.2 of the 2014 Oregon Structural Specialty Code.
[13] http://earthquake.usgs.gov/designmaps/us/application.php?

3.3.2 Helical Pile Systems

The allowable design load capacity for helical piles shall be limited to 15-kips/square foot of helix bearing. We recommend use of single-helix helical piles with helix diameters in the range of 8 to 12-inches. Thus, the total allowable design load capacity will be in the range of 5 to 12-kips per pile.

Helical pile ultimate load capacity shall be evaluated by installation torque in the underlying siltstone according to the following relationship:

$$Q_u = \frac{2}{d_{eff}} T$$

Where:

$$Q_u = Ultimate\ capacity, kips$$

$$d_{eff} = Pile\ shaft\ diameter, ft.$$

$$T = Installation\ torque, k - ft.$$

Helical piles shall consist of the following elements:

- 2.875-inch O.D. x 0.25-inch wall (min.) tubular steel shafts with connections designed to prevent vertical slip during loading using a threaded connection,
- Single-helix plates having a minimum 0.325-inch thickness
- "Pre-construction" brackets designed for embedment in concrete.

Helical pile shafts shall consist of cold-formed welded and seamless carbon steel structural tubing meeting the requirement of ASTM A500 Grade B with a minimum yield strength of 42-ksi. Pile shafts, including the lead section with helix plate, shall be either hot-dipped galvanized or otherwise coated for corrosion resistance.

All helical piles shall be embedded a minimum of 1-foot into underlying native, undisturbed SILTSTONE as verified by K & A Engineering, Inc. in the field during construction.

The Installer shall provide K & A Engineering, Inc. with:

- A manufacturer's certification of materials (length, section, steel grade) for pile shafts and lead section with helix,
- Manufacturer's certification for shaft treatment for corrosion resistance (galvanization or other coatings),
- Schedule of shaft connection elements,
- Manufacturer's certification of materials (dimension and construction) for the pile bracket,
- A description and drawings detailing the connection of the pile bracket to the pile shaft and to the existing foundation including connector type/size/grade, epoxy adhesives (if used), and installation methods.
- Certification of drive head pressure meter calibration,
- Drive head manufacturer's published relationship between drive pressure and torque output for the drive head used.

Submittals must be made to K & A Engineering, Inc. a minimum of 1-week prior to installation.

K & A Engineering, Inc. shall inspect the installation of helical piles including:

- Observe installation of the helical piles
- Verify minimum depth of installation,
- Record installation pressures,
- Approve of installation based on installation torque and depth, and
- Provide a written installation summary that recommends acceptance by the local building official.

K & A Engineering, Inc. shall be notified a minimum of 2-weeks in advance of load test installation, load testing. and production pile installation.

3.3.3 Micropiles

For design purposes, micropiles shall be designed for an allowable design grout-siltstone bond strength of 1,000-pounds/square foot of bond. Load testing is required to verify actual bond capacity. Based on our preliminary analysis, micropiles consisting of a 5-inch nominal shaft diameter and using a No 8 solid steel reinforcing element should achieve allowable load capacities in the range of 15 to 20-kips, depending on the depth of embedment in siltstone.

We recommend an allowable design load capacity of 20-kips maximum, in tension and compression.

To achieve economy and reasonably high individual micropile load capacity, we recommend the following design criteria:

- Minimum diameter of the grout-siltstone bond zone of 5-inches,
- 4-inch x 0.25 tubular steel casing extending from the ground surface (grade beam or load pad) to 1-foot below the surface of siltstone, having a minimum yield strength of 36-ksi;
- Micropile reinforcement consisting of one solid No. 8 reinforcing bar, minimum yield strength of 60-ksi;
- Maximum design allowable grout-to-siltstone bond strength of 1.0-ksf.

Prior to installation of production micropiles, a minimum of one test pile should be installed into Mudstone and load tested to verify actual ultimate and allowable load capacity. The load test shall include:

- Ultimate load, in tension, to a minimum 200-percent of the maximum specified working load. The load test shall be made in increments of 10, 25, 50, 100, 150, and 200-percent of maximum specified working load.
- Creep Testing. A creep test shall be made a 133-percent of the maximum specified working load. Criteria for successful creep is less than 2-mm of creep over one log-cycle of time.

K & A Engineering, Inc. shall:

- Review and approve materials and construction methods submitted by Contractor prior to construction,
- Inspect installation of test piles,

- Inspect load testing and verify ultimate load at failure or that no failure occurred.
- Verify the validity of the preliminary allowable grout bond strength based on load test results, and make recommendations for embedment lengths of the production piles, accordingly, and
- Inspect and approve micropile construction.

3.4 SITE DEVELOPMENT

3.4.1 General Recommendations

We recommend that site development consist of the minimal amount of earthwork necessary for access and foundation construction. Site development should be planned and executed to incorporate the following requirements:

- **Fills.** No permanent fills other than low fills (less than 4-feet in height shall be created;
- **Retaining Walls.**
  - *Fill Retaining Walls:* Based on the current Conceptual Site Plan (Appendix A), permanent fills will be required to support portions of the driveway and parking areas approaching the building pads. We have provided recommendations for design criteria for these retaining walls. We believe that the most cost-effective wall systems for these retaining walls are Mechanically-Stabilized Earth embankments (MSE) – compacted soil embankments reinforced with horizontal reinforcement elements (typically geogrids) and a structural wall facing.
  - *Cut Retaining Walls:* The current Conceptual Site Plan (Appendix A) grading requires a retaining wall to support the cut into the hillside on the east side of the driveway. We have provided retaining wall design criteria for this wall system in this report.
- **Revegetation:** Surface erosion shall be minimized by establishment of vegetation in all disturbed areas with species of grasses, shrubs, and trees *that are well adapted to local climate and soil conditions and that produce vigorous, deep, and dense root structures*. Areas to receive vegetative treatment include, but are not limited to:
  - Road cut and fill embankments
  - Disturbed areas around foundations
  - Disturbed areas associated with landscaping and retaining walls.

  Revegetation shall be installed immediately after completion of grading, foundation pad construction, and access road construction. *Temporary revegetation is required for temporary cuts, fills, and other disturbed areas during long (2-months or more) periods of inactivity and between construction phases.*
- **Stone Armoring.** In some areas of ground disturbance, *where allowed*[14], it may be more beneficial, economical, or practical to place stone armoring in lieu of vegetation to minimize surface erosion. Stone armoring shall consist, at a minimum, of 12-inches of 4 to 7-inch crushed basalt quarry rock, machine placed.
- **No-Build Zone.** *No foundations, earthwork, or vegetative disturbance shall occur in a 20-foot wide "no-build" zone adjacent to the west edge of the existing NW Spring Street. This zone*

[14] Our understanding is that stone armoring may not be allowed on the north tax lot (1800) in some areas. In these areas revegetation should be used for erosion control. Check with local codes.

extends 20-feet west of the east property boundary. The purpose of this requirement is to preserve the integrity of the Zone 1 scarp embankment described in this report, and thus preserve the integrity of the NW Spring Street roadway. The exception to this is minor necessary disturbance allowing for the construction of a low gravity retaining wall on the east side of the access driveway to be constructed at or near the west edge of the "no-build" zone.

- **Drainage.** Development shall result in positive sheet-flow drainage flowing west. Concentrated flows from roof drains shall be distributed to the ground surface as sheet flow using systems designed by the project civil engineer.

3.4.2 Access Drive Design and Construction

Our understanding is that the driveway accessing home sites will leave NW Spring Street somewhere in the south half of tax lot 1900 and extend northward on the project site, following the west edge of the specified "no-build" zone, and terminating at the proposed single-family residence building pad on tax lot 1800. See the Conceptual Site Plan (Appendix A).

We recommend that the access drive be surfaced with either:

- Crushed aggregate - a minimum of 8-inches of ¾" – 0 well-graded crushed aggregate over a slit-fil woven geotextile, or
- Hot Mix Asphalt Concrete pavement – a minimum of 2-inches of dense asphalt concrete pavement over 8-inches of ¾" – 0 well-graded crushed aggregate.

The driveway surface and cut embankment retaining walls shall be drained to in such a manner as to prevent concentrated flows of storm runoff on native sandy soils.

3.4.3 Foundation Pads

Our understanding is that, at the time of this report, two-story "daylight" designs for single-family residences are being considered. In this concept, a lower "daylight" level will face the west at a grade that is lower than the east side of the foundation pad.

Grading in the Conceptual Site Plan (Appendix A) indicates that the lower "daylight" level will be close to the existing grade at the east edge of the building pad as follows:

- Duplex "A" on Tax Lot 1900:
  - Main pad elevation 65-feet,
  - Lower floor elevation (approximately) 55-feet
  - Existing grade ranges in elevation from (approximately) 52 to 57-feet.
- Duplex "B" on Tax Lot 1903:
  - Main pad elevation 51-feet,
  - Lower floor elevation (approximately) 41-feet
  - Existing grade ranges in elevation from (approximately) 39 to 43-feet.
- Single-family Residence on Tax Lot 1800:
  - Main pad elevation 40-feet,
  - Lower floor elevation (approximately) 30-feet
  - Existing grade ranges in elevation from (approximately) 22 to 24-feet.

The lower "daylight" levels of the Duplex units "A" and "B" and the Single-family residence will include a retaining wall on the north, east, and south sides to provide grade separation. We anticipate that deep foundation elements will support reinforced concrete grade beams that support the lower "daylight" levels of all three structures.

We recommend that all soils excavated from basement areas and foundation pad should be removed from the project site and disposed of off-site -or- utilized for MSE fill embankments for the driveway. The purposes of this requirement include:

Foundation pads should be graded appropriately to provide temporary support for:

- Access for helical pile or micropile installation
- Forming and construction of reinforced concrete grade beams

Note that the undocumented fills found at the site are not suitable for temporary support and should be completely removed from foundation areas.

3.4.4 Retaining Walls

3.4.4.1 General Requirements

All retaining wall structures shall be evaluated for global stability and shal have a minimum factor of safety of:

- **Static Conditions:** FOS ≥ 1.5 during static conditions and
- **Earthquake Conditions:** FOS ≥ 1.1 for the design peak ground acceleration (0.32g).

Lateral reinforcements (i.e. tiebacks) may be required to resist transient loads from the design earthquake for tall cut embankment retaining walls with sloped ground surfaces. K & A Engineering, Inc. should be consulted with to provide additional design criteria for lateral reinforcement.

We anticipate that some movement will occur behind retained cut slopes for the design earthquake. Retaining walls supporting cut slopes should extend vertically 1-ft above retained soil grade to limit the movement of displaced soils from shallow slope movements in terrace sands above cut embankment retaining walls.

3.4.4.2 Cut Embankments

Stability for cut embankments along the east side of the driveway should be provided a gravity retaining

Gabion baskets shall consist of 9-gage ArtWeld welded wire baskets manufactured by Hilfiker Retaining Walls[15]. K & A Engineering, Inc. shall review and approve of wall design and construction details prior to installation and shall provide quality assurance of wall construction.

According to the Conceptual Site Plan (Appendix A), retaining walls supporting the permanent cut slopes along the east side of the driveway will support cut embankments up to 10-ft in height.

[15] See http://www.hilfiker.com/awg.html Technical specifications, drawings, and construction details are readily available from the manufacturer.

We recommend a wall system consisting of welded-wire gabion baskets filled with 4 to 7-inch open-graded quarry stone. This wall shall have a BASE : HEIGHT ratio of 0.7 or greater and the toe of the wall shall be buried a 1-foot below final grade at the toe. Retained soils shall not exceed 2H : 1V slope.

Recommended design criteria include:

- **Active Lateral Earth Pressure:** 58-pcf (equivalent fluid pressure),
- **Passive Lateral Earth Pressure:**
  - *Terrace Sands:* 330-pcf,
  - *Siltstone:* 406-pcf,
- **Coefficient of Sliding:** 0.36
- **Bearing Capacity:** 1.5-ksf

3.4.4.3 Driveway Fill Embankments

We recommend gravity walls consisting of mechanically-stabilized earth embankments for all fill retaining walls. These offer use of native sands for backfill and present minimal toe bearing pressure. The recommended design criteria include:

- **Active Lateral Earth Pressure:** 33-pcf (equivalent fluid pressure),
- **Passive Lateral Earth Pressure:**
  - *Terrace Sands:* 330-pcf,
  - *Siltstone:* 406-pcf,
- **Uniform lateral earth pressure from traffic loading:** 60-psf
- **Coefficient Against Sliding:** 0.36
- **Bearing Capacity:** 1.5-ksf

4 LIMITATION AND USE OF GEOTECHNICAL RECOMMENDATIONS

This report has been prepared for the exclusive use of Bill Lund for the subject project.

This geotechnical investigation, analysis, and recommendations meet the standards of care of competent geotechnical engineers providing similar services at the time these services were provided.

We do not warrant or guarantee site surface or subsurface conditions. Exploration test holes indicate soil conditions only at specific locations (i.e. the test hole locations) to the depths penetrated. They do not necessarily reflect soil/rock materials or groundwater conditions that exist between or beyond exploration locations or limits.

The scope of our services does not include construction safety precautions, techniques, sequences, or procedures, except as specifically recommended in this report. Our services should not be interpreted as an environmental assessment of site conditions.

Appendix A

Maps

- Vicinity Map
- Geotechnical Site Plan
- Field-developed Cross Section
- Conceptual Site Plan – Civil Grading and Site Development

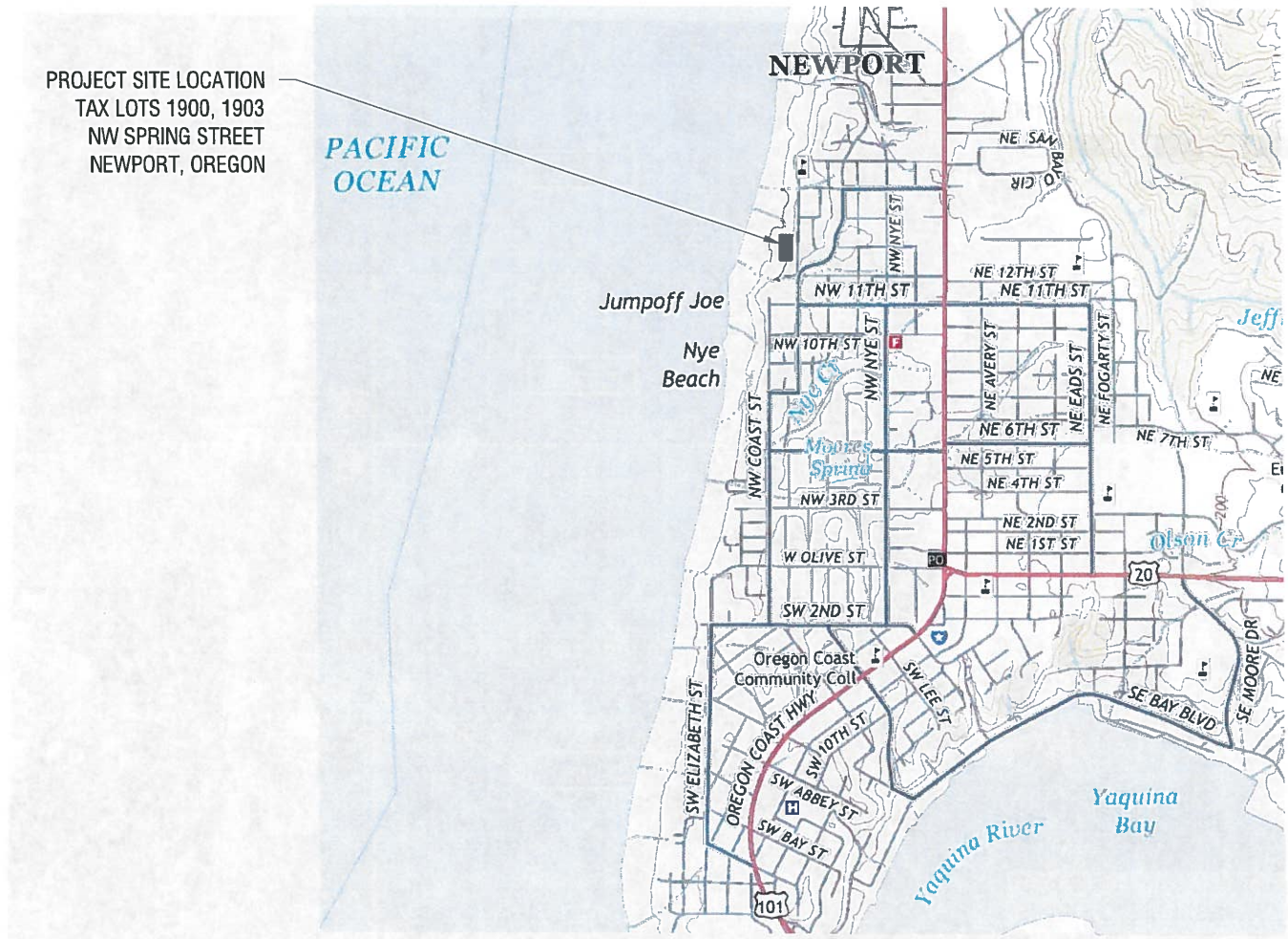
Geotechnical Engineering Report
Proposed Residential Development
Tax Lots 1900 and 1903
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
June 29, 2018

Prepared for:

Bill Lund
P.O. Box 22
Seal Rock, OR 97376

Prepared by:

Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.
Coburg, Oregon

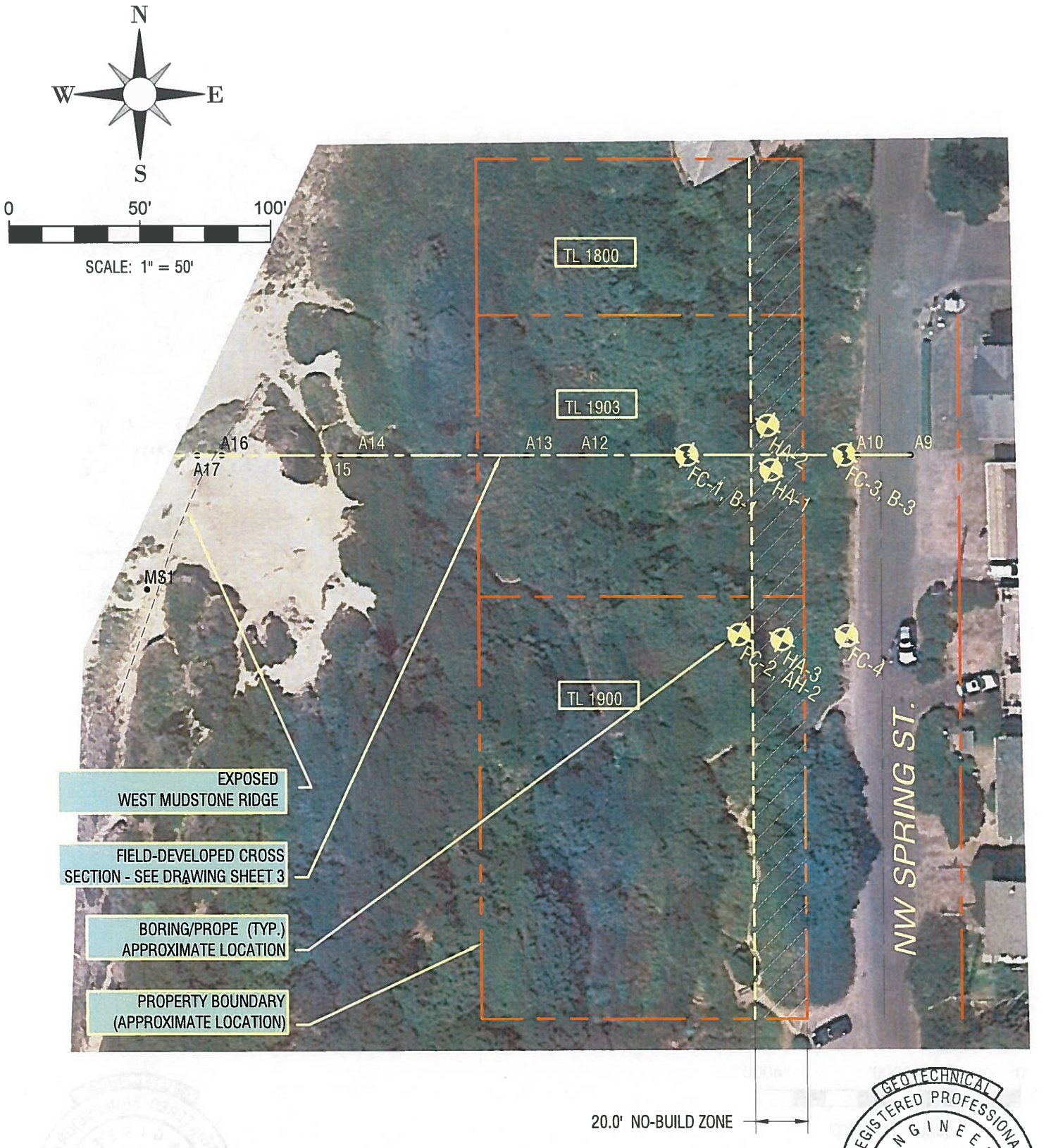


K & A Engineering,Inc
91051 S. Willamette St.
Coburg, OR 97408
541 684 9399 541 684 9358 fax

k·a engineering

VICINITY MAP
Geotechnical Site Investigation
Lund Development
Tax Lots 1900, 1903; NW Spring St., Newport, OR
11/27/17 Project: 17056 Drawing 1 / 3

GEOTECHNICAL REGISTERED PROFESSIONAL ENGINEER
19,474
OREGON
SEPTEMBER 16, 1997
MICHAEL DENNIS REMBOLDT
EXPIRES: DECEMBER 31, 2018



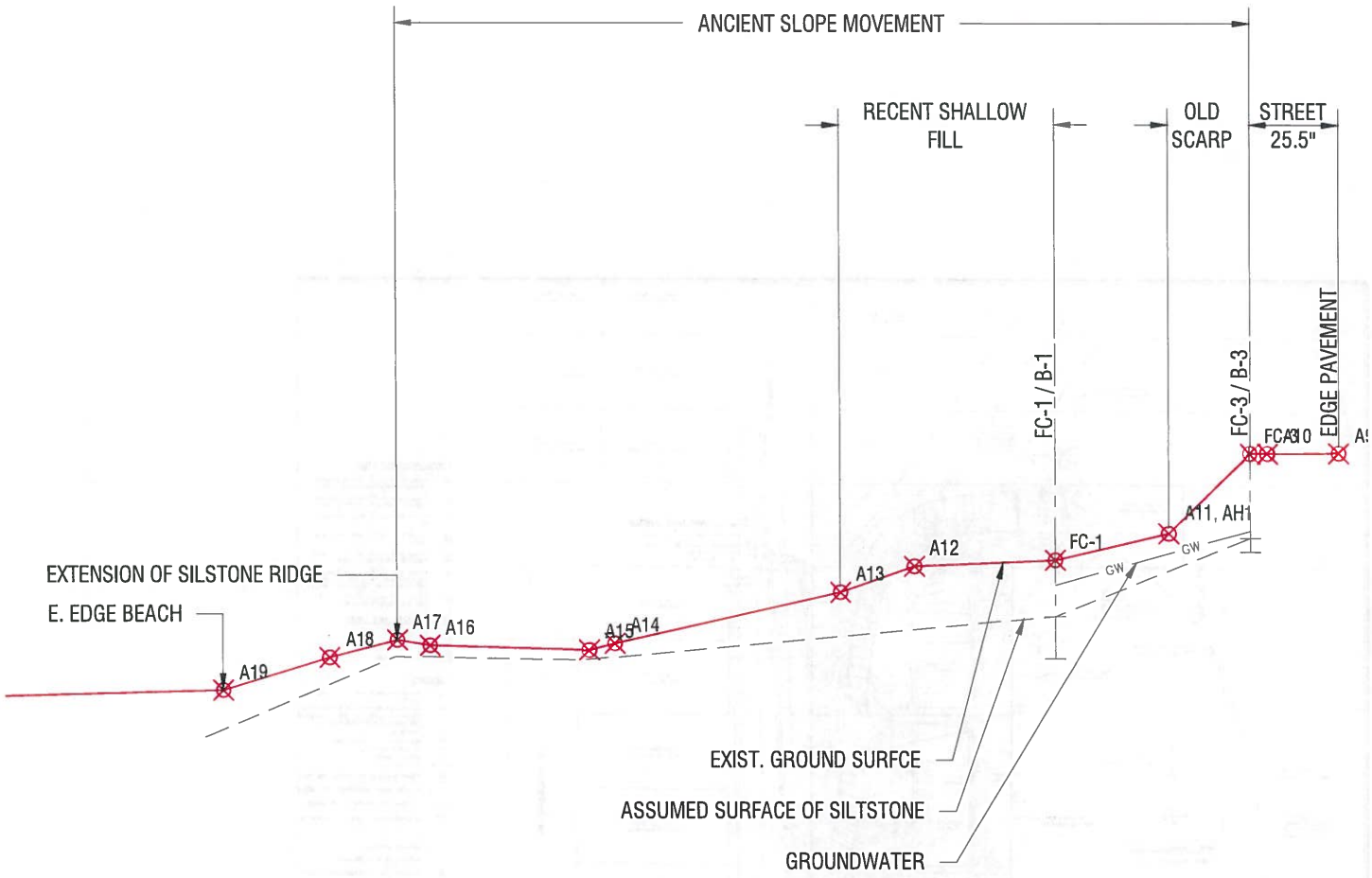
K & A Engineering,Inc
91051 S. Willamette St.
Coburg, OR 97408
541 684 9399 541 684 9358 fax

k·a engineering

GEOTECHNICAL SITE PLAN
Geotechnical Site Investigation
Lund Development
Tax Lots 1900, 1903; NW Spring St., Newport, OR
11/27/17 Project: 17056 Drawing 2 / 3

GEOTECHNICAL
REGISTERED PROFESSIONAL
ENGINEER
19,474
OREGON
SEPTEMBER 16, 1997
MICHAEL DENNIS REMBOLDT

EXPIRES: DECEMBER 31, 2018



1/3

FIELD-DEVELOPED CROSS SECTION

1" =50'

0 50' 100'

SCALE: 1" = 50'

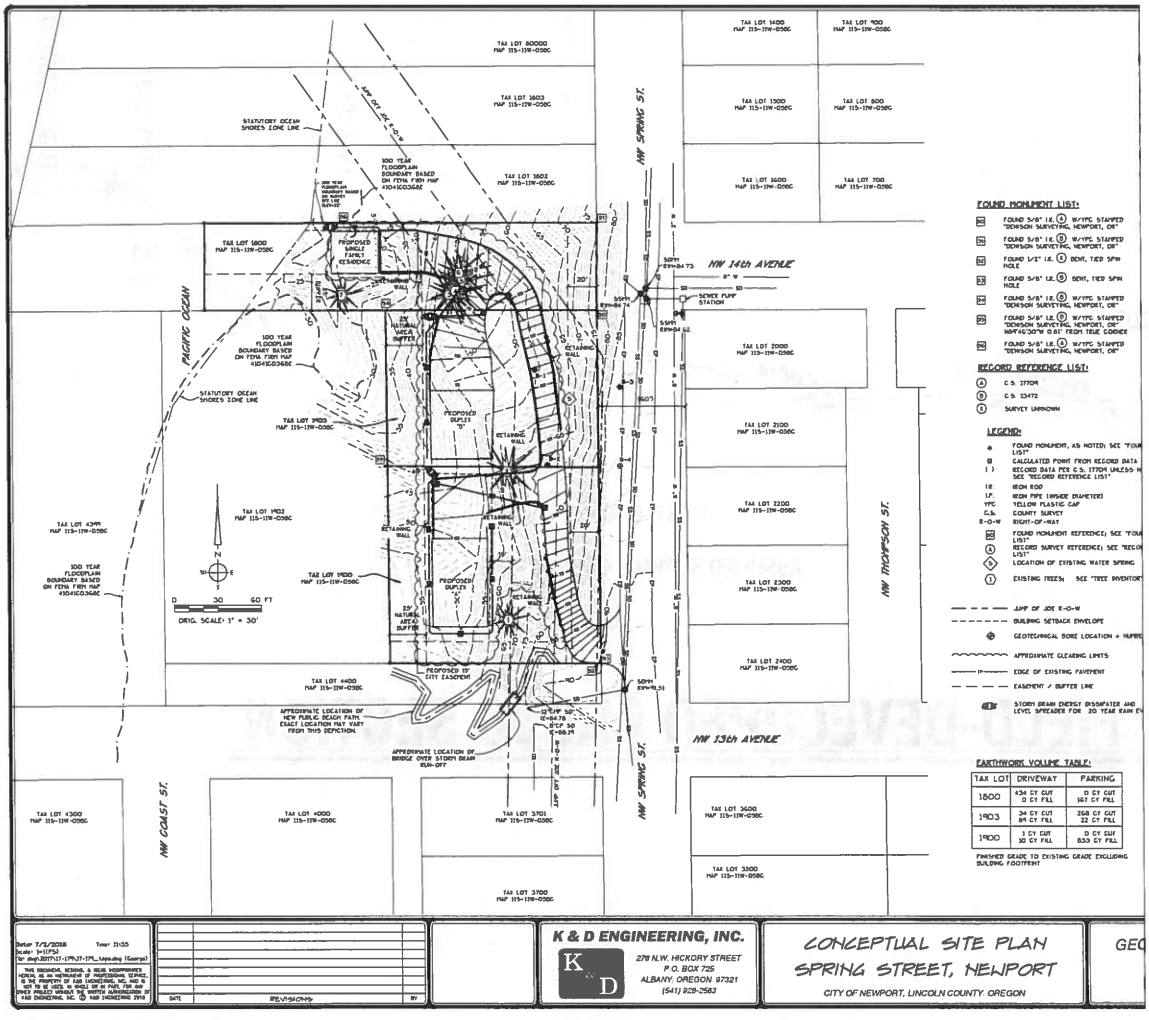
K & A Engineering,Inc
91051 S. Willamette St.
Coburg, OR 97408
541 684 9399 541 684 9358 fax

k·a engineering

FIELD-DEVELOPED CROSS SECTION
Geotechnical Site Investigation
Lund Development
Tax Lots 1900, 1903; NW Spring St., Newport, OR
11/27/17 Project: 17056 Drawing 3 / 3

GEOTECHNICAL REGISTERED PROFESSIONAL ENGINEER
19,474
OREGON
SEPTEMBER 16, 1997
MICHAEL DENNIS REMBOLDT

EXPIRES: DECEMBER 31, 2018



K & D ENGINEERING, INC.
278 N.W. HICKORY STREET
P.O. BOX 725
ALBANY, OREGON 97321
(541) 928-2583

CONCEPTUAL SITE PLAN
SPRING STREET, NEWPORT
CITY OF NEWPORT, LINCOLN COUNTY, OREGON

Appendix B

Probes and Boring Logs

Geotechnical Engineering Report
Proposed Residential Development
Tax Lots 1900 and 1903
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
June 29, 2018

Prepared for:

Bill Lund
P.O. Box 22
Seal Rock, OR 97376

Prepared by:

Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.
Coburg, Oregon

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER AH-2 Sheet 1 of 1
SURFACE ELEVATION 55.80
NORTH | EAST

DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)

Tan, damp, loose to moderately dense, silty-SAND or SAND with some silt (FILL?). Contains pockets of brown SILT, organics, and roots.

White/gray, loose to moderately dense, coarse, poorly-graded, SAND with trace silt (dune sand or terrace deposits). Some orange staining.

End of Boring @ 6 feet

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft: 2.5, 5.0, 7.5, 10.0, 12.5, 15.0, 17.5, 20.0, 22.5, 25.0, 27.5
DEPTH m.: 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/8/17
BORING COMPLETED 11/8/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER JDB
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER B-1 Sheet 1 of 1
SURFACE ELEVATION 42.60
NORTH | EAST

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE / RECOVERY / GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
0			Tan/brown, damp, loose to moderately dense, silty-SAND or SAND with some silt (FILL). Contains pockets of brown silt, gravel, and roots.		0
2.5	1		Brown, damp, loose to moderately dense, silty-SAND (FILL) mixed with decomposed mudstone fragments (gravel and cobble sized). Glass shards and garbages from 2 to 6-ft. Additional samples retrieved to 6-ft using 3.5-in AMS hand auger.		1.0
5.0	2				2.0
ACR 7.5			Brown, moist, soft, high plasticity, SILT or CLAY with rounded gravels.		
10.0	3		Dark gray or black, damp, very stiff to hard, friable, CLAY with some sand (decomposed siltstone). Some orange staining below 12-ft. Stiffer with depth.		3.0
12.5	4				4.0
15.0					
17.5	5		Dark gray or black, hard, weathered SILTSTONE BEDROCK (Nye Formation) (not friable).		5.0
20.0			End of Boring @ 19.5 feet		6.0
22.5					7.0
25.0					8.0
27.5					

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/7/17	16:05	ACR			6.8

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG AMS 9410-VTR
ENGINEER MDR
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER B-3 Sheet 1 of 1
SURFACE ELEVATION 73.00
NORTH | EAST

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft	SAMPLE NO.	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	DEPTH m.
0		Brown, moist, loose, organic-laden, gravelly-silty-SAND (FILL) - contains concentrated, thin roots.	
	1	Grayish-brown, moist, moderately dense, fine silty-SAND (FILL). Relatively high fines content.	
2.5		Black, damp, moderately stiff, low plasticity, organic silty-SAND or sandy-SILT (original native).	1.0
5.0	2	White/tan, damp, moderately dense, fine, poorly-graded SAND (terrace deposits?). Top 1-ft stained orange from overlying layer.	2.0
7.5			
10.0	3		3.0
12.5	4		4.0
15.0		Gray and white, moist or damp, moderately dense, coarse, poorly-graded SAND (terrace deposits). Some orange staining.	5.0
17.5	5		
20.0			6.0
	6	Gray, wet, moderately dense, poorly-graded, gravelly-SAND or SAND with some gravel - coarse sands and rounded gravels up to 0.5-in in diameter.	
22.5		Gray/white, wet, moderately dense, poorly-graded SAND. Orange staining at 22.6 and 23.3-ft.	7.0
	7	Dark gray/black, damp, very stiff/hard, friable, laminated, fine-grained, weathered SILTSTONE (Nye Formation).	
25.0		End of Boring @ 24.8 feet	8.0
27.5			

⊗ Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/8/17	09:30	ACR		21.3	

BORING STARTED 11/8/17
BORING COMPLETED 11/8/17
DRILLER K & A
RIG AMS 9410-VTR
ENGINEER MDR
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER HA-1 Sheet 1 of 1
SURFACE ELEVATION 50.20
NORTH | EAST

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE	RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
0					FILL - basalt cobbles - most likely end-dumped from street		
2.5					Brown, moist, loose to mod. dense, fine-grained, non-plastic organic poorly-graded SAND - native "topsoil."		1.0
5.0					Brown, moist, loose, non-plastic, fine-grained, poorly-graded SAND. Trace organics. Grading into marine terrace deposits. No Groundwater.		
					End of Boring @ 5 feet		
7.5							2.0
10.0							3.0
12.5							4.0
15.0							5.0
17.5							6.0
20.0							7.0
22.5							8.0
25.0							
27.5							

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER GS
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER HA-2 Sheet 1 of 1
SURFACE ELEVATION 53.60
NORTH | EAST

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE	RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
0					Brown, moist, loose to mod. dense, fine-grained, non-plastic organic poorly-graded SAND - native "topsoil."		0
2.5					Brown to light grayish-white, wet, gravelly poorly-graded SAND. Weathered Marine Terrace Deposits.		1.0
5.0					Dk. reddish-brown, wet to sl. wet, stiff, blocky SILTY-CLAY. Residual soil from decomposing Nye Formation. Stiffer, brittle/friable, blocky with depth. No Groundwater		2.0
					End of Boring @ 5 feet		
7.5							3.0
10.0							4.0
12.5							5.0
15.0							6.0
17.5							7.0
20.0							8.0
22.5							
25.0							
27.5							

⊗ Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER GS
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER HA-3 Sheet 1 of 1
SURFACE ELEVATION 58.00
NORTH | EAST

Unconfined Compressive Strength, tons/ft.^{2} (1 2 3 4 5)
PL MC LL
N VALUE, blows/ft. (10 20 30 40 50 60 70 80 90)

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
				Brown, loose, moist, non-plastic organic SAND - native "topsoil."		
2.5				Brown to gray-brown or greyish-white with red stain, moderately dense, gravelly poorly-graded SAND. Terrace Deposits. No Groundwater.		1.0
5.0				End of Boring @ 6 feet		2.0
7.5						
10.0						3.0
12.5						4.0
15.0						
17.5						5.0
20.0						6.0
22.5						7.0
25.0						8.0
27.5						

⊗ Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER GS
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

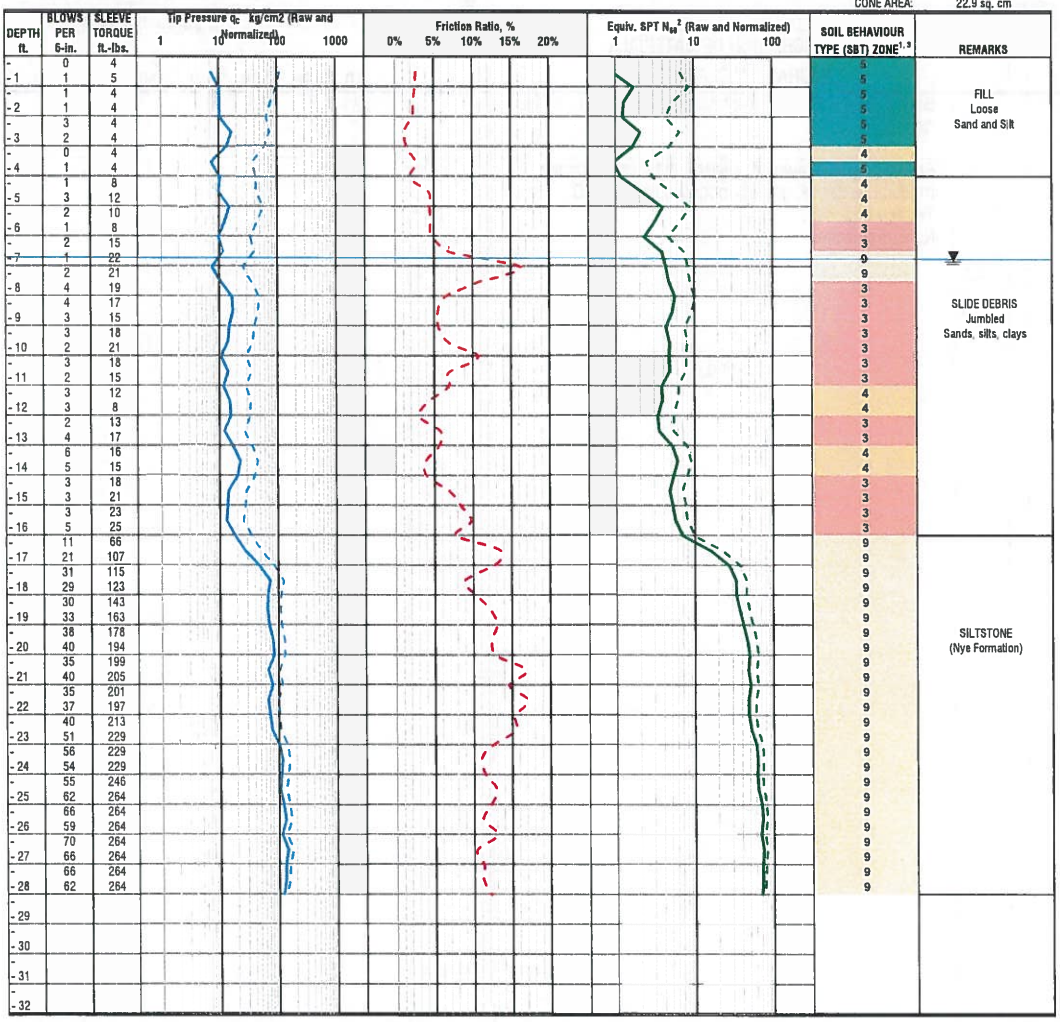
DYNAMIC PROBE LOG
FC-1

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-1
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903; NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER: 17056
DATE STARTED: 11-07-2017
DATE COMPLETED: 11-07-2017
DEPTH COMPLETED (ft): 28.0
SURFACE ELEVATION: 42.6 ft
STATIC WATER DEPTH ON COMPLETION (ft): 6.8
FIRST ENCOUNTERED WATER DEPTH (ft): 6.8
HAMMER WEIGHT: 63.5 kg
CONE AREA: 22.9 sq. cm

DEPTH ft.	BLOWS PER 6-in.	SLEEVE TORQUE ft.-lbs.	SOIL BEHAVIOUR TYPE (SBT) ZONE[1, 3]	REMARKS
-	0	4	5	
- 1	1	5	5	
-	1	4	5	FILL
- 2	1	4	5	Loose
-	3	4	5	Sand and Silt
- 3	2	4	5	
-	0	4	4	
- 4	1	4	5	
-	1	8	4	
- 5	3	12	4	
-	2	10	4	
- 6	1	8	3	
-	2	15	3	
- 7	1	22	9	▼
-	2	21	9	
- 8	4	19	3	
-	4	17	3	SLIDE DEBRIS
- 9	3	15	3	Jumbled
-	3	18	3	Sands, silts, clays
- 10	2	21	3	
-	3	18	3	
- 11	2	15	3	
-	3	12	4	
- 12	3	8	4	
-	2	13	3	
- 13	4	17	3	
-	6	16	4	
- 14	5	15	4	
-	3	18	3	
- 15	3	21	3	
-	3	23	3	
- 16	5	25	3	
-	11	66	9	
- 17	21	107	9	
-	31	115	9	
- 18	29	123	9	
-	30	143	9	
- 19	33	163	9	
-	38	178	9	SILTSTONE
- 20	40	194	9	(Nye Formation)
-	35	199	9	
- 21	40	205	9	
-	35	201	9	
- 22	37	197	9	
-	40	213	9	
- 23	51	229	9	
-	56	229	9	
- 24	54	229	9	
-	55	246	9	
- 25	62	264	9	
-	66	264	9	
- 26	59	264	9	
-	70	264	9	
- 27	66	264	9	
-	66	264	9	
- 28	62	264	9	
- 29				
- 30				
- 31				
- 32				



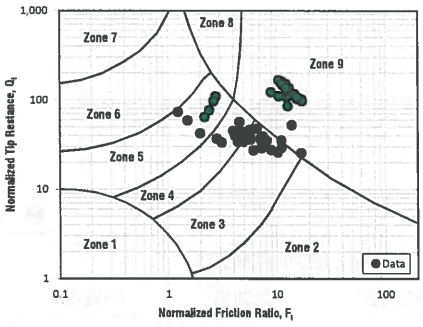
[1]P.K. Robertson, 2010. "Evaluation of flow liquefacton and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6. and P.K. Robertson, 2000. "Soil classification using the cone penetration test." Canadian Geotechnical Journal, 27(1).

[2]John H. Schmertmann, "Statics of SPT", Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering, 6th Edition" Gregg Drilling and Testing, Inc.

Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
1	Sensitive, fine grained
2	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
7	Gravelly sand to dense sand
8	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)

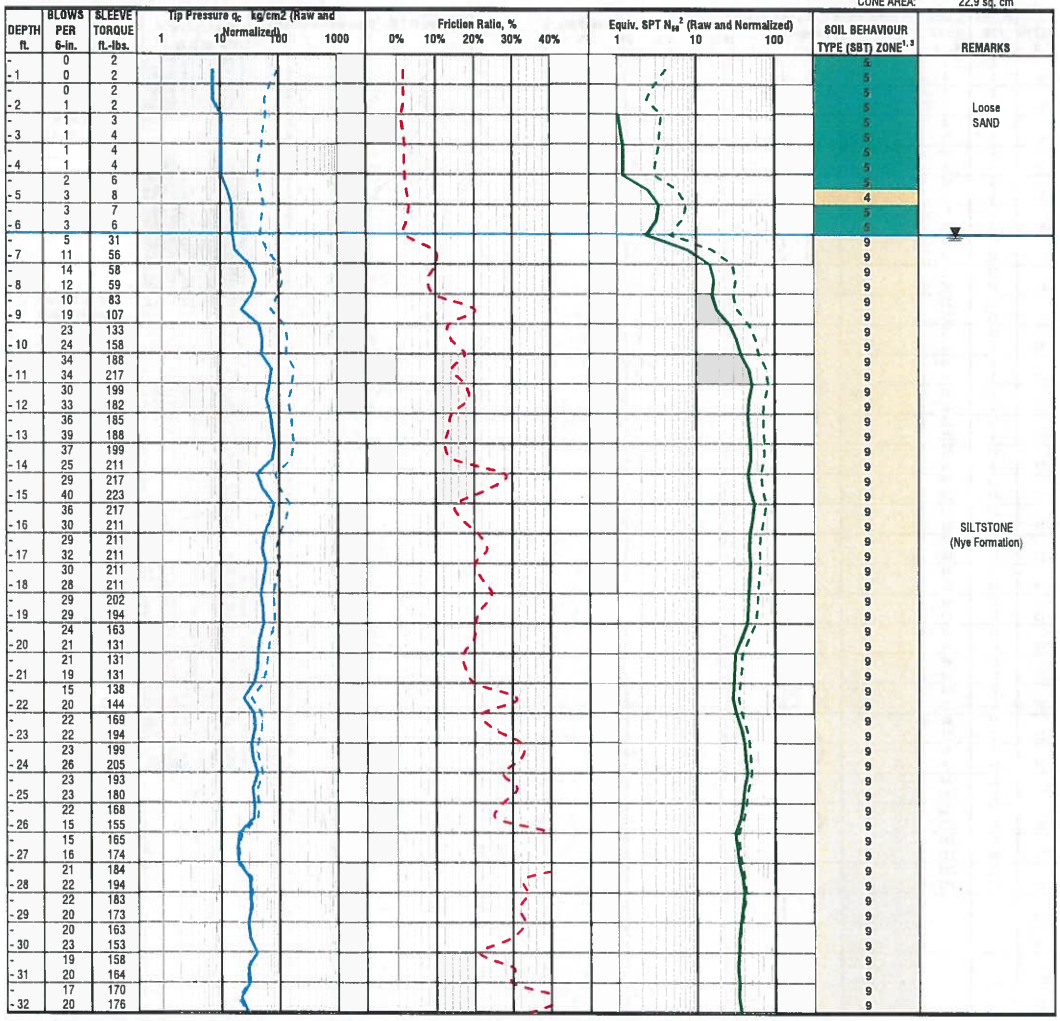


DYNAMIC PROBE LOG
FC-2

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-2
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903; NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER:	17056
DATE STARTED:	11-07-2017
DATE COMPLETED:	11-07-2017
DEPTH COMPLETED (ft):	32.0
SURFACE ELEVATION:	55.8 ft
STATIC WATER DEPTH ON COMPLETION (ft):	6.0
FIRST ENCOUNTERED WATER DEPTH (ft):	6.0
HAMMER WEIGHT:	63.5 kg
CONE AREA:	22.9 sq. cm



[1]P.K. Robertson, 2010. "Evaluation of flow liquefacton and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6. and P.K. Robertson, 2000. "Soil classification using the cone penetration test." Canadian Geotechnical Journal, 27(1).

[2]John H. Schmertmann, "Statics of SPT", Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. May 1979.

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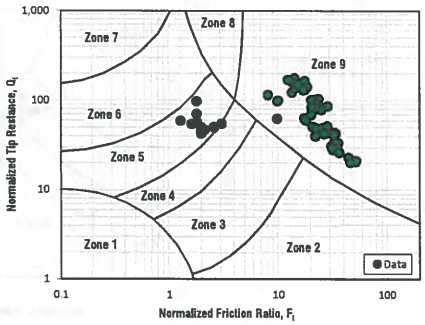
Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
1	Sensitive, fine grained
2	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
7	Gravelly sand to dense sand
8	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)

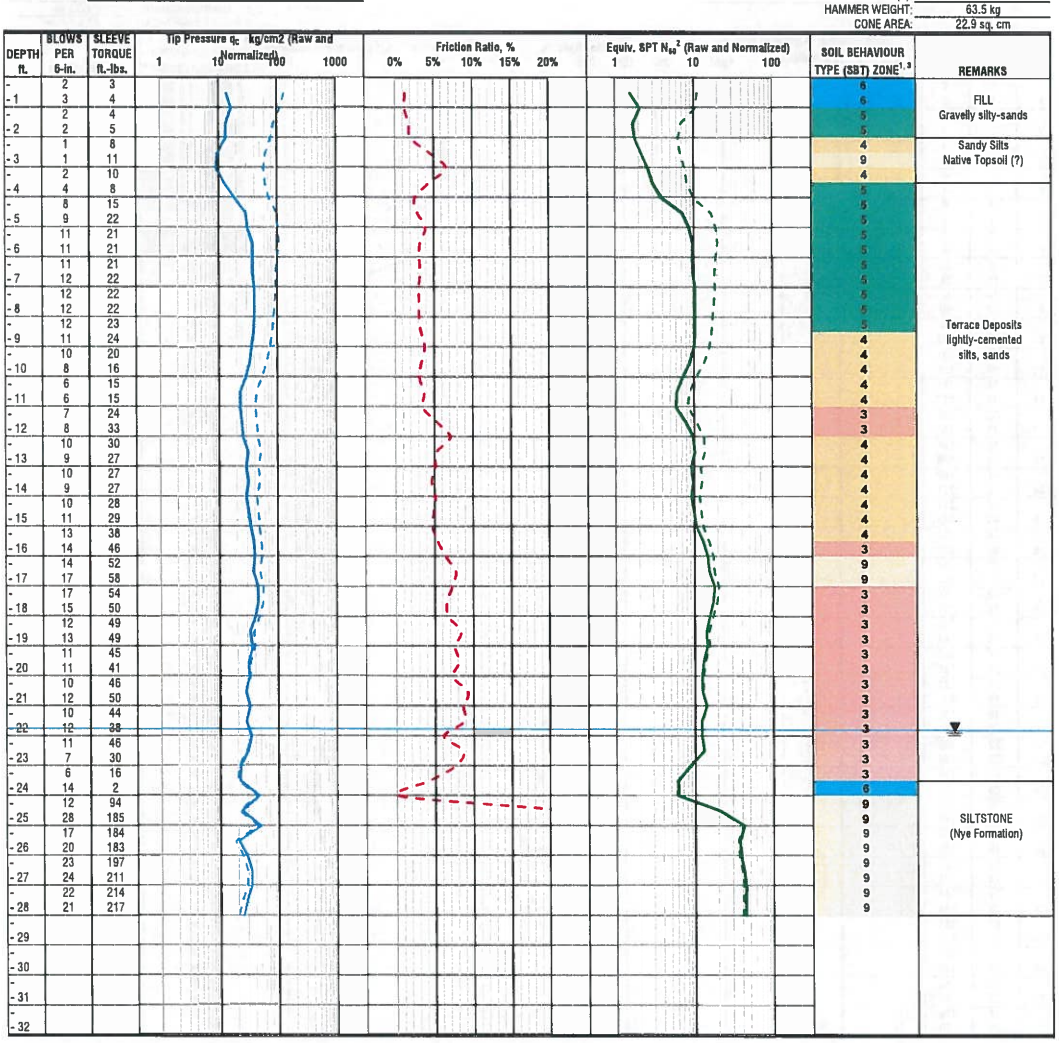


DYNAMIC PROBE LOG
FC-3

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-3
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903; NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER:	17056
DATE STARTED:	11-08-2017
DATE COMPLETED:	11-08-2017
DEPTH COMPLETED (ft):	28.0
SURFACE ELEVATION:	N/A
STATIC WATER DEPTH ON COMPLETION (ft):	20.8
FIRST ENCOUNTERED WATER DEPTH (ft):	20.8
HAMMER WEIGHT:	63.5 kg
CONE AREA:	22.9 sq. cm



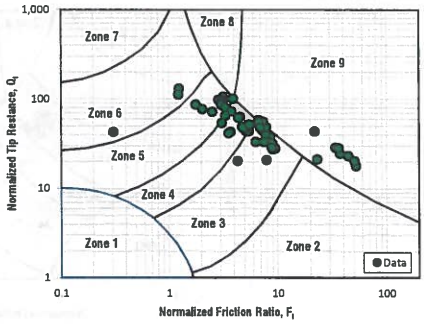
[1]P.K. Robertson, 2010. "Evaluation of flow liquefacton and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6. and P.K. Robertson, 2000. "Soil classification using the cone penetration test," Canadian Geotechnical Journal, 27(1).

[2]John H. Schmertmann, "Statics of SPT", Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering, 6th Edition" Gregg Drilling and Testing, Inc.

Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
1	Sensitive, fine grained
2	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
7	Gravelly sand to dense sand
8	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)

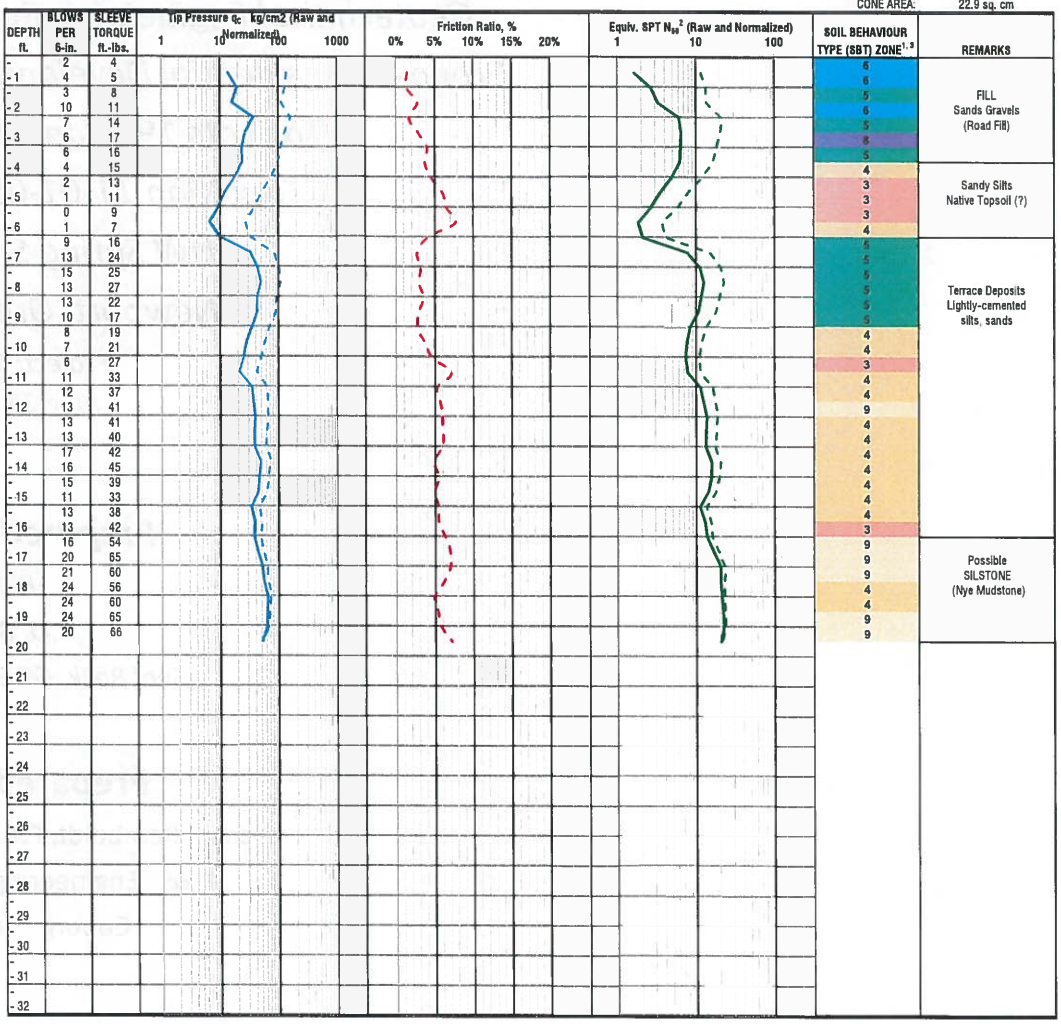


DYNAMIC PROBE LOG
FC-4

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-4
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903; NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER:	17056
DATE STARTED:	11-08-2017
DATE COMPLETED:	11-08-2017
DEPTH COMPLETED (ft):	19.5
SURFACE ELEVATION:	72.0 ft
STATIC WATER DEPTH ON COMPLETION (ft):	None Observed
FIRST ENCOUNTERED WATER DEPTH (ft):	None Observed
HAMMER WEIGHT:	63.5 kg
CONE AREA:	22.9 sq. cm



[1]P.K. Robertson, 2010. "Evaluation of flow liquefacton and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering. Vol 136, No. 6. and P.K. Robertson, 2000. "Soil classification using the cone penetration test," Canadian Geotechnical Journal. 27(1).

[2]John H. Schmertmann, "Statics of SPT", Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering, 6th Edition" Gregg Drilling and Testing, Inc.

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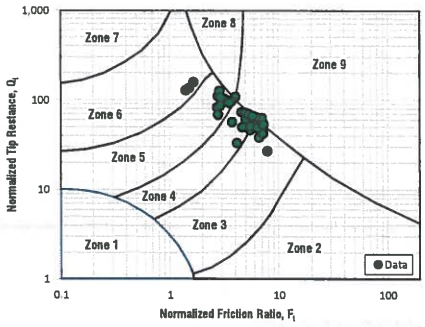
6	Sands - clean sand to silty-sand
7	Gravelly sand to dense sand
8	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)



Appendix C

Slope Stability Analysis

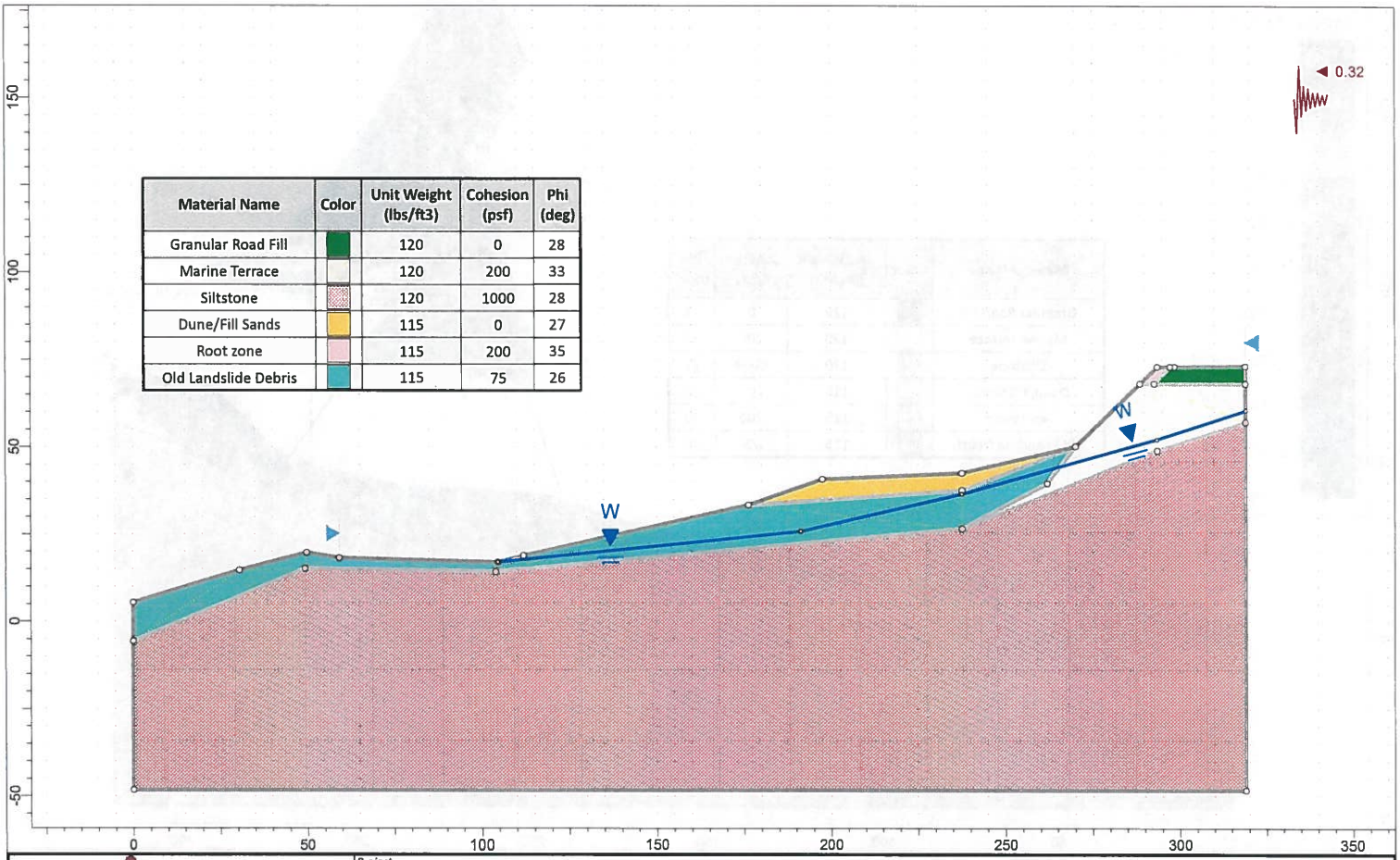
Geotechnical Engineering Report
Proposed Residential Development
Tax Lots 1900 and 1903
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
June 29, 2018

Prepared for:

Bill Lund
P.O. Box 22
Seal Rock, OR 97376

Prepared by:

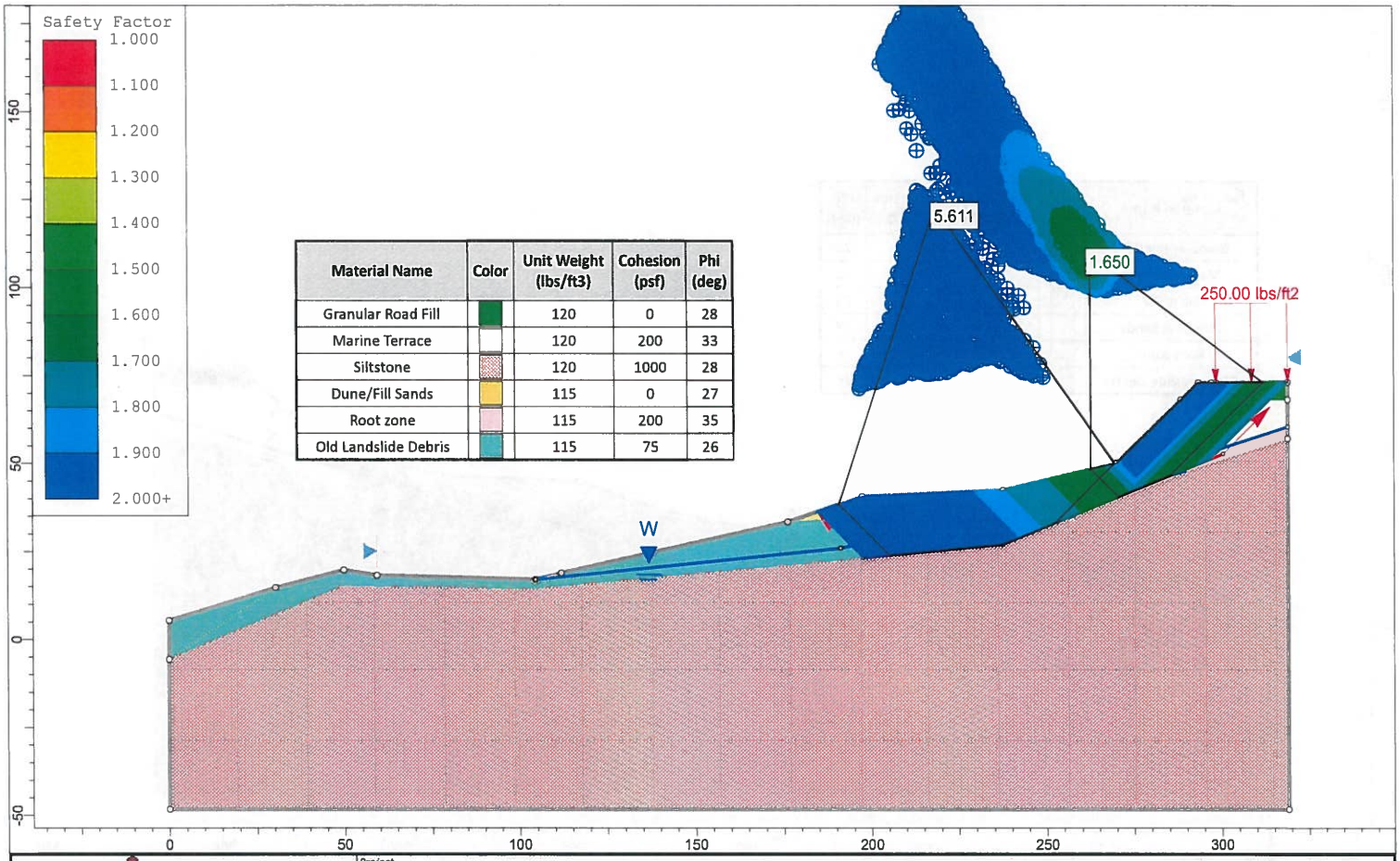
Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.
Coburg, Oregon



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	North Cross Section Subsurface Soil Profile		
Drawn By		Scale 1:455	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim

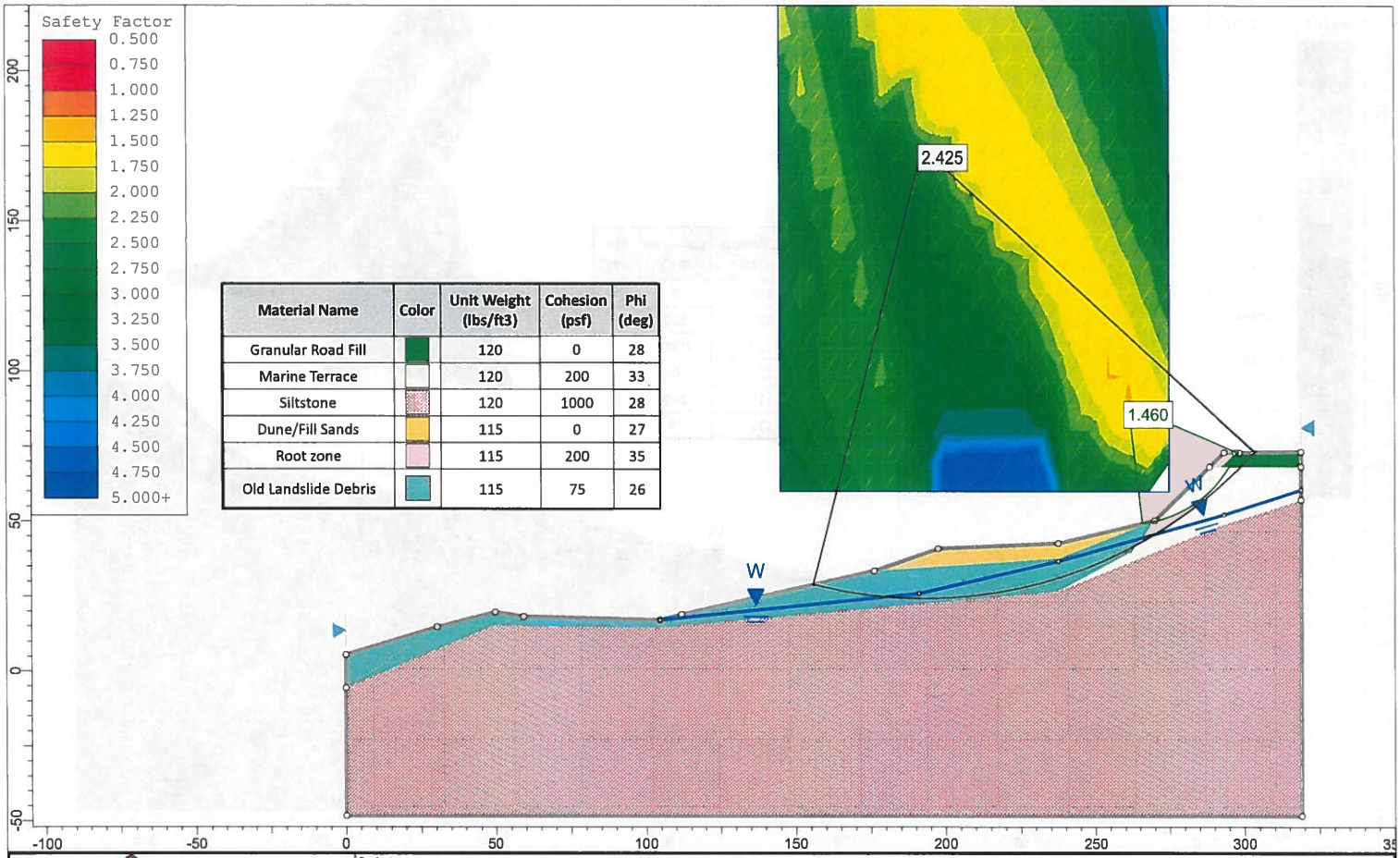
SLIDE 6.039



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039 kia engineering

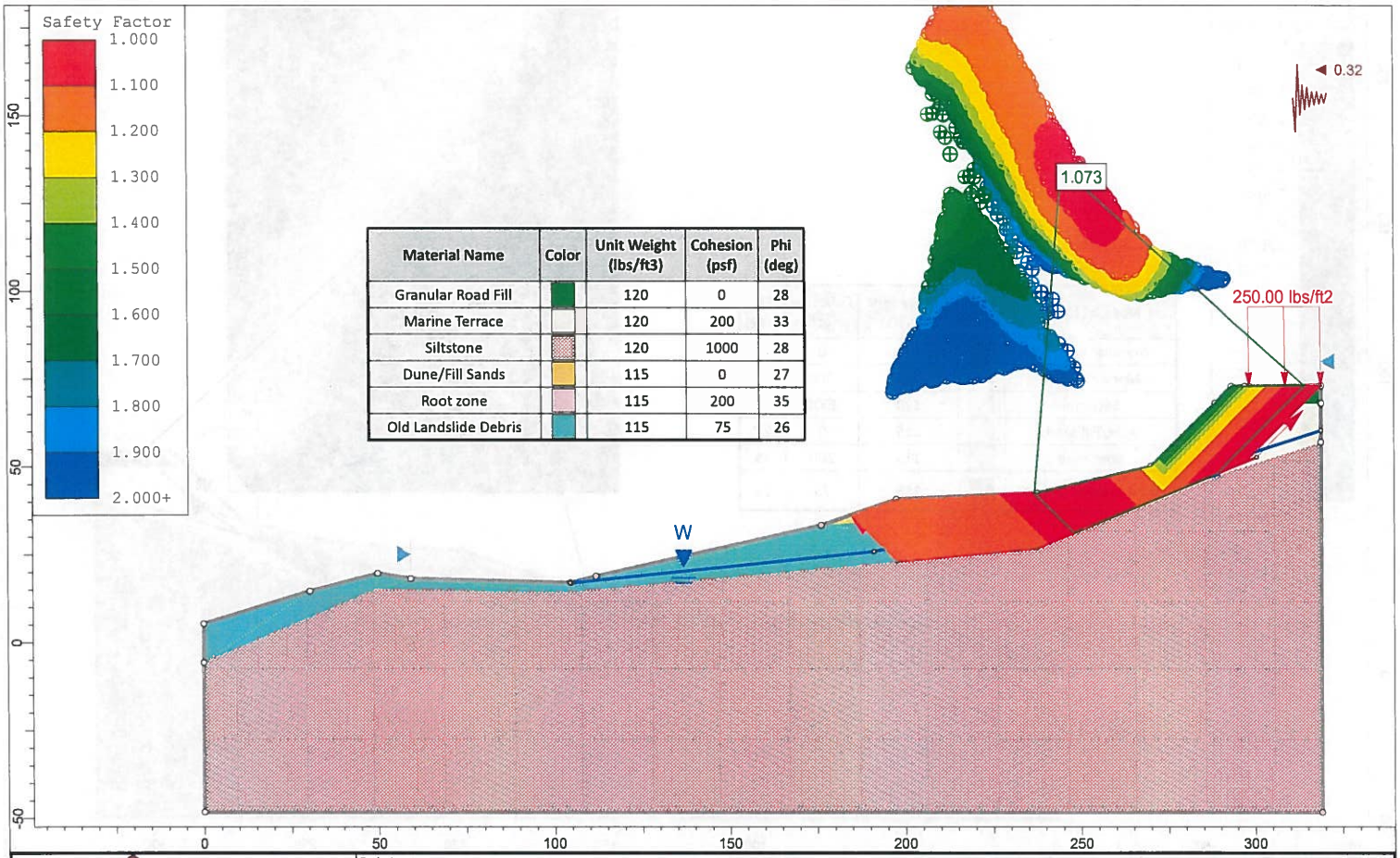
Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Block Failure on Underlying Siltstone		
Drawn By		Scale 1:452	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039 k·a engineering

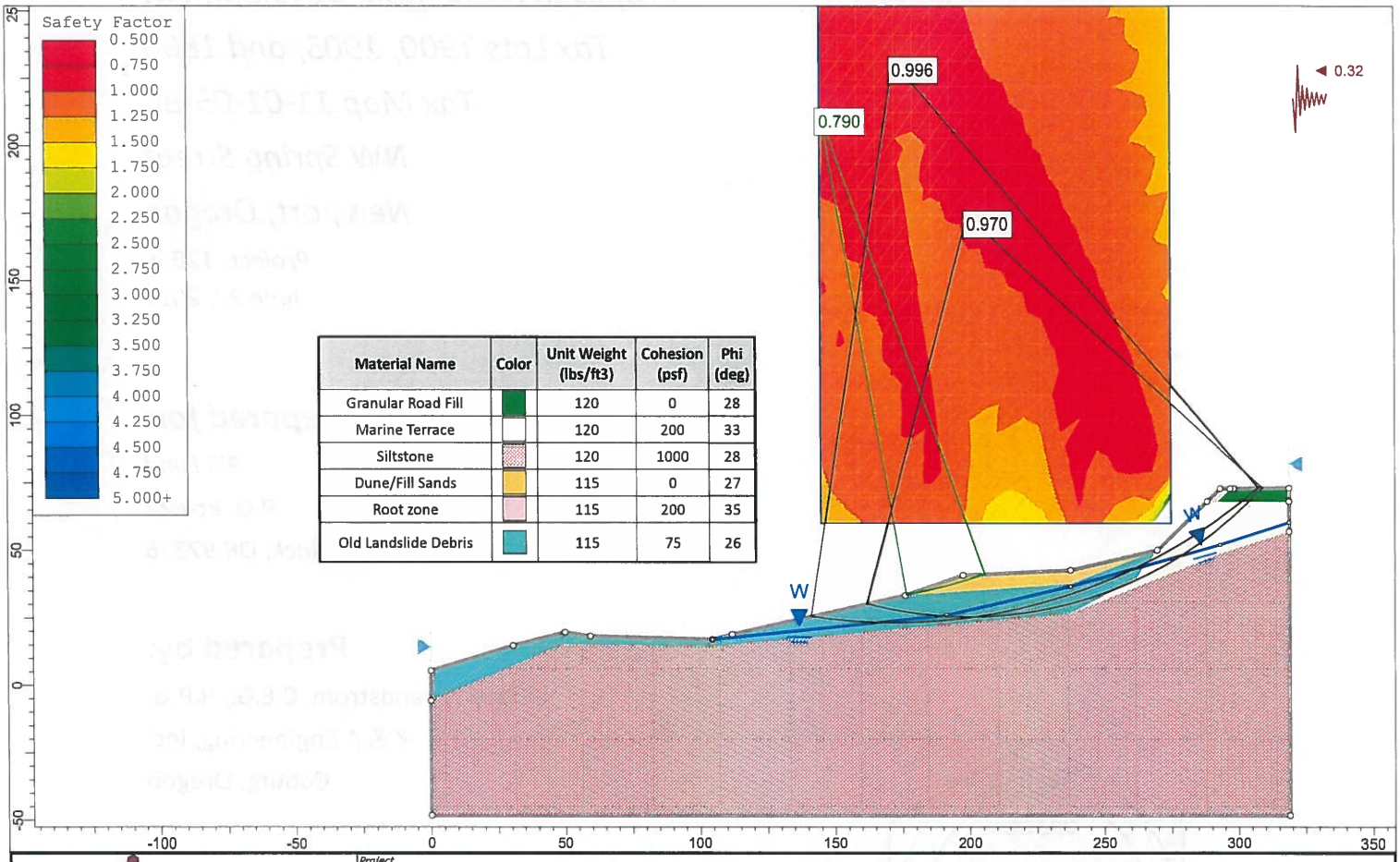
Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Circular Failure in Old Slide Debris - No Earthquake or Traffic Load		
Drawn By		Scale 1:530	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039 engineering

Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Block Failure on Underlying Siltstone		
Drawn By		Scale 1:452	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim



Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon
Analysis Description	Circular Failure in Old Slide Debris - With Earthquake Load 32%g
Drawn By	Scale 1:588 — Company
Date	11/28/2017, 2:05:02 PM — File Name: North Cross Section 11 28 17.slim

SLIDEINTERPRET 6.039

k·a engineering

Appendix D

Geologic Hazard Assessment

Proposed Residential Development
Tax Lots 1900, 1903, and 1800
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
June 29, 2018

Prepared for:

Bill Lund
P.O. Box 22
Seal Rock, OR 97376

Prepared by:

Gary C. Sandstrom, C.E.G., R.P.G.
K & A Engineering, Inc.
Coburg, Oregon

1.0 Introduction

At the request of Bill Lund, Gary C. Sandstrom, Geologist, LLC, working with K&A Engineering Inc., of Coburg, Oregon, observed site conditions at Lots 1800, 1900 and 1903 immediately north of 1245 NW Spring St., Newport, Oregon, 97365. The site is situated in a geologic hazard zone defined by the City of Newport and Lincoln County and this report has been prepared to assess geologic hazard conditions relevant to the proposed purchase and development of the property.

2.0 Scope of Work

A site visit and geologic reconnaissance of surface features was conducted on October 10, 2017. A follow-up visit November 7-8, 2017 included geotechnical borings and additional site reconnaissance plus excavation of 3 hand auger borings and a hand-dug test pit to further characterize the site. In addition, the following literature and internet sources were reviewed:

- Google Maps, http://maps.google.com/maps
- Google Earth, earth.google.com
- USGS, http://store.usgs.gov, 1984 and 2014 Newport North Topographic Quadrangle maps from US Dept. of Interior, Geological Survey
- ORMAP GIS, http://www.ormap.org Oregon Map website listing tax lot numbers
- Lincoln County Assessor's Maps, tax maps and site surveys, www.co.lincoln.or.us
- H.G. Schlicker & Associates, Inc., *Geologic Reconnaissance of Lots 1, 2, 3, 4, 5, Block 37, NW Spring St, Newport, Oregon,* August, 1991
- Schlicker, H.G., Olcott, G.W., Beaulieu, J.D. and Deacon, R.J., *Environmental Geology of Lincoln County, Oregon,* State of Oregon, DOGAMI, Bulletin 81, 1973
- Snavely, P.D., MacLeod, N.S., Wagner, H.C. and Rau, W.W., *Geologic Map of the Yaquina and Toledo Quadrangles, Lincoln County, Oregon,* US Dept. of the Interior, Geological Survey, Misc. Investigation I-867, 1976
- Snavely, P.D., MacLeod, N.S. and Wagner, H.C., *Preliminary Bedrock Geologic Map of the Yaquina and Toledo Quadrangles, Lincoln County, Oregon,* US Dept. of the Interior, Geological Survey, Open File Report 72-352, 1972
- Priest, G.R. and Allan, J.C., *Evaluation of Coastal Erosion Hazard Zones Along Dune and Bluff-Backed Shorelines in Lincoln County, Oregon: Cascade Head to Seal Rock Technical Report to Lincoln County*; State of Oregon, DOGAMI, Open File Report O-04-09, 2004
- *Tsunami Inundation Map for Newport North, Linc-06,* State of Oregon, DOGAMI, TIM Linc-06, 2013

- State of Oregon, DOGAMI, (HazVu), http://oregongeology.org/sub/hazvu/index
- State of Oregon, DOGAMI, Statewide Landslide Inventory for Oregon (SLIDO), http://www.oregongeology.org/projects/slido/slido-map
- State of Oregon, DOGAMI, (LIDAR), http://oregongeology.org/sub/lidardataviewer/index
- State of Oregon, *Cascadia Magazine,* Cascadia EQ Time Line, DOGAMI, Winter 2010

This report was written to summarize the investigations. Geotechnical site explorations were conducted by K&A Engineering Inc.

3.0 Project Location and Description

The vacant subject property is situated on the bluff above the Pacific Ocean on the west side of NW Spring Street south of NW 14th Avenue in Newport, Oregon approximately ¾ mile north-northwest of the junction of US Highway 101 and US Highway 20, and a mile and a half north of the US 101 Yaquina River Bridge (see Google Earth Location Map and USGS 1984 and 2014 Newport Topographic Quadrangle Maps). The property (see the ORMAP and Lincoln County Photo tax maps and plat tax map) is listed as tax lots 1800 (104), 1903 (Parcels 4 and 5 of Ocean View Block 37) and 1900 (Parcels 2 & 3 and the northern half of Parcel 1, Block 37) in T11S, R11W, Section 5 SW ¼ of NW ¼. Combined Lots 1900 and 1903 are rectangular lots bounded on the east by NW Spring Street and measure approximately 303 feet north-south and 125 feet east-west. Lot 1800 is situated immediately north of Lot 1903 and measures 60 feet north-south and extends approximately 215-245 feet west from NW Spring Street to the vegetation line, and appears to be the abandoned right-of-way for NW 14th Avenue. The north-neighboring lot 1802 at 1409 NW Spring Street is occupied by a single-family residence, as are the lots on the east side of NW Spring Street opposite Lots 1900 and 1903. South-neighboring Lot 4400 is owned by the City of Newport, as is the NW 13th Avenue right-of-way south of Lot 4400 which extends to the vegetation line approximately 350 feet west of NW Spring Street. The City of Newport also owns parcel 1902 west of Lots 1900 and 1903, and all the adjoining City of Newport parcels are vacant. Single family residences (including the southern neighbor at 1245 NW Spring Avenue) are situated on the parcels west of NW Spring Street and south of the 13th Avenue right-of-way.

The eastern boundary of the heavily-vegetated subject parcel generally coincides with a landslide scarp ranging up to 10 to 15 feet high along the west margin of the NW Spring Street right-of-way. The slopes at the base of the scarp appear to have been cut and benched during construction of an access road at some point during site development, and the base of the scarp/cut-bank has been buttressed with basalt cobble fill in places. Moderate, generally hummocky, irregular slopes lead down to the beach. The vegetation line is approximately 250 west of NW Spring Street at the north end of the subject site and approximately 300 feet west at the south end. A generally SE-NW trending drainage channel traverses the site from the approximate midpoint of the southern boundary to the beach sand/vegetation line near the northwest corner. Site elevation ranges from approximately 93 feet at the southeast corner to 20 feet at the sand line near the northwest corner. The northeast site corner is approximately 85 feet and the southwest corner is approximately 65 feet. Several footpaths traverse the site and several primitive campsites were observed in the vicinity.

4.0 Geologic Setting

The slopes underlying the project site are classified in the geologic literature as Quaternary (less than 2.8 million years before present) Marine Terrace deposits overlying early Miocene (16.5-23.0 million years before present) Nye Mudstone (see DOGAMI Bulletin 81-3, OFR-O-04-09, USGS-OF-72-352-1 and USGS I-867 geologic maps). The Marine Terrace deposits are described in B-81 as up to 75 feet (in Lincoln County) of semi-consolidated uplifted beach sand overlain locally by fine-grained dune deposits, with occasional localized gravel lenses. Terrace deposits are described in O-04-09 as unconsolidated to moderately consolidated gravel, beach and dune sand; locally containing minor consolidated clay-rich paleosols, colluvium, debris flows, and alluvial interbeds; to thin-bedded sandstone, conglomerate, and tuffaceous siltstone with thick glauconitic sandstone beds; sandstone is fine- to coarse-grained and shows crossbedding, fore-set bedding, and scour and fill structures.
DOGAMI B-81 maps early Miocene (approximately 16.5-23 million years old) Nye Mudstone deposits at the base of the bluffs at the head of the beach west of the subject site and USGS OF-72-352-1 maps Nye Mudstone underlying the Marine Terrace deposits in much of the site vicinity. Nye Mudstone deposits are described as massive to thick-bedded, gray, clayey marine siltstone and very fine-grained sandstone containing sandstone interbeds near the base and calcareous concretions in places. Middle Miocene (10.4-16.5 million years old) Astoria Formation deposits are mapped overlying the Nye Mudstone a short distance to the south and in the wave zone west of the site. Nye Mudstone dips in the site vicinity are mapped at generally 11 to 15 degrees to the west to southwest and Astoria Formation deposits are mapped at 23 degrees to the west a few hundred feet to the south at Jumpoff Joe.
The USDA National Resource Conservation Service Pacific Northwest Soils website classifies the soils underlying the site as Urban land-Bandon complex on 12 to 50% slopes to the west, described as colluvium derived from sedimentary rock. No further information is provided on the NRCS website.

5.0 Geologic Hazard Mapping

DOGAMI O-04-09 and the HazVu website map active landslides underlying the subject site. The DOGAMI HazVu website maps two landslides underlying the site, the first is a Quaternary (sometime in the last 2.8 million years) landslide extending from about NW 12th Street on the south northward past NW 22nd Street and eastward to the intersection of NW 15th Street and NW Thompson Street. An active slide is mapped extending generally along the west side of NW Spring Street between NW 14th Street and NW 11th Street and corresponds to the scarp observed on the eastern margin of the subject site. The landslide hazard rating of the subject site is very high due to underlying landslides.
The DOGAMI HazVu website maps an ENE-WSW trending active fault approximately 1.5 miles southeast of the subject site and rates the site vicinity susceptible to severe shaking in the event of both Cascadia subduction zone earthquakes and lesser earthquakes. The majority of the site is situated above the statutory tsunami inundation line (at 30 feet elevation). The western margin of lot 1800 near the vegetation line is below the inundation line, but the homesites proposed for that lot are above the line. DOGAMI's Tsunami Inundation Map Linc-06 shows inundation scenarios for earthquakes of several different magnitudes, including a Cascadia Subduction Zone earthquake which could reach an elevation of approximately 80 feet, past the eastern property line. The site vicinity is classified by HazVu as at low risk of liquefaction in the event of earthquakes and the Flood Hazard zone for ocean flooding extends into the western margin of Lot 1800, but not the proposed homesite vicinity. The revised Site Plan dated 5/31/18 shows the FEMA "FIRM" boundary in relation to the proposed residence footprints

– please note the proposed residence footprints are above the FEMA "FIRM" hazard. The HazVu Coastal Erosion Hazard map, based on O-04-09 and not intended to be site-specific, maps almost the entire subject site as an active erosion zone; the southern end of the eastern margin adjacent to NW Spring Street is classified at high hazard (high probability being affected by active erosion in the next 60-100 years). The attached OFR-04-09 Dune and Bluff Erosion Hazard diagrams are a pictorial explanation of the erosional hazard zones. The site vicinity is estimated (O-04-09) to be subsiding relative to sea level at a rate of approximately one and a half millimeters a year.

6.0 Previous Site Study

A geologic site reconnaissance was performed by H.G. Schlicker & Associates in 1991 to evaluate site geology. The report has these observations: "A prominent head scarp is present adjacent to Spring Street between 13th Street and 14th Street encompassing the eastern parts of lot 1 through 5, Block 37 (Lots 1900 and 1903). The slide debris appears to have moved towards the ocean as a unit and a major slide mass lies between the subject property and the beach. It is highly broken and distorted from sliding and is being eroded by the ocean waves and driving rains. The landslide, as it now exists, rests on a nearly level surface and is not capable of further sliding. Rather it acts as a buttress to the toe of the subject property. Small local slumps can occur along the face of the bluff. The east part of lots 3, 4 and 5, Block 37 slope moderately steeply. The slope is probably overlain by a thin (layer of) slide debris or other material which may be capable of slope movement unless toe support is provided." Schlicker's summary and conclusions: "The site is underlain by Coastal Terrace deposits, Nye Mudstone and possibly some Astoria rocks. The thickness of the overlying material is unknown but is believed to be a relatively thin deposit of landslide debris. Thick landslide debris, distorted Coastal Terrace and Nye form lie between the site and the beach. The bowl-shaped area present just east of Spring Street is an older landslide that has apparently been stable for many years. The area west of Spring Street probably moved initially prior to the Jump Off Joe landslide that began about 1942 and continued until recently. Movement in the vicinity of the site is limited to small local slumps since the driving force is no longer present to activate a large slide. Foundation conditions at the site depend upon the thickness of the debris and the character of the sediments to depths which might effect settlement or cause slope instability." A geotechnical site study was recommended.

7.0 Soils Observed

Soils observed on the site surface consisted generally of sandy silt topsoil with organics ranging to fine-grained sand consistent with classification as Marine Terrace Deposits. Exposures of Nye Mudstone were observed west of the subject site near the vegetation line and also in shallow explorations along the access road at the base of the scarp along the eastern site margin. Geotechnical borings on the subject site by K&A Engineering also encountered interpreted Marine Terrace deposits overlying Nye Mudstone. Angular basalt cobbles (two feet deep in the first hand-auger boring) were observed in places along the upper edge of the access road at the base of the scarp and are interpreted as fill placed to buttress the base of the scarp prior to current site explorations. Soils observed west of the subject site consisted generally of relatively loose fine-grained sand interpreted as disturbed Marine Terrace deposits weathered to or covered by dune sand. Nye Mudstone was observed near the vegetation line as mentioned above, and rock exposures were sighted in the surf zone corresponding to exposures of Astoria Formation materials mapped in the literature.

Three hand-auger borings were excavated on November 7, 2017 (see Boring Logs and Site Plan) on the upper shoulder of the access road near the base of the scarp along the eastern site margin to characterize soils in the vicinity, encountering residual siltstone at one location. A test pit was excavated with a mattock in the access road near observed siltstone fragments and a seep, and encountered wet, light gray, gravelly sand overlying weathered siltstone. Mr. Lund reported siltstone was encountered in places during clearing of the access road at the base of the scarp.
Materials observed are consistent with descriptions in the geologic literature.

8.0 Drainage and Groundwater

A spring is mapped (USGS 2014 Newport North Topographic Quadrangle Map) in Lot 1903 and was observed on the access road during the reconnaissance. A hand-dug test at the location uncovered the contact between the Marine Terrace deposits and underlying Nye Mudstone at a depth of approximately a foot and a half below the surface. The resulting creek flows generally northwestward and onto the beach west of the NW 14th Street right-of-way.
A footpath leads from the City of Newport right-of-way south of the subject parcel along a generally north-northwest trending swale that traverses the vicinity west of the subject parcel, but no flowing water was observed and none is mapped, so the feature may be more a relict of landsliding than a watercourse.
A drain line from the southern neighboring residence leads down to the beach and has been disconnected and utilized as a water source by people camping in the vicinity. The channel below the disconnected line shows evidence of relatively rapid erosion.
A surface run-off collector grate was observed on the west shoulder of NW Spring Street south of the subject parcel and a one-foot diameter corrugated metal pipe discharges onto the steeper slopes below the scarp west of the grate. Other collection grates were observed near the intersection of NW Spring Street and NW 14th Street, but the discharge locations were not found. A section of loose concrete pipe about 2-3 feet long was observed sitting on the ground surface on the trail at the base of the scarp below the northern drains. Flow from the drains likely combines with flow from the spring in the drainage mapped by USGS.

9.0 Geohazard Inspection

Geohazard site inspections were performed on October 10, 2017 and November 7, 2017 (see Recon Photos, Site Plan and Cross Section). These included traversing the subject site and site vicinity where accessible observing conditions for evidence of instability. The eastern margin of the subject site generally coincides with a heavily-vegetated, 10-15 feet high landslide head-scarp situated a few feet west of the NW Spring Street right-of-way that is also obscured by piles of brushy landscaping debris likely from neighboring sites. Slopes to the east of the subject parcel are relatively gentle and underlain by Marine Terrace sand deposits. No curbs are present in the site vicinity and pavement runoff generally infiltrates into the sandy soil on the road shoulders. Several utility boxes/vaults on the east side of Spring Street appear to have settled, and a mailbox on the west side appears to be leaning as a result of soil creep. As mentioned above, stormwater collection inlet grates were observed in the pavement near the north and south ends of the subject site and the outfall of the southern drain was observed discharging onto the moderately-steep site slopes in the City of Newport right-of-way west of the scarp. The northern drain outfalls were not observed due to heavy vegetation, but the drains are likely discharged in a similar manner onto the slopes to the west. A path down to the beach near the northern drain location goes over a disconnected segment of concrete drain pipe.

An access road was apparently excavated below the scarp at some point during prior site development and was again cleared of vegetation for the present geotechnical investigation. The recent grading activities exposed organics and dark brown sandy silt topsoil grading to tan Marine Terrace sand deposits at the level of the scarp near the southeast corner access point and residual siltstone soils and weathered siltstone further to the north below the scarp. Siltstone excavation spoils were observed on the roadbed at the same general location as the spring mapped by USGS and observed during the recon, and an exploratory test-pit dug at the spring location with a mattock encountered saturated Marine Terrace deposits overlying relatively-impermeable weathered siltstone. Residual/weathered siltstone was also encountered at the same elevation a couple dozen feet to the north near the base of the cut-bank and above the roadbed. Undisturbed angular basalt cobbles were observed in several locations on the upper margin of the access road and were likely placed to buttress the scarp, talus and cut-bank from previous site development. Two feet of cobbles with fragments of broken glass were encountered near the base of the scarp and above the primitive road directly upslope and east of the first tracked drill boring.

Site topography west of the scarp descending to the beach consists of generally moderate to gentle, very hummocky slopes underlain by sand and heavily vegetated with lodgepole pines, salal, ferns, blackberries and other brush, with several observed primitive campsites. Erosional scarps, pines with curved trunks and exposed roots are common. Materials interpreted as excavation spoils mixed with organic debris from previous development appear to have been pushed westward onto the slopes near the first track rig borehole in Lot 1903.

Exposures of Nye Mudstone up to a dozen feet or more were observed above the head of the beach sands west of Lots 1900 and 1903 and some grass-covered dunes have formed below the siltstone exposures and to the north.

10.0 Conclusions

The subject property is situated at the seaward edge of Quaternary (less than 2.8 million years old) Marine Terrace deposits, essentially beach sand compacted by wave action that has been uplifted due to regional tectonic movement from subduction of the Pacific Plate under the North American Plate. The terrace sands overlie early-Miocene age (approximately 16.5-23 million years old) Nye Mudstone deposits that were observed at the base of the bluffs at the head of the beach, in access road excavation and in explorational borings. The Nye Mudstone dips generally 10-15° westward to southwestward in the site vicinity and cross-sections drafted for the geotechnical report suggests a generally-similar contact orientation with the overlying Marine Terrace deposits. Geologic literature and the State of Oregon Geologic Hazards website suggest two stages of landsliding have occurred at the site. A relatively large landslide occurred at some point within the last 2.8 million years but is considered relatively stable (H.G. Schlicker 1991 site reconnaissance). A more recent landslide, classified as active, has apparently translated a block of Marine Terrace deposits westward and forming the scarp noted along the east margin of the site. The translated Marine Terrace sand deposits are significantly disturbed by the slide and have been eroded by subsequent rainfall producing an irregular hummocky topography. Schlicker's report concluded the slide mass is currently resting on a fairly level base and is unlikely to move, and provides a buttress to protect slopes along the eastern margin of the site. Geotechnical explorations encountered relatively hard siltstone at shallow to moderate depths in the proposed homesite vicinities in the eastern margin of the site.

The site is situated within the Coastal Erosion Hazard Zone defined by the State of Oregon (DOGAMI – OFR O-04-09 and HazVu website) see attached Bluff Recession Diagram: the majority of the site is in

the very high hazard – active erosion zone. The mean erosion rate of the Nye Mudstone at the base of the bluff is estimated at 0.30 foot per year, or about 6 feet every 20 years. Astoria Formation deposits are also mapped in the surf zone, and sand dunes are forming in places west of the siltstone exposures at the base of the bluff. Rising sea levels from global warming combined with coastal subsidence in the Newport vicinity suggests that erosion will eventually undercut the cliff/bluff in the site vicinity, but in our opinion at a rate not likely to significantly effect the homesite vicinity within the design life of the structure if the recommended mitigations are followed. Erosion of the hummocky landslide debris will likely continue at a relatively high rate and any proposed structures will need to protect against such erosion. The underlying sand slopes are also rated at low soil liquefaction hazard in the event of an earthquake.

The homesite locations are not considered at risk from ocean flooding or most tsunamis, but a rupture of the Cascadia Subduction Zone, an event with a probability of 1 in 3 or 4 in the next 50 years estimated by OSU researcher Chris Goldfinger, could generate a surge of up to 80 feet high which could cover most if not all the subject site. The last subduction zone earthquake in the Pacific northwest with major tsunami and subsidence occurred January 26, 1700, and 19 such earthquakes are thought to have occurred over the last 10,000 years, leading to an estimated repeat interval of 530 years or so (DOGAMI IMS 28). Other research estimates an average interval of 240 years. A large subduction zone earthquake and resulting tsunami would cause widespread damage on the coast, especially if paired with high tides, major storms and saturated soils. Geologists believe such an event would remobilize old landslides and generate new slides in areas prone to sliding. Near-instantaneous subsidence of the coast of 3 to 5 feet is a possibility discussed in Open File Report O-04-09 and in more recent research. Any resident of the Oregon coast must acknowledge the possibility and probability of earthquakes and tsunamis and the substantial damage they would cause and weigh that against their enjoyment of the coast environment.

11.0 Recommendations

Relatively hard siltstone bedrock was encountered at shallow to moderate depths at the proposed homesite locations but is overlain by relatively weak sand that is very prone to wind and rain erosion. Deep foundations such as drilled piles set several feet into competent siltstone bedrock would likely provide vertical support for a single-family residence. The siltstone exposed at the head of the beach is expected to erode at approximately 0.3 feet per year but continued translational movement is relatively unlikely.

Residences should be constructed with well-drained upslope retaining walls to resist lateral pressure from the eroding Marine Terrace materials on the surface and east of the subject site. In our opinion, horizontal anchors tied into the foundations and set into competent siltstone would help mitigate lateral movement induced by percolation and migration of groundwater through the terrace sands and down the inclined contact between the permeable sand and impermeable siltstone towards the beach. The sands adjacent to the residences should be buttressed with rockeries, cribbing or retaining walls to counter lateral pressures and reduce erosion.

The seep observed near the middle of the subject site in the access road that feeds the creek flowing northwestward down to the beach should be diverted to a drain or tighline leading downslope as far as possible to reduce erosion. Gutter and foundation drains for new residences should also be tightlined as far downslope as possible to a level spreader system or erosion-resistant basin.

Maintaining deep-rooted, densely foliated vegetation on site slopes will help reduce the severity of wind and rain erosion. Bark mulch or other organic material held in place by jute netting can help protect

bare soils until vegetation is established. Surface gravel can also reduce erosion in places where vegetation is not maintained. Impermeable soil should be placed against the footing walls, sloping outward, to reduce infiltration to the footing subgrade.

12.0 Report Limitations

This report presents site observations, site research, site explorations, and recommendations for the proposed site development by Gary C. Sandstrom, Geologist LLC. The conclusions in this report are based on the conditions described in this report and are intended for the exclusive use of the client(s) and their representatives for use in their evaluation of the site. The analysis and general recommendations provided herein may not be suitable for structures or purposes other than those described herein. Services performed by the geologist for this project have been conducted with the level of care and skill exercised by other current geotechnical professionals in this area under similar budget and time constraints. No warranty or guarantee is herein expressed or implied. The conclusions in this report are based on the site conditions as they currently exist and it is assumed that the limited site locations that were physically investigated generally represent the subsurface conditions at the site. Should site development or site conditions change, or if a substantial amount of time goes by between my site investigation and site development, I reserve the right to review this report for its applicability. If you have any questions regarding the contents of this report, or if I can be of further assistance, please contact me.

Gary C. Sandstrom, Geologist, LLC

Addendum June 4, 2018

This addendum to the Geologic Hazard Report dated November 30, 2017 is intended to address Erosion Control Measures, Newport Municipal Code 14.21.090. An email dated May 17, 2018 from Derrick Tokos, Community Development Director, City of Newport suggested an item by item response to the regulations.

14.21.090 A. Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one time during construction;

Response: It is recommended the contractor minimize erosion by employing a phased approach: limiting construction activities to the smallest practical areas at any particular time, such as constructing buildings one unit at a time and completing remediation work before moving on to the next unit; road construction as a separate phase; working on retaining wall separate from building construction if possible, and so forth. Exposed soils should be protected with tarps, mulch, temporary shoring or temporary backfills until temporary vegetative or permanent remediation can be performed.
Permanent measures should include planting of deep-rooted vegetation as much as possible – lodgepole pines are common in the site vicinity and are a major factor in keeping the loose sands west of Spring Street as stable as they presently are. Dense foliage would also minimize the force of rain and wind impact on bare soils. Other native vegetation such as salal and grasses used for dune stabilization should also be employed in appropriate settings. In my opinion grass lawns offer poor protection from erosion and non-native vegetation requiring irrigation systems should be avoided.
Temporary vegetative stabilization might be accomplished by planting grass using straw or jute netting to hold soils in place.
Other forms of minimizing surface erosion by wind and rain could include cobble or rock armor and/or gravel, flagstone pavements or geomat grids. Retaining walls or cobble armoring could be constructed to help stabilize steeper slopes where vegetation might be less effective. Any retaining walls constructed should have adequate drains to reduce lateral pressures, with drain discharge directed to sumps and then pumped to city storm sewers (storm drain grates were observed on Spring Street opposite both the north and south ends of the property). Discharge could also be directed to the beach if allowed, or into level spreader systems or bioswales to reduce surface flows and facilitate infiltration if such systems are deemed adequate by the geotechnical engineer.
Flow may also be discharged into any natural watercourses found on the property if this can be accomplished without increasing erosion and sedimentation (this may require placement into the watercourse of gravel or cobbles, retaining basins and/or temporary placement of bark-filled net bags). Feasibility of the various options depends on finalized locations of various buildings and retaining walls, final grades, and what the City of Newport will allow.

14.21.090 B. Development plans shall minimize cut or fill operations so as to prevent off-site impacts:

Response: Cuts and fills will likely be necessary for driveway access to the dwellings and should be protected with retaining walls, graded slopes or terraces and other forms of protection as mentioned above in the response to Section A. Buildings should be founded on piles set into mudstone with grade beams or other lattice/mat foundations where necessary to avoid excessive excavation of subgrade

materials. Spread footings would require excessive excavation and would almost certainly not support the proposed construction on the loose native sand subgrade. The northern residence planned at lower elevations should be constructed on "stilts" rather than elevated fills which would be subject to possible flooding erosion.

14.21.090 C. Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development;

Response: As mentioned above in the response to Section A, grass combined with mulching and/or jute netting or other appropriate means for holding soil in place and reducing erosion should be used to protect exposed soils. Permanent remedial vegetation could also be planted in critical areas to forestall erosion in areas not directly effected/disturbed by construction.

14.21.090 D. Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical;

As mentioned above in the response to Section A, modular/phased construction would allow permanent remedial measures to be installed as quickly as possible.

14.21.090 E. Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary.

Response: Any temporary or permanent excavations should have a sump installed to collect increased runoff with discharge directed into city storm sewers or to the beach as mentioned above in the response to Section A. Permanent drainage systems should be installed as soon as practicable to deal with temporarily-increased runoff generated in later stages of construction. Vegetated bioswales should be utilized if and where slope and soil conditions are adequate to retard infiltration. Level spreader systems may also be effective if slope and soil conditions allow. Natural watercourses could be lined with gravel or provided with water-bars or basins to reduce erosion, with bark-filled net bags placed temporarily to slow water velocities and trap sediments, and/or vegetation planted to further reduce erosional effects.

14.21.090 F. Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching, seeding, planting, or armoring with rolled erosion control products, stone or other similar methods;

Response: See responses to Section A and E.

14.21.090 G. All drainage provisions shall be designed to adequately carry existing and potential surface runoff from the twenty-year frequency storm to suitable drainageways such as storm drains, natural watercourses, or drainage swales. In no case shall runoff be directed in such a way that it significantly decreases the stability of known landslides or areas identified as unstable slopes prone to earth movement, either by erosion or increase of groundwater pressure.

Response: As mentioned in the responses to Section A and E, it is recommended that discharge be directed to city storm sewers or to the beach, or into drainage swales or level spreader systems. If surface runoff and drain discharge is allowed to be directed into the city storm sewers or the beach as proposed, stability of the landslide should be increased rather than decreased.

14.21.090 H. Where drainage swales are used to divert surface waters, they shall be vegetated or protected as necessary to prevent offsite erosion and sediment transport;

Response: See response to Section E.

14.21.090 I. Erosion and sediment control devices shall be required where necessary to prevent polluting discharges from occurring. Control devices and measures which may be required include, but are not limited to:

1. **Energy absorbing devices to reduce runoff water velocity;**
2. **Sedimentation controls such as sediment or debris basins. Any trapped material shall be removed to an approved disposal site on an approved schedule;**
3. **Dispersal of water runoff from developed areas over large undisturbed areas;**

Response: See responses to Sections A and E.

14.21.090 J. Disposed spoil material or stockpiled topsoil shall be prevented from eroding into streams or drainageways by applying mulch or other protective covering; or by location at sufficient distance from streams or drainageways; or by other sediment reduction measures; and

Response: Spoils material or topsoil should be removed from the site as soon as possible or placed on impermeable fabrics in impounded basins and/or covered with mulch if necessary to prevent transport of sediments to watercourses.

14.21.090 K. Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid waste, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handlings, disposal, site monitoring and clean-up activities.

Response: Construction-related materials should be handled in a responsible manner and disposed of properly, with minimal use of toxic materials,. Any spillage should be immediately contained and cleaned up.

Appendix E

Reference Reports

- USGS Earthquake Deaggregation
- USGS Seismic Design Summary Report
- H.G. Schlicker Report

Geotechnical Engineering Report

Proposed Residential Development

Tax Lots 1900 and 1903

Tax Map 11-01-05-BC

NW Spring Street

Newport, Oregon

Project: 17056

June 29, 2018

Prepared for:

Bill Lund

P.O. Box 22

Seal Rock, OR 97376

Prepared by:

Michael Remboldt, P.E., G.E.

K & A Engineering, Inc.

Coburg, Oregon

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

Input

Edition

Dynamic: Conterminous U.S. 2014 (v4.1.

Spectral Period

Peak ground acceleration

Latitude

Decimal degrees

44.643

Time Horizon

Return period in years

475

Longitude

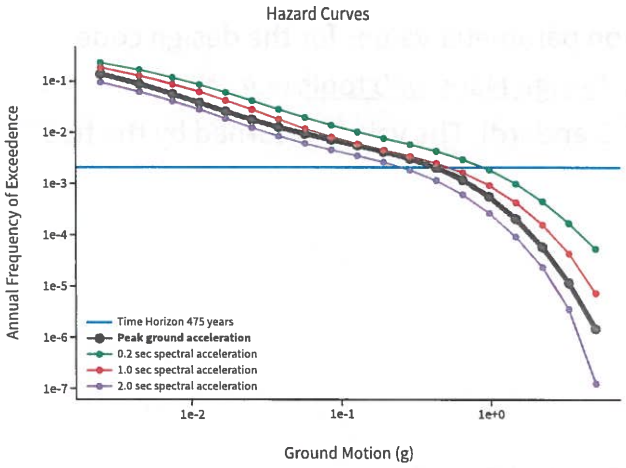
Decimal degrees, negative values for western longitudes

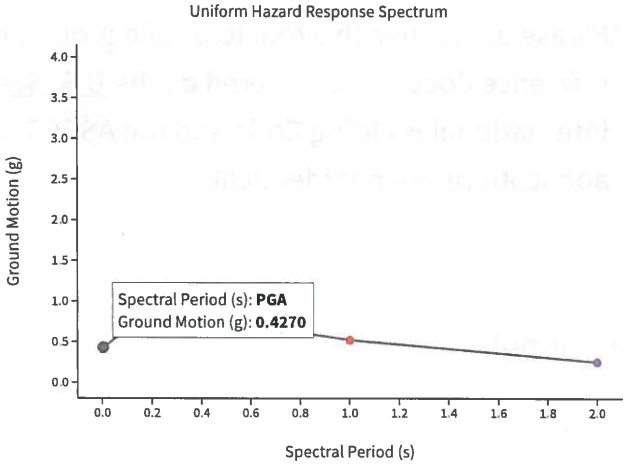
-124.061

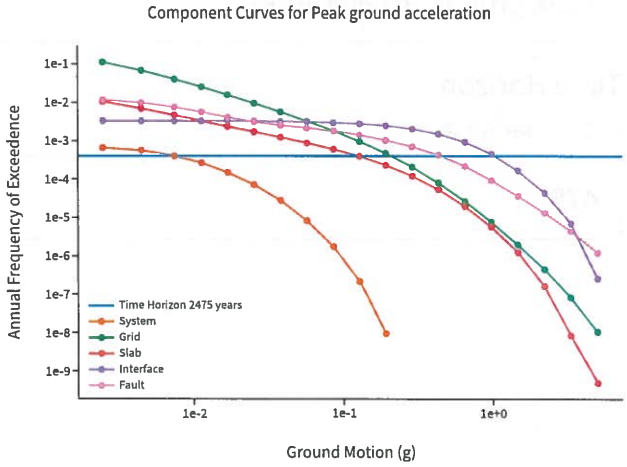
Site Class

259 m/s (Site class D)

Hazard Curve





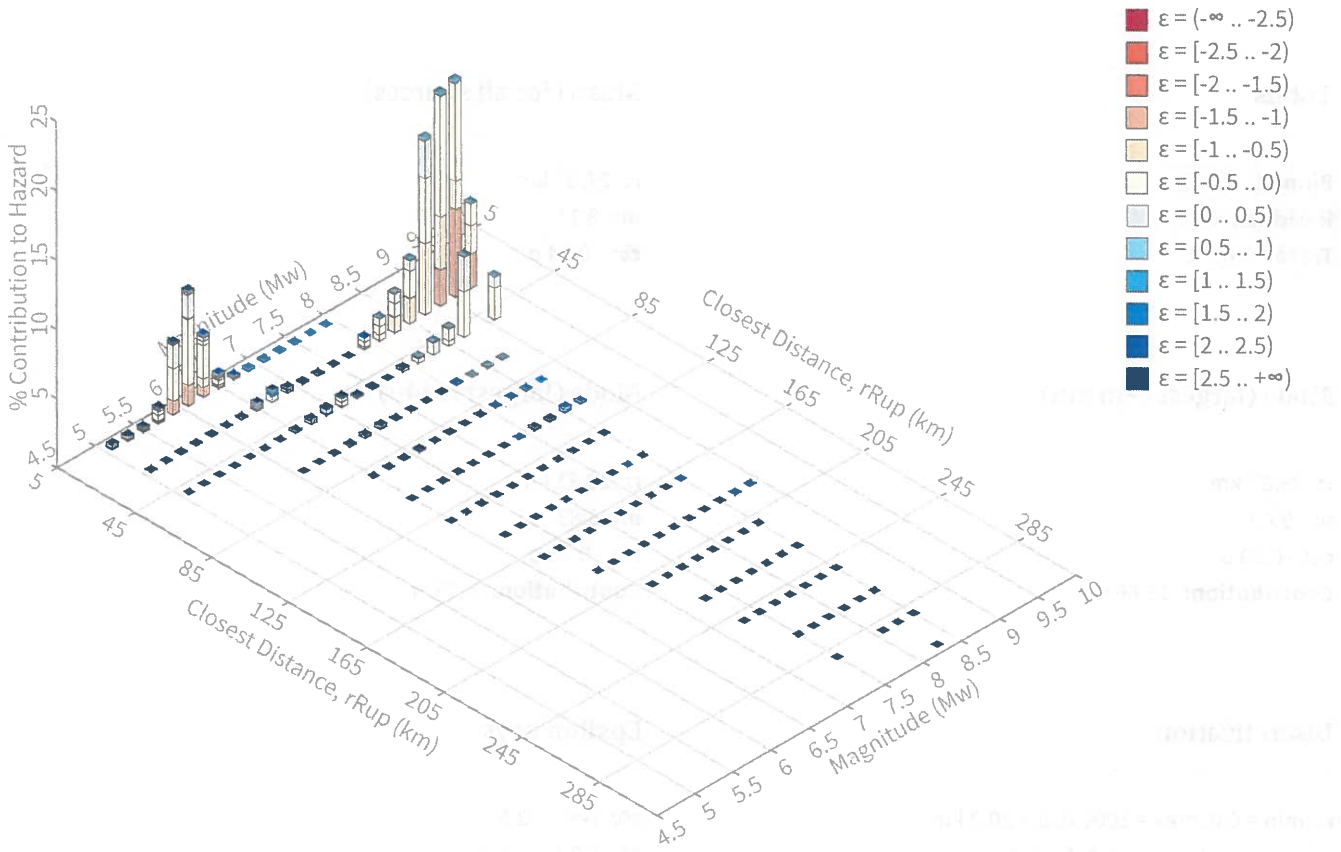


View Raw Data

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 475 yrs
Exceedance rate: 0.0021052632 yr^{-1}
PGA ground motion: 0.42700495 g

Recovered targets

Return period: 476.54342 yrs
Exceedance rate: 0.0020984447 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.68 %

Mean (for all sources)

r: 27.07 km
m: 8.11
ε0: -0.24 σ

Mode (largest r-m bin)

r: 28.87 km
m: 9.08
ε0: -0.59 σ
Contribution: 15.66 %

Mode (largest ε0 bin)

r: 28.81 km
m: 8.83
ε0: -0.25 σ
Contribution: 8.73 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
sub0_ch_mid.in	Interface							26.92
Cascadia Megathrust - whole CSZ Characteristic		31.26	8.88	-0.44	124.356°W	44.742°N	295.43	26.92
Geologic Model Small Mag	Fault							18.80
Yaquina		2.04	6.10	-0.33	124.033°W	44.632°N	119.19	18.17
sub0_ch_bot.in	Interface							17.85
Cascadia Megathrust - whole CSZ Characteristic		25.25	9.07	-0.68	123.734°W	44.757°N	63.80	17.85
sub0_ch_top.in	Interface							8.59
Cascadia Megathrust - whole CSZ Characteristic		43.58	8.79	-0.05	124.567°W	44.738°N	284.99	8.59
sub2_ch_mid.in	Interface							3.03
Cascadia Megathrust - Goldfinger Case C Characteristic		31.04	8.45	-0.25	124.356°W	44.742°N	295.43	3.03
coastalOR_deep.in	Slab							2.19
sub2_ch_bot.in	Interface							2.10
Cascadia Megathrust - Goldfinger Case C Characteristic		25.15	8.71	-0.54	123.734°W	44.757°N	63.80	2.10
sub1_GRb0_mid.in	Interface							1.97
Cascadia floater over southern zone - Goldfinger Case B		34.60	8.43	-0.15	124.356°W	44.742°N	295.43	1.97
sub1_GRb1_mid.in	Interface							1.66
Cascadia floater over southern zone - Goldfinger Case B		35.30	8.30	-0.09	124.356°W	44.742°N	295.43	1.66
sub1_ch_mid.in	Interface							1.39
Cascadia Megathrust - Goldfinger Case B Characteristic		31.05	8.59	-0.31	124.356°W	44.742°N	295.43	1.39
sub1_GRb0_bot.in	Interface							1.31
Cascadia floater over southern zone - Goldfinger Case B		28.99	8.42	-0.34	123.734°W	44.757°N	63.80	1.31
sub1_GRb1_bot.in	Interface							1.12
Cascadia floater over southern zone - Goldfinger Case B		29.69	8.30	-0.28	123.734°W	44.757°N	63.80	1.12

USGS Design Maps Summary Report

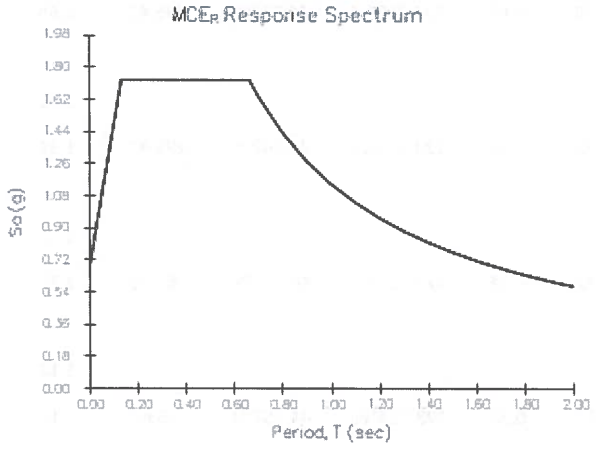
User-Specified Input

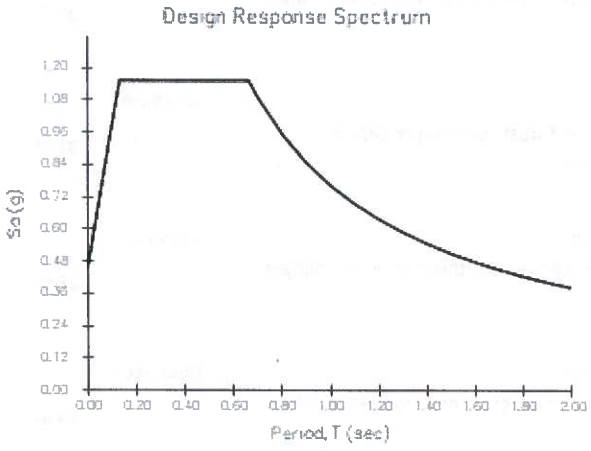
Report Title	Lund Project - NW Spring St., Newport, Oregon Wed November 29, 2017 01:07:38 UTC
Building Code Reference Document	ASCE 7-10 Standard (which utilizes USGS hazard data available in 2008)
Site Coordinates	44.64312°N, 124.06075°W
Site Soil Classification	Site Class D – "Stiff Soil"
Risk Category	I/II/III

USGS-Provided Output

S_S =	1.729 g	S_{MS} =	1.729 g	S_{DS} =	1.153 g
S_1 =	0.765 g	S_{M1} =	1.148 g	S_{D1} =	0.765 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.





For PGA_M, T_L, C_{RS}, and C_{R1} values, please view the detailed report.

H.G. Schlicker & Associates, Inc.
235 N.E. 122nd Avenue, Suite 300 • Portland, Oregon 97230
(503) 257-9666

Project #91-781

August 29, 1991

To: Mr. Hal Smith
P.O. Box 753
Newport, OR 97365

Subject: Geologic Reconnaissance
Lots 1, 2, 3, 4, 5, Block 37
N.W. Spring Street
Newport, Oregon

Dear Mr. Smith:

INTRODUCTION

This report presents the results of our preliminary investigation of the above referenced property. We understand that you plan to construct three or four single family homes adjacent to Spring Street, or possibly a cluster near the west side of the property.

The purpose for this report is to provide information concerning slope stability, foundation characteristics, and buildability of the site. A geotechnical report will be necessary providing the geologic conditions are reasonably favorable and mitigation costs will not exceed the final land value.

SCOPE

No drilling or excavation was be done for this preliminary study. Work included a site visit, review of published and unpublished geology and available reports of the area.

GEOLOGY

Regional Geology

The exposure along the sea cliffs at Jump Off Joe include the Nye Mudstone overlain by the Astoria Formation and unconformably overlain by the Coastal Terrace deposits. The Nye Mudstone and remnants of the Coastal Terrace deposits are present in the vicinity of the site.

Geologic Units

Nye Mudstone. The Nye is early Miocene in age. It is composed of siltstone, fine silty sand beds and occasionally with layers of volcanic sand and ash. It was deposited in marine environment and has been broadly folded with dips in the vicinity of 20 degrees or more except where distorted or modified by landsliding. Along the beach the Nye has been deeply weathered and fractured.

Astoria Formation. The Astoria, of middle Miocene age, overlies the older Nye Mudstone. It is composed of thin to thick bedded fine to medium grained sandstone. It contains limey concretions and sulfide nodules. In places it has convolute bedding formed by submarine landslides before the unit became consolidated. It crops out mainly in the surf in this area.

Coastal Terrace deposits. The Coastal Terraces are composed of Pleistocene to Recent age, flat lying beds of weakly consolidated fine sand and silty sand but with medium to coarse sand locally. The beds include brackish water deposits and occasionally peat or other organics. At the site a peat layer a foot or more thick is observed in the bluff exposures west of Block 37. The disrupted condition of the material is the result of landsliding.

SITE CONDITIONS

Typography

The site lies between Spring Street on the east and the Pacific Ocean on the west. The steepest slope adjacent to Spring street is about 24 degrees, however, the slope on lots 4 and 5 is only about 10 degrees. Elevations on the site lie between 40 and 80 feet MSL. The land rises to 57 feet about 90 feet to the west of the site and slopes to 10 feet MSL at the beach 110 feet west of the site.

Slope Stability

The area from Jump Off Joe northwards and from Spring Street west is old landslide. A prominent head scarp is present adjacent to Spring Street between 13th street and 14th street encompassing the eastern parts of lot 1 through 5, Block 37.

The slide debris appears to have moved towards the ocean as a unit and a major slide mass lies between the subject property and

the beach. It is highly broken and distorted from sliding and is being eroded by the ocean waves and driving rains. The landslide, as it now exists, rests on a nearly level surface and is not capable of further sliding. Rather it acts as a buttress to the toe of the subject property. Small local slumps can occur along the face of the bluff.

The east part of Lots 3, 4 and 5, Block 37 slope moderately steeply. The slope is probably overlain by a thin slide debris or other material which may be capable of slope movement unless toe support is provided.

SUMMARY AND CONCLUSIONS

The site is underlain by Coastal Terrace deposits, Nye Mudstone and possibly some Astoria rocks. The thickness of the overlying material is unknown but is believed to be a relatively thin deposit of landslide debris. Thick landslide debris, distorted Coastal Terrace and Nye formation lie between the site and the beach.

The bowl-shaped area present just east of Spring Street is an older landslide that has apparently been stable for many years.

The area west of Spring Street probably moved initially prior to the Jump Off Joe landslide that began about 1942 and continued until recently. Movement in the vicinity of the site is limited to small local slumps since the driving force is no longer present to activate a large slide.

Foundation conditions at the site depend upon the thickness of the debris and the character of the sediments to depths which might effect settlement or cause slope instability.

RECOMMENDATIONS

Because of the sensitive nature of old landslides and debris deposits, we recommend that:

1. A geotechnical study be performed to determine the thickness and engineering characteristics of the material to a depth of at least 50 feet unless drilling indicates competent material at a shallower depth.

2. At least two test holes should be drilled to approximately 50feet in depth.

3. Laboratory tests include direct shear be done.

4. Slope stability calculations be made.

5. Consideration be made for slope support including crib walls.

6. Various foundations systems be considered if development of the site is feasible.

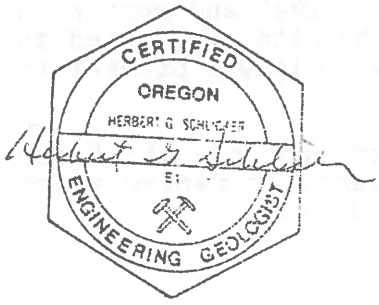
LIMITATIONS

Our investigation was based on geological reconnaissance and available published information. The date and recommendations presented in this report are believed to be representative of the site. The conclusions and recommendations herein are professional opinions derived in accordance with current standards of professional practice and no warranty is expressed or implied.

It has been our pleasure to serve you. If you have any questions concerning this report of the site, please contact us.

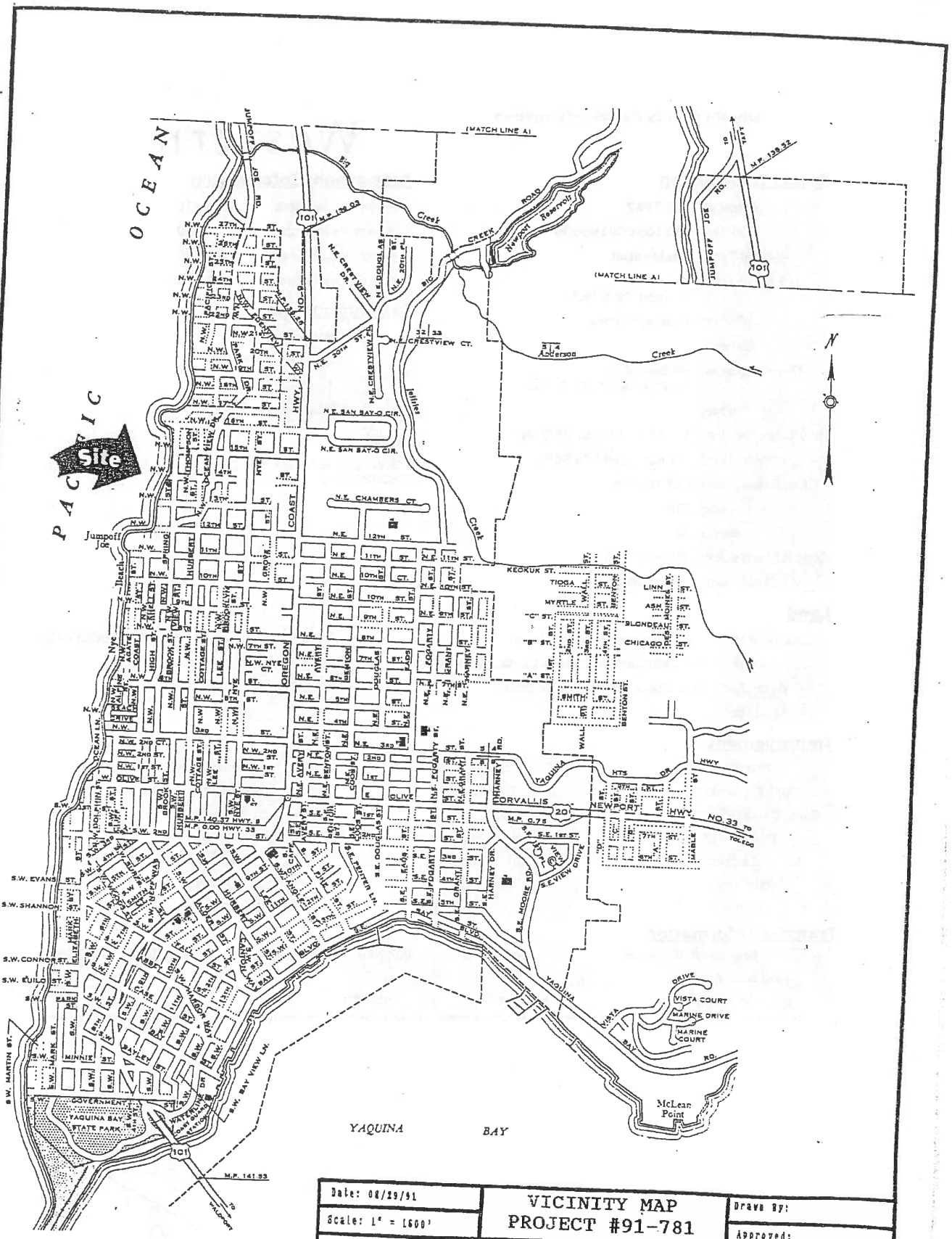
Respectfully submitted,

H.G. SCHLICKER AND ASSOCIATES, INC.



Herbert G. Schlicker, P.G., C.E.G.
President

HGS:mlr



Date: 08/29/91	VICINITY MAP PROJECT #91-781	Drawn By:
Scale: 1" = 1600'		Approved:

LOTS 1,2,3,4 & 5, BLOCK 37
N.W. SPRING STREET
NEWPORT, OREGON

Lincoln County Parcel Information

Western Title & Escrow

Parcel Information

Parcel #:	**R127787**
Tax Lot:	**111105BC0190000**
Record Type:	**Residential**
Site Address:	Newport OR 97365
Owner:	Anderson Lonna
Owner2:	
Owner Address:	PO Box 6432 Miramar Beach, FL 32550
Phone:	
Twn/Range/Section:	T: 11S R: 11W S: 05 Q: NW
Parcel Size:	.45 Acres (19,576 SqFt)
Plat/Subdivision:	OCEANVIEW
Lot:	23N
Block:	37
Census Tract/Block:	950900/4006
Waterfront:	Pacific Ocean

Assessment Information

Market Value Land:	$169,770
Market Value Impr:	$0
Market Value Total:	$169,770
Assessed Value:	$48,620

Tax Information

Levy Code Area:	104
Levy Rate:	17.9558
Tax Year:	2014
Annual Tax:	$873.01

Legal

OCEANVIEW, BLOCK 37, LOT 2,3,N 1/2 OF 1 & PTN VAC ALLEY, DOC200501956

Land

Cnty Land Use:	100 - Residential Vacant Land	Land Use Std.:	VRES - VACANT RESIDENTIAL
Zoning:	R-2 - Residential-Medium Density Single-Family	Neighborhood:	NNOB
Watershed:	Rock Creek-Frontal Pacific Ocean	School District:	
Recreation:	-		

Improvement

Year Built:	0	Fin SqFt:	0	Bedrooms:	0
Bsmt Fin SqFt:	0	Flr 1 SqFt:	0	Bathrooms:	0.00
Bsmt UnFin SqFt:	0	Flr 2 SqFt:	0	Attic Fin SqFt:	0
Deck SqFt:	0	Garage SqFt:	0	Attic UnFin SqFt:	0
Carport:	0	Garage Desc:		Exterior:	
Roof Type:		Foundation:		Porch:	0
Roof Mtl:		AC:	No	Heat Type:	

Transfer Information

Rec. Date:	02/04/05	Sale Price:		Doc Num:	0000501956	Doc Type:	Grant Deed
Orig Loan Amt:							
Loan Type:		Finance Type:		Lender:			

.45
.36
.81

10/21/2015

Screen Print from AbleTerm session(Lincoln County) 03:45 PM 10/21/2015

- - General Appraisal Information - -

Property ID : R127787 (Real Estate) 11-11-05-BC-01900-00
Owners Name : ANDERSON LONNA
Legal Desc : OCEANVIEW, BLOCK 37, LOT 2,3,N 1/2 OF 1 & PTN VAC ALLEY, DOC200501956

1. Last Apprsd: 11/23/07 Number Improvements : 0
2. Appraiser : KL Number Land Segments: 2
3. Next Apprsl:
4. Next Reason: Building Permits :
5. Maint Area : E-08

6. Utilities : OFF SITES SEW,CW,EL
7. Topography :
8. Access : PVD
9. Other :
10. Zone : R-2

11. Remarks :

Enter 'RM' for remarks or <RET> To Return:

WTE ACCO 2005038

Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550
Grantor's Name and Address

Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550
Grantee's Name and Address

After recording, return to (Name, Address, Zip):
Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550

Until requested otherwise, send all tax statements to (Name, Address, Zip):
Hal Smith & Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550

STATE OF OREGON
County of Lincoln

2 Pages

I, Dana W. Jenkins, County Clerk, in and for said county, do hereby certify that the within instrument was received for record, and recorded in the Book of Records of said county at Newport, Oregon. WITNESS my hand and seal of said office affixed.

DANA W. JENKINS, Lincoln County Clerk

SPACE RESERVED FOR RECORDER'S USE

Doc : 200501956
Rect: 500983 31.00
02/04/2005 03:56:04pm

Witness my hand and seal of County affixed.

NAME TITLE

By _____ Deputy.

DEED CREATING ESTATE BY THE ENTIRETY

KNOW ALL BY THESE PRESENTS that Hal Smith, hereinafter called grantor, the spouse of the grantee hereinafter named, for the consideration hereinafter stated, does hereby grant, bargain, sell and convey unto Lonna Anderson, herein called the grantee, an undivided one-half of that certain real property, with the tenements, hereditaments and appurtenances thereunto belonging or in any way appertaining, situated in Lincoln County, State of Oregon, described as follows, to-wit:

See Attached Exhibit "A"

(IF SPACE INSUFFICIENT, CONTINUE DESCRIPTION ON REVERSE)

To Have and to Hold an undivided one-half of the above described real property unto the grantee forever.

The above named grantor retains a like undivided one-half of that same real property, and it is the intent and purpose of this instrument to create, and there hereby is created, an estate by the entirety between husband and wife as to this real property.

The true and actual consideration paid for this transfer, stated in terms of dollars, is $5.00 ① However, the actual consideration consists of or includes other property or value given or promised which is ☐ part of the ☐ the whole (indicate which) consideration.② (The sentence between the symbols ①, if not applicable, should be deleted. See ORS 93.030.)

IN WITNESS WHEREOF, the grantor has executed this instrument on 2-3-2005

Hal Smith

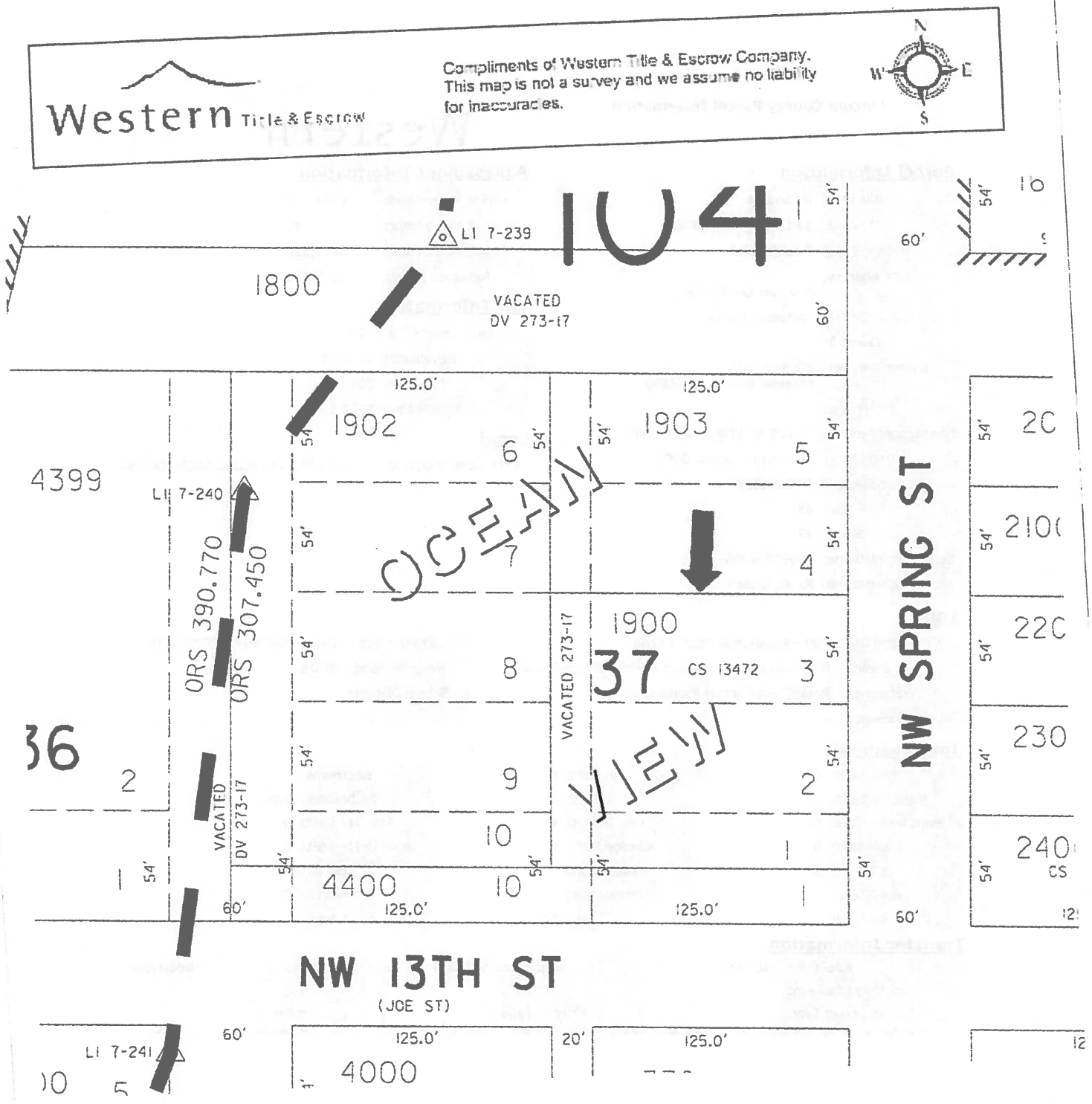
THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

FLORIDA
STATE OF ~~OREGON~~, County of Okaloosa) ss.

This instrument was acknowledged before me on February 3, 2005
by Hal Smith, who is personally known to me

Toni N. Bludworth
Commision No
DD0269610
Comm Expires
12/2/2007

Toni N. Bludworth
Notary Public for ~~Oregon~~ Florida
My commission expires 12/2/2007


Western Title & Escrow
Compliments of Western Title & Escrow Company. This map is not a survey and we assume no liability for inaccuracies.
N
W
E
S
104
LI 7-239
1800
VACATED
OV 273-17
60'
54'
125.0'
1902
1903
1900
37
CS 13472
4399
LI 7-240
ORS 390.770
ORS 307.450
VACATED
OV 273-17
VACATED 273-17
OCEAN WAY
NW SPRING ST
NW 13TH ST
(JOE ST)
4400
4000
LI 7-241
20'
36

Lincoln County Parcel Information

Western Title & Escrow

Parcel Information

Parcel #:	**R130144**
Tax Lot:	**111105BC0190300**
Record Type:	**Residential**
Site Address:	Newport OR 97365
Owner:	Anderson Lonna
Owner2:	
Owner Address:	PO Box 6432 Miramar Beach, FL 32550
Phone:	
Twn/Range/Section:	T: 11S R: 11W S: 05 Q: NW
Parcel Size:	.36 Acres (15,660 SqFt)
Plat/Subdivision:	OCEANVIEW
Lot:	45
Block:	37
Census Tract/Block:	950900/4006
Waterfront:	Pacific Ocean

Assessment Information

Market Value Land:	$152,520
Market Value Impr:	$0
Market Value Total:	$152,520
Assessed Value:	$40,800

Tax Information

Levy Code Area:	104
Levy Rate:	17.9558
Tax Year:	2014
Annual Tax:	$732.59

Legal

OCEANVIEW, BLOCK 37, LOT 4,5 & PTN VAC ALLEY, DOC200501956

Land

Cnty Land Use:	100 - Residential Vacant Land	Land Use Std.:	VRES - VACANT RESIDENTIAL
Zoning:	R-2 - Residential-Medium Density Single-Family	Neighborhood:	NNOB
Watershed:	Rock Creek-Frontal Pacific Ocean	School District:	
Recreation:	-		

Improvement

Year Built:	0	Fin SqFt:	0	Bedrooms:	0
Bsmt Fin SqFt:	0	Flr 1 SqFt:	0	Bathrooms:	0.00
Bsmt UnFin SqFt:	0	Flr 2 SqFt:	0	Attic Fin SqFt:	0
Deck SqFt:	0	Garage SqFt:	0	Attic UnFin SqFt:	0
Carport:	0	Garage Desc:		Exterior:	
Roof Type:		Foundation:		Porch:	0
Roof Mtl:		AC:	No	Heat Type:	

Transfer Information

Rec. Date:	10/18/91	Sale Price:	$48,000	Doc Num:	Doc Type:
Orig Loan Amt:					
Loan Type:		Finance Type:		Lender:	

Screen Print from AbleTerm session(Lincoln County) 03:49 PM 10/21/2015

- - General Appraisal Information - -

Property ID : R130144 (Real Estate) 11-11-05-BC-01903-00
Owners Name : ANDERSON LONNA
Legal Desc : OCEANVIEW, BLOCK 37, LOT 4,5 & PTN VAC ALLEY, DOC200501956

1. Last Apprsd: 11/23/07 Number Improvements : 0
2. Appraiser : KL Number Land Segments: 2
3. Next Apprsl:
4. Next Reason: Building Permits :
5. Maint Area : E-08

6. Utilities : OFF SITES SEW,CW,EL
7. Topography :
8. Access : PVD
9. Other :
10. Zone : R-2

11. Remarks :

Enter 'RM' for remarks or <RET> To Return:

WTE ACCO 2005038

Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550
Grantor's Name and Address

Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550
Grantee's Name and Address

After recording, return to (Name, Address, Zip):
Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550

Until requested otherwise, send all tax statements to (Name, Address, Zip):
Hal Smith & Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550

STATE OF OREGO.
County of Lincoln

2 Pages

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DANA W. JENKINS, Lincoln County Clerk

SPACE RESERVED FOR RECORDER'S USE

Doc : 200501956
Rect: 500983 31.00
02/04/2005 03:56:04pm

Witness my hand and seal of County affixed.

NAME TITLE

By _____, Deputy.

DEED CREATING ESTATE BY THE ENTIRETY

KNOW ALL BY THESE PRESENTS that Hal Smith, hereinafter called grantor, the spouse of the grantee hereinafter named, for the consideration hereinafter stated, does hereby grant, bargain, sell and convey unto Lonna Anderson, herein called the grantee, an undivided one-half of that certain real property, with the tenements, hereditaments and appurtenances thereunto belonging or in any way appertaining, situated in Lincoln County, State of Oregon, described as follows, to-wit:

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Hal Smith

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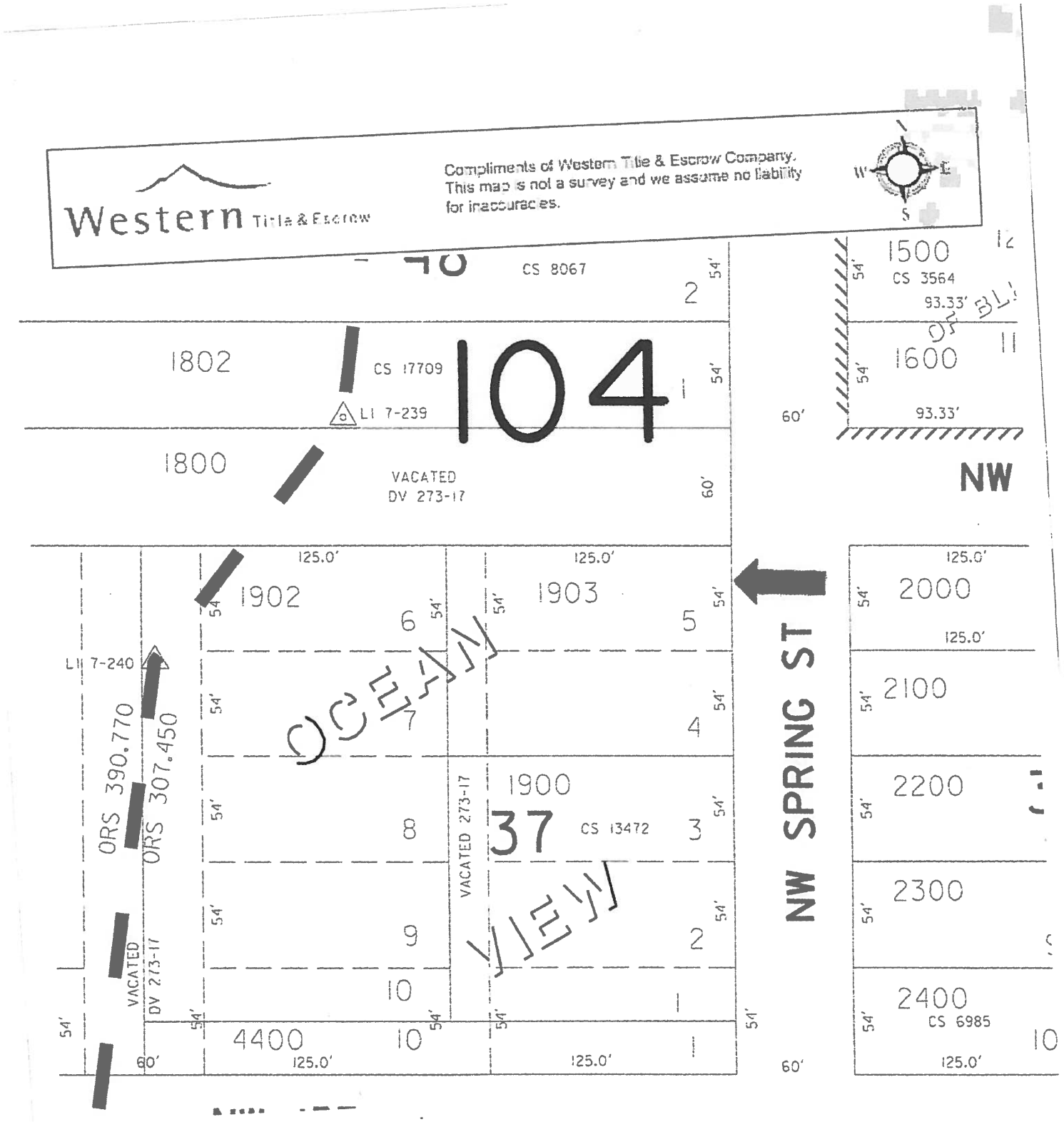
STATE OF ~~OREGON~~ FLORIDA, County of Okaloosa) ss.

This instrument was acknowledged before me on February 3, 2005

by Hal Smith, who is personally known to me

Toni N. Bludworth
Commision No
DD0269610
Comm Expires
12/2/2007

Toni N. Bludworth
Notary Public for ~~Oregon~~ Florida
My commission expires 12/2/2007


Western Title & Escrow
Compliments of Western Title & Escrow Company. This map is not a survey and we assume no liability for inaccuracies.
CS 8067
1500
CS 3564
93.33'
1600
93.33'
1802
CS 17709
LI 7-239
104
1800
VACATED
DV 273-17
60'
NW
125.0'
1902
1903
2000
2100
2200
2300
2400
CS 6985
LI 7-240
ORS 390.770
ORS 307.450
OCEAN VIEW
1900
37
CS 13472
VACATED 273-17
VACATED
DV 273-17
4400
NW SPRING ST
54'

Derrick Tokos

From: Derrick Tokos
Sent: Thursday, July 05, 2018 12:12 PM
To: 'Bill Lund'; P.E. Michael Remboldt; Grant Beem; Gary Sandstrom
Subject: RE: Revised Geotechnical Report - NW Spring Street Development

Hi Bill,

The geological report you sent me was the June 12th version, not the new copy with the redrafted executive summary. Could you or Michael please send me the current draft?

Thank you,

Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

From: Bill Lund [mailto:wlund_albany@yahoo.com]
Sent: Friday, June 29, 2018 4:37 PM
To: Derrick Tokos <D.Tokos@NewportOregon.gov>; P.E. Michael Remboldt <michael@kaengineers.com>; Grant Beem <gbeem@kdeng.com>; Gary Sandstrom <garysandstrom@comcast.net>
Subject: Fw: Revised Geotechnical Report - NW Spring Street Development

Hi Derrick,

Attached and below are comments from Mike @ K&A engineering. I will get the conceptual site plan on Monday from K&D engineering.

I need to say that a lot of what you are asking for is very difficult to get now as most of the information that you are asking for is done at the final design stage which will be after the Geo permit is issued.

I believe both engineering companies has exhausted what they can provide at this time until we move to the actual design.

Please except this report as final to finish processing the Geo permit.

Thanks,

Bill Lund

----- Forwarded Message -----

From: michael@kaengineers.com <michael@kaengineers.com>
To: 'Bill Lund' <wlund_albany@yahoo.com>
Cc: 'Gary Sandstrom' <garysandstrom@comcast.net>
Sent: Friday, June 29, 2018, 4:12:55 PM PDT
Subject: Revised Geotechnical Report - NW Spring Street Development

Bill,

Attached is our geotechnical report, revised to address Derrick Toko's comments to you (email dated 6/21/18).

The report has (or has not) been revised as follows:

1. Executive summary. I re-wrote the executive summary to, hopefully make clear that:
    a. Regardless of if the r-o-w is vacated, the grading plan stays essentially the same, with the exception that if it is vacated access to the building pads for the south lots will be directly from the driveway.
    b. I said that there may be some minor adjustments to foundation pad location.
2. Not part of the geotechnical report. Please note that I don't have K & D's revised drawing today so you will have replace it with the one shown in our Appendix A or, when it's done, send it to me and I can do it.
3. Derrick did not have the latest report and this error has been corrected
4. With the revised wording of the executive summary, no additional clarification is needed on this one.
5. Design "specifications" for retaining walls. Design criteria has been included in the report (it was actually in the last version too). Geotechnical reports rarely include detailed design drawings and specifications. This would be a costly mistake at this point in the process (to include a site-specific design) because the final site plan may change pending official review and your final submittal for a building perit.
6. I re-worded this section to say that stone armoring may not be allowed, with a footnote requiring checking local codes. If stone armoring is not allowed, then use vegetative means…
7. Not part of the geotechnical report.
8. The geotechnical report is not a design document. We provide criteria, not designs. The design needs to be evaluated in the permit review process.
9. Again, this is not a design submittal. Analysis will be conducted as part of grading and storm runoff design. Making this kind of analysis and specification at this juncture in the process is premature, highly irregular, and would incur additional costs for you since it would likely have to be redone later for the actual final design.
10. Not part of the geotechnical report.

Let me know if you have any questions.

Mike

Michael Remboldt, P.E., G.E.

Derrick Tokos

From: Derrick Tokos
Sent: Thursday, June 21, 2018 4:33 PM
To: 'Bill Lund'
Cc: Tim Gross; Steven Rich; Spencer Nebel; 'P.E. Michael Remboldt'; 'Wayne Belmont'
Subject: RE: Bill Lund Trail -- Comments on Revised Geologic Report

Bill... I meant 24-ft not 34-ft wall under item #5 below. It was a typo.

From: Derrick Tokos
Sent: Thursday, June 21, 2018 4:23 PM
To: 'Bill Lund' <wlund_albany@yahoo.com>
Cc: Tim Gross <T.Gross@NewportOregon.gov>; Steven Rich <s.rich@newportoregon.gov>; Spencer Nebel <S.Nebel@NewportOregon.gov>; P.E. Michael Remboldt <michael@kaengineers.com>; 'Wayne Belmont' <wbelmont@co.lincoln.or.us>
Subject: RE: Bill Lund Trail -- Comments on Revised Geologic Report

Bill,

I had a chance to review your updated geologic report, dated June 12, 2018, and there are a few items that we need to see addressed before a decision is rendered on your permit application.

1. On Page No. 2 of the executive summary, Michael Remboldt states "*Our understanding is that there may be a possibility of vacation of the "Jump Off Joe" right-of-way which would mean moving the locations of the proposed new residential structures east into the original desired location – within the right-of-way with access directly from NW Spring Street. In this case, much of the grading, including retaining walls, discussed in this report would become unnecessary.*"

   If the structures are to be moved to the east, as noted, then an alternate plan needs to be provided showing how that is to be accomplished. It will need to include the same level of detail as the conceptual site plan prepared by K&D Engineering. On the other hand, if it is Mr. Remboldt' s position that either location is acceptable as long as their recommendations are followed, then that needs to be stated expressly in the report.

2. A beach access boardwalk and staircase is being proposed with the request to vacate the undeveloped "Jump-Off Joe" right-of-way. The alignment of this trial improvement needs to be shown on the conceptual site plan and recommendations for its construction included in the report.

3. Page 2 of the report includes what appears to be a half written statement about overall site stability. It states "*We have determined that the site can be developed as proposed into individual home sites that provide the stability and safety normally expected for this use, provided that the recommendations in this report are implemented in design and construction. The overall slope stability is...*" Your geotechnical engineer and engineering geologist should clarify the concepts they are trying to convey about overall site stability.

4. Page 3 of the report includes a statement that a 20-foot wide "no build zone" is to be maintained extending west from the east property line. How does this work if the right-of-way is vacated and each structure obtains access directly off of SW Spring Street (as noted under Item #1)? This needs to be clarified.

5. On page 14 of the report, on the topic of fill retaining walls, Mr. Remboldt notes that they have provided design criteria for retaining walls; however, those design standards are not spelled out in the report, nor are there any

details on the conceptual site plan. This information needs to be included with the report. Specifically, the conceptual site plan shows a vertical retaining wall with a peak height of 34-feet at the northwest corner of the driveway for the first duplex unit. Is this truly your intent and, if so, we need to see the design specifications that you believe will result in a structurally sound, load bearing wall at that height.

6. Page 14, includes a recommendation regarding the use of stone armoring for erosion control. State law prohibits the use of this type of armoring on the northernmost lot. Please revise the report to note that limitation.

7. As we have previously discussed, the city parcel identified on your conceptual site plan as Tax Lot 1903 is part of the Jump-Off Joe park and natural area, and development proposed adjacent to this property must maintain a 25-foot no build buffer. The conceptual site plan shows storm drain lines and energy dissipaters within the buffer areas. This is a form of development, and the site plan needs to be revised such that there are no drainage improvements within the buffer.

8. Page 14 of the report notes that flow spreaders are to used to avoid concentrating storm run-off collected from improved surfaces. There are many ways to accomplish this, and additional information is needed from K&A as to how "sheet flow" is to be achieved. The conceptual site plan shows energy dissipaters, which are often riprap outfalls. This type of improvement is intended to reduce the velocity of run-off, but may not dissipate it to the point that sheet flow is achieved.

9. NMC 14.21.090(G) requires that storm run-off improvements be sufficient to handle surface run-off attributed to a 20-year, 24-hr storm event. Page 2 of Gary Sandstrom's June 4, 2018, addendum responds to this criterion by identifying different ways storm run-off can be managed; however, nowhere can I find information documenting how the proposed method of managing run-off will be sufficient for a 20-year design storm. This type of analysis is something you may want K&D to perform; however, they should first coordinate with K&A and Sandstorm to make sure that proposed storm drainage improvements are in line with the recommendations contained in the geologic report.

10. As I noted in a 5-17-18 email (attached), a separate land use application is required because the parcels are located in a shoreland area. You might want to submit that application once you have a revised conceptual site plan.

Per our conversation today, I'll plan on meeting you at the property on Monday at 10:30 am to discuss the trial alignment.

Let me know if you have any questions.

Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

From: Spencer Nebel
Sent: Thursday, June 21, 2018 10:26 AM

To: 'Bill Lund' <wlund_albany@yahoo.com>
Cc: Tim Gross <T.Gross@NewportOregon.gov>; Derrick Tokos <D.Tokos@NewportOregon.gov>; Steven Rich <S.Rich@NewportOregon.gov>
Subject: FW: Bill Lund Trail

Hi Bill:

We met on a staff level to review the trail issue that would need to be addressed as part of the County Road vacation. Earlier you had indicated that you were proposing to build a trail and steps similar to those recently built at Agate Beach. I have enclosed a copy of the specs for that project for your review. Overall that project was a good design and is holding up well and is providing safer access for people accessing Agate Beach.

From a City Staff perspective we have no objection to the utilization of City Land and R.O.W.s as part of the development and construction of beach access as would be required by the road vacation. With the requested vacation, it will be important to show that you are shifting a portion of this access across your property in exchange for the vacation of public R.O.W. for consideration of the County regarding the vacation request and the City Council's decision for concurring, or not, with a vacation request. This will also provide additional support to the vacation in the event that decisions are made to vacate the road and this decision is appealed. Also, please remember that while staff will provide a recommendation to the City Council on the vacation, the Council will have the final authority as to whether to support the vacation or not. They will need to be satisfied that the request meets requirements for replacing beach access.

In the material that you provided to us for the trail easement and the information that shows the sites for home construction, it appears that there is a conflict with the proposed easement and the most southerly structure proposed on this plan. In reviewing possible trail layout, it might be more beneficial to utilize the area between the County Road R.O.W. and the southernmost structure to transition the trail down the steepest part of the slope through this area. This would require a more irregular easement, but may make the trail more buildable.

In order to provide a staff recommendation, it would be helpful for you to show the proposed location of the trail on a topo map to make sure that it is buildable including how the trail would cross the City property to the west of your property to access the beach. It is also my understanding that if the road is vacated you would be able to shift the building sites closer to or on a portion of the vacated road R.O.W. If that is the case it may be possible to utilize a portion of your property that borders the City property to the west of your property as well for a dedicated trail easement without impacting your ability to develop these sites.

Can you submit a drawing showing where the trail would be built utilizing both City property/R.O.W. and your property for this purpose? Once we have that information, we can provide more specific feedback regarding the trail component relating to the vacation.

Spencer R. Nebel
City Manager
City of Newport, Oregon 97365
541-574-0601
s.nebel@newportoregon.gov

From: Tim Gross
Sent: Thursday, June 21, 2018 7:53 AM
To: Spencer Nebel <S.Nebel@NewportOregon.gov>
Subject: RE: Bill Lund Trail

Here they are.

Timothy Gross, PE

Public Works Director/City Engineer
City of Newport
169 SW Coast Highway
Newport, OR 97365
P 541-574-3369
F 541-265-3301
C 541-961-5313

From: Spencer Nebel
Sent: Thursday, June 21, 2018 7:46 AM
To: Tim Gross <T.Gross@NewportOregon.gov>
Subject: Bill Lund Trail

Hi Tim: Can you send me the specs for the Agate Beach Trail so I can forward them on to Bill Lund?

Spencer R. Nebel
City Manager
City of Newport, Oregon 97365
541-574-0601
s.nebel@newportoregon.gov

EXHIBIT A-9

K & A Engineering, Inc.
91051 S. Willamette Street
P. O. Box 8486, Coburg, OR 97408
(541) 684-9399 Voice
(541) 684-9358 FAX
kaengineers.com

June 12, 2018 **Project: 17056**

Bill Lund
P. O. Box 22
Seal Rock, OR 97376

Subject: Geotechnical Site Investigation and Report and Geologic Hazard Assessment
Proposed Residential Development
Tax Lots 1800, 1900, 1903; Tax Map 11-11-05-BC;
NW Spring St., Newport, Oregon

K & A Engineering, Inc. is pleased to present our Geotechnical Engineering Report for the subject development.

Our Services were completed in accordance with our Contract for Engineering Services, dated October 20, 2017 and meet the requirements of 2014 Oregon Structural Specialty Code, Section 1803, Geotechnical Investigations. Our report:

- Presents a summary of the existing subsurface conditions at the subject project site,
- Provides a detailed Geologic Hazard Assessment,
- Identifies and characterizes geologic hazards, and
- Presents recommendations for the design and construction of foundation support for the proposed single-family residences.

Thank you for the opportunity to be involved with your project. Please call us if you have any questions.

GEOTECHNICAL REGISTERED PROFESSIONAL ENGINEER 19,474 OREGON SEPTEMBER 16, 1997 MICHAEL DENNIS REMBOLDT

EXPIRES: DECEMBER 31, 2018

Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.

CERTIFIED OREGON GARY C SANDSTROM E1452 ENGINEERING GEOLOGIST

Gary C. Sandstrom, C.E.G.
Gary C. Sandstrom, Geologist, LLC

Geotechnical Engineering Report

and

Geologic Hazard Assessment

Tax Lots 1800, 1900, 1903; Tax Map 11-11-05-BC;
NW Spring St., Newport, Oregon

Project: 17056
June 12, 2018

Prepared for:

Bill Lund
P. O. Box 22
Seal Rock, OR 97376

Prepared by:

Michael Remboldt, P.E., G.E.
Gary C. Sandstrom, C.E.G., R.P.G.
K & A Engineering, Inc.
Coburg, Oregon

K & A Engineering, Inc.
541·684·9399 · Kaengineers.com
Established 1998

k·a engineering

Geotechnical Engineering Report

Geotechnical Site Investigation

Tax Lots 1800, 1900, 1903; Tax Map 11-11-05-BC; NW Spring St., Newport, Oregon

June 12, 2018

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Executive Summary

We have carefully evaluated the project site and your current proposal for development, which addresses an existing city road right-of-way that was discovered after we embarked on our site investigation. To address the existence of the road right-of-way, you have secured the services of a licensed civil engineer (K & D Engineering, Inc.) to delineate development features including:

- Location of the discovered road right-of-way ("Jump Off Joe Road"),
- Building pad locations,
- Access driveways,
- Retaining walls (approximate locations),
- Grades for driveway and building pads, and
- Pertinent hazard zones such as the 100-year flood zone and elevation.

Our original investigation was designed and executed prior to having knowledge of the existence of the "Jump Off Joe" right-of-way. This discovery forced relocation of the residence and duplex buildings to the west side of this right-of-way and requires driveway access for all three sites from the south end of the project site at NW Spring Street.

Our understanding is that there may be a possibility of vacation of the "Jump Off Joe" right-of-way which would mean moving the locations of the proposed new residential structures east into the original desired location – within the right-of-way with access directly from NW Spring Street. In this case, much of the grading, including retaining walls, discussed in this report would become unnecessary.

We have determined that the site can be developed as proposed into individual home sites that provide the stability and safety normally expected for this use, provided that the recommendations in this report are implemented in design and construction. The overall slope stability is

MISSING CONCEPT

Hazards that exist at the site include:

- Likely lateral movement during the extreme Cascadian subduction zone earthquake. This is evidenced by historic landslide activity including scarps, landslide debris, and uneven ground surface.
- Very high expected peak ground acceleration from the design earthquake.
- Undocumented fills and soft buried landslide debris which constitute hazards of differential foundation settlement.

- Loose, poorly-graded sandy soils on the ground surface which, if left un-vegetated, could result in a severe surface erosion hazard.

To mitigate these hazards and ensure reasonable reliability and safety to the development, occupants, and the surrounding infrastructure, we have made recommendations including:

- Support of all structures on deep foundation elements including battered piles to resist lateral earthquake loads and minimize the hazard of lateral spreading,
- Limitations on earthwork including no permanent unsupported fill embankments,
- Grading to encourage positive sheet-flow storm runoff,
- A 20-foot wide "no-build" zone extending west from the east property boundary,
- Gravity retaining wall systems including:
  - Support of fills required for access driveway and parking areas,
  - Support of cut embankment on the east side of the driveway,
- Vegetation of all disturbed areas to minimize surface erosion and improve soil strength and slope stability.

HOW DOES THIS ASSESS DEV W/ ROW

1 INTRODUCTION

This report documents our geotechnical investigation of site conditions that exist on tax lots 1900 and 1903 located on the west side of NW Spring Street just north of NW 13th Street in Newport, Oregon.

The purpose of our investigation included:

- Characterization of surface and subsurface soil, rock, and groundwater conditions,
- Evaluating current slope stability,
- Delineating geologic hazards, and
- Development of recommendations for suitable development of the properties for single-family residences.

The scope of our services included:

- Fieldwork to characterize subsurface conditions,
- Analysis of field data,
- Evaluation and determination of the nature of slope stability.
- Development of geotechnical design and construction criteria, and
- This written Geotechnical Engineering Report.

Our services meet the requirements of the 2014 Oregon Structural Specialty Code, Section 1803 – Geotechnical Investigations.

2 INVESTIGATION AND FINDINGS

2.1 SITE LOCATION

The project site, consisting essentially of tax lots 1900, 1903, and the east half of tax lot 1800, has a combined area of approximately 0.95-acres. The project site is located between the west edge of NW Spring Street and east shore/coast of the Pacific Ocean (west coast of the USA), just north of NW 13th Street. See the attached Vicinity Map.

2.2 SURFACE CONDITIONS

The project site generally consists of a west-facing slope descending from the east edge of the roadway (NW Spring Street) to the ocean beaches. The vegetation line at the east edge of the beach is approximately 250-feet west of the roadway, while the study area extends approximately 125-feet west of the roadway. See the attached Geotechnical Site Plan.

We surveyed a field-developed cross section across the study area to characterize general ground surface gradients and tie the ground surface shape with underlying soil and rock profiles. The site consists, generally, of three zones:

- Zone 1: Upper terrace containing the roadway (NW Spring Street) and the steep (approximately 1H : 1V) embankment descending down from the west edge of the roadway;
- Zone 2: A rolling mid-slope area extending from the toe of the steep embankment along the west edge of the roadway to a terminal siltstone ridge bordering the east edge of the beach. Slope gradients in this zone range from approximately 0 to 35-percent.
- Zone 3: Terminal area centered on a siltstone rock exposure bordering the east edge of the beach. The siltstone has a shallow cap of dune sand in some areas on the north end.

Dense-vegetation, consisting of native trees, understory shrubs, grasses, and non-native blackberry covers the ground surface of zones 1 and 2 of the study area.

Aside from erosion due to disturbance on the few foot-trails that exist on the site, there is little evidence of on-going severe surface erosion or mass slope movement. We did not observe indications of slope movement in the roadway such as cracks with differential movement.

In general, with the exception of some shallow subsidence of utility boxes on the east side of the road, it appears that the site is relatively stable in its current condition.

2.3 SUBSURFACE SOIL CONDITIONS

2.3.1 Methods of Investigation

We investigated subsurface soil conditions by making three (4) probes[1] (FC-1 through FC-4) and two (2) continuous sample boring[2] (B-1 and B-3) using our track-mounted geotechnical drill. Additionally, shallow borings were made using a 3.5-inch hand-auger to verify shallow soil conditions (HA-1 through HA-3, AH-2).

See the attached Geotechnical Site Plan for approximate locations of these probes and borings.

Graphic logs of the probes and borings are attached to this report. The approximate location of the probes and borings are shown on the attached Site Plan.

2.3.2 Zone 1

Subsurface Conditions on the upper terrace, Zone 1, generally consist of:

- 3-ft of loose and moderately dense, sand and gravel road FILL, over
- 1-ft of organic sandy-SILT (native topsoil), over
- 20-ft of light brown/tan/white, moderately dense, lightly-cemented, silts and sands (Marine Terrace Deposits), over
- Very stiff to hard, dark brown to gray, SILTSTONE (Nye Formation).

The cemented marine terrace deposits can be seen in isolated areas through breaks in the vegetation on the steep embankment descending from the roadway.

Groundwater was observed approximately 21-feet below the roadway surface.

2.3.3 Zone 2

For the mid-slope area, Zone 2, there are two distinct areas:

- Zone 2 North (generally tax lots 1903 and 1800) and
- Zone 2 South (generally tax lot 1900)

The north portion of Zone 2 contains includes landslide debris extending to depths as much as approximately 16-feet below the ground surface. The south portion does not exhibit similar landslide debris and bedrock is much shallower.

2.3.3.1 Zone 2 North

Subsurface condition on Zone 2 North, in the area investigated, consist of approximately:

- 5 to 6-ft of light brown/tan, loose, poorly-graded (dune) sands and sandy-FILL (we found glass and other fill debris), over

[1] A 3.55-in^2 cone is pushed into the soil using a 140-lb. hammer falling 30-in. The energy required to advance the cone is recorded in the field as the number of blows per 6-inches of penetration. Soil friction on the side of the cone is measured using a torque wrench. Calculated cone tip pressure is used to estimate soil engineering

[2] 1.5-inch diameter x 4-foot continuous samples obtained using a G7 2-3/8" direct push dual tube system manufactured by AMS, Inc.

- 10 to 12-feet of dark brown/black/tan, soft/loose, jumbled mixtures of sands, silts, clay, and gravelly-clay, over
- Very stiff to hard, dark brown to gray, SILTSTONE (Nye Formation).

Groundwater was observed (FC-1, B-1) at a depth of approximately 6.8-feet below the existing ground surface.

2.3.3.2 Zone 2 South

Subsurface conditions in this zone, in the areas investigated, consist of approximately:

- 1-ft of brown/tan, loose, organic-laden, SAND (topsoil), over
- 2 to 4-ft of white/gray with some orange staining, loose to moderately dense, poorly-graded SAND with trace of silt - Interpreted as weathered/decomposed Marine Terrace Deposits; over
- Very stiff to hard, dark brown to gray, SILTSTONE (Nye Formation).

Groundwater was observed (FC-3) at a depth of approximately 6.0-feet below the existing ground surface.

2.4 Local Geology

2.4.1 Geologic Setting

Surficial geology of the site is mapped in the geologic literature as consisting of Quaternary (less than 2.8 million years before present) Marine Terrace deposits overlying early Miocene (16.5-23.0 million years before present) Nye Mudstone[3].

The Marine Terrace deposits are variously described as consisting of:

- Semi-consolidated uplifted beach sand overlain locally by fine-grained dune deposits with occasional localized gravel lenses[4],
- Unconsolidated to moderately consolidated gravel, beach and dune sand; locally containing minor consolidated clay-rich paleosols, colluvium, debris flows, and alluvial interbeds; to thin-bedded sandstone, conglomerate and tuffaceous siltstone with thick glauconitic sandstone beds[5].

Nye Mudstone underlies the Marine Terrace deposits in much of the site vicinity. Nye Mudstone deposits are described as massive to thick-bedded, gray, clayey marine siltstone with sandstone interbeds, including calcareous concretions in places.

Middle Miocene (10.4-16.5 million years old) Astoria Formation deposits are mapped overlying the Nye Mudstone a short distance to the south and in the wave zone west of the site.

[3]See DOGAMI Bulletin 81-3, OFR-O-04-09, USGS-OF-72-352-1 and USGS I-867.
[4] DOGAMI Bulletin B-81-3
[5] DOGAM Open-file report O-04-09

Nye Mudstone bedding has been mapped in the vicinity to dip, generally, 11 to 15 degrees to the west/southwest and Astoria Formation deposits are mapped at 23 degrees to the west a few hundred feet to the south at "Jumpoff-Joe."

Our probes and borings confirm these two mapped geologic units – lightly cemented gravel and sand terraces overlying sedimentary mudstone – and the sloped surface of siltstone.

H.G. Schlicker investigated geologic conditions at the project site and wrote a report in 1991. Schlicker recommended:

- The old landslide area on the site is relatively stable, and
- A geotechnical investigation to confirm subsurface conditions.

This report summarizes our geotechnical investigation and verifies Schlicker's conclusions. A copy of the Schlicker report is attached in Appendix E.

3 Recommendations for Design and Construction

3.1 Geologic Hazards

3.1.1 General Discussion

The project site is located within a coastal environment that is documented to have active erosional processes at work on a continuous or intermittent basis. These processes include:

- Wave action which causes erosion of the toe of slopes ascending from beaches, eventually resulting in slope instability,
- Mass slope movement. These are more often the result of erosion but can also be caused by earthquake ground motion,
- Tsunami, and
- Surface erosion from concentrated surface runoff.

Other hazards typical for coastal geology include faulting, liquefaction, and lateral spreading.

We have developed a detailed geologic hazard assessment for the project site. The complete geologic hazard assessment report, by Gary C. Sandstrom, registered professional engineering geologist, is attached to this report, Appendix D.

3.1.2 Slope Movement

The project site is well within the area of high coastal erosion hazard and existing land sliding identified by the Oregon Department of Geology and Minerals Industries (DOGAMI)[6]. The project site is within the influence of the large "Jump-off Joe" landslide complex - a rather large, linear slide zone. See Figure 1. This landslide complex consists of numerous individual slope movements that likely occurred

[6] Open-file report O-04-09 and on-line geologic hazard viewer published by the Oregon Department of Geology and Minerals Industries (DOGAMI), HazVue. See http://www.oregongeology.org/hazvu/

individually over long periods of time – thus the overlapping appearance. Slope movement in the area including the project site is believed to be Quaternary in age (sometime in the last 2.8 million years).

Severe slope movement, associated with this general feature, has been observed south of the intersection of NW Spring Street and NW 12th Street at the northwest side of existing condominiums.

Evidence of old slope movement on the site include:

- The steep embankment descending from the roadway (transition between Zone 1 and 2). This is an upper scarp to the old slope movement(s), having a mean slope gradient estimated to be approximately 1H : 1V (based on our field observations). There are areas of near-vertical faces in this scarp area. In the south half of tax lot 1900, we see evidence of an isolated block of marine terrace deposit that has moved away from the main scarp;
- Uneven ground surface (Zone 2); and
- Finding of jumbled, mixed soil debris in Zone 2 North subsurface soils.

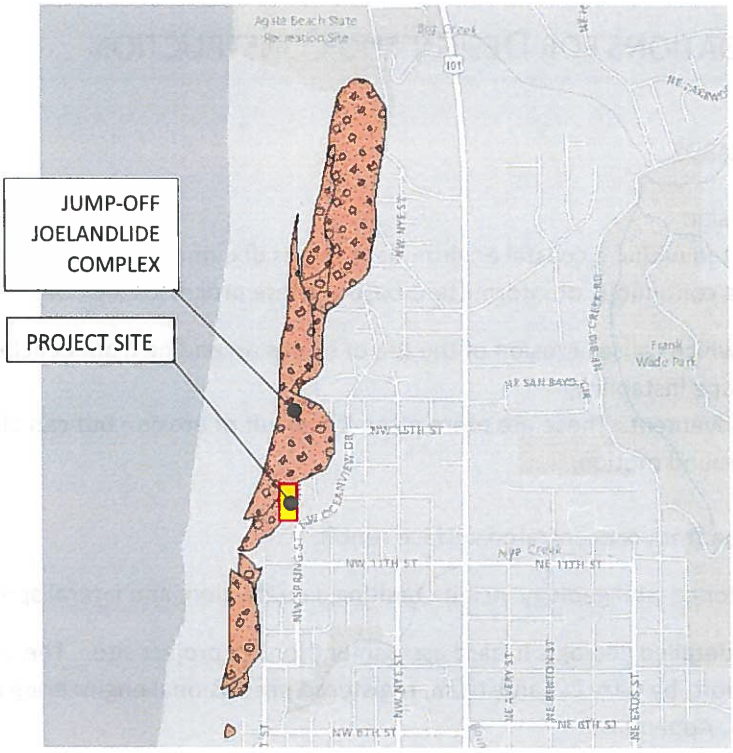

Figure 1 - HazVu Mapping of Jump-off Joe Landslide Area

Our field-developed cross section across tax lot 1903 indicates the overall concave shape of the ground surface due to the historic slope movement. See the attached drawing Field Developed Cross Section.

We have modeled slope stability using common methods of limit equilibrium analysis.[7] Limit equilibrium assesses stability based on a "factor of safety" (FOS) – the ratio of forces resisting movement to forces driving movement. Our modeling included:

- Ground surface boundaries defined by our field-developed cross section,
- Subsurface boundaries and material properties estimated from our probes and borings,
- Groundwater levels estimated from the probes and borings,
- Earthquake peak ground acceleration based on deaggregation of earthquake ground motion data.[8]

In the current static condition, the site is stable, with minimum FOS in the range of 1.4 to 1.6. This FOS is within the generally-acceptable limits for development.

In the event of the (extreme) Cascadian subduction-zone earthquake (475-year recurrence), peak ground accelerations are expected to exceed 30% of gravity, and our estimates of FOS for this condition are either slightly above or slightly below 1.0, depending on modeling method and estimates of groundwater and soil shear strength. We believe that there will be some lateral movement with this magnitude of earthquake ground motion.

Graphic summaries of our analysis are attached in Appendix C to this report.

3.1.3 Beach Regression

DOGAMI has estimated a general beach regression of in the approximate range of 0.3 to 0.4-feet/year in this area. This is an overall estimate for screening purposes and is not meant to be site-specific. For this site, we believe that long-term regression may be less than this range due to several mitigating features specific to the project site:

- The protection of the toe of the Zone 2 slope by the terminal siltstone exposure found at the east edge of the beach area,
- Overall low-gradients of the ground in the Zone 2 area, and
- High densities of existing vegetation in Zones 2 and 1.

3.1.4 Design Earthquake

The design earthquake was determined using criteria including an event having a 10-percent chance, or higher, of occurring within a 50-year period. Based on analysis using current modeling of local sources of earthquake ground motion (crustal, deep, and subduction zone)[9], the design earthquake has a (modal) magnitude of 9.08 with a peak ground acceleration of 0.32g.[10] A summary of the Deaggregation analysis is attached to this report in Appendix D.

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[7] We use proprietary software SLIDE, published by Roc Science, http://www.rocscience.com

[8] U.S. Geological Survey – Earthquake Hazards Program. https://earthquake.usgs.gov/hazards/interactive/

[9] 2014 Dynamic Conterminous NSHMP PSHA interactive deaggregation analysis, on-line at the USGS Geologic Earthquake Hazards Program. https://earthquake.usgs.gov/hazards/interactive/

[10] The analysis was made for a Site Class of 760 m/s shear velocity (B/C Boundary). Bedrock is shallow, and our probes indicated very high equivalent SPT "N" which would put this at a relatively high shear wave velocity and, hence, a lower Site Class. For structural design, we have provided spectral design criteria based on Site Class D to ensure an expected level of conservatism for the project.

3.1.5 Faulting and Lateral Spreading

Mapping by the State of Oregon Department of Geology and Minerals Industries (DOGAMI) of geologic hazards indicates that there is an ENE-WSW trending active fault approximately 1.5 miles southeast of the subject site. Direct rupture at the project site from this fault is unlikely.

Minor lateral spreading (several feet or less) at the site due to strong earthquake ground motion is likely, based on our pseudo-static stability analysis using the expected peak ground acceleration of 0.32g.

3.1.6 Liquefaction

We found no evidence of loose, saturated clean sands in the area investigated and it is our opinion that risks due to earthquake-induced liquefaction and resulting subsidence are low for the project site.

3.1.7 Tsunami

The majority of the project site is situated above the statutory tsunami inundation line (at 30 feet elevation). The exception is the western margin of lot 1800 near the vegetation line at the beach) which is below the inundation line, but our understanding is that proposed homesites are above and essentially in-line with development proposed for the remaining project site.

DOGAMI's Tsunami Inundation Map includes inundation scenarios for earthquakes of several different magnitudes and indicates that a tsunami induced by a Cascadia Subduction Zone earthquake[11] could reach an elevation of approximately 80 feet, which would extend above NW Spring Street.

In general, aside from the aftermath of a Cascadia Subduction Zone earthquake, the site meets current criteria for tsunami.

3.1.8 Expansive Soils

Subsurface soils at this site are not expansive.

3.1.9 Foundation Settlement

Undocumented fills could represent a minor hazard of excessive differential settlement. We found undocumented sandy fill that has been placed over a relatively large area of the central portion of the project site. This hazard can easily be mitigated by following our recommendations for Foundations in this report.

3.2 Seismic Design Criteria

For designing lateral bracing systems and other structural elements for earthquake ground motion, we recommend that design criteria be selected based on a site class "D – Stiff soil profile."[12] The recommended design spectral response acceleration parameters[13] are shown on Table 2.

[11] A rupture of the entire length of the fault zone from the southern Oregon to northern Washington costs, resulting in sub-marine landsliding.
[12] Section 1613.3.2 of the 2014 Oregon Structural Specialty Code.
[13] http://earthquake.usgs.gov/designmaps/us/application.php?

Table 1- Recommended Seismic Design Parameters

Design Parameter	Design Value
S_{MS} (site class "D")	1.729
S_{M1} (site class "D")	1.148
S_{DS} (site class "D")	1.153
S_{D1} (site class "D")	0.765

3.3 FOUNDATIONS

3.3.1 General Foundation Recommendations

We assume that this site will be developed to support one or more conventional single-family residences.

To mitigate hazards associated with:

- Slope movement,
- Differential settlement from underlying slide debris, loose sands, and undocumented fills, and
- Erosion of loose sands;

We are recommending that all permanent structures be supported on a foundation system consisting of reinforced concrete grade beams or isolated reinforced concrete pads supported by deep foundation elements.

Deep foundation elements should find support for all loads within underlying siltstone.

Helical piles or micropiles are the most economical and efficient deep foundation elements for this site. These systems can easily be installed through the overlying unconsolidated fill and slide debris and embedded into underlying load-bearing siltstone.

Micropiles have an advantage of very high individual allowable load capacity in compression and tens tension and can be battered to provide the necessary resistance to lateral loads. Helical piles offer reasonable individual load capacity but, due to expected limited embedment in siltstone, should not be relied upon for uplift.

Deep foundation elements shall extend into the underlying native siltstone.

Battered deep foundation elements should be designed to resist lateral earthquake loads and provide additional security against lateral spreading.

3.3.2 Helical Pile Systems

The allowable design load capacity for helical piles shall be limited to 15-kips/square foot of helix bearing. We recommend use of single-helix helical piles with helix diameters in the range of 8 to 12-inches. Thus, the total allowable design load capacity will be in the range of 5 to 12-kips per pile.

Helical pile ultimate load capacity shall be evaluated by installation torque in the underlying siltstone according to the following relationship:

$$Q_u = \frac{2}{d_{eff}} T$$

Where:

$$Q_u = Ultimate\ capacity, kips$$

$$d_{eff} = Pile\ shaft\ diameter, ft.$$

$$T = Installation\ torque, k - ft.$$

Helical piles shall consist of the following elements:

- 2.875-inch O.D. x 0.25-inch wall (min.) tubular steel shafts with connections designed to prevent vertical slip during loading using a threaded connection,
- Single-helix plates having a minimum 0.325-inch thickness
- "Pre-construction" brackets designed for embedment in concrete.

Helical pile shafts shall consist of cold-formed welded and seamless carbon steel structural tubing meeting the requirement of ASTM A500 Grade B with a minimum yield strength of 42-ksi. Pile shafts, including the lead section with helix plate, shall be either hot-dipped galvanized or otherwise coated for corrosion resistance.

All helical piles shall be embedded a minimum of 1-foot into underlying native, undisturbed SILTSTONE as verified by K & A Engineering, Inc. in the field during construction.

The Installer shall provide K & A Engineering, Inc. with:

- A manufacturer's certification of materials (length, section, steel grade) for pile shafts and lead section with helix,
- Manufacturer's certification for shaft treatment for corrosion resistance (galvanization or other coatings),
- Schedule of shaft connection elements,
- Manufacturer's certification of materials (dimension and construction) for the pile bracket,
- A description and drawings detailing the connection of the pile bracket to the pile shaft and to the existing foundation including connector type/size/grade, epoxy adhesives (if used), and installation methods.
- Certification of drive head pressure meter calibration,
- Drive head manufacturer's published relationship between drive pressure and torque output for the drive head used.

Submittals must be made to K & A Engineering, Inc. a minimum of 1-week prior to installation.

K & A Engineering, Inc. shall inspect the installation of helical piles including:

- Observe installation of the helical piles
- Verify minimum depth of installation,
- Record installation pressures,
- Approve of installation based on installation torque and depth, and

- Provide a written installation summary that recommends acceptance by the local building official.

K & A Engineering, Inc. shall be notified a minimum of 2-weeks in advance of load test installation, load testing. and production pile installation.

3.3.3 Micropiles

For design purposes, micropiles shall be designed for an allowable design grout-siltstone bond strength of 1,000-pounds/square foot of bond. Load testing is required to verify actual bond capacity. Based on our preliminary analysis, micropiles consisting of a 5-inch nominal shaft diameter and using a No 8 solid steel reinforcing element should achieve allowable load capacities in the range of 15 to 20-kips, depending on the depth of embedment in siltstone.

We recommend an allowable design load capacity of 20-kips maximum, in tension and compression.

To achieve economy and reasonably high individual micropile load capacity, we recommend the following design criteria:

- Minimum diameter of the grout-siltstone bond zone of 5-inches,
- 4-inch x 0.25 tubular steel casing extending from the ground surface (grade beam or load pad) to 1-foot below the surface of siltstone, having a minimum yield strength of 36-ksi;
- Micropile reinforcement consisting of one solid No. 8 reinforcing bar, minimum yield strength of 60-ksi;
- Maximum design allowable grout-to-siltstone bond strength of 1.0-ksf.

Prior to installation of production micropiles, a minimum of one test pile should be installed into Mudstone and load tested to verify actual ultimate and allowable load capacity. The load test shall include:

- Ultimate load, in tension, to a minimum 200-percent of the maximum specified working load. The load test shall be made in increments of 10, 25, 50, 100, 150, and 200-percent of maximum specified working load.
- Creep Testing. A creep test shall be made a 133-percent of the maximum specified working load. Criteria for successful creep is less than 2-mm of creep over one log-cycle of time.

K & A Engineering, Inc. shall:

- Review and approve materials and construction methods submitted by Contractor prior to construction,
- Inspect installation of test piles,
- Inspect load testing and verify ultimate load at failure or that no failure occurred.
- Verify the validity of the preliminary allowable grout bond strength based on load test results, and make recommendations for embedment lengths of the production piles, accordingly, and
- Inspect and approve micropile construction.

3.4 Site Development

3.4.1 General Recommendations

We recommend that site development consist of the minimal amount of earthwork necessary for access and foundation construction. Site development should be planned and executed to incorporate the following requirements:

- **Fills.** No permanent fills other than low fills (less than 4-feet in height shall be created;
- **Retaining Walls.**
  - *Fill Retaining Walls:* Based on the current Conceptual Site Plan (Appendix A), permanent fills will be required to support portions of the driveway and parking areas approaching the building pads. We have provided recommendations for design criteria for these retaining walls. We believe that the most cost-effective wall systems for these retaining walls are Mechanically-Stabilized Earth embankments (MSE) – compacted soil embankments reinforced with horizontal reinforcement elements (typically geogrids) and a structural wall facing.
  - *Cut Retaining Walls:* The current Conceptual Site Plan (Appendix A) grading requires a retaining wall to support the cut into the hillside on the east side of the driveway. We have provided retaining wall design criteria for this wall system in this report.
- **Revegetation:** Surface erosion shall be minimized by establishment of vegetation in all disturbed areas with species of grasses, shrubs, and trees *that are well adapted to local climate and soil conditions and that produce vigorous, deep, and dense root structures*. Areas to receive vegetative treatment include, but are not limited to:
  - Road cut and fill embankments
  - Disturbed areas around foundations
  - Disturbed areas associated with landscaping and retaining walls.

  Revegetation shall be installed immediately after completion of grading, foundation pad construction, and access road construction. *Temporary revegetation is required for temporary cuts, fills, and other disturbed areas during long (2-months or more) periods of inactivity and between construction phases.*
- **Stone Armoring.** In some areas of ground disturbance, it may be more beneficial, economical, or practical to place stone armoring in lieu of vegetation to minimize surface erosion. Stone armoring shall consist, at a minimum, of 12-inches of 4 to 7-inch crushed basalt quarry rock, machine placed.
- **No-Build Zone.** *No foundations, earthwork, or vegetative disturbance shall occur in a 20-foot wide "no-build" zone adjacent to the west edge of the existing NW Spring Street. This zone extends 20-feet west of the east property boundary.* The purpose of this requirement is to preserve the integrity of the Zone 1 scarp embankment described in this report, and thus preserve the integrity of the NW Spring Street roadway. The exception to this is minor necessary disturbance allowing for the construction of a low gravity retaining wall on the east side of the access driveway to be constructed at or near the west edge of the "no-build" zone.
- **Drainage.** Development shall result in positive sheet-flow drainage flowing west. Concentrated flows from roof drains shall be distributed to the ground surface as sheet flow using flow spreaders.

3.4.2 Access Drive Design and Construction

Our understanding is that the driveway accessing home sites will leave NW Spring Street somewhere in the south half of tax lot 1900 and extend northward on the project site, following the west edge of the specified "no-build" zone, and terminating at the proposed single-family residence building pad on tax lot 1800. See the Conceptual Site Plan (Appendix A).

We recommend that the access drive be surfaced with either:

- Crushed aggregate - a minimum of 8-inches of ¾" – 0 well-graded crushed aggregate over a slit-fil woven geotextile, or
- Hot Mix Asphalt Concrete pavement – a minimum of 2-inches of dense asphalt concrete pavement over 8-inches of ¾" – 0 well-graded crushed aggregate.

The driveway surface and cut embankment retaining walls shall be drained to in such a manner as to prevent concentrated flows of storm runoff on native sandy soils.

3.4.3 Foundation Pads

Our understanding is that, at the time of this report, two-story "daylight" designs for single-family residences are being considered. In this concept, a lower "daylight" level will face the west at a grade that is lower than the east side of the foundation pad.

Grading in the Conceptual Site Plan (Appendix A) indicates that the lower "daylight" level will be close to the existing grade at the east edge of the building pad as follows:

- Duplex "A" on Tax Lot 1900:
  - Main pad elevation 65-feet,
  - Lower floor elevation (approximately) 55-feet
  - Existing grade ranges in elevation from (approximately) 52 to 57-feet.
- Duplex "B" on Tax Lot 1903:
  - Main pad elevation 51-feet,
  - Lower floor elevation (approximately) 41-feet
  - Existing grade ranges in elevation from (approximately) 39 to 43-feet.
- Single-family Residence on Tax Lot 1800:
  - Main pad elevation 40-feet,
  - Lower floor elevation (approximately) 30-feet
  - Existing grade ranges in elevation from (approximately) 22 to 24-feet.

The lower "daylight" levels of the Duplex units "A" and "B" and the Single-family residence will include a retaining wall on the north, east, and south sides to provide grade separation. We anticipate that deep foundation elements will support reinforced concrete grade beams that support the lower "daylight" levels of all three structures.

We recommend that all soils excavated from basement areas and foundation pad should be removed from the project site and disposed of off-site -or- utilized for MSE fill embankments for the driveway. The purposes of this requirement include:

Foundation pads should be graded appropriately to provide temporary support for:

- Access for helical pile or micropile installation
- Forming and construction of reinforced concrete grade beams

Note that the undocumented fills found at the site are not suitable for temporary support and should be completely removed from foundation areas.

3.4.4 Retaining Walls

3.4.4.1 General Requirements

All retaining wall structures shall be evaluated for global stability and shal have a minimum factor of safety of:

- **Static Conditions:** FOS ≥ 1.5 during static conditions and
- **Earthquake Conditions:** FOS ≥ 1.1 for the design peak ground acceleration (0.32g).

Lateral reinforcements (i.e. tiebacks) may be required to resist transient loads from the design earthquake for tall cut embankment retaining walls with sloped ground surfaces. K & A Engineering, Inc. should be consulted with to provide additional design criteria for lateral reinforcement.

We anticipate that some movement will occur behind retained cut slopes for the design earthquake. Retaining walls supporting cut slopes should extend vertically 1-ft above retained soil grade to limit the movement of displaced soils from shallow slope movements in terrace sands above cut embankment retaining walls.

3.4.4.2 Cut Embankments

Stability for cut embankments along the east side of the driveway should be provided a gravity retaining

Gabion baskets shall consist of 9-gage ArtWeld welded wire baskets manufactured by Hilfiker Retaining Walls[14]. K & A Engineering, Inc. shall review and approve of wall design and construction details prior to installation and shall provide quality assurance of wall construction.

According to the Conceptual Site Plan (Appendix A), retaining walls supporting the permanent cut slopes along the east side of the driveway will support cut embankments up to 10-ft in height.

We recommend a wall system consisting of welded-wire gabion baskets filled with 4 to 7-inch open-graded quarry stone. This wall shall have a BASE : HEIGHT ratio of 0.7 or greater and the toe of the wall shall be buried a 1-foot below final grade at the toe. Retained soils shall not exceed 2H : 1V slope.

Recommended design criteria include:

- **Active Lateral Earth Pressure:** 58-pcf (equivalent fluid pressure),
- **Passive Lateral Earth Pressure:**
  - *Terrace Sands:* 330-pcf,
  - *Siltstone:* 406-pcf,
- **Coefficient of Sliding:** 0.36

[14] See http://www.hilfiker.com/awg.html Technical specifications, drawings, and construction details are readily available from the manufacturer.

- **Bearing Capacity:** 1.5-ksf

3.4.4.3 Driveway Fill Embankments

We recommend gravity walls consisting of mechanically-stabilized earth embankments for all fill retaining walls. These offer use of native sands for backfill and present minimal toe bearing pressure. The recommended design criteria include:

- **Active Lateral Earth Pressure:** 33-pcf (equivalent fluid pressure),
- **Passive Lateral Earth Pressure:**
  - *Terrace Sands:* 330-pcf,
  - *Siltstone:* 406-pcf,
- **Uniform lateral earth pressure from traffic loading:** 60-psf
- **Coefficient Against Sliding:** 0.36
- **Bearing Capacity:** 1.5-ksf

4 LIMITATION AND USE OF GEOTECHNICAL RECOMMENDATIONS

This report has been prepared for the exclusive use of Bill Lund for the subject project.

This geotechnical investigation, analysis, and recommendations meet the standards of care of competent geotechnical engineers providing similar services at the time these services were provided.

We do not warrant or guarantee site surface or subsurface conditions. Exploration test holes indicate soil conditions only at specific locations (i.e. the test hole locations) to the depths penetrated. They do not necessarily reflect soil/rock materials or groundwater conditions that exist between or beyond exploration locations or limits.

The scope of our services does not include construction safety precautions, techniques, sequences, or procedures, except as specifically recommended in this report. Our services should not be interpreted as an environmental assessment of site conditions.

Appendix A

Maps

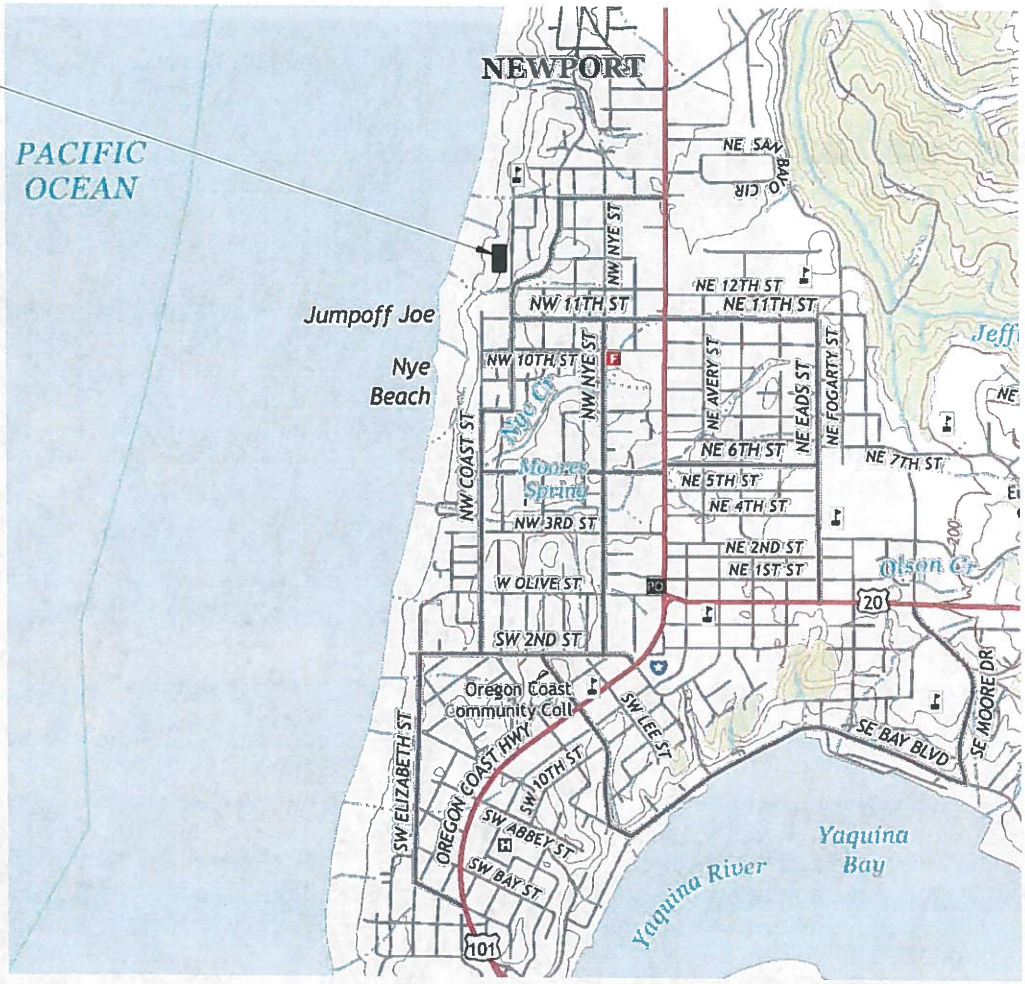
- Vicinity Map
- Geotechnical Site Plan
- Field-developed Cross Section
- Conceptual Site Plan – Civil Grading and Site Development

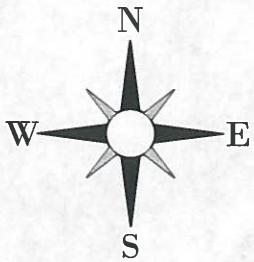
Geotechnical Engineering Report
Proposed Residential Development
Tax Lots 1900 and 1903
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
June 12, 2018

Prepared for:
Bill Lund
P.O. Box 22
Seal Rock, OR 97376

Prepared by:
Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.
Coburg, Oregon

PROJECT SITE LOCATION
TAX LOTS 1900, 1903
NW SPRING STREET
NEWPORT, OREGON





0 2000' 4000'

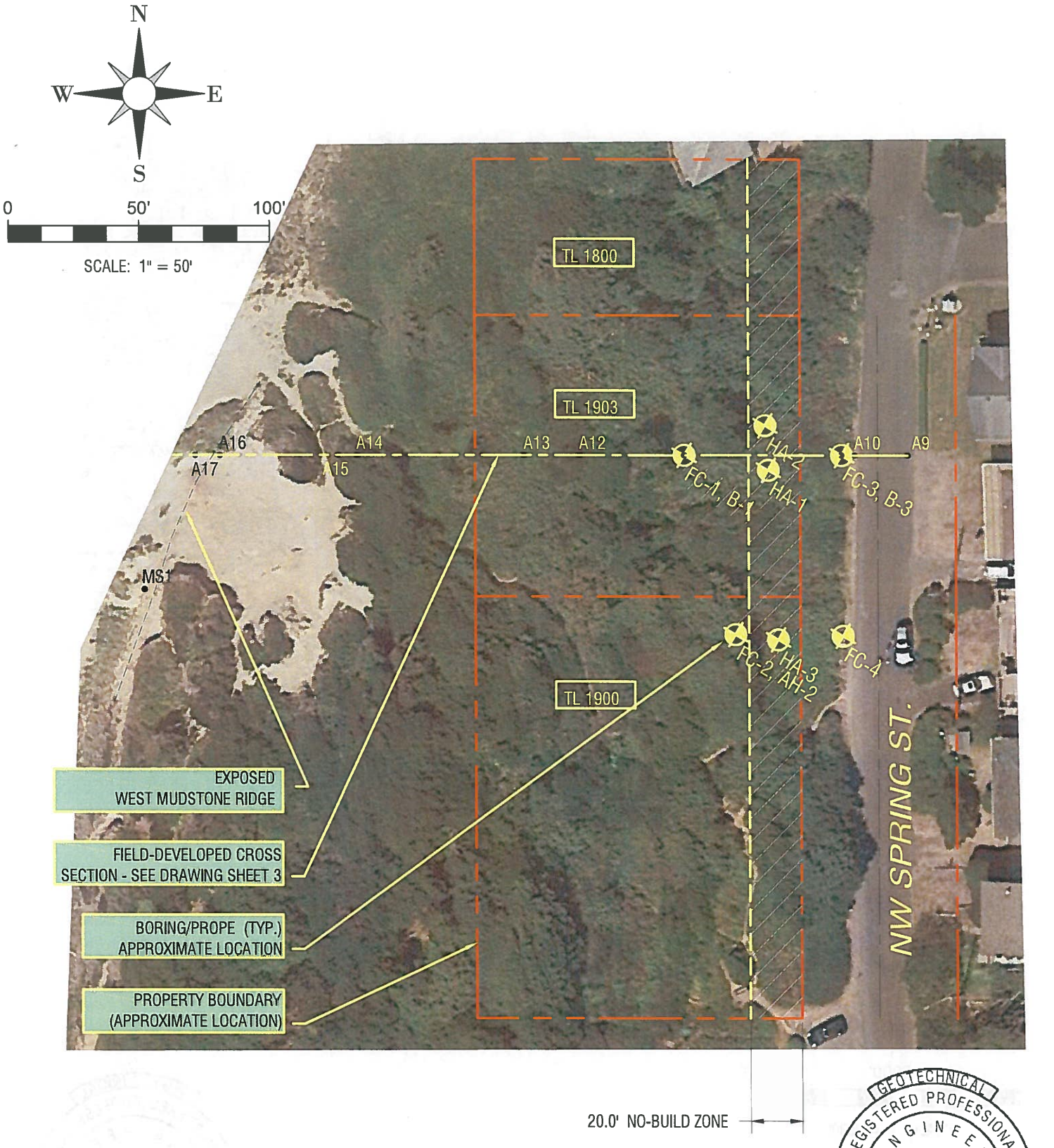
SCALE: 1" = 2000'

K & A Engineering,Inc
91051 S. Willamette St.
Coburg, OR 97408
541 684 9399 541 684 9358 fax

k·a engineering

VICINITY MAP
Geotechnical Site Investigation
Lund Development
Tax Lots 1900, 1903; NW Spring St., Newport, OR
11/27/17 Project: 17056 Drawing 1 / 3

EXPIRES: DECEMBER 31, 2018



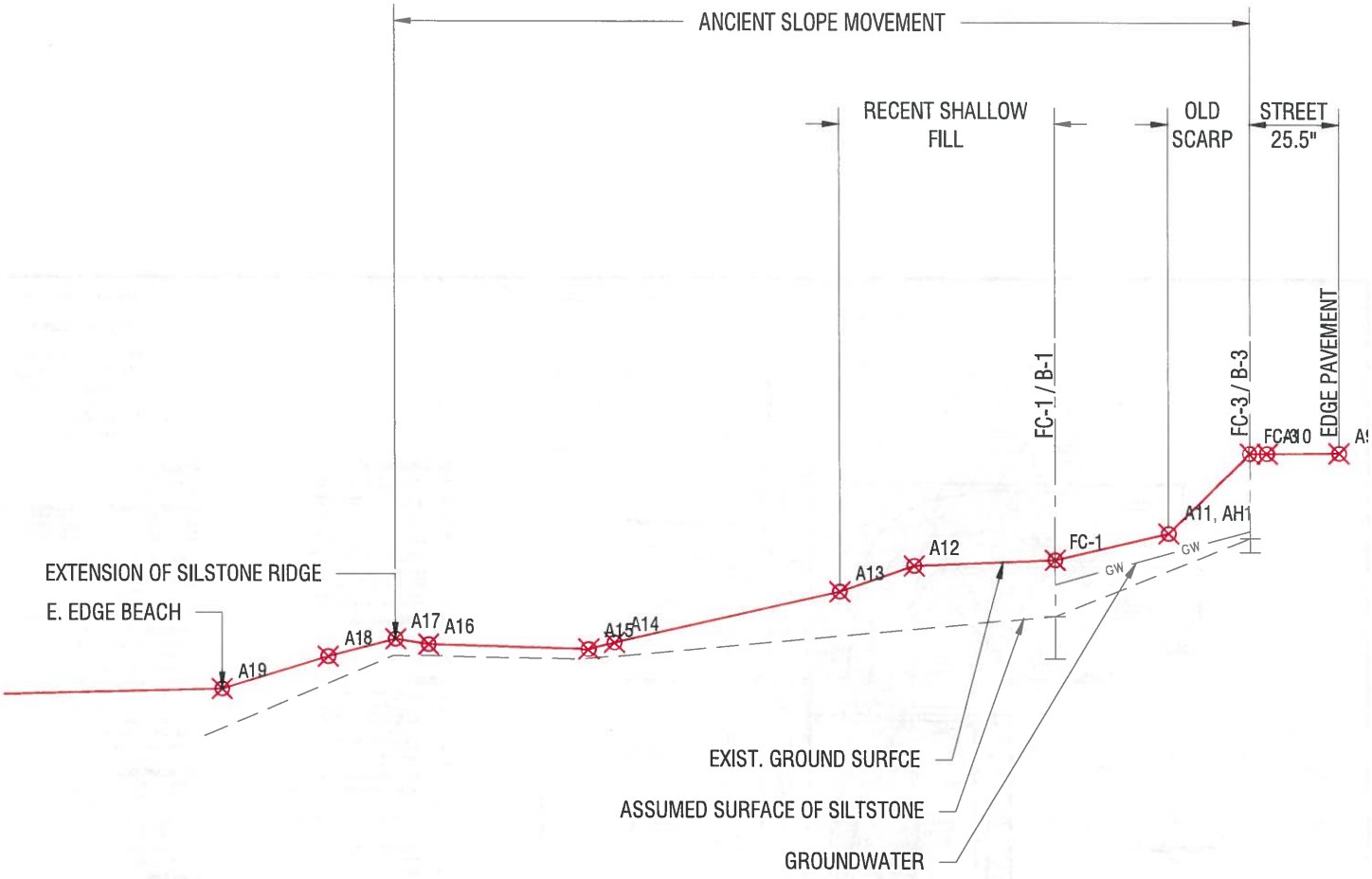
K & A Engineering,Inc
91051 S. Willamette St.
Coburg, OR 97408
541 684 9399 541 684 9358 fax

k·a engineering

GEOTECHNICAL SITE PLAN
Geotechnical Site Investigation
Lund Development
Tax Lots 1900, 1903; NW Spring St., Newport, OR
11/27/17 Project: 17056 Drawing 2 / 3

GEOTECHNICAL
REGISTERED PROFESSIONAL ENGINEER
19,474
OREGON
SEPTEMBER 16, 1997
MICHAEL DENNIS REMBOLDT

EXPIRES: DECEMBER 31, 2018



FIELD-DEVELOPED CROSS SECTION

1 / 3

1" =50'

0 50' 100'

SCALE: 1" = 50'

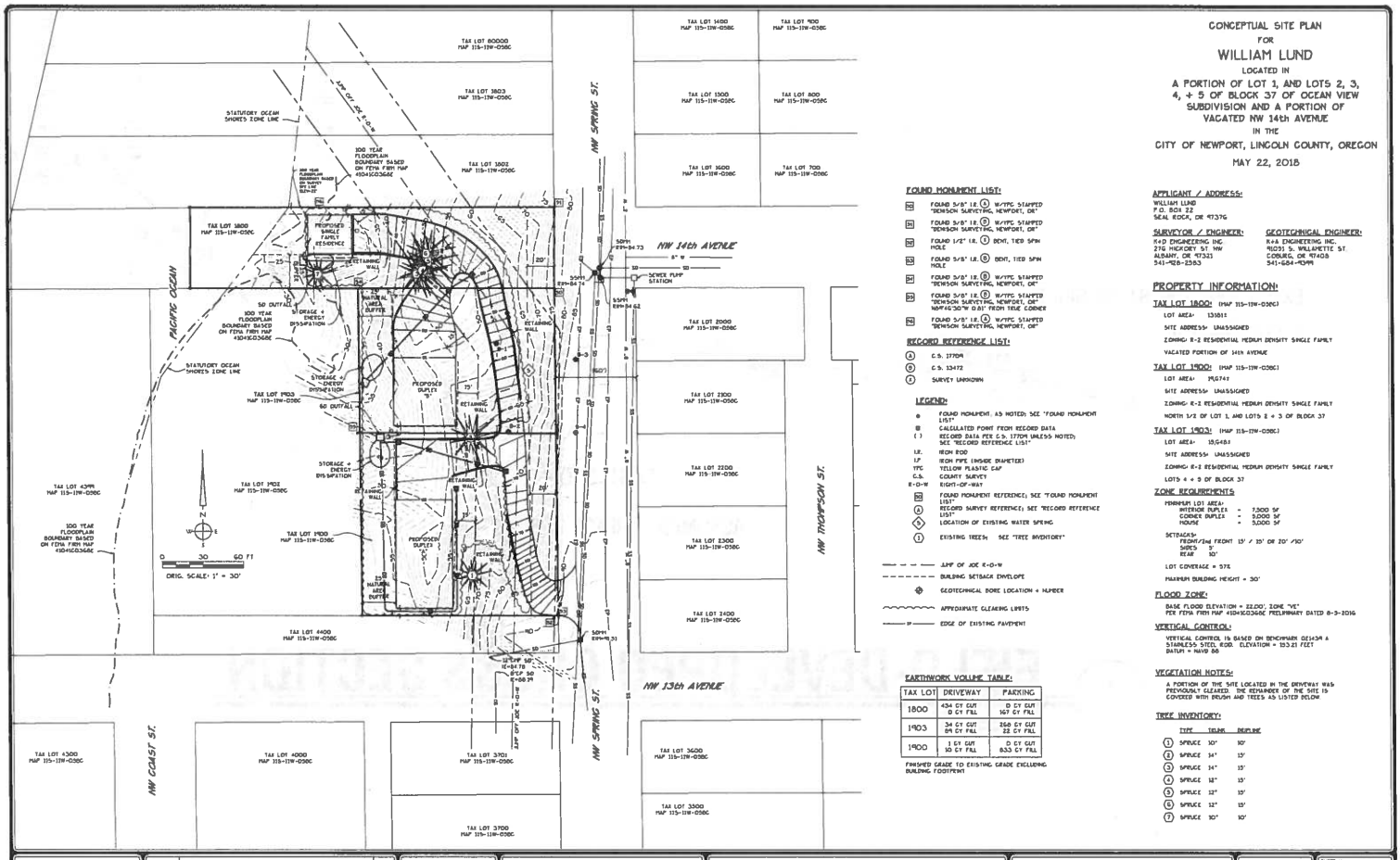
K & A Engineering,Inc
91051 S. Willamette St.
Coburg, OR 97408
541 684 9399 541 684 9358 fax

k·a engineering

FIELD-DEVELOPED CROSS SECTION
Geotechnical Site Investigation
Lund Development
Tax Lots 1900, 1903; NW Spring St., Newport, OR
11/27/17 Project: 17056 Drawing 3 / 3

GEOTECHNICAL REGISTERED PROFESSIONAL ENGINEER
19,474
OREGON
SEPTEMBER 16, 1997
MICHAEL DENNIS REMBOLDT

EXPIRES: DECEMBER 31, 2018



CONCEPTUAL SITE PLAN
FOR
WILLIAM LUND
LOCATED IN
A PORTION OF LOT 1, AND LOTS 2, 3, 4, + 5 OF BLOCK 37 OF OCEAN VIEW SUBDIVISION AND A PORTION OF VACATED NW 14th AVENUE
IN THE
CITY OF NEWPORT, LINCOLN COUNTY, OREGON
MAY 22, 2018

FOUND MONUMENT LIST:

- FOUND 5/8" I.R. (A) W/YPC STAMPED "DENSON SURVEYING, NEWPORT, OR"
- FOUND 3/8" I.R. (D) W/YPC STAMPED "DENSON SURVEYING, NEWPORT, OR"
- FOUND 1/2" I.R. (C) BENT, TIED 5PK HOLE
- FOUND 5/8" I.R. (B) BENT, TIED 5PK HOLE
- FOUND 3/8" I.R. (D) W/YPC STAMPED "DENSON SURVEYING, NEWPORT, OR"
- FOUND 5/8" I.R. (E) W/YPC STAMPED "DENSON SURVEYING, NEWPORT, OR" N84°46'30"W 0.01' FROM TRUE CORNER
- FOUND 5/8" I.R. (E) W/YPC STAMPED "DENSON SURVEYING, NEWPORT, OR"

RECORD REFERENCE LIST:

- (A) C.S. 17709
- (B) C.S. 13472
- (F) SURVEY UNKNOWN

LEGEND:

- ● FOUND MONUMENT. AS NOTED; SEE "FOUND MONUMENT LIST"
- ⊠ CALCULATED POINT FROM RECORD DATA
- ( ) RECORD DATA PER C.S. 17709 UNLESS NOTED; SEE "RECORD REFERENCE LIST"
- I.R. IRON ROD
- I.P. IRON PIPE (INDICATE DIAMETER)
- Y.P.C. YELLOW PLASTIC CAP
- C.S. COUNTY SURVEY
- E-O-W EIGHT-OF-WAY
- (B) FOUND MONUMENT REFERENCE; SEE "FOUND MONUMENT LIST"
- (A) RECORD SURVEY REFERENCE; SEE "RECORD REFERENCE LIST"
- (S) LOCATION OF EXISTING WATER SPRING
- (1) EXISTING TREES; SEE "TREE INVENTORY"
- APP. OF JOE E-O-W
- BUILDING SETBACK ENVELOPE
- GEOTECHNICAL BORE LOCATION & NUMBER
- APPROXIMATE CLEARING LIMITS
- EDGE OF EXISTING PAVEMENT

EARTHWORK VOLUME TABLE:

TAX LOT	DRIVEWAY	PARKING
1800	434 CY CUT 0 CY FILL	0 CY CUT 167 CY FILL
1903	34 CY CUT 0 CY FILL	266 CY CUT 22 CY FILL
1900	1 CY CUT 10 CY FILL	0 CY CUT 833 CY FILL

FINISHED GRADE TO EXISTING GRADE EXCLUDING BUILDING FOOTPRINT

APPLICANT / ADDRESS:
WILLIAM LUND
P.O. BOX 22
SEAL ROCK, OR 97376

SURVEYOR / ENGINEER:
K+D ENGINEERING INC.
276 HICKORY ST. NW
ALBANY, OR 97321
541-928-2583

GEOTECHNICAL ENGINEER:
K+A ENGINEERING INC.
96031 S. WILLAMETTE ST.
COBURG, OR 97408
541-654-9098

PROPERTY INFORMATION:

TAX LOT 1800: (MAP 115-11W-05BC)
LOT AREA: 13,181±
SITE ADDRESS: UNASSIGNED
ZONING: R-2 RESIDENTIAL MEDIUM DENSITY SINGLE FAMILY
VACATED PORTION OF 14th AVENUE

TAX LOT 1900: (MAP 115-11W-05BC)
LOT AREA: 19,674±
SITE ADDRESS: UNASSIGNED
ZONING: R-2 RESIDENTIAL MEDIUM DENSITY SINGLE FAMILY
NORTH 1/2 OF LOT 1, AND LOTS 2 + 3 OF BLOCK 37

TAX LOT 1903: (MAP 115-11W-05BC)
LOT AREA: 15,648±
SITE ADDRESS: UNASSIGNED
ZONING: R-2 RESIDENTIAL MEDIUM DENSITY SINGLE FAMILY
LOTS 4 + 5 OF BLOCK 37

ZONE REQUIREMENTS:
MINIMUM LOT AREA:
INTERIOR DUPLEX = 7,500 SF
CORNER DUPLEX = 9,000 SF
HOUSE = 5,000 SF

SETBACKS:
FRONT/2nd FRONT 15' / 15' OR 20' /10'
SIDES 5'
REAR 10'

LOT COVERAGE = 57%
MAXIMUM BUILDING HEIGHT = 30'

FLOOD ZONE:
BASE FLOOD ELEVATION = 22.00', ZONE "VE" PER FEMA FIRM MAP 410415C0336D PRELIMINARY DATED 8-3-2016

VERTICAL CONTROL:
VERTICAL CONTROL IS BASED ON BENCHMARK OE1434 A STAINLESS STEEL ROD. ELEVATION = 153.21 FEET DATUM = NAVD 88

VEGETATION NOTES:
A PORTION OF THE SITE LOCATED IN THE DRIVEWAY WAS PREVIOUSLY CLEARED. THE REMAINDER OF THE SITE IS COVERED WITH BRUSH AND TREES AS LISTED BELOW.

TREE INVENTORY:

	TYPE	DBH	DRIPLINE
(1)	SPRUCE	10"	10'
(2)	SPRUCE	14"	15'
(3)	SPRUCE	14"	15'
(4)	SPRUCE	18"	15'
(5)	SPRUCE	12"	15'
(6)	SPRUCE	12"	15'
(7)	SPRUCE	10"	10'

Date: 5/21/2018 Time: 13:24
Scale: 1=1[FS]
File: dwg\2017\17-179\17-179_topo.dwg (George)

DATE	REVISION	BY

K & D ENGINEERING, INC.
276 N.W. HICKORY STREET
P.O. BOX 725
ALBANY, OREGON 97321
(541) 928-2583

CONCEPTUAL SITE PLAN
SPRING STREET, NEWPORT
CITY OF NEWPORT, LINCOLN COUNTY, OREGON

GEOTECHNICAL REPORT

HORZ. SCALE:	1" = 30'
VERT. SCALE:	
DESIGN DATE:	5-23-2018
DESIGN BY:	GWB
DRAWN BY:	CSC
CHECK BY:	GWB
PROJECT No.:	17-179

SHEET No. 1 OF 1

Appendix B

Probes and Boring Logs

Geotechnical Engineering Report
Proposed Residential Development
Tax Lots 1900 and 1903
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
June 12, 2018

Prepared for:

Bill Lund
P.O. Box 22
Seal Rock, OR 97376

Prepared by:

Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.
Coburg, Oregon

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER AH-2 Sheet 1 of 1
SURFACE ELEVATION 55.80
NORTH | EAST

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE	RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
0					Tan, damp, loose to moderately dense, silty-SAND or SAND with some silt (FILL?). Contains pockets of brown SILT, organics, and roots.		0
2.5					White/gray, loose to moderately dense, coarse, poorly-graded, SAND with trace silt (dune sand or terrace deposits). Some orange staining.		1.0
5.0					End of Boring @ 6 feet		2.0
7.5							3.0
10.0							4.0
12.5							5.0
15.0							6.0
17.5							7.0
20.0							8.0
22.5							
25.0							
27.5							

Unconfined Compressive Strength, tons/ft.^{2}
1 2 3 4 5
PL MC LL
N VALUE, blows/ft.
10 20 30 40 50 60 70 80 90

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/8/17
BORING COMPLETED 11/8/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER JDB
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER B-1 Sheet 1 of 1
SURFACE ELEVATION 42.60
NORTH | EAST

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
0				Tan/brown, damp, loose to moderately dense, silty-SAND or SAND with some silt (FILL). Contains pockets of brown silt, gravel, and roots.		
2.5	1			Brown, damp, loose to moderately dense, silty-SAND (FILL) mixed with decomposed mudstone fragments (gravel and cobble sized). Glass shards and garbages from 2 to 6-ft. Additional samples retrieved to 6-ft using 3.5-in AMS hand auger.		1.0
5.0	2			Brown, moist, soft, high plasticity, SILT or CLAY with rounded gravels.		2.0
7.5						
10.0	3			Dark gray or black, damp, very stiff to hard, friable, CLAY with some sand (decomposed siltstone). Some orange staining below 12-ft. Stiffer with depth.		3.0
12.5	4					4.0
15.0						
17.5	5			Dark gray or black, hard, weathered SILTSTONE BEDROCK (Nye Formation) (not friable).		5.0
20.0				End of Boring @ 19.5 feet		6.0
22.5						7.0
25.0						8.0
27.5						

ACR

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/7/17	16:05	ACR			6.8

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG AMS 9410-VTR
ENGINEER MDR
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER B-3 Sheet 1 of 1
SURFACE ELEVATION 73.00
NORTH | EAST

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft	SAMPLE NO.	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	DEPTH m.
0		Brown, moist, loose, organic-laden, gravelly-silty-SAND (FILL) - contains concentrated, thin roots.	
2.5	1	Grayish-brown, moist, moderately dense, fine silty-SAND (FILL). Relatively high fines content.	
		Black, damp, moderately stiff, low plasticity, organic silty-SAND or sandy-SILT (original native).	1.0
5.0	2	White/tan, damp, moderately dense, fine, poorly-graded SAND (terrace deposits?). Top 1-ft stained orange from overlying layer.	2.0
7.5			
10.0	3		3.0
12.5	4		4.0
15.0		Gray and white, moist or damp, moderately dense, coarse, poorly-graded SAND (terrace deposits). Some orange staining.	
17.5	5		5.0
20.0			6.0
	6	Gray, wet, moderately dense, poorly-graded, gravelly-SAND or SAND with some gravel - coarse sands and rounded gravels up to 0.5-in in diameter.	
22.5		Gray/white, wet, moderately dense, poorly-graded SAND. Orange staining at 22.6 and 23.3-ft.	7.0
	7	Dark gray/black, damp, very stiff/hard, friable, laminated, fine-grained, weathered SILTSTONE (Nye Formation).	
25.0		End of Boring @ 24.8 feet	8.0
27.5			

UNIT DRY WT. LBS./FT.^{3}

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/8/17	09:30	ACR		21.3	

BORING STARTED 11/8/17
BORING COMPLETED 11/8/17
DRILLER K & A
RIG AMS 9410-VTR
ENGINEER MDR
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER HA-1 Sheet 1 of 1
SURFACE ELEVATION 50.20
NORTH | EAST

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
0				FILL - basalt cobbles - most likely end-dumped from street		
2.5				Brown, moist, loose to mod. dense, fine-grained, non-plastic organic poorly-graded SAND - native "topsoil."		1.0
5.0				Brown, moist, loose, non-plastic, fine-grained, poorly-graded SAND. Trace organics. Grading into marine terrace deposits. No Groundwater.		
				End of Boring @ 5 feet		
7.5						2.0
10.0						3.0
12.5						4.0
15.0						5.0
17.5						
20.0						6.0
22.5						7.0
25.0						8.0
27.5						

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER GS
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER HA-2 Sheet 1 of 1
SURFACE ELEVATION 53.60
NORTH | EAST

DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)

Brown, moist, loose to mod. dense, fine-grained, non-plastic organic poorly-graded SAND - native "topsoil."

Brown to light grayish-white, wet, gravelly poorly-graded SAND. Weathered Marine Terrace Deposits.

Dk. reddish-brown, wet to sl. wet, stiff, blocky SILTY-CLAY. Residual soil from decomposing Nye Formation. Stiffer, brittle/friable, blocky with depth. No Groundwater

End of Boring @ 5 feet

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft: 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0 27.5
DEPTH m.: 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS					
DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER GS
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER HA-3 Sheet 1 of 1
SURFACE ELEVATION 58.00
NORTH | EAST

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
				Brown, loose, moist, non-plastic organic SAND - native "topsoil."		
2.5				Brown to gray-brown or greyish-white with red stain, moderately dense, gravelly poorly-graded SAND. Terrace Deposits. No Groundwater.		1.0
5.0				End of Boring @ 6 feet		2.0
7.5						
10.0						3.0
12.5						4.0
15.0						5.0
17.5						
20.0						6.0
22.5						7.0
25.0						8.0
27.5						

Unconfined Compressive Strength, tons/ft.^{2}
1 2 3 4 5
PL MC LL
N VALUE, blows/ft.
10 20 30 40 50 60 70 80 90

⊗ Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER GS
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

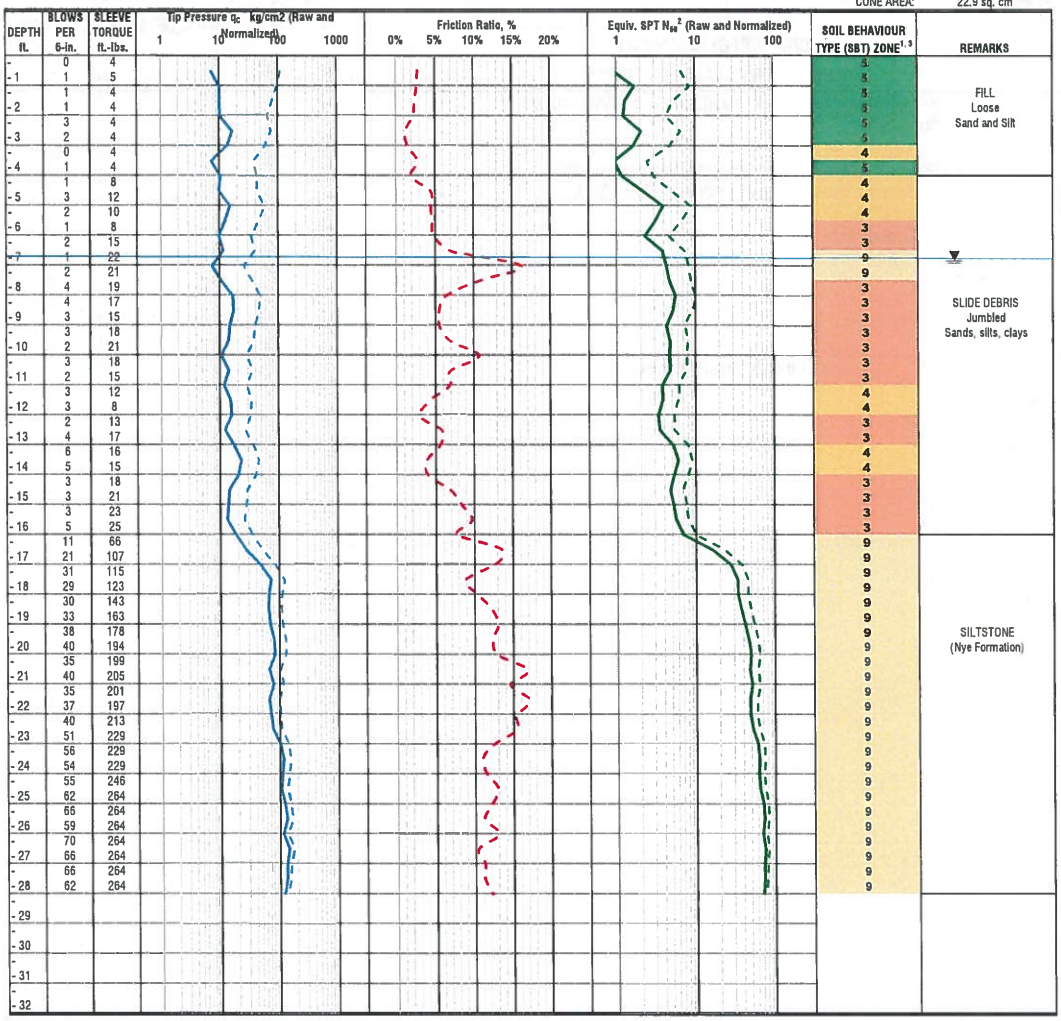
DYNAMIC PROBE LOG
FC-1

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-1
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903; NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER: 17056
DATE STARTED: 11-07-2017
DATE COMPLETED: 11-07-2017
DEPTH COMPLETED (ft): 28.0
SURFACE ELEVATION: 42.6 ft
STATIC WATER DEPTH ON COMPLETION (ft): 6.8
FIRST ENCOUNTERED WATER DEPTH (ft): 6.8
HAMMER WEIGHT: 63.5 kg
CONE AREA: 22.9 sq. cm

DEPTH ft.	BLOWS PER 6-in.	SLEEVE TORQUE ft.-lbs.	SOIL BEHAVIOUR TYPE (SBT) ZONE[1, 3]	REMARKS
-	0	4	5	
- 1	1	5	5	
-	1	4	5	FILL
- 2	1	4	5	Loose
-	3	4	5	Sand and Silt
- 3	2	4	5	
-	0	4	4	
- 4	1	4	5	
-	1	8	4	
- 5	3	12	4	
-	2	10	4	
- 6	1	8	3	
-	2	15	3	
- 7	1	22	9	
-	2	21	9	
- 8	4	19	3	
-	4	17	3	SLIDE DEBRIS
- 9	3	15	3	Jumbled
-	3	18	3	Sands, silts, clays
- 10	2	21	3	
-	3	18	3	
- 11	2	15	3	
-	3	12	4	
- 12	3	8	4	
-	2	13	3	
- 13	4	17	3	
-	6	16	4	
- 14	5	15	4	
-	3	18	3	
- 15	3	21	3	
-	3	23	3	
- 16	5	25	3	
-	11	66	9	
- 17	21	107	9	
-	31	115	9	
- 18	29	123	9	
-	30	143	9	
- 19	33	163	9	
-	38	178	9	SILTSTONE
- 20	40	194	9	(Nye Formation)
-	35	199	9	
- 21	40	205	9	
-	35	201	9	
- 22	37	197	9	
-	40	213	9	
- 23	51	229	9	
-	56	229	9	
- 24	54	229	9	
-	55	246	9	
- 25	62	264	9	
-	66	264	9	
- 26	59	264	9	
-	70	264	9	
- 27	66	264	9	
-	66	264	9	
- 28	62	264	9	
- 29				
- 30				
- 31				
- 32				



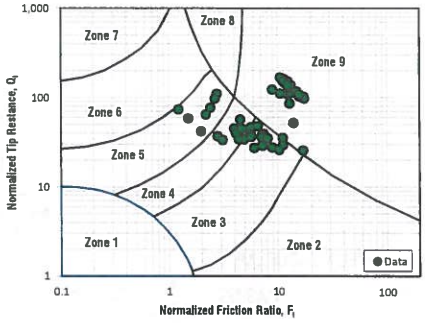
[1]P.K. Robertson, 2010. "Evaluation of flow liquefacton and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6, and P.K. Robertson, 2000. "Soil classification using the cone penetration test," Canadian Geotechnical Journal, 27(1).

[2]John H. Schmertmann, "Statics of SPT". Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering, 6th Edition" Gregg Drilling and Testing, Inc.

Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
1	Sensitive, fine grained
2	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
7	Gravelly sand to dense sand
8	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)



DYNAMIC PROBE LOG
FC-2

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-2
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903; NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER:	17056
DATE STARTED:	11-07-2017
DATE COMPLETED:	11-07-2017
DEPTH COMPLETED (ft):	32.0
SURFACE ELEVATION:	55.8 ft
STATIC WATER DEPTH ON COMPLETION (ft):	6.0
FIRST ENCOUNTERED WATER DEPTH (ft):	6.0
HAMMER WEIGHT:	63.5 kg
CONE AREA:	22.9 sq. cm

DEPTH ft.	BLOWS PER 6-in.	SLEEVE TORQUE ft.-lbs.	SOIL BEHAVIOUR TYPE (SBT) ZONE[1, 3]	REMARKS
-	0	2	5	
- 1	0	2	5	
-	0	2	5	
- 2	1	2	5	Loose SAND
-	1	3	5	
- 3	1	4	5	
-	1	4	5	
- 4	1	4	5	
-	2	6	5	
- 5	3	8	4	
-	3	7	5	
- 6	3	6	5	
-	5	31	9	
- 7	11	56	9	
-	14	58	9	
- 8	12	59	9	
-	10	83	9	
- 9	19	107	9	
-	23	133	9	
- 10	24	158	9	
-	34	188	9	
- 11	34	217	9	
-	30	199	9	
- 12	33	182	9	
-	36	185	9	
- 13	39	188	9	
-	37	199	9	
- 14	25	211	9	
-	29	217	9	
- 15	40	223	9	
-	36	217	9	
- 16	30	211	9	SILTSTONE (Nye Formation)
-	29	211	9	
- 17	32	211	9	
-	30	211	9	
- 18	28	211	9	
-	29	202	9	
- 19	29	194	9	
-	24	163	9	
- 20	21	131	9	
-	21	131	9	
- 21	19	131	9	
-	15	138	9	
- 22	20	144	9	
-	22	169	9	
- 23	22	194	9	
-	23	199	9	
- 24	26	205	9	
-	23	193	9	
- 25	23	180	9	
-	22	168	9	
- 26	15	155	9	
-	15	165	9	
- 27	16	174	9	
-	21	184	9	
- 28	22	194	9	
-	22	183	9	
- 29	20	173	9	
-	20	163	9	
- 30	23	153	9	
-	19	158	9	
- 31	20	164	9	
-	17	170	9	
- 32	20	176	9	

Tip Pressure q_c kg/cm2 (Raw and Normalized): 1, 10, 100, 1000
Friction Ratio, %: 0%, 10%, 20%, 30%, 40%
Equiv. SPT N_{60}[2] (Raw and Normalized): 1, 10, 100

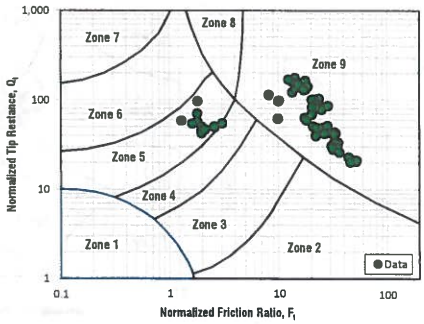
[1]P.K. Robertson, 2010. "Evaluation of flow liquefacton and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6, and P.K. Robertson, 2000. "Soil classification using the cone penetration test," Canadian Geotechnical Journal, 27(1).

[2]John H. Schmertmann, "Statics of SPT", Journal of the Geotechnical Engineering Division, American Society of Civil Engineers, May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering, 6th Edition" Gregg Drilling and Testing, Inc.

Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
1	Sensitive, fine grained
2	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
7	Gravelly sand to dense sand
8	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)



DYNAMIC PROBE LOG
FC-3

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-3
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903, NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER: 17056
DATE STARTED: 11-08-2017
DATE COMPLETED: 11-08-2017
DEPTH COMPLETED (ft): 28.0
SURFACE ELEVATION: N/A
STATIC WATER DEPTH ON COMPLETION (ft): 20.8
FIRST ENCOUNTERED WATER DEPTH (ft): 20.8
HAMMER WEIGHT: 63.5 kg
CONE AREA: 22.9 sq. cm

DEPTH ft.	BLOWS PER 6-in.	SLEEVE TORQUE ft.-lbs.	SOIL BEHAVIOUR TYPE (SBT) ZONE[1, 3]	REMARKS
-	2	3	6	
- 1	3	4	6	FILL
-	2	4	5	Gravelly silty-sands
- 2	2	5	5	
-	1	8	4	Sandy Silts
- 3	1	11	9	Native Topsoil (?)
-	2	10	4	
- 4	4	8	5	
-	8	15	5	
- 5	9	22	5	
-	11	21	5	
- 6	11	21	5	
-	11	21	5	
- 7	12	22	5	
-	12	22	5	
- 8	12	22	5	
-	12	23	5	
- 9	11	24	4	Terrace Deposits
-	10	20	4	lightly-cemented
- 10	8	16	4	silts, sands
-	6	15	4	
- 11	6	15	4	
-	7	24	3	
- 12	8	33	3	
-	10	30	4	
- 13	9	27	4	
-	10	27	4	
- 14	9	27	4	
-	10	28	4	
- 15	11	29	4	
-	13	38	4	
- 16	14	46	3	
-	14	52	9	
- 17	17	58	9	
-	17	54	3	
- 18	15	50	3	
-	12	49	3	
- 19	13	49	3	
-	11	45	3	
- 20	11	41	3	
-	10	46	3	
- 21	12	50	3	
-	10	44	3	
- 22	12	38	3	▼
-	11	46	3	
- 23	7	30	3	
-	6	16	3	
- 24	14	2	6	
-	12	94	9	
- 25	28	185	9	SILTSTONE
-	17	184	9	(Nye Formation)
- 26	20	183	9	
-	23	197	9	
- 27	24	211	9	
-	22	214	9	
- 28	21	217	9	
- 29				
- 30				
- 31				
- 32				

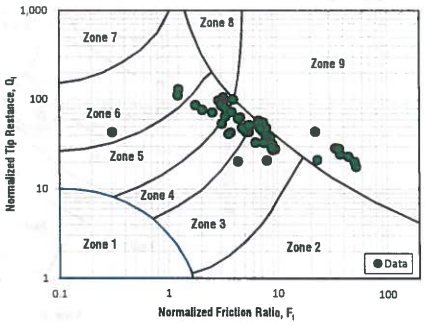
[1]P.K. Robertson, 2010. "Evaluation of flow liquefacton and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6. and P.K. Robertson, 2000. "Soil classification using the cone penetration test." Canadian Geotechnical Journal. 27(1).

[2]John H. Schmertmann, "Statics of SPT", Journal of the Geotechnical Engineering Division. American Society of Civil Engineers. May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering, 6th Edition" Gregg Drilling and Testing, Inc.

Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
1	Sensitive, fine grained
2	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
7	Gravelly sand to dense sand
8	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)

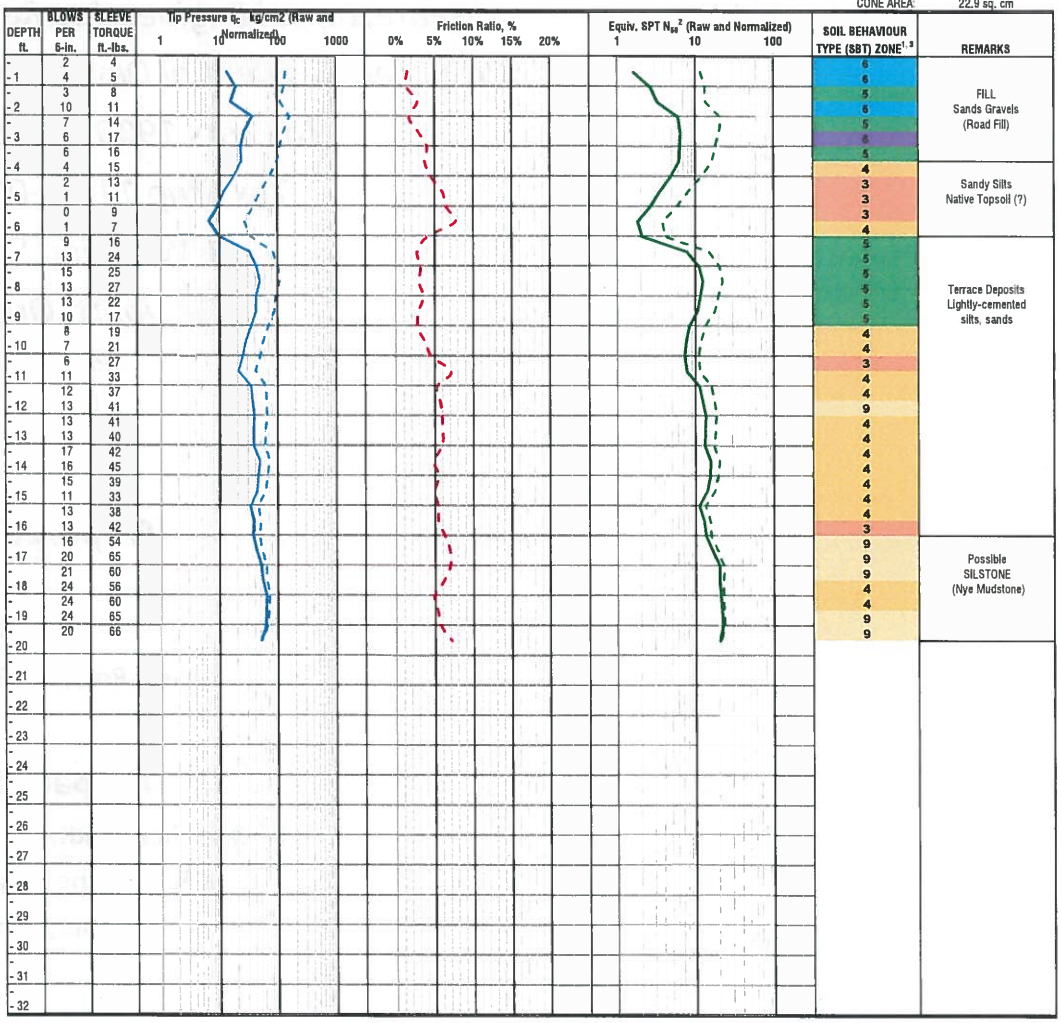


DYNAMIC PROBE LOG
FC-4

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-4
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903; NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER:	17056
DATE STARTED:	11-08-2017
DATE COMPLETED:	11-08-2017
DEPTH COMPLETED (ft):	19.5
SURFACE ELEVATION:	72.0 ft
STATIC WATER DEPTH ON COMPLETION (ft):	None Observed
FIRST ENCOUNTERED WATER DEPTH (ft):	None Observed
HAMMER WEIGHT:	63.5 kg
CONE AREA:	22.9 sq. cm



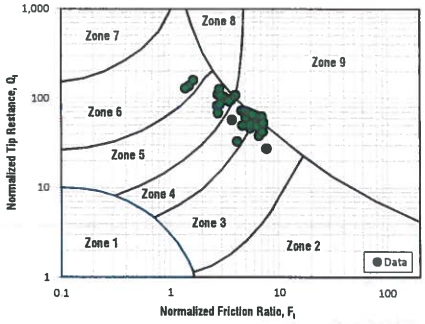
[1]P.K. Robertson, 2010. "Evaluation of flow liquefacton and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6. and P.K. Robertson, 2000. "Soil classification using the cone penetration test," Canadian Geotechnical Journal, 27(1).

[2]John H. Schmertmann, "Statics of SPT", Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering, 6th Edition" Gregg Drilling and Testing, Inc.

Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
1	Sensitive, fine grained
2	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
7	Gravelly sand to dense sand
8	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)



Appendix C

Slope Stability Analysis

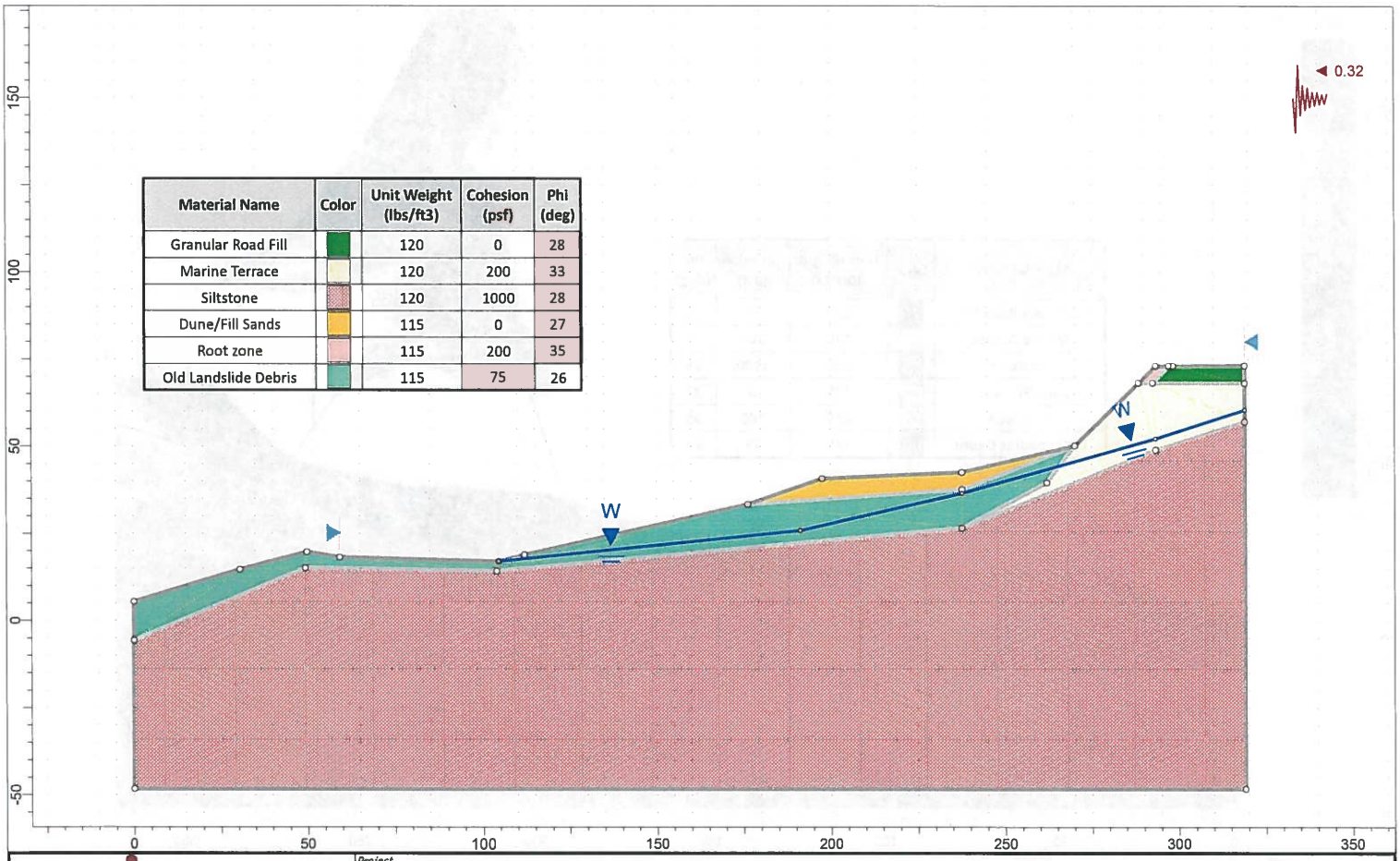
Geotechnical Engineering Report
Proposed Residential Development
Tax Lots 1900 and 1903
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
June 12, 2018

Prepared for:

Bill Lund
P.O. Box 22
Seal Rock, OR 97376

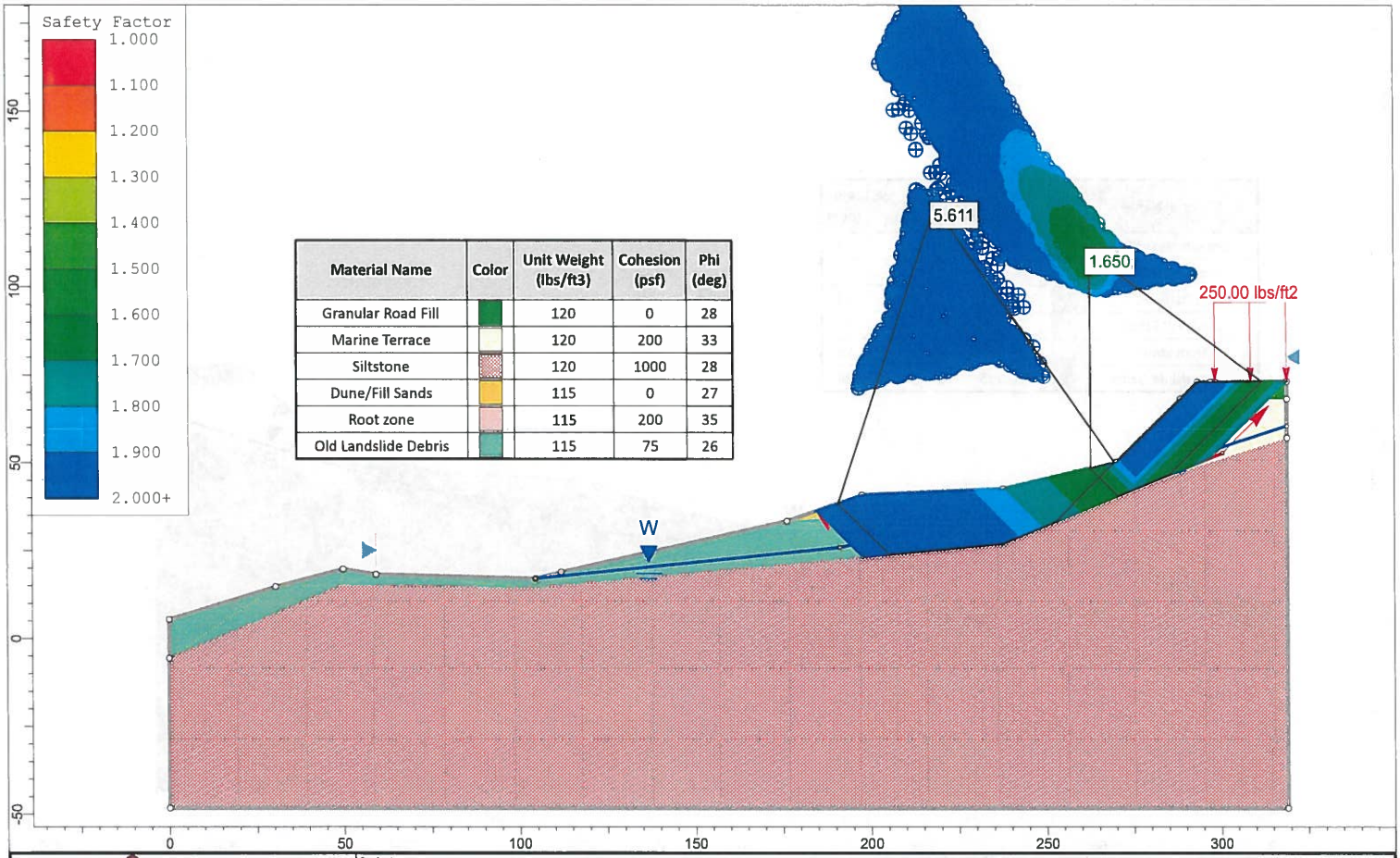
Prepared by:

Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.
Coburg, Oregon



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

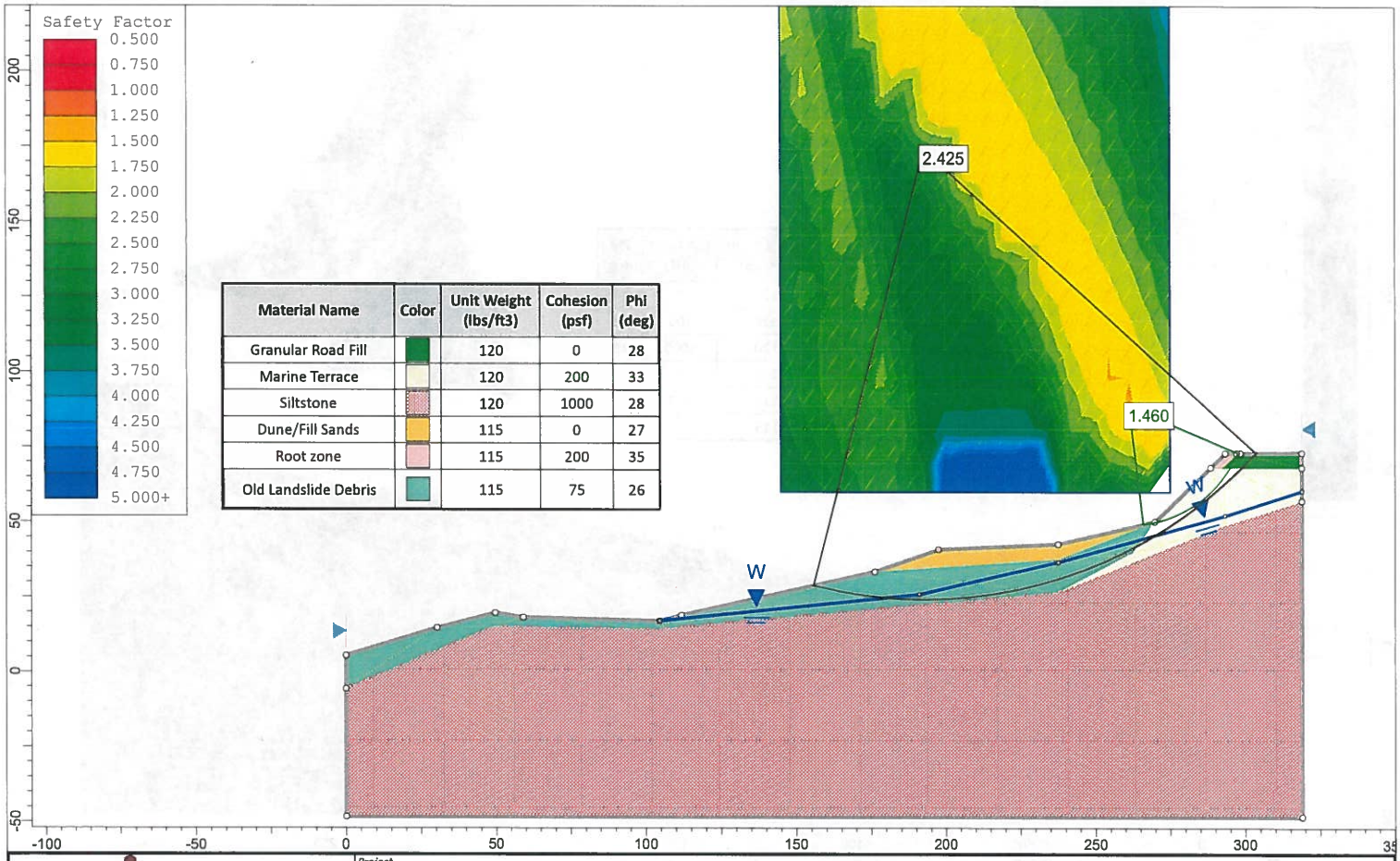
	Project: Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
	Analysis Description: North Cross Section Subsurface Soil Profile		
	Drawn By:	Scale: 1:455	Company:
SLIDE 6.039	Date: 11/28/2017, 2:05:02 PM		File Name: North Cross Section 11 28 17.slim



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039

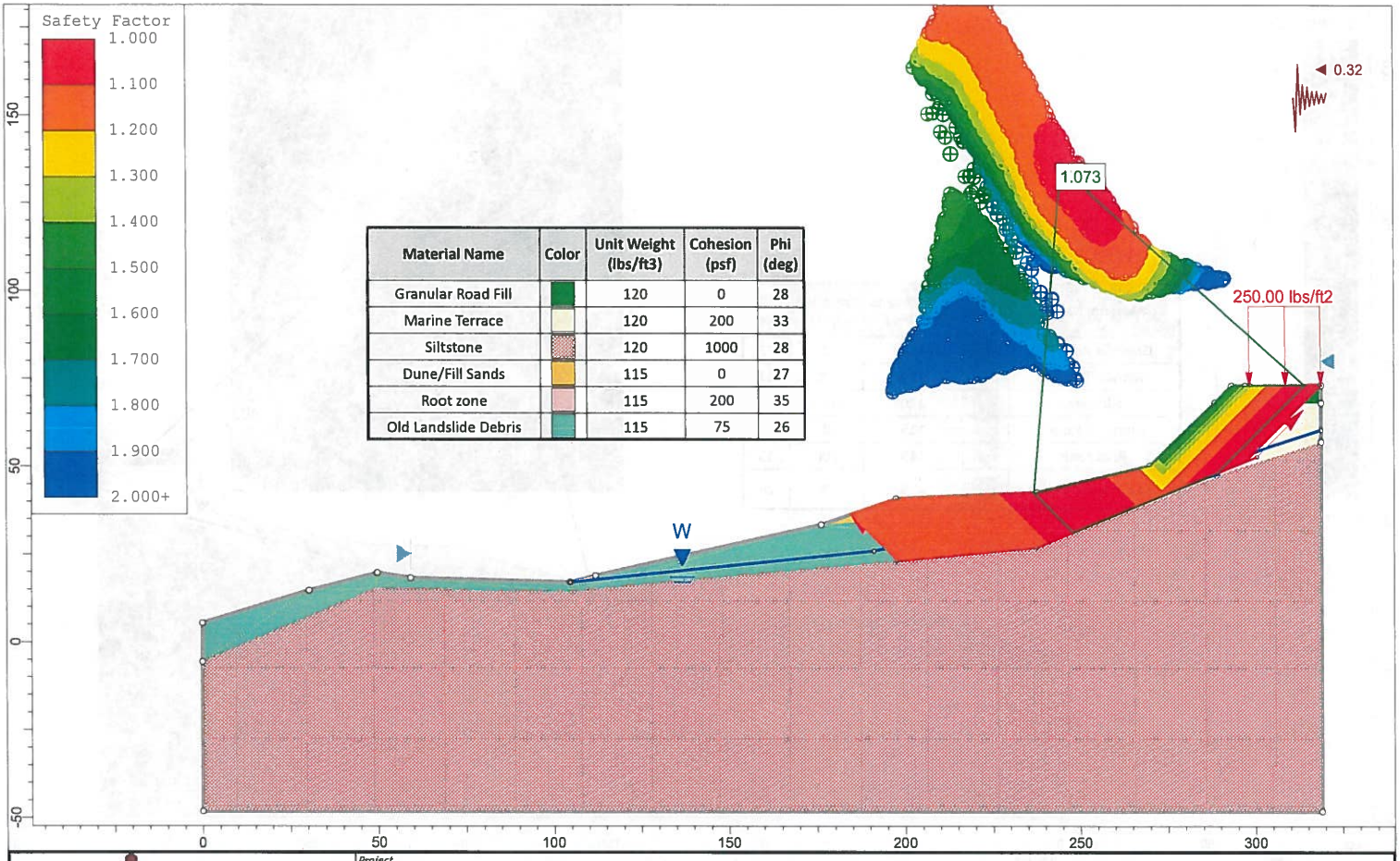
Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Block Failure on Underlying Siltstone		
Drawn By		Scale 1:452	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039 ka engineering

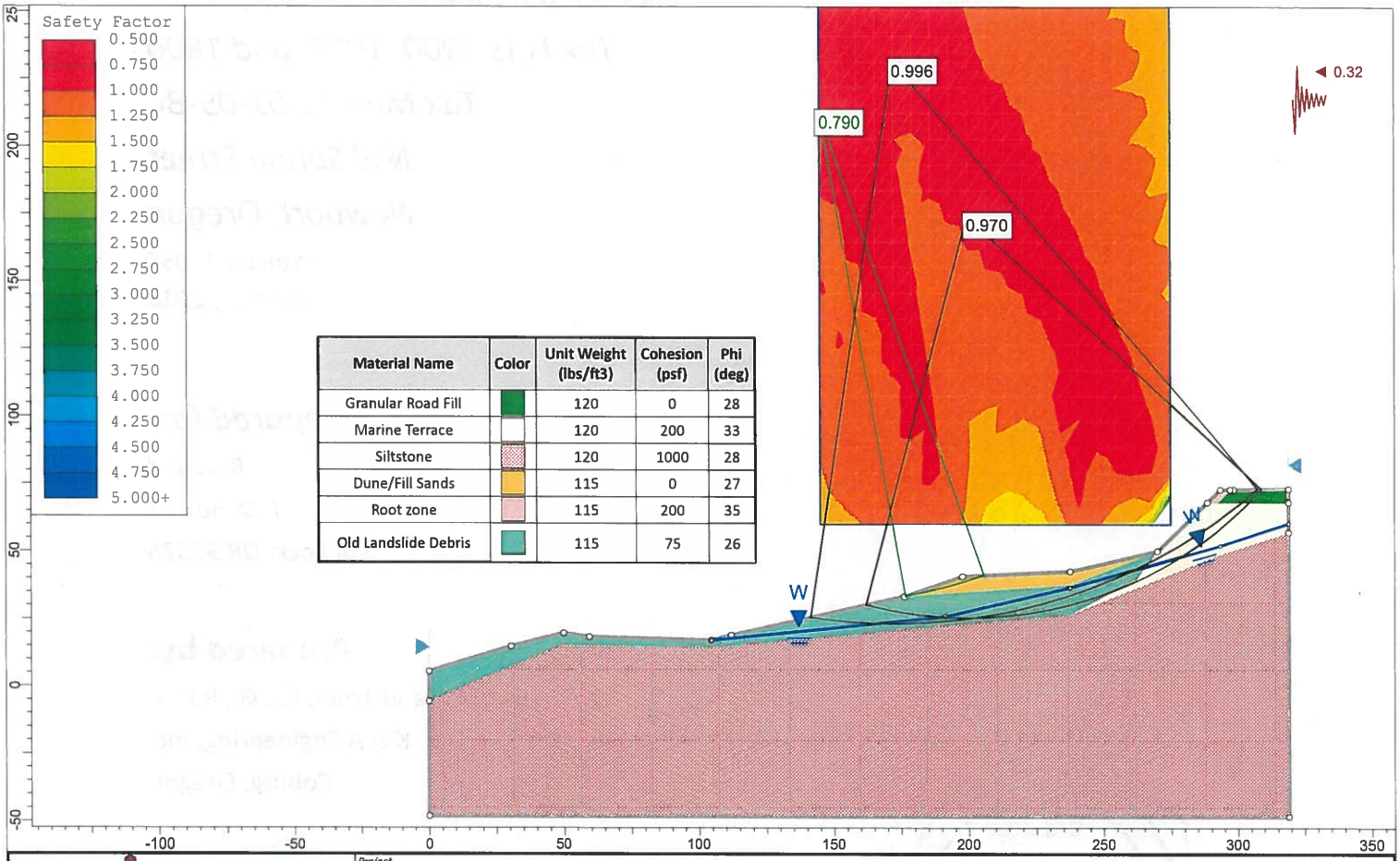
Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Circular Failure in Old Slide Debris - No Earthquake or Traffic Load		
Drawn By		Scale 1:530	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039

Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Block Failure on Underlying Siltstone		
Drawn By		Scale 1:452	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039 kia engineering

Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Circular Failure in Old Slide Debris - With Earthquake Load 32%g		
Drawn By		Scale 1:588	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim

Appendix D

Geologic Hazard Assessment

Proposed Residential Development
Tax Lots 1900, 1903, and 1800
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
June 12, 2018

Prepared for:

Bill Lund
P.O. Box 22
Seal Rock, OR 97376

Prepared by:

Gary C. Sandstrom, C.E.G., R.P.G.
K & A Engineering, Inc.
Coburg, Oregon

1.0 Introduction

At the request of Bill Lund, Gary C. Sandstrom, Geologist, LLC, working with K&A Engineering Inc., of Coburg, Oregon, observed site conditions at Lots 1800, 1900 and 1903 immediately north of 1245 NW Spring St., Newport, Oregon, 97365. The site is situated in a geologic hazard zone defined by the City of Newport and Lincoln County and this report has been prepared to assess geologic hazard conditions relevant to the proposed purchase and development of the property.

2.0 Scope of Work

A site visit and geologic reconnaissance of surface features was conducted on October 10, 2017. A follow-up visit November 7-8, 2017 included geotechnical borings and additional site reconnaissance plus excavation of 3 hand auger borings and a hand-dug test pit to further characterize the site. In addition, the following literature and internet sources were reviewed:

- Google Maps, http://maps.google.com/maps
- Google Earth, earth.google.com
- USGS, http://store.usgs.gov, 1984 and 2014 Newport North Topographic Quadrangle maps from US Dept. of Interior, Geological Survey
- ORMAP GIS, http://www.ormap.org Oregon Map website listing tax lot numbers
- Lincoln County Assessor's Maps, tax maps and site surveys, www.co.lincoln.or.us
- H.G. Schlicker & Associates, Inc., *Geologic Reconnaissance of Lots 1, 2, 3, 4, 5, Block 37, NW Spring St, Newport, Oregon,* August, 1991
- Schlicker, H.G., Olcott, G.W., Beaulieu, J.D. and Deacon, R.J., *Environmental Geology of Lincoln County, Oregon,* State of Oregon, DOGAMI, Bulletin 81, 1973
- Snavely, P.D., MacLeod, N.S., Wagner, H.C. and Rau, W.W., *Geologic Map of the Yaquina and Toledo Quadrangles, Lincoln County, Oregon,* US Dept. of the Interior, Geological Survey, Misc. Investigation I-867, 1976
- Snavely, P.D., MacLeod, N.S. and Wagner, H.C., *Preliminary Bedrock Geologic Map of the Yaquina and Toledo Quadrangles, Lincoln County, Oregon,* US Dept. of the Interior, Geological Survey, Open File Report 72-352, 1972
- Priest, G.R. and Allan, J.C., *Evaluation of Coastal Erosion Hazard Zones Along Dune and Bluff-Backed Shorelines in Lincoln County, Oregon: Cascade Head to Seal Rock Technical Report to Lincoln County*; State of Oregon, DOGAMI, Open File Report O-04-09, 2004
- *Tsunami Inundation Map for Newport North, Linc-06,* State of Oregon, DOGAMI, TIM Linc-06, 2013

- State of Oregon, DOGAMI, (HazVu), http://oregongeology.org/sub/hazvu/index
- State of Oregon, DOGAMI, Statewide Landslide Inventory for Oregon (SLIDO), http://www.oregongeology.org/projects/slido/slido-map
- State of Oregon, DOGAMI, (LIDAR), http://oregongeology.org/sub/lidardataviewer/index
- State of Oregon, *Cascadia Magazine,* Cascadia EQ Time Line, DOGAMI, Winter 2010

This report was written to summarize the investigations. Geotechnical site explorations were conducted by K&A Engineering Inc.

3.0 Project Location and Description

The vacant subject property is situated on the bluff above the Pacific Ocean on the west side of NW Spring Street south of NW 14th Avenue in Newport, Oregon approximately ¾ mile north-northwest of the junction of US Highway 101 and US Highway 20, and a mile and a half north of the US 101 Yaquina River Bridge (see Google Earth Location Map and USGS 1984 and 2014 Newport Topographic Quadrangle Maps). The property (see the ORMAP and Lincoln County Photo tax maps and plat tax map) is listed as tax lots 1800 (104), 1903 (Parcels 4 and 5 of Ocean View Block 37) and 1900 (Parcels 2 & 3 and the northern half of Parcel 1, Block 37) in T11S, R11W, Section 5 SW ¼ of NW ¼. Combined Lots 1900 and 1903 are rectangular lots bounded on the east by NW Spring Street and measure approximately 303 feet north-south and 125 feet east-west. Lot 1800 is situated immediately north of Lot 1903 and measures 60 feet north-south and extends approximately 215-245 feet west from NW Spring Street to the vegetation line, and appears to be the abandoned right-of-way for NW 14th Avenue. The north-neighboring lot 1802 at 1409 NW Spring Street is occupied by a single-family residence, as are the lots on the east side of NW Spring Street opposite Lots 1900 and 1903. South-neighboring Lot 4400 is owned by the City of Newport, as is the NW 13th Avenue right-of-way south of Lot 4400 which extends to the vegetation line approximately 350 feet west of NW Spring Street. The City of Newport also owns parcel 1902 west of Lots 1900 and 1903, and all the adjoining City of Newport parcels are vacant. Single family residences (including the southern neighbor at 1245 NW Spring Avenue) are situated on the parcels west of NW Spring Street and south of the 13th Avenue right-of-way.

The eastern boundary of the heavily-vegetated subject parcel generally coincides with a landslide scarp ranging up to 10 to 15 feet high along the west margin of the NW Spring Street right-of-way. The slopes at the base of the scarp appear to have been cut and benched during construction of an access road at some point during site development, and the base of the scarp/cut-bank has been buttressed with basalt cobble fill in places. Moderate, generally hummocky, irregular slopes lead down to the beach. The vegetation line is approximately 250 west of NW Spring Street at the north end of the subject site and approximately 300 feet west at the south end. A generally SE-NW trending drainage channel traverses the site from the approximate midpoint of the southern boundary to the beach sand/vegetation line near the northwest corner. Site elevation ranges from approximately 93 feet at the southeast corner to 20 feet at the sand line near the northwest corner. The northeast site corner is approximately 85 feet and the southwest corner is approximately 65 feet. Several footpaths traverse the site and several primitive campsites were observed in the vicinity.

4.0 Geologic Setting

The slopes underlying the project site are classified in the geologic literature as Quaternary (less than 2.8 million years before present) Marine Terrace deposits overlying early Miocene (16.5-23.0 million years before present) Nye Mudstone (see DOGAMI Bulletin 81-3, OFR-O-04-09, USGS-OF-72-352-1 and USGS I-867 geologic maps). The Marine Terrace deposits are described in B-81 as up to 75 feet (in Lincoln County) of semi-consolidated uplifted beach sand overlain locally by fine-grained dune deposits, with occasional localized gravel lenses. Terrace deposits are described in O-04-09 as unconsolidated to moderately consolidated gravel, beach and dune sand; locally containing minor consolidated clay-rich paleosols, colluvium, debris flows, and alluvial interbeds; to thin-bedded sandstone, conglomerate, and tuffaceous siltstone with thick glauconitic sandstone beds; sandstone is fine- to coarse-grained and shows crossbedding, fore-set bedding, and scour and fill structures.
DOGAMI B-81 maps early Miocene (approximately 16.5-23 million years old) Nye Mudstone deposits at the base of the bluffs at the head of the beach west of the subject site and USGS OF-72-352-1 maps Nye Mudstone underlying the Marine Terrace deposits in much of the site vicinity. Nye Mudstone deposits are described as massive to thick-bedded, gray, clayey marine siltstone and very fine-grained sandstone containing sandstone interbeds near the base and calcareous concretions in places. Middle Miocene (10.4-16.5 million years old) Astoria Formation deposits are mapped overlying the Nye Mudstone a short distance to the south and in the wave zone west of the site. Nye Mudstone dips in the site vicinity are mapped at generally 11 to 15 degrees to the west to southwest and Astoria Formation deposits are mapped at 23 degrees to the west a few hundred feet to the south at Jumpoff Joe.
The USDA National Resource Conservation Service Pacific Northwest Soils website classifies the soils underlying the site as Urban land-Bandon complex on 12 to 50% slopes to the west, described as colluvium derived from sedimentary rock. No further information is provided on the NRCS website.

5.0 Geologic Hazard Mapping

DOGAMI O-04-09 and the HazVu website map active landslides underlying the subject site. The DOGAMI HazVu website maps two landslides underlying the site, the first is a Quaternary (sometime in the last 2.8 million years) landslide extending from about NW 12th Street on the south northward past NW 22nd Street and eastward to the intersection of NW 15th Street and NW Thompson Street. An active slide is mapped extending generally along the west side of NW Spring Street between NW 14th Street and NW 11th Street and corresponds to the scarp observed on the eastern margin of the subject site. The landslide hazard rating of the subject site is very high due to underlying landslides.
The DOGAMI HazVu website maps an ENE-WSW trending active fault approximately 1.5 miles southeast of the subject site and rates the site vicinity susceptible to severe shaking in the event of both Cascadia subduction zone earthquakes and lesser earthquakes. The majority of the site is situated above the statutory tsunami inundation line (at 30 feet elevation). The western margin of lot 1800 near the vegetation line is below the inundation line, but the homesites proposed for that lot are above the line.
DOGAMI's Tsunami Inundation Map Linc-06 shows inundation scenarios for earthquakes of several different magnitudes, including a Cascadia Subduction Zone earthquake which could reach an elevation of approximately 80 feet, past the eastern property line. The site vicinity is classified by HazVu as at low risk of liquefaction in the event of earthquakes and the Flood Hazard zone for ocean flooding extends into the western margin of Lot 1800, but not the proposed homesite vicinity. The revised Site Plan dated 5/31/18 shows the FEMA "FIRM" boundary in relation to the proposed residence footprints

– please note the proposed residence footprints are above the FEMA "FIRM" hazard boundary (as stated previously but ignored). The HazVu Coastal Erosion Hazard map, based on O-04-09 and not intended to be site-specific, maps almost the entire subject site as an active erosion zone; the southern end of the eastern margin adjacent to NW Spring Street is classified at high hazard (high probability being affected by active erosion in the next 60-100 years). The attached OFR-04-09 Dune and Bluff Erosion Hazard diagrams are a pictorial explanation of the erosional hazard zones. The site vicinity is estimated (O-04-09) to be subsiding relative to sea level at a rate of approximately one and a half millimeters a year.

6.0 Previous Site Study

A geologic site reconnaissance was performed by H.G. Schlicker & Associates in 1991 to evaluate site geology. The report has these observations: "A prominent head scarp is present adjacent to Spring Street between 13th Street and 14th Street encompassing the eastern parts of lot 1 through 5, Block 37 (Lots 1900 and 1903). The slide debris appears to have moved towards the ocean as a unit and a major slide mass lies between the subject property and the beach. It is highly broken and distorted from sliding and is being eroded by the ocean waves and driving rains. The landslide, as it now exists, rests on a nearly level surface and is not capable of further sliding. Rather it acts as a buttress to the toe of the subject property. Small local slumps can occur along the face of the bluff. The east part of lots 3, 4 and 5, Block 37 slope moderately steeply. The slope is probably overlain by a thin (layer of) slide debris or other material which may be capable of slope movement unless toe support is provided." Schlicker's summary and conclusions: "The site is underlain by Coastal Terrace deposits, Nye Mudstone and possibly some Astoria rocks. The thickness of the overlying material is unknown but is believed to be a relatively thin deposit of landslide debris. Thick landslide debris, distorted Coastal Terrace and Nye form lie between the site and the beach. The bowl-shaped area present just east of Spring Street is an older landslide that has apparently been stable for many years. The area west of Spring Street probably moved initially prior to the Jump Off Joe landslide that began about 1942 and continued until recently. Movement in the vicinity of the site is limited to small local slumps since the driving force is no longer present to activate a large slide. Foundation conditions at the site depend upon the thickness of the debris and the character of the sediments to depths which might effect settlement or cause slope instability." A geotechnical site study was recommended.

7.0 Soils Observed

Soils observed on the site surface consisted generally of sandy silt topsoil with organics ranging to fine-grained sand consistent with classification as Marine Terrace Deposits. Exposures of Nye Mudstone were observed west of the subject site near the vegetation line and also in shallow explorations along the access road at the base of the scarp along the eastern site margin. Geotechnical borings on the subject site by K&A Engineering also encountered interpreted Marine Terrace deposits overlying Nye Mudstone. Angular basalt cobbles (two feet deep in the first hand-auger boring) were observed in places along the upper edge of the access road at the base of the scarp and are interpreted as fill placed to buttress the base of the scarp prior to current site explorations. Soils observed west of the subject site consisted generally of relatively loose fine-grained sand interpreted as disturbed Marine Terrace deposits weathered to or covered by dune sand. Nye Mudstone was observed near the vegetation line as mentioned above, and rock exposures were sighted in the surf zone corresponding to exposures of Astoria Formation materials mapped in the literature.

Three hand-auger borings were excavated on November 7, 2017 (see Boring Logs and Site Plan) on the upper shoulder of the access road near the base of the scarp along the eastern site margin to characterize soils in the vicinity, encountering residual siltstone at one location. A test pit was excavated with a mattock in the access road near observed siltstone fragments and a seep, and encountered wet, light gray, gravelly sand overlying weathered siltstone. Mr. Lund reported siltstone was encountered in places during clearing of the access road at the base of the scarp.
Materials observed are consistent with descriptions in the geologic literature.

6.0 Drainage and Groundwater

A spring is mapped (USGS 2014 Newport North Topographic Quadrangle Map) in Lot 1903 and was observed on the access road during the reconnaissance. A hand-dug test at the location uncovered the contact between the Marine Terrace deposits and underlying Nye Mudstone at a depth of approximately a foot and a half below the surface. The resulting creek flows generally northwestward and onto the beach west of the NW 14th Street right-of-way.
A footpath leads from the City of Newport right-of-way south of the subject parcel along a generally north-northwest trending swale that traverses the vicinity west of the subject parcel, but no flowing water was observed and none is mapped, so the feature may be more a relict of landsliding than a watercourse.
A drain line from the southern neighboring residence leads down to the beach and has been disconnected and utilized as a water source by people camping in the vicinity. The channel below the disconnected line shows evidence of relatively rapid erosion.
A surface run-off collector grate was observed on the west shoulder of NW Spring Street south of the subject parcel and a one-foot diameter corrugated metal pipe discharges onto the steeper slopes below the scarp west of the grate. Other collection grates were observed near the intersection of NW Spring Street and NW 14th Street, but the discharge locations were not found. A section of loose concrete pipe about 2-3 feet long was observed sitting on the ground surface on the trail at the base of the scarp below the northern drains. Flow from the drains likely combines with flow from the spring in the drainage mapped by USGS.

7.0 Geohazard Inspection

Geohazard site inspections were performed on October 10, 2017 and November 7, 2017 (see Recon Photos, Site Plan and Cross Section). These included traversing the subject site and site vicinity where accessible observing conditions for evidence of instability. The eastern margin of the subject site generally coincides with a heavily-vegetated, 10-15 feet high landslide head-scarp situated a few feet west of the NW Spring Street right-of-way that is also obscured by piles of brushy landscaping debris likely from neighboring sites. Slopes to the east of the subject parcel are relatively gentle and underlain by Marine Terrace sand deposits. No curbs are present in the site vicinity and pavement runoff generally infiltrates into the sandy soil on the road shoulders. Several utility boxes/vaults on the east side of Spring Street appear to have settled, and a mailbox on the west side appears to be leaning as a result of soil creep. As mentioned above, stormwater collection inlet grates were observed in the pavement near the north and south ends of the subject site and the outfall of the southern drain was observed discharging onto the moderately-steep site slopes in the City of Newport right-of-way west of the scarp. The northern drain outfalls were not observed due to heavy vegetation, but the drains are likely discharged in a similar manner onto the slopes to the west. A path down to the beach near the northern drain location goes over a disconnected segment of concrete drain pipe.

An access road was apparently excavated below the scarp at some point during prior site development and was again cleared of vegetation for the present geotechnical investigation. The recent grading activities exposed organics and dark brown sandy silt topsoil grading to tan Marine Terrace sand deposits at the level of the scarp near the southeast corner access point and residual siltstone soils and weathered siltstone further to the north below the scarp. Siltstone excavation spoils were observed on the roadbed at the same general location as the spring mapped by USGS and observed during the recon, and an exploratory test-pit dug at the spring location with a mattock encountered saturated Marine Terrace deposits overlying relatively-impermeable weathered siltstone. Residual/weathered siltstone was also encountered at the same elevation a couple dozen feet to the north near the base of the cut-bank and above the roadbed. Undisturbed angular basalt cobbles were observed in several locations on the upper margin of the access road and were likely placed to buttress the scarp, talus and cut-bank from previous site development. Two feet of cobbles with fragments of broken glass were encountered near the base of the scarp and above the primitive road directly upslope and east of the first tracked drill boring.

Site topography west of the scarp descending to the beach consists of generally moderate to gentle, very hummocky slopes underlain by sand and heavily vegetated with lodgepole pines, salal, ferns, blackberries and other brush, with several observed primitive campsites. Erosional scarps, pines with curved trunks and exposed roots are common. Materials interpreted as excavation spoils mixed with organic debris from previous development appear to have been pushed westward onto the slopes near the first track rig borehole in Lot 1903.

Exposures of Nye Mudstone up to a dozen feet or more were observed above the head of the beach sands west of Lots 1900 and 1903 and some grass-covered dunes have formed below the siltstone exposures and to the north.

8.0 Conclusions

The subject property is situated at the seaward edge of Quaternary (less than 2.8 million years old) Marine Terrace deposits, essentially beach sand compacted by wave action that has been uplifted due to regional tectonic movement from subduction of the Pacific Plate under the North American Plate. The terrace sands overlie early-Miocene age (approximately 16.5-23 million years old) Nye Mudstone deposits that were observed at the base of the bluffs at the head of the beach, in access road excavation and in explorational borings. The Nye Mudstone dips generally 10-15° westward to southwestward in the site vicinity and cross-sections drafted for the geotechnical report suggests a generally-similar contact orientation with the overlying Marine Terrace deposits. Geologic literature and the State of Oregon Geologic Hazards website suggest two stages of landsliding have occurred at the site. A relatively large landslide occurred at some point within the last 2.8 million years but is considered relatively stable (H.G. Schlicker 1991 site reconnaissance). A more recent landslide, classified as active, has apparently translated a block of Marine Terrace deposits westward and forming the scarp noted along the east margin of the site. The translated Marine Terrace sand deposits are significantly disturbed by the slide and have been eroded by subsequent rainfall producing an irregular hummocky topography. Schlicker's report concluded the slide mass is currently resting on a fairly level base and is unlikely to move, and provides a buttress to protect slopes along the eastern margin of the site. Geotechnical explorations encountered relatively hard siltstone at shallow to moderate depths in the proposed homesite vicinities in the eastern margin of the site.

The site is situated within the Coastal Erosion Hazard Zone defined by the State of Oregon (DOGAMI – OFR O-04-09 and HazVu website) see attached Bluff Recession Diagram: the majority of the site is in

the very high hazard – active erosion zone. The mean erosion rate of the Nye Mudstone at the base of the bluff is estimated at 0.30 foot per year, or about 6 feet every 20 years. Astoria Formation deposits are also mapped in the surf zone, and sand dunes are forming in places west of the siltstone exposures at the base of the bluff. Rising sea levels from global warming combined with coastal subsidence in the Newport vicinity suggests that erosion will eventually undercut the cliff/bluff in the site vicinity, but in our opinion at a rate not likely to significantly effect the homesite vicinity within the design life of the structure if the recommended mitigations are followed. Erosion of the hummocky landslide debris will likely continue at a relatively high rate and any proposed structures will need to protect against such erosion. The underlying sand slopes are also rated at low soil liquefaction hazard in the event of an earthquake.

The homesite locations are not considered at risk from ocean flooding or most tsunamis, but a rupture of the Cascadia Subduction Zone, an event with a probability of 1 in 3 or 4 in the next 50 years estimated by OSU researcher Chris Goldfinger, could generate a surge of up to 80 feet high which could cover most if not all the subject site. The last subduction zone earthquake in the Pacific northwest with major tsunami and subsidence occurred January 26, 1700, and 19 such earthquakes are thought to have occurred over the last 10,000 years, leading to an estimated repeat interval of 530 years or so (DOGAMI IMS 28). Other research estimates an average interval of 240 years. A large subduction zone earthquake and resulting tsunami would cause widespread damage on the coast, especially if paired with high tides, major storms and saturated soils. Geologists believe such an event would remobilize old landslides and generate new slides in areas prone to sliding. Near-instantaneous subsidence of the coast of 3 to 5 feet is a possibility discussed in Open File Report O-04-09 and in more recent research. Any resident of the Oregon coast must acknowledge the possibility and probability of earthquakes and tsunamis and the substantial damage they would cause and weigh that against their enjoyment of the coast environment.

9.0 Recommendations

Relatively hard siltstone bedrock was encountered at shallow to moderate depths at the proposed homesite locations but is overlain by relatively weak sand that is very prone to wind and rain erosion. Deep foundations such as drilled piles set several feet into competent siltstone bedrock would likely provide vertical support for a single-family residence. The siltstone exposed at the head of the beach is expected to erode at approximately 0.3 feet per year but continued translational movement is relatively unlikely.

Residences should be constructed with well-drained upslope retaining walls to resist lateral pressure from the eroding Marine Terrace materials on the surface and east of the subject site. In our opinion, horizontal anchors tied into the foundations and set into competent siltstone would help mitigate lateral movement induced by percolation and migration of groundwater through the terrace sands and down the inclined contact between the permeable sand and impermeable siltstone towards the beach. The sands adjacent to the residences should be buttressed with rockeries, cribbing or retaining walls to counter lateral pressures and reduce erosion.

The seep observed near the middle of the subject site in the access road that feeds the creek flowing northwestward down to the beach should be diverted to a drain or tighline leading downslope as far as possible to reduce erosion. Gutter and foundation drains for new residences should also be tightlined as far downslope as possible to a level spreader system or erosion-resistant basin.

Maintaining deep-rooted, densely foliated vegetation on site slopes will help reduce the severity of wind and rain erosion. Bark mulch or other organic material held in place by jute netting can help protect

bare soils until vegetation is established. Surface gravel can also reduce erosion in places where vegetation is not maintained. Impermeable soil should be placed against the footing walls, sloping outward, to reduce infiltration to the footing subgrade.

10.0 Report Limitations

This report presents site observations, site research, site explorations, and recommendations for the proposed site development by Gary C. Sandstrom, Geologist LLC. The conclusions in this report are based on the conditions described in this report and are intended for the exclusive use of the client(s) and their representatives for use in their evaluation of the site. The analysis and general recommendations provided herein may not be suitable for structures or purposes other than those described herein. Services performed by the geologist for this project have been conducted with the level of care and skill exercised by other current geotechnical professionals in this area under similar budget and time constraints. No warranty or guarantee is herein expressed or implied. The conclusions in this report are based on the site conditions as they currently exist and it is assumed that the limited site locations that were physically investigated generally represent the subsurface conditions at the site. Should site development or site conditions change, or if a substantial amount of time goes by between my site investigation and site development, I reserve the right to review this report for its applicability. If you have any questions regarding the contents of this report, or if I can be of further assistance, please contact me.

Gary C. Sandstrom, Geologist, LLC

Addendum June 4, 2018

This addendum to the Geologic Hazard Report dated November 30, 2017 is intended to address Erosion Control Measures, Newport Municipal Code 14.21.090. An email dated May 17, 2018 from Derrick Tokos, Community Development Director, City of Newport suggested an item by item response to the regulations.

14.21.090 A. Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one time during construction;

Response: It is recommended the contractor minimize erosion by employing a phased approach: limiting construction activities to the smallest practical areas at any particular time, such as constructing buildings one unit at a time and completing remediation work before moving on to the next unit; road construction as a separate phase; working on retaining wall separate from building construction if possible, and so forth. Exposed soils should be protected with tarps, mulch, temporary shoring or temporary backfills until temporary vegetative or permanent remediation can be performed.
Permanent measures should include planting of deep-rooted vegetation as much as possible – lodgepole pines are common in the site vicinity and are a major factor in keeping the loose sands west of Spring Street as stable as they presently are. Dense foliage would also minimize the force of rain and wind impact on bare soils. Other native vegetation such as salal and grasses used for dune stabilization should also be employed in appropriate settings. In my opinion grass lawns offer poor protection from erosion and non-native vegetation requiring irrigation systems should be avoided.
Temporary vegetative stabilization might be accomplished by planting grass using straw or jute netting to hold soils in place.
Other forms of minimizing surface erosion by wind and rain could include cobble or rock armor and/or gravel, flagstone pavements or geomat grids. Retaining walls or cobble armoring could be constructed to help stabilize steeper slopes where vegetation might be less effective. Any retaining walls constructed should have adequate drains to reduce lateral pressures, with drain discharge directed to sumps and then pumped to city storm sewers (storm drain grates were observed on Spring Street opposite both the north and south ends of the property). Discharge could also be directed to the beach if allowed, or into level spreader systems or bioswales to reduce surface flows and facilitate infiltration if such systems are deemed adequate by the geotechnical engineer.
Flow may also be discharged into any natural watercourses found on the property if this can be accomplished without increasing erosion and sedimentation (this may require placement into the watercourse of gravel or cobbles, retaining basins and/or temporary placement of bark-filled net bags). Feasibility of the various options depends on finalized locations of various buildings and retaining walls, final grades, and what the City of Newport will allow.

14.21.090 B. Development plans shall minimize cut or fill operations so as to prevent off-site impacts:

Response: Cuts and fills will likely be necessary for driveway access to the dwellings and should be protected with retaining walls, graded slopes or terraces and other forms of protection as mentioned above in the response to Section A. Buildings should be founded on piles set into mudstone with grade beams or other lattice/mat foundations where necessary to avoid excessive excavation of subgrade

materials. Spread footings would require excessive excavation and would almost certainly not support the proposed construction on the loose native sand subgrade. The northern residence planned at lower elevations should be constructed on "stilts" rather than elevated fills which would be subject to possible flooding erosion.

14.21.090 C. Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development;

Response: As mentioned above in the response to Section A, grass combined with mulching and/or jute netting or other appropriate means for holding soil in place and reducing erosion should be used to protect exposed soils. Permanent remedial vegetation could also be planted in critical areas to forestall erosion in areas not directly effected/disturbed by construction.

14.21.090 D. Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical;

As mentioned above in the response to Section A, modular/phased construction would allow permanent remedial measures to be installed as quickly as possible.

14.21.090 E. Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary.

Response: Any temporary or permanent excavations should have a sump installed to collect increased runoff with discharge directed into city storm sewers or to the beach as mentioned above in the response to Section A. Permanent drainage systems should be installed as soon as practicable to deal with temporarily-increased runoff generated in later stages of construction. Vegetated bioswales should be utilized if and where slope and soil conditions are adequate to retard infiltration. Level spreader systems may also be effective if slope and soil conditions allow. Natural watercourses could be lined with gravel or provided with water-bars or basins to reduce erosion, with bark-filled net bags placed temporarily to slow water velocities and trap sediments, and/or vegetation planted to further reduce erosional effects.

14.21.090 F. Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching, seeding, planting, or armoring with rolled erosion control products, stone or other similar methods;

Response: See responses to Section A and E.

14.21.090 G. All drainage provisions shall be designed to adequately carry existing and potential surface runoff from the twenty-year frequency storm to suitable drainageways such as storm drains, natural watercourses, or drainage swales. In no case shall runoff be directed in such a way that it significantly decreases the stability of known landslides or areas identified as unstable slopes prone to earth movement, either by erosion or increase of groundwater pressure.

Response: As mentioned in the responses to Section A and E, it is recommended that discharge be directed to city storm sewers or to the beach, or into drainage swales or level spreader systems. If surface runoff and drain discharge is allowed to be directed into the city storm sewers or the beach as proposed, stability of the landslide should be increased rather than decreased.

14.21.090 H. Where drainage swales are used to divert surface waters, they shall be vegetated or protected as necessary to prevent offsite erosion and sediment transport;

Response: See response to Section E.

14.21.090 I. Erosion and sediment control devices shall be required where necessary to prevent polluting discharges from occurring. Control devices and measures which may be required include, but are not limited to:

1. **Energy absorbing devices to reduce runoff water velocity;**
2. **Sedimentation controls such as sediment or debris basins. Any trapped material shall be removed to an approved disposal site on an approved schedule;**
3. **Dispersal of water runoff from developed areas over large undisturbed areas;**

Response: See responses to Sections A and E.

14.21.090 J. Disposed spoil material or stockpiled topsoil shall be prevented from eroding into streams or drainageways by applying mulch or other protective covering; or by location at sufficient distance from streams or drainageways; or by other sediment reduction measures; and

Response: Spoils material or topsoil should be removed from the site as soon as possible or placed on impermeable fabrics in impounded basins and/or covered with mulch if necessary to prevent transport of sediments to watercourses.

14.21.090 K. Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid waste, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handlings, disposal, site monitoring and clean-up activities.

Response: Construction-related materials should be handled in a responsible manner and disposed of properly, with minimal use of toxic materials,. Any spillage should be immediately contained and cleaned up.

Appendix E

Reference Reports

- USGS Earthquake Deaggregation
- USGS Seismic Design Summary Report
- H.G. Schlicker Report

Geotechnical Engineering Report

Proposed Residential Development

Tax Lots 1900 and 1903

Tax Map 11-01-05-BC

NW Spring Street

Newport, Oregon

Project: 17056

June 12, 2018

Prepared for:

Bill Lund

P.O. Box 22

Seal Rock, OR 97376

Prepared by:

Michael Remboldt, P.E., G.E.

K & A Engineering, Inc.

Coburg, Oregon

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

Input

Edition

Dynamic: Conterminous U.S. 2014 (v4.1.

Spectral Period

Peak ground acceleration

Latitude

Decimal degrees

44.643

Time Horizon

Return period in years

475

Longitude

Decimal degrees, negative values for western longitudes

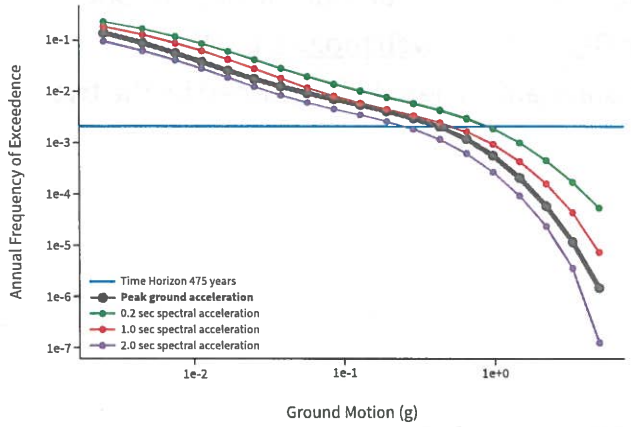
-124.061

Site Class

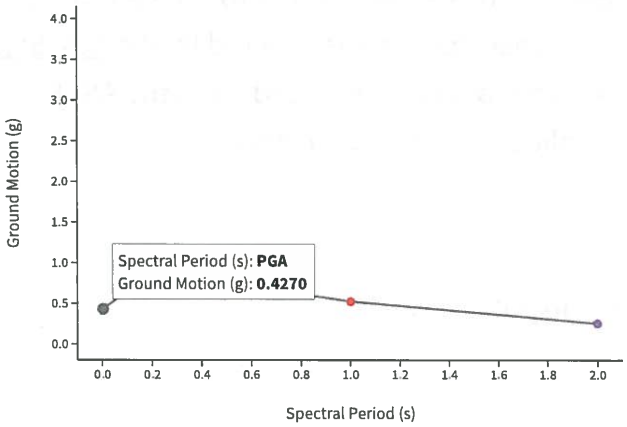
259 m/s (Site class D)

Hazard Curve

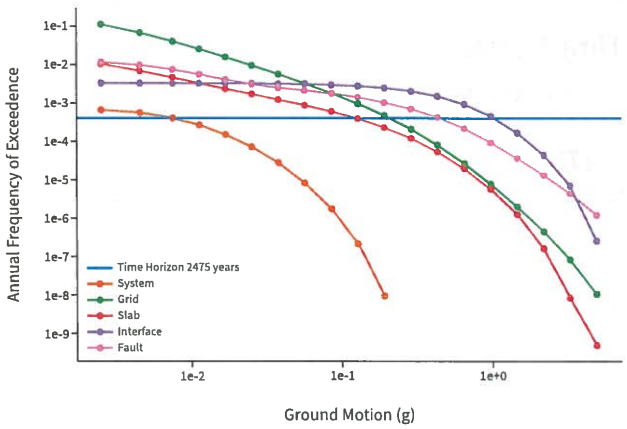
Hazard Curves



Uniform Hazard Response Spectrum



Component Curves for Peak ground acceleration

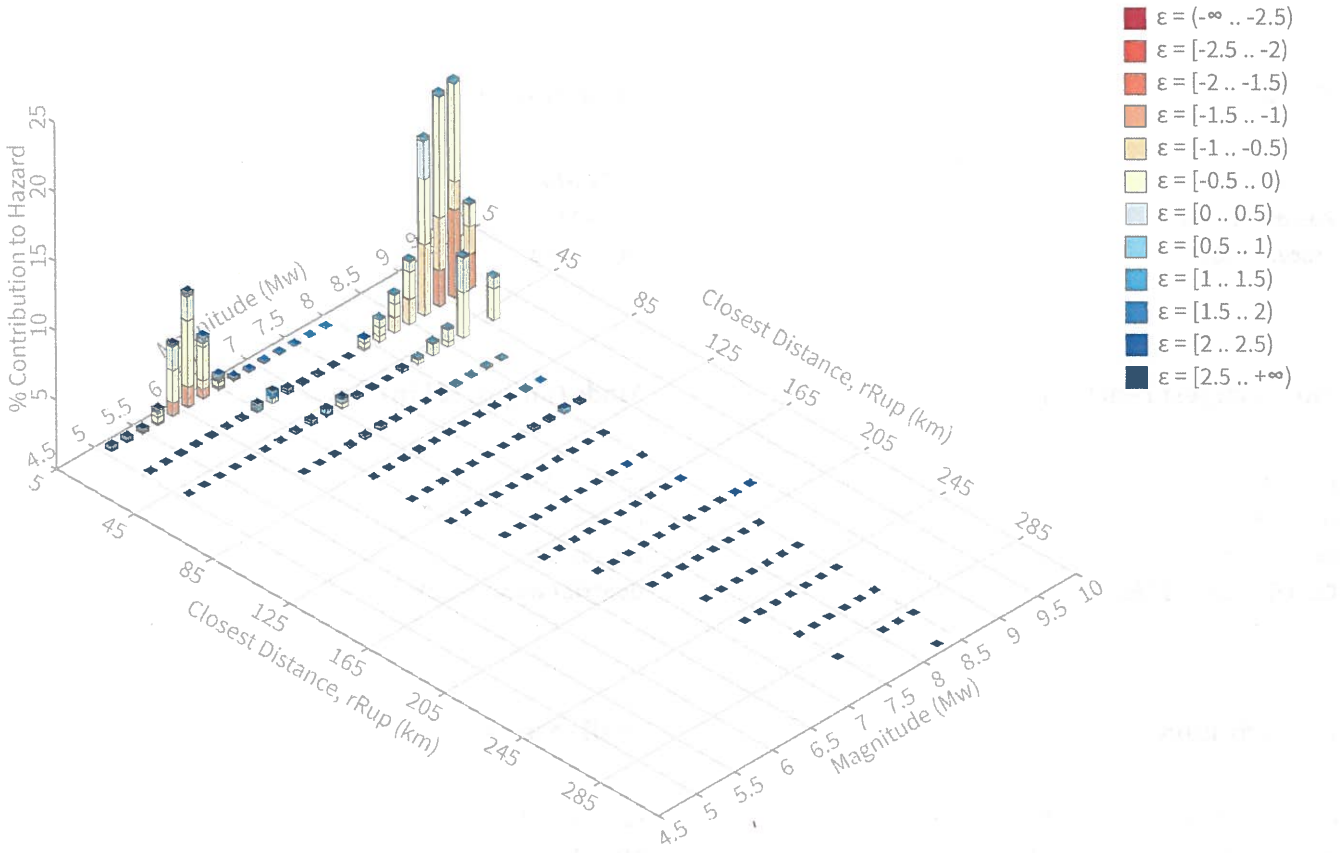


View Raw Data

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 475 yrs
Exceedance rate: 0.0021052632 yr^{-1}
PGA ground motion: 0.42700495 g

Recovered targets

Return period: 476.54342 yrs
Exceedance rate: 0.0020984447 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.68 %

Mean (for all sources)

r: 27.07 km
m: 8.11
ε0: -0.24 σ

Mode (largest r-m bin)

r: 28.87 km
m: 9.08
ε0: -0.59 σ
Contribution: 15.66 %

Mode (largest ε0 bin)

r: 28.81 km
m: 8.83
ε0: -0.25 σ
Contribution: 8.73 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
sub0_ch_mid.in	Interface							26.92
Cascadia Megathrust - whole CSZ Characteristic		31.26	8.88	-0.44	124.356°W	44.742°N	295.43	26.92
Geologic Model Small Mag	Fault							18.80
Yaquina		2.04	6.10	-0.33	124.033°W	44.632°N	119.19	18.17
sub0_ch_bot.in	Interface							17.85
Cascadia Megathrust - whole CSZ Characteristic		25.25	9.07	-0.68	123.734°W	44.757°N	63.80	17.85
sub0_ch_top.in	Interface							8.59
Cascadia Megathrust - whole CSZ Characteristic		43.58	8.79	-0.05	124.567°W	44.738°N	284.99	8.59
sub2_ch_mid.in	Interface							3.03
Cascadia Megathrust - Goldfinger Case C Characteristic		31.04	8.45	-0.25	124.356°W	44.742°N	295.43	3.03
coastalOR_deep.in	Slab							2.19
sub2_ch_bot.in	Interface							2.10
Cascadia Megathrust - Goldfinger Case C Characteristic		25.15	8.71	-0.54	123.734°W	44.757°N	63.80	2.10
sub1_GRb0_mid.in	Interface							1.97
Cascadia floater over southern zone - Goldfinger Case B		34.60	8.43	-0.15	124.356°W	44.742°N	295.43	1.97
sub1_GRb1_mid.in	Interface							1.66
Cascadia floater over southern zone - Goldfinger Case B		35.30	8.30	-0.09	124.356°W	44.742°N	295.43	1.66
sub1_ch_mid.in	Interface							1.39
Cascadia Megathrust - Goldfinger Case B Characteristic		31.05	8.59	-0.31	124.356°W	44.742°N	295.43	1.39
sub1_GRb0_bot.in	Interface							1.31
Cascadia floater over southern zone - Goldfinger Case B		28.99	8.42	-0.34	123.734°W	44.757°N	63.80	1.31
sub1_GRb1_bot.in	Interface							1.12
Cascadia floater over southern zone - Goldfinger Case B		29.69	8.30	-0.28	123.734°W	44.757°N	63.80	1.12

USGS Design Maps Summary Report

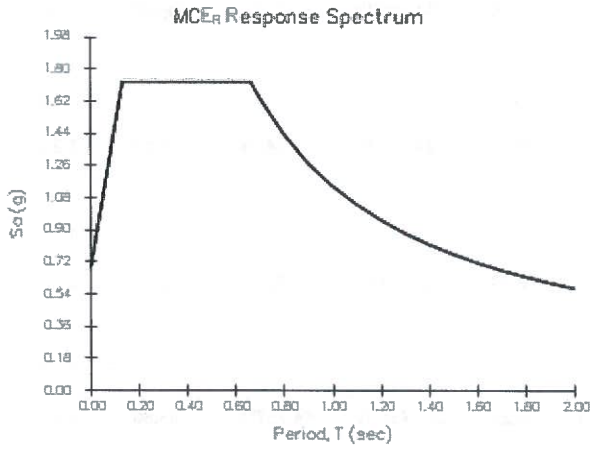
User-Specified Input

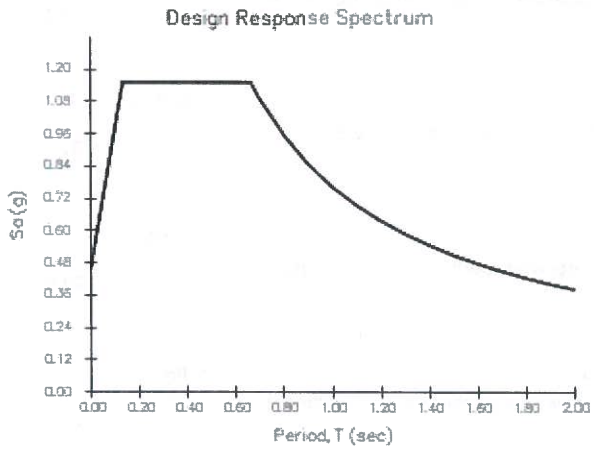
Report Title	Lund Project - NW Spring St., Newport, Oregon Wed November 29, 2017 01:07:38 UTC
Building Code Reference Document	ASCE 7-10 Standard (which utilizes USGS hazard data available in 2008)
Site Coordinates	44.64312°N, 124.06075°W
Site Soil Classification	Site Class D – "Stiff Soil"
Risk Category	I/II/III

USGS-Provided Output

S_S =	1.729 g	S_{MS} =	1.729 g	S_{DS} =	1.153 g
S_1 =	0.765 g	S_{M1} =	1.148 g	S_{D1} =	0.765 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.





For PGA_M, T_L, C_{RS}, and C_{R1} values, please view the detailed report.

H.G. Schlicker & Associates, Inc.
235 N.E. 122nd Avenue, Suite 300 • Portland, Oregon 97230
(503) 257-9666

Project #91-781

August 29, 1991

To: Mr. Hal Smith
P.O. Box 753
Newport, OR 97365

Subject: Geologic Reconnaissance
Lots 1, 2, 3, 4, 5, Block 37
N.W. Spring Street
Newport, Oregon

Dear Mr. Smith:

INTRODUCTION

This report presents the results of our preliminary investigation of the above referenced property. We understand that you plan to construct three or four single family homes adjacent to Spring Street, or possibly a cluster near the west side of the property.

The purpose for this report is to provide information concerning slope stability, foundation characteristics, and buildability of the site. A geotechnical report will be necessary providing the geologic conditions are reasonably favorable and mitigation costs will not exceed the final land value.

SCOPE

No drilling or excavation was be done for this preliminary study. Work included a site visit, review of published and unpublished geology and available reports of the area.

GEOLOGY

Regional Geology

The exposure along the sea cliffs at Jump Off Joe include the Nye Mudstone overlain by the Astoria Formation and unconformably overlain by the Coastal Terrace deposits. The Nye Mudstone and remnants of the Coastal Terrace deposits are present in the vicinity of the site.

Geologic Units

Nye Mudstone. The Nye is early Miocene in age. It is composed of siltstone, fine silty sand beds and occasionally with layers of volcanic sand and ash. It was deposited in marine environment and has been broadly folded with dips in the vicinity of 20 degrees or more except where distorted or modified by landsliding. Along the beach the Nye has been deeply weathered and fractured.

Astoria Formation. The Astoria, of middle Miocene age, overlies the older Nye Mudstone. It is composed of thin to thick bedded fine to medium grained sandstone. It contains limey concretions and sulfide nodules. In places it has convolute bedding formed by submarine landslides before the unit became consolidated. It crops out mainly in the surf in this area.

Coastal Terrace deposits. The Coastal Terraces are composed of Pleistocene to Recent age, flat lying beds of weakly consolidated fine sand and silty sand but with medium to coarse sand locally. The beds include brackish water deposits and occasionally peat or other organics. At the site a peat layer a foot or more thick is observed in the bluff exposures west of Block 37. The disrupted condition of the material is the result of landsliding.

SITE CONDITIONS

Typography

The site lies between Spring Street on the east and the Pacific Ocean on the west. The steepest slope adjacent to Spring street is about 24 degrees, however, the slope on lots 4 and 5 is only about 10 degrees. Elevations on the site lie between 40 and 80 feet MSL. The land rises to 57 feet about 90 feet to the west of the site and slopes to 10 feet MSL at the beach 110 feet west of the site.

Slope Stability

The area from Jump Off Joe northwards and from Spring Street west is old landslide. A prominent head scarp is present adjacent to Spring Street between 13th street and 14th street encompassing the eastern parts of lot 1 through 5, Block 37.

The slide debris appears to have moved towards the ocean as a unit and a major slide mass lies between the subject property and

the beach. It is highly broken and distorted from sliding and is being eroded by the ocean waves and driving rains. The landslide, as it now exists, rests on a nearly level surface and is not capable of further sliding. Rather it acts as a buttress to the toe of the subject property. Small local slumps can occur along the face of the bluff.

The east part of Lots 3, 4 and 5, Block 37 slope moderately steeply. The slope is probably overlain by a thin slide debris or other material which may be capable of slope movement unless toe support is provided.

SUMMARY AND CONCLUSIONS

The site is underlain by Coastal Terrace deposits, Nye Mudstone and possibly some Astoria rocks. The thickness of the overlying material is unknown but is believed to be a relatively thin deposit of landslide debris. Thick landslide debris, distorted Coastal Terrace and Nye formation lie between the site and the beach.

The bowl-shaped area present just east of Spring Street is an older landslide that has apparently been stable for many years.

The area west of Spring Street probably moved initially prior to the Jump Off Joe landslide that began about 1942 and continued until recently. Movement in the vicinity of the site is limited to small local slumps since the driving force is no longer present to activate a large slide.

Foundation conditions at the site depend upon the thickness of the debris and the character of the sediments to depths which might effect settlement or cause slope instability.

RECOMMENDATIONS

Because of the sensitive nature of old landslides and debris deposits, we recommend that:

1. A geotechnical study be performed to determine the thickness and engineering characteristics of the material to a depth of at least 50 feet unless drilling indicates competent material at a shallower depth.

2. At least two test holes should be drilled to approximately 50feet in depth.

3. Laboratory tests include direct shear be done.

4. Slope stability calculations be made.

5. Consideration be made for slope support including crib walls.

6. Various foundations systems be considered if development of the site is feasible.

LIMITATIONS

Our investigation was based on geological reconnaissance and available published information. The date and recommendations presented in this report are believed to be representative of the site. The conclusions and recommendations herein are professional opinions derived in accordance with current standards of professional practice and no warranty is expressed or implied.

It has been our pleasure to serve you. If you have any questions concerning this report of the site, please contact us.

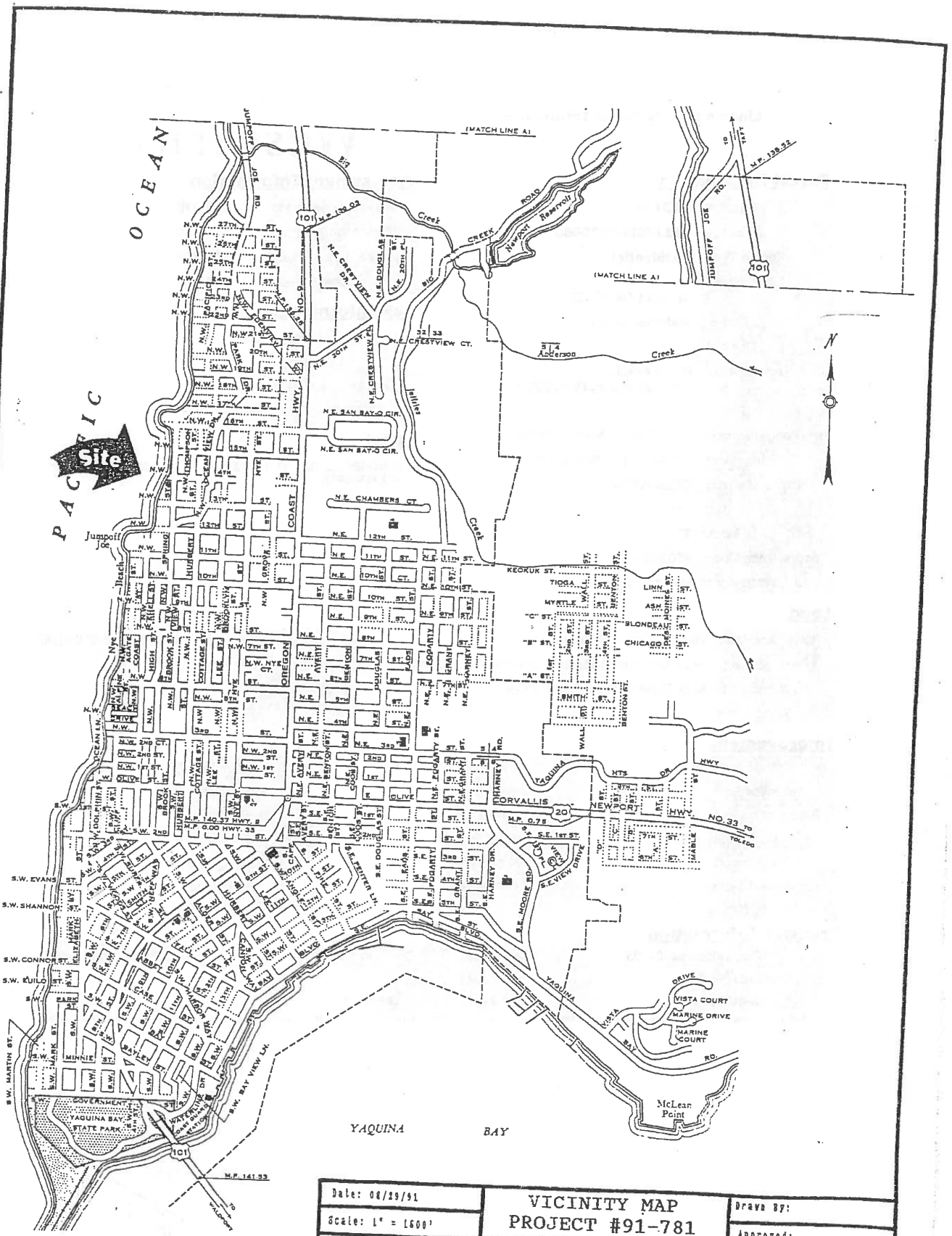
Respectfully submitted,

H.G. SCHLICKER AND ASSOCIATES, INC.

CERTIFIED
OREGON
HERBERT G SCHLICKER
91
ENGINEERING GEOLOGIST

Herbert G. Schlicker, P.G., C.E.G.
President

HGS:mlr



Date: 08/29/91	VICINITY MAP PROJECT #91-781	Drawn By:
Scale: 1" = 1600'		Approved:

LOTS 1,2,3,4 & 5, BLOCK 37
N.W. SPRING STREET
NEWPORT, OREGON

Lincoln County Parcel Information

Western Title & Escrow

Parcel Information

Parcel #:	**R127787**
Tax Lot:	**111105BC0190000**
Record Type:	**Residential**
Site Address:	Newport OR 97365
Owner:	Anderson Lonna
Owner2:	
Owner Address:	PO Box 6432 Miramar Beach, FL 32550
Phone:	
Twn/Range/Section:	T: 11S R: 11W S: 05 Q: NW
Parcel Size:	.45 Acres (19,576 SqFt)
Plat/Subdivision:	OCEANVIEW
Lot:	23N
Block:	37
Census Tract/Block:	950900/4006
Waterfront:	Pacific Ocean

Assessment Information

Market Value Land:	$169,770
Market Value Impr:	$0
Market Value Total:	$169,770
Assessed Value:	$48,620

Tax Information

Levy Code Area:	104
Levy Rate:	17.9558
Tax Year:	2014
Annual Tax:	$873.01

Legal

OCEANVIEW, BLOCK 37, LOT 2,3,N 1/2 OF 1 & PTN VAC ALLEY, DOC200501956

Land

Cnty Land Use:	100 - Residential Vacant Land	Land Use Std.:	VRES - VACANT RESIDENTIAL
Zoning:	R-2 - Residential-Medium Density Single-Family	Neighborhood:	NNOB
Watershed:	Rock Creek-Frontal Pacific Ocean	School District:	
Recreation:	-		

Improvement

Year Built:	0	Fin SqFt:	0	Bedrooms:	0
Bsmt Fin SqFt:	0	Flr 1 SqFt:	0	Bathrooms:	0.00
Bsmt UnFin SqFt:	0	Flr 2 SqFt:	0	Attic Fin SqFt:	0
Deck SqFt:	0	Garage SqFt:	0	Attic UnFin SqFt:	0
Carport:	0	Garage Desc:		Exterior:	
Roof Type:		Foundation:		Porch:	0
Roof Mtl:		AC:	No	Heat Type:	

Transfer Information

Rec. Date:	02/04/05	Sale Price:		Doc Num:	0000501956	Doc Type:	Grant Deed
Orig Loan Amt:							
Loan Type:		Finance Type:		Lender:			

.45
.36
.81

10/21/2015

Screen Print from AbleTerm session(Lincoln County) 03:45 PM 10/21/2015

- - General Appraisal Information - -

Property ID : R127787 (Real Estate) 11-11-05-BC-01900-00
Owners Name : ANDERSON LONNA
Legal Desc : OCEANVIEW, BLOCK 37, LOT 2,3,N 1/2 OF 1 & PTN VAC ALLEY, DOC200501956

1. Last Apprsd: 11/23/07 Number Improvements : 0
2. Appraiser : KL Number Land Segments: 2
3. Next Apprsl:
4. Next Reason: Building Permits :
5. Maint Area : E-08

6. Utilities : OFF SITES SEW,CW,EL
7. Topography :
8. Access : PVD
9. Other :
10. Zone : R-2

11. Remarks :

Enter 'RM' for remarks or <RET> To Return:

FORM No. 106 – DEED CREATING E ...E ENTIRETY – Husband to Wife or Wife to Husband.

EA ... ...O PART OF ANY STEVENS-NESS FORM MAY BE RE

WTE ACCO 2005038

Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550
Grantor's Name and Address

Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550
Grantee's Name and Address

After recording, return to (Name, Address, Zip):
Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550

Until requested otherwise, send all tax statements to (Name, Address, Zip):
Hal Smith & Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550

SPACE RESERVED FOR RECORDER'S USE

STATE OF OREGON
County of Lincoln

2 Pages

I, Dana W. Jenkins, County Clerk, in and for said county, do hereby certify that the within instrument was received for record, and recorded in the Book of Records of said county at Newport, Oregon. WITNESS my hand and seal of said office affixed.

DANA W. JENKINS, Lincoln County Clerk

Doc : 200501956
Rect: 500983 31.00
02/04/2005 03:56:04pm

Witness my hand and seal of County affixed.

NAME TITLE

By ..... Deputy.

DEED CREATING ESTATE BY THE ENTIRETY

KNOW ALL BY THESE PRESENTS that Hal Smith, hereinafter called grantor, the spouse of the grantee hereinafter named, for the consideration hereinafter stated, does hereby grant, bargain, sell and convey unto Lonna Anderson, herein called the grantee, an undivided one-half of that certain real property, with the tenements, hereditaments and appurtenances thereunto belonging or in any way appertaining, situated in Lincoln County, State of Oregon, described as follows, to-wit:

See Attached Exhibit "A"

(IF SPACE INSUFFICIENT, CONTINUE DESCRIPTION ON REVERSE)

To Have and to Hold an undivided one-half of the above described real property unto the grantee forever.

The above named grantor retains a like undivided one-half of that same real property, and it is the intent and purpose of this instrument to create, and there hereby is created, an estate by the entirety between husband and wife as to this real property.

The true and actual consideration paid for this transfer, stated in terms of dollars, is $ 5.00 ① However, the actual consideration consists of or includes other property or value given or promised which is ☐ part of the ☐ the whole (indicate which) consideration.② (The sentence between the symbols ①, if not applicable, should be deleted. See ORS 93.030.)

IN WITNESS WHEREOF, the grantor has executed this instrument on 2-3-2005

Hal Smith

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

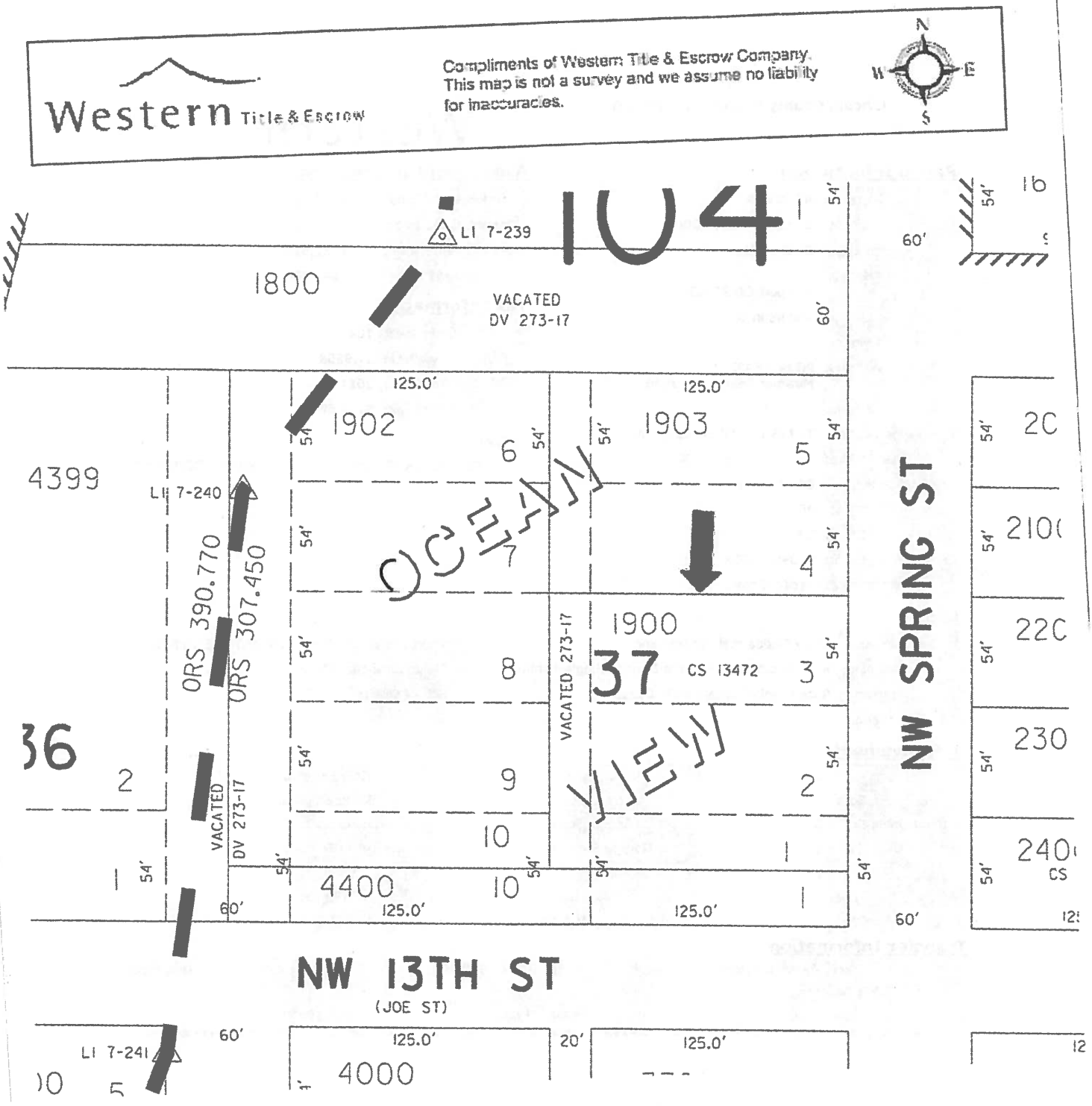
STATE OF ~~OREGON~~ FLORIDA, County of Okaloosa) ss.

This instrument was acknowledged before me on February 3, 2005

by Hal Smith, who is personally known to me

Toni N. Bludworth
Commision No
DD0269610
Comm Expires
12/2/2007

Toni N. Bludworth
Notary Public for ~~Oregon~~ Florida
My commission expires 12/2/2007


Western Title & Escrow
Compliments of Western Title & Escrow Company. This map is not a survey and we assume no liability for inaccuracies.
N
W
E
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104
LI 7-239
1800
VACATED
DV 273-17
60'
125.0'
1902
1903
1900
37
CS 13472
4399
LI 7-240
ORS 390.770
ORS 307.450
VACATED
DV 273-17
VACATED 273-17
OCEAN VIEW
NW SPRING ST
NW 13TH ST
(JOE ST)
4400
4000
LI 7-241
20'
54'

Lincoln County Parcel Information

Western Title & Escrow

Parcel Information

Parcel #:	**R130144**
Tax Lot:	**111105BC0190300**
Record Type:	**Residential**
Site Address:	Newport OR 97365
Owner:	Anderson Lonna
Owner2:	
Owner Address:	PO Box 6432 Miramar Beach, FL 32550
Phone:	
Twn/Range/Section:	T: 11S R: 11W S: 05 Q: NW
Parcel Size:	.36 Acres (15,660 SqFt)
Plat/Subdivision:	OCEANVIEW
Lot:	45
Block:	37
Census Tract/Block:	950900/4006
Waterfront:	Pacific Ocean

Assessment Information

Market Value Land:	$152,520
Market Value Impr:	$0
Market Value Total:	$152,520
Assessed Value:	$40,800

Tax Information

Levy Code Area:	104
Levy Rate:	17.9558
Tax Year:	2014
Annual Tax:	$732.59

Legal

OCEANVIEW, BLOCK 37, LOT 4,5 & PTN VAC ALLEY, DOC200501956

Land

Cnty Land Use:	100 - Residential Vacant Land	Land Use Std.:	VRES - VACANT RESIDENTIAL
Zoning:	R-2 - Residential-Medium Density Single-Family	Neighborhood:	NNOB
Watershed:	Rock Creek-Frontal Pacific Ocean	School District:	
Recreation:	-		

Improvement

Year Built:	0	Fin SqFt:	0	Bedrooms:	0
Bsmt Fin SqFt:	0	Flr 1 SqFt:	0	Bathrooms:	0.00
Bsmt UnFin SqFt:	0	Flr 2 SqFt:	0	Attic Fin SqFt:	0
Deck SqFt:	0	Garage SqFt:	0	Attic UnFin SqFt:	0
Carport:	0	Garage Desc:		Exterior:	
Roof Type:		Foundation:		Porch:	0
Roof Mtl:		AC:	No	Heat Type:	

Transfer Information

Rec. Date:	10/18/91	Sale Price:	$48,000	Doc Num:	Doc Type:
Orig Loan Amt:					
Loan Type:		Finance Type:		Lender:	

Screen Print from AbleTerm session(Lincoln County) 03:49 PM 10/21/2015

- - General Appraisal Information - -

Property ID : R130144 (Real Estate) 11-11-05-BC-01903-00
Owners Name : ANDERSON LONNA
Legal Desc : OCEANVIEW, BLOCK 37, LOT 4,5 & PTN VAC ALLEY, DOC200501956

1. Last Apprsd: 11/23/07 Number Improvements : 0
2. Appraiser : KL Number Land Segments: 2
3. Next Apprsl:
4. Next Reason: Building Permits :
5. Maint Area : E-08

6. Utilities : OFF SITES SEW,CW,EL
7. Topography :
8. Access : PVD
9. Other :
10. Zone : R-2

11. Remarks :

Enter 'RM' for remarks or <RET> To Return:

FORM No. 106 – DEED CREATING [...]HE ENTIRETY – Husband to Wife or Wife to Husband. © 1988-1999 STEVENS-[...]LISHING CO., PORTLAND, OR www.stevensness.com

EA · [...]O PART OF ANY STEVENS-NESS FORM MAY BE RE[...]

WTE ACCO 2005038

Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550
Grantor's Name and Address

Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550
Grantee's Name and Address

After recording, return to (Name, Address, Zip):
Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550

Until requested otherwise, send all tax statements to (Name, Address, Zip):
Hal Smith & Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550

SPACE RESE[RVED] FOR RECORDER'S USE

STATE OF OREGO[N],
County of Lincoln

2 Pages

I, Dana W. Jenkins, County Clerk, in and for said county, do hereby certify that the within instrument was received for record, and recorded in the Book of Records of said county at Newport, Oregon. WITNESS my hand and seal of said office affixed.

[signature]
DANA W. JENKINS, Lincoln County Clerk

LINCOLN COUNTY CLERK · STATE OF OREGON

Doc : 200501956
Rect: 500983 31.00
02/04/2005 03:56:04pm

Witness my hand and seal of County affixed.

NAME TITLE

By ______________________ Deputy.

DEED CREATING ESTATE BY THE ENTIRETY

KNOW ALL BY THESE PRESENTS that Hal Smith, hereinafter called grantor, the spouse of the grantee hereinafter named, for the consideration hereinafter stated, does hereby grant, bargain, sell and convey unto Lonna Anderson, herein called the grantee, an undivided one-half of that certain real property, with the tenements, hereditaments and appurtenances thereunto belonging or in any way appertaining, situated in Lincoln County, State of Oregon, described as follows, to-wit:

See Attached Exhibit "A"

(IF SPACE INSUFFICIENT, CONTINUE DESCRIPTION ON REVERSE)

To Have and to Hold an undivided one-half of the above described real property unto the grantee forever.

The above named grantor retains a like undivided one-half of that same real property, and it is the intent and purpose of this instrument to create, and there hereby is created, an estate by the entirety between husband and wife as to this real property.

The true and actual consideration paid for this transfer, stated in terms of dollars, is $5.00. ① However, the actual consideration consists of or includes other property or value given or promised which is ☐ part of the ☐ the whole (indicate which) consideration.① (The sentence between the symbols ①, if not applicable, should be deleted. See ORS 93.030.)

IN WITNESS WHEREOF, the grantor has executed this instrument on 2-3-2005

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

Hal Smith

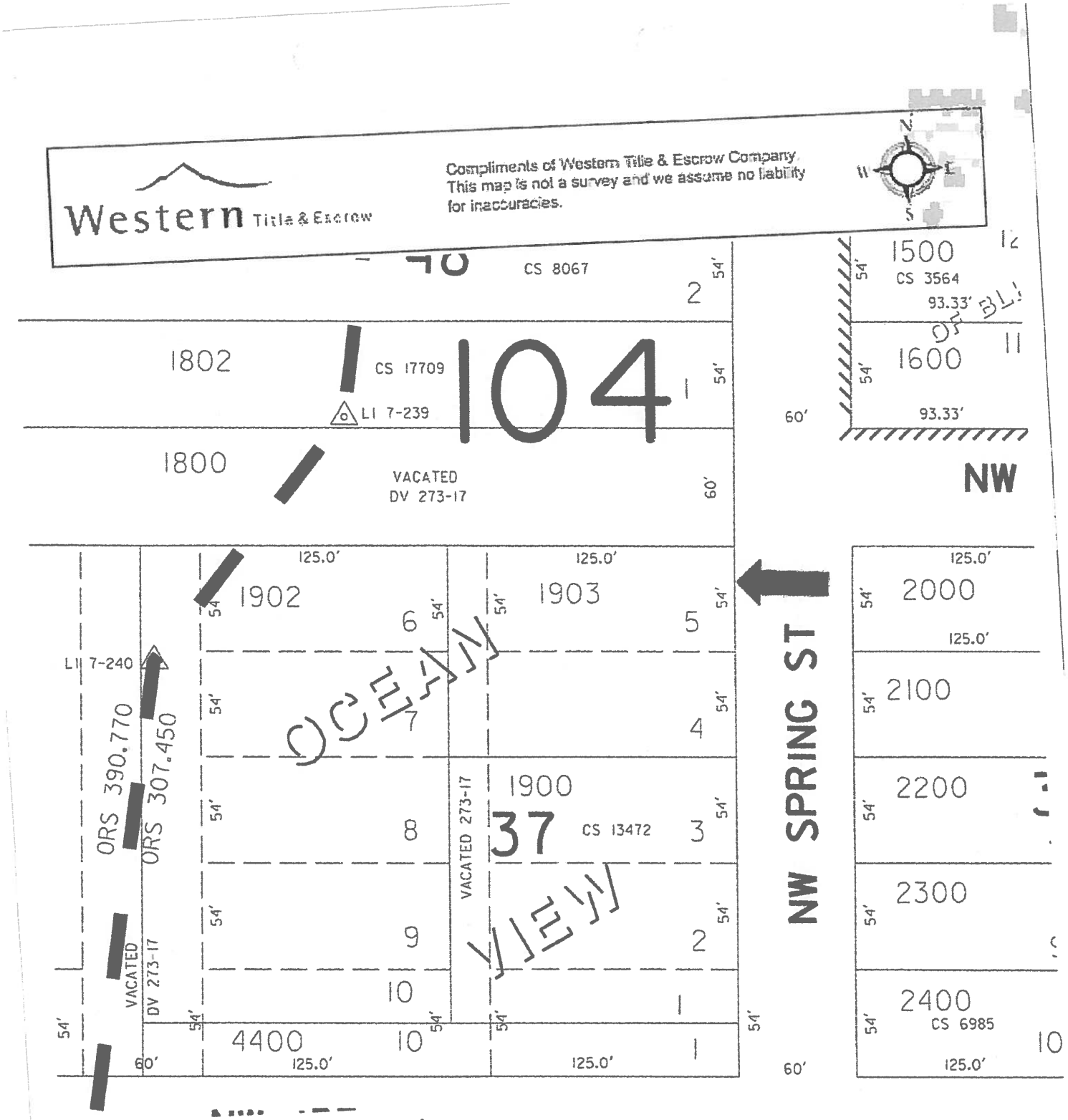
STATE OF ~~OREGON~~ FLORIDA, County of Okaloosa) ss.

This instrument was acknowledged before me on February 3, 2005
by Hal Smith, who is personally known to me

Toni N. Bludworth
Commision No
DD0269610
Comm Expires
12/2/2007

TONI N. BLUDWORTH
Commission DD0269610
Expires 12/2/2007
Bonded thru (800)432-4254
Florida Notary Assn., Inc.

Toni N. Bludworth
Notary Public for ~~Oregon~~ Florida
My commission expires 12/2/2007


Western Title & Escrow
Compliments of Western Title & Escrow Company.
This map is not a survey and we assume no liability
for inaccuracies.
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CS 8067
1802
CS 17709
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104
1800
VACATED
DV 273-17
1500
CS 3564
93.33'
1600
93.33'
60'
NW
125.0'
1902
1903
2000
2100
2200
2300
2400
CS 6985
LI 7-240
ORS 390.770
ORS 307.450
OCEAN VIEW
1900
37
CS 13472
VACATED 273-17
VACATED
DV 273-17
4400
NW SPRING ST
54'

Derrick Tokos

From: Derrick Tokos
Sent: Friday, May 04, 2018 4:44 PM
To: 'wlund_albany'
Cc: Victor Mettle; 'michael@kaengineers.com'
Subject: RE: Lund Spring St. Geo report
Attachments: RE: Spring st. Geologic permit application

Hi Bill,

I did see Mike's response. He recommended addressing the issues in a series of supplemental letters as opposed to re-writing the report, which is fine (see attached). He also mentioned that a meeting might be helpful, which I would be happy to accommodate.

Derrick I. Tokos, AICP
Community Development Director
City of Newport
169 SW Coast Highway
Newport, OR 97365
ph: 541.574.0626 fax: 541.574.0644
d.tokos@newportoregon.gov

From: wlund_albany [mailto:wlund_albany@yahoo.com]
Sent: Friday, May 04, 2018 4:33 PM
To: Derrick Tokos <D.Tokos@NewportOregon.gov>
Cc: Victor Mettle <V.Mettle@NewportOregon.gov>; 'michael@kaengineers.com' <michael@kaengineers.com>
Subject: RE: Lund Spring St. Geo report

Hi Derek,

Thanks for your quick response!

I have forwarded your email to Mike but did you receive the email from Mike about your courtesy review. I thought he answered or communicated about your questions.

A lot of your courtesy review questions didn't seem to have anything to do with Geology report and validating Mike and Gary's work. Most of those questions will be answered in the building/site plans that will be coming.

Maybe we need a quick meeting?

Bill

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: Derrick Tokos <D.Tokos@NewportOregon.gov>
Date: 5/4/18 4:11 PM (GMT-08:00)
To: 'wlund_albany' <wlund_albany@yahoo.com>
Cc: Victor Mettle <V.Mettle@NewportOregon.gov>
Subject: RE: Lund Spring St. Geo report

Bill,

The geologic hazards permit application that you just submitted for the west side of the property is subject to a 30-day completeness review (NMC 14.52.050(A)). I performed a courtesy review of your last report in December (letter attached). Most of those issues have not been addressed, and they need to be addressed in the report before the application can be deemed complete and a permit can be issued.

Additionally, the City requires that a geologic report, prepared by a certified engineering geologist, establish the site is suitable for development (NMC 14.21.050(D)). It is must be accompanied by an engineering report, which can be drafted by a geotechnical engineer, to address engineering remediation anticipated to make the site suitable for the proposed development (NMC 14.21.050(E)). Your original report was prepared by Gary Sandstrom, an Engineering Geologist and Michael Remboldt, a Geotechnical Engineer. The letter included with your new geologic permit application, regarding the suitability of the western portion of the property for development, was only signed Michael Remboldt. We need a letter from Gary Sandstrom or another licensed engineering geologist indicating that they concur that the western portion of the property is suitable for the proposed development.

Finally, as I am sure you will recall, K&A Engineering had recommended that the over-steepened temporary fill embankment for the drill access be pulled back to a 2H:1V maximum slope (ref: 11/17/17) letter. They later recommended the erosion control blanket and straw wattles because wet weather had set in before the work could be completed. That is still an outstanding issue and, if as I suspect, you are planning to construct a residential driveway within the old Jump-off Joe right-of-way to serve one or more homes, then the scope of the planned driveway improvement will need to be factored into the report and site plan information that I had requested with the courtesy review.

Derrick I. Tokos, AICP
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mombetsu, japan, sister city

December 13, 2017

Bill Lund
P.O. Box 22
Seal Rock, OR 97376

RE: Geologic Engineering Report for Spring Street Properties (Tax Lots 1800, 1900, and 1903 of Tax Map 11-11-05-BC)

Dear Mr. Lund,

On December 6, 2017, I informed you that the City could not accept your application for a geologic permit because a portion of the area that you propose to develop may be within a County road right-of-way. However, I did agree to perform a courtesy review of the report to see if there is missing information. That way you would at least have the option of updating the report while you work to resolve the right-of-way issue.

After reviewing the report, I have identified that the following supplemental information is needed to satisfy City of Newport submittal requirements for geologic reports:

1. NMC 14.21.050(A) requires that a site plan be provided illustrating areas that are to be disturbed, ground topography (contours), roads, driveways, an outline of wooded or naturally vegetated areas, watercourses, erosion control measures, and trees with a diameter of at least 8-inches dbh proposed for removal. No such plan was included with the application. The geotechnical engineering report and the engineering geologist's report refer to one or more future home sites and the engineering geologist notes that the home sites are located such that they will not be impacted by certain hazards. Footprints for these future home sites must be shown on the plan to confirm their location relative to the hazards identified in the report. The engineering geologist notes that a spring drains through the property. The location of the spring needs to be identified on the plan.

   The engineering geologist's report indicates that slopes at the base of the scarp were cut and benched to facilitate drill rig access. The geotechnical engineer notes that a 20-foot no build buffer is needed, extending west from the NW Spring Street right-of-way. The location of the buffer and driveway need to be shown on the plan. If the driveway is within the no-build zone, then the reports need to speak to what, if anything, needs to be done to ensure that the driveway work does not compromise the stability of the scarp.

   The site plan must be drawn to scale with dimensions of the property lines labeled (NMC 14.52.040).

2. NMC 14.21.050(B) requires that an estimate of depths and the extent of all proposed excavation and fill work be provided. This information was not included with the report. Depth and extent of earthwork is commonly addressed by showing existing and finished grade contours (at 1 or 2-ft intervals) along with numeric estimates.

3. NMC 14.21.090(B) indicates that the geologic report, prepared by a certified engineering geologist, shall explain how development plans will minimize cut or fill operations so as to prevent off-site impacts. This is not addressed in Mr. Sandstrom's report. The report recommends installation of retaining walls, the location, height and extent of which is not specified. Additional detail is needed with respect to these recommendations, along with an explanation of why the size recommended is the minimum needed. The same is true for the proposed gabion walls.

4. NMC 14.21.090(F) requires that the certified engineering geologist's report provide recommendations for preventing surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching, seeding, planting, or armoring with rolled erosion control products, rock, etc. The report addresses permanent drainage solutions; however, it needs to also address measures that are to be undertaken during the course of construction.

5. NMC 14.21.090(G) requires that drainage provisions shall be designed to adequately carry existing and potential surface runoff from a 20-year design frequency storm to suitable drainageway. Retention facilities must be used, with restricted release rates, when dealing with slopes in excess of 12% (NMC 14.21.100). The report needs to include information explaining how compliance with these requirements will be achieved. Note that the geotechnical engineering report suggests that managing run-off via sheet flow may be acceptable in some cases; whereas, the engineering geologist indicates that flows need to be channeled and directed downslope before being dissipated via use of flow spreaders. This discrepancy should be addressed. Also, potential outfall locations should be shown on the map to avoid confusion as to where they can be placed (i.e. they cannot extend so far west that they end up on city property).

6. A couple of minor typographical errors should be corrected in the geotechnical engineering report, including the tax map reference on the cover page and bookmark error on page 2 of the report.

Copies of this letter are being provided to Michael Remboldt, who prepared the geotechnical engineering report, and Gary Sandstrom, the engineering geologist, who assessed the geologic hazards conditions. Please don't hesitate to contact me if you have questions regarding my comments.

Sincerely,

Derrick I. Tokos, AICP
Community Development Director
City of Newport
ph: 541-574-0626
d.tokos@newportoregon.gov

xc: Michael Remboldt, Geotechnical Engineer
Gary Sandstrom, Engineering Geologist

From: wlund_albany [mailto:wlund_albany@yahoo.com]
Sent: Friday, May 04, 2018 12:53 PM
To: Victor Mettle <V.Mettle@NewportOregon.gov>
Subject: Lind Spring St. Geo report

Hi Victor,

Just making sure my Geo permit is being processed and the 15 day appeal period has started.

Thanks,

Bill Lund

Sent from my Verizon, Samsung Galaxy smartphone

CHAPTER 14.21 GEOLOGIC HAZARDS OVERLAY

14.21.010 Purpose

The purpose of this section is to promote the public health, safety, and general welfare by minimizing public and private losses due to earth movement hazards and limiting erosion and related environmental damage, consistent with Statewide Planning Goals 7 and 18, and the Natural Features Section of the Newport Comprehensive Plan.

14.21.020 Applicability of Geologic Hazards Regulations

A. The following are areas of known geologic hazards or are potentially hazardous and are therefore subject to the requirements of Section 14.21:

1. Bluff or dune backed shoreline areas within high or active hazard zones identified in the Department of Geology and Mineral Industries (DOGAMI) Open File Report O-04-09 Evaluation of Coastal Erosion Hazard Zones along Dune and Bluff Backed Shorelines in Lincoln County, Oregon: Cascade Head to Seal Rock, Technical Report to Lincoln County, dated 2004.

2. Active or potential landslide areas, prehistoric landslides, or other landslide risk areas identified in the DOGAMI Open File Report O-04-09.

3. Any other documented geologic hazard area on file, at the time of inquiry, in the office of the City of Newport Community Development Department.

A "documented geologic hazard area" means a unit of land that is shown by reasonable written evidence to contain geological characteristics/conditions which are hazardous or potentially hazardous for the improvement thereof.

B. The DOGAMI Open File Report O-04-09 is not intended as a site specific analysis tool. The City will use DOGAMI Open File Report O-04-09 to identify when a Geologic Report is needed on property prior to development. A Geologic Report that applies to a specific property and that identifies a proposed development on the property as being in a different hazard zone than that identified in DOGAMI Open File Report O-04-09, shall control over DOGAMI Open File Report O-04-09 and shall establish the

bluff or dune-backed shoreline hazard zone or landslide risk area that applies to that specific property. The time restriction set forth in subsection 14.21.030 shall not apply to such determinations.

C. In circumstances where a property owner establishes or a Geologic Report identifies that development, construction, or site clearing (including tree removal) will occur outside of a bluff or dune-backed shoreline hazard zone or landslide risk areas, as defined above, no further review is required under this Section 14.21.

D. If the results of a Geologic Report are substantially different than the hazard designations contained in DOGAMI Open File Report O-04-09 then the city shall provide notice to the Department of Geology and Mineral Industries (DOGAMI) and Department of Land Conservation and Development (DLCD). The agencies will have 14 days to provide comments and the city shall consider agency comments and determine whether or not it is appropriate to issue a Geologic Permit.

(*Section amended by Ordinance No. 1601 (5-20-91) and then repealed and replaced in its entirety by Ordinance No. 2017 (8-17-2011).)

14.21.030 Geologic Permit Required

All persons proposing development, construction, or site clearing (including tree removal) within a geologic hazard area as defined in 14.21.010 shall obtain a Geologic Permit. The Geologic Permit may be applied for prior to or in conjunction with a building permit, grading permit, or any other permit required by the city.

Unless otherwise provided by city ordinance or other provision of law, any Geologic Permit so issued shall be valid for the same period of time as a building permit issued under the Uniform Building Code then in effect.

14.21.040 Exemptions

The following activities are exempt from the provisions of this chapter:

A. Maintenance, repair, or alterations to existing structures that do not alter the building footprint or foundation;

B. An excavation which is less than two feet in depth, or which involves less than twenty-five cubic yards of volume;

C. Fill which is less than two feet in depth, or which involves less than twenty-five cubic yards of volume;

D. Exploratory excavations under the direction of a registered engineering geologist or geotechnical engineer;

E. Construction of structures for which a building permit is not required;

F. Removal of trees smaller than 8-inches dbh (diameter breast height);

G. Removal of trees larger than 8-inches dbh (diameter breast height) provided the canopy area of the trees that are removed in any one year period is less than twenty-five percent of the lot or parcel area;

H. Forest practices as defined by ORS 527 (the State Forest Practices Act) and approved by the state Department of Forestry;

I. Maintenance and reconstruction of public and private roads, streets, parking lots, driveways, and utility lines, provided the work does not extend outside the area previously disturbed;

J. Installation of utility lines not including electric substations; and

K. Emergency response activities intended to reduce or eliminate an immediate danger to life, property, or flood or fire hazard.

14.21.050 Application Submittal Requirements

In addition to a land use application form with the information required in Section 14.52.020, an application for a Geologic Permit shall include the following:

A. A site plan that illustrates areas of disturbance, ground topography (contours), roads and driveways, an outline of wooded or naturally vegetated areas, watercourses, erosion control measures, and trees with a diameter of at

least 8-inches dbh (diameter breast height) proposed for removal; and

B. An estimate of depths and the extent of all proposed excavation and fill work; and

C. Identification of the bluff or dune-backed hazard zone or landslide hazard zone for the parcel or lot upon which development is to occur. In cases where properties are mapped with more than one hazard zone, a certified engineering geologist shall identify the hazard zone(s) within which development is proposed; and

D. A Geologic Report prepared by a certified engineering geologist, establishing that the site is suitable for the proposed development; and

E. An engineering report, prepared by a licensed civil engineer, geotechnical engineer, or certified engineering geologist (to the extent qualified), must be provided if engineering remediation is anticipated to make the site suitable for the proposed development.

14.21.060 Geologic Report Guidelines

Geologic Reports shall be prepared consistent with standard geologic practices employing generally accepted scientific and engineering principles and shall, at a minimum, contain the items outlined in the Oregon State Board of Geologist Examiners "Guidelines for Preparing Engineering Geologic Reports in Oregon," in use on the effective date of this section. Such reports shall address subsections 14.21.070 to 14.21.090, as applicable. For oceanfront property, reports shall also address the "Geological Report Guidelines for New Development on Oceanfront Properties," prepared by the Oregon Coastal Management Program of the Department of Land Conservation and Development, in use as of the effective date of this section. All Geologic Reports are valid as prima facie evidence of the information therein contained for a period of five (5) years. They are only valid for the development plan addressed in the report. The city assumes no responsibility for the quality or accuracy of such reports.

14.21.070 Construction Limitations within Geologic Hazard Areas

A. New construction shall be limited to the recommendations, if any, contained in the Geologic Report; and

1. Property owners should consider use of construction techniques that will render new buildings readily moveable in the event they need to be relocated; and
2. Properties shall possess access of sufficient width and grade to permit new buildings to be relocated or dismantled and removed from the site.

14.21.080 Prohibited Development on Beaches and Foredunes

Construction of residential, commercial, or industrial buildings is prohibited on beaches, active foredunes, other foredunes that are conditionally stable and subject to ocean undercutting or wave overtopping, and interdune areas (deflation plains) that are subject to ocean flooding. Other development in these areas shall be permitted only if a certified engineering geologist determines that the development is adequately protected from any geologic hazards, wind erosion, undercutting, ocean flooding and storm waves and is designed to minimize adverse environmental effects. Such a determination shall consider:

A. The type of use proposed and the adverse effects it might have on the site and adjacent areas;

B. Temporary and permanent stabilization programs and the planned maintenance of new and existing vegetation;

C. Methods for protecting the surrounding area from any adverse effects of the development; and

D. Hazards to life, public and private property, and the natural environment that may be caused by the proposed use.

14.21.090 Erosion Control Measures

In addition to completing a Geologic Report, a certified engineering geologist shall address the following standards.

A. Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one time during construction;

B. Development plans shall minimize cut or fill operations so as to prevent off-site impacts;

C. Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development;

D. Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical;

E. Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary;

F. Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching, seeding, planting, or armoring with rolled erosion control products, stone, or other similar methods;

G. All drainage provisions shall be designed to adequately carry existing and potential surface runoff from the twenty year frequency storm to suitable drainageways such as storm drains, natural watercourses, or drainage swales. In no case shall runoff be directed in such a way that it significantly decreases the stability of known landslides or areas identified as unstable slopes prone to earth movement, either by erosion or increase of groundwater pressure.

H. Where drainage swales are used to divert surface waters, they shall be vegetated or protected as necessary to prevent offsite erosion and sediment transport;

I. Erosion and sediment control devices shall be required where necessary to prevent polluting discharges from occurring. Control devices and measures which may be required include, but are not limited to:

   1. Energy absorbing devices to reduce runoff water velocity;

   2. Sedimentation controls such as sediment or debris basins. Any trapped materials shall be removed to an approved disposal site on an approved schedule;

3. Dispersal of water runoff from developed areas over large undisturbed areas;

J. Disposed spoil material or stockpiled topsoil shall be prevented from eroding into streams or drainageways by applying mulch or other protective covering; or by location at a sufficient distance from streams or drainageways; or by other sediment reduction measures; and

K. Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handling, disposal, site monitoring and clean-up activities.

14.21.100 Storm water Retention Facilities Required

For structures, driveways, parking areas, or other impervious surfaces in areas of 12% slope or greater, the release rate and sedimentation of storm water shall be controlled by the use of retention facilities as specified by the City Engineer. The retention facilities shall be designed for storms having a 20-year recurrence frequency. Storm waters shall be directed into a drainage with adequate capacity so as not to flood adjacent or downstream property.

14.21.110 Approval Authority

An application shall be processed and authorized using a Type I decision making procedure.

14.21.120 Appeals of Geologic Permits

Any appeal from the issuance or denial of a Geologic Permit shall be filed within 15 calendar days of the date the city issues a final order as provided by Section 14.52.050. Appellants challenging substantive elements of a Geologic Report shall submit their own analysis prepared by a certified engineering geologist. Such report shall be provided within 30 days of the date the appeal is filed. A failure to submit a report within this timeframe is grounds for dismissal of the appeal.

14.21.130 Certification of Compliance

No development requiring a Geologic Report shall receive final approval (e.g. certificate of occupancy, final inspection, etc.) until the city receives a written statement by a certified engineering geologist indicating that all performance, mitigation, and monitoring measures contained in the report have been satisfied. If mitigation measures involve engineering solutions prepared by a licensed professional engineer, then the city must also receive an additional written statement of compliance by the design engineer.

14.21.140 Removal of Sedimentation

Whenever sedimentation is caused by stripping vegetation, grading, or other development, it shall be the responsibility of the person, corporation, or other entity causing such sedimentation to remove it from all adjoining surfaces and drainage systems and to return the affected areas to their original or equal condition prior to final approval of the project.

14.21.150 Applicability of Nonconforming Use Provisions

A. A building or structure that is nonconforming under Section 14.32 of the Zoning Ordinance that is destroyed by fire, other casualty or natural disaster shall be subject to the casualty loss provisions contained in Section 14.32 of the Zoning Ordinance. Application of the provisions of this section to a property shall not have the effect of rendering it nonconforming.

B. A building or structure that conforms to the Zoning Ordinance that is destroyed by fire, other casualty or natural disaster may be replaced with a building or structure of up to the same size provided a Geologic Report is prepared by a certified engineering geologist. A Geologic Report prepared pursuant to this subsection shall adhere to the Geologic Report Guidelines outlined in subsection 14.21.030. All recommendations contained in the report shall be followed, however the report need not establish that the site is suitable for development as required in subsection 14.21.050(D). An application filed under this subsection shall be processed and authorized as a ministerial action by the Community Development Department.

Geotechnical Engineering Report

Tax Lots 1800, 1900, 1903; Tax Map 11-1-05-BC;

NW Spring St., Newport, Oregon

Project: 17056

November 30, 2017

Prepared for:

Bill Lund

P. O. Box 22

Seal Rock, OR 97376

Prepared by:

Michael Remboldt, P.E., G.E.

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Established 1998

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Geotechnical Engineering Report

Geotechnical Site Investigation

Tax Lots 1800, 1900, 1903; Tax Map 11-1-05-BC; NW Spring St., Newport, Oregon

November 30, 2017

1 TABLE OF CONTENTS

Executive Summary

We have carefully evaluated the project site and have determined that the site can be developed into individual home sites that provide the stability and safety normally expected for this use, provided that the recommendations in this report are implemented in design and construction.

Hazards that exist at the site include:

- Likely lateral movement during the extreme Cascadian subduction zone earthquake. This is evidenced by historic landslide activity including scarps, landslide debris, and uneven ground surface.
- Very high expected peak ground acceleration from the design earthquake.
- Undocumented fills and soft buried landslide debris which constitute hazards of differential foundation settlement.
- Loose, poorly-graded sandy soils on the ground surface which, if left un-vegetated, could result in a severe surface erosion hazard.

To mitigate these hazards and ensure reasonable reliability and safety to the development, occupants, and the surrounding infrastructure, we have made recommendations including:

- Support of all structures on deep foundation elements including battered piles to resist lateral earthquake loads and minimize the hazard of lateral spreading,
- Limitations on earthwork including no permanent fills,
- Grading to encourage positive sheet-flow storm runoff,
- A 20-foot wide "no-build" zone extending west from the east property boundary,

- Gravity retaining wall system to stabilize the "no-build" zone along the east edge of the access driveway,
- Vegetation of all disturbed areas to minimize surface erosion and improve soil strength and slope stability.

1 INTRODUCTION

This report documents our geotechnical investigation of site conditions that exist on tax lots 1900 and 1903 located on the west side of NW Spring Street just north of NW 13th Street in Newport, Oregon.

The purpose of our investigation included:

- Characterization of surface and subsurface soil, rock, and groundwater conditions,
- Evaluating current slope stability,
- Delineating geologic hazards, and
- Development of recommendations for suitable development of the properties for single-family residences.

The scope of our services included:

- Fieldwork to characterize subsurface conditions,
- Analysis of field data,
- Evaluation and determination of the nature of slope stability.
- Development of geotechnical design and construction criteria, and
- This written Geotechnical Engineering Report.

Our services meet the requirements of the 2014 Oregon Structural Specialty Code, Section 1803 – Geotechnical Investigations.

2 INVESTIGATION AND FINDINGS

2.1 SITE LOCATION

The project site, consisting essentially of tax lots 1900, 1903, and the east half of tax lot 1800, has a combined area of approximately 0.95-acres. The project site is located between the west edge of NW Spring Street and east shore/coast of the Pacific Ocean (west coast of the USA), just north of NW 13th Street. See the attached Vicinity Map.

2.2 SURFACE CONDITIONS

The project site generally consists of a west-facing slope descending from the east edge of the roadway (NW Spring Street) to the ocean beaches. The vegetation line at the east edge of the beach is approximately 250-feet west of the roadway, while the study area extends approximately 125-feet west of the roadway. See the attached Geotechnical Site Plan.

We surveyed a field-developed cross section across the study area to characterize general ground surface gradients and tie the ground surface shape with underlying soil and rock profiles. The site consists, generally, of three zones:

- Zone 1: Upper terrace containing the roadway (NW Spring Street) and the steep (approximately 1H : 1V) embankment descending down from the west edge of the roadway;
- Zone 2: A rolling mid-slope area extending from the toe of the steep embankment along the west edge of the roadway to a terminal siltstone ridge bordering the east edge of the beach. Slope gradients in this zone range from approximately 0 to 35-percent.
- Zone 3: Terminal area centered on a siltstone rock exposure bordering the east edge of the beach. The siltstone has a shallow cap of dune sand in some areas on the north end.

Dense-vegetation, consisting of native trees, understory shrubs, grasses, and non-native blackberry covers the ground surface of zones 1 and 2 of the study area.

Aside from erosion due to disturbance on the few foot-trails that exist on the site, there is little evidence of on-going severe surface erosion or mass slope movement. We did not observe indications of slope movement in the roadway such as cracks with differential movement.

In general, with the exception of some shallow subsidence of utility boxes on the east side of the road, it appears that the site is relatively stable in its current condition.

2.3 Subsurface Soil Conditions

2.3.1 Methods of Investigation

We investigated subsurface soil conditions by making three (4) probes[1] (FC-1 through FC-4) and two (2) continuous sample boring[2] (B-1 and B-3) using our track-mounted geotechnical drill. Additionally, shallow borings were made using a 3.5-inch hand-auger to verify shallow soil conditions (HA-1 through HA-3, AH-2).

See the attached Geotechnical Site Plan for approximate locations of these probes and borings.

Graphic logs of the probes and borings are attached to this report. The approximate location of the probes and borings are shown on the attached Site Plan.

2.3.2 Zone 1

Subsurface Conditions on the upper terrace, Zone 1, generally consist of:

- 3-ft of loose and moderately dense, sand and gravel road FILL, over
- 1-ft of organic sandy-SILT (native topsoil), over

[1] A 3.55-in^2 cone is pushed into the soil using a 140-lb. hammer falling 30-in. The energy required to advance the cone is recorded in the field as the number of blows per 6-inches of penetration. Soil friction on the side of the cone is measured using a torque wrench. Calculated cone tip pressure is used to estimate soil engineering

[2] 1.5-inch diameter x 4-foot continuous samples obtained using a G7 2-3/8" direct push dual tube system manufactured by AMS, Inc.

- 20-ft of light brown/tan/white, moderately dense, lightly-cemented, silts and sands (Marine Terrace Deposits), over
- Very stiff to hard, dark brown to gray, SILTSTONE (Nye Formation).

The cemented marine terrace deposits can be seen in isolated areas through breaks in the vegetation on the steep embankment descending from the roadway.

Groundwater was observed approximately 21-feet below the roadway surface.

2.3.3 Zone 2

For the mid-slope area, Zone 2, there are two distinct areas:

- Zone 2 North (generally tax lots 1903 and 1800) and
- Zone 2 South (generally tax lot 1900)

The north portion of Zone 2 contains includes landslide debris extending to depths as much as approximately 16-feet below the ground surface. The south portion does not exhibit similar landslide debris and bedrock is much shallower.

2.3.3.1 Zone 2 North

Subsurface condition on Zone 2 North, in the area investigated, consist of approximately:

- 5 to 6-ft of light brown/tan, loose, poorly-graded (dune) sands and sandy-FILL (we found glass and other fill debris), over
- 10 to 12-feet of dark brown/black/tan, soft/loose, jumbled mixtures of sands, silts, clay, and gravelly-clay, over
- Very stiff to hard, dark brown to gray, SILTSTONE (Nye Formation).

Groundwater was observed (FC-1, B-1) at a depth of approximately 6.8-feet below the existing ground surface.

2.3.3.2 Zone 2 South

Subsurface conditions in this zone, in the areas investigated, consist of approximately:

- 1-ft of brown/tan, loose, organic-laden, SAND (topsoil), over
- 2 to 4-ft of white/gray with some orange staining, loose to moderately dense, poorly-graded SAND with trace of silt - Interpreted as weathered/decomposed Marine Terrace Deposits; over
- Very stiff to hard, dark brown to gray, SILTSTONE (Nye Formation).

Groundwater was observed (FC-3) at a depth of approximately 6.0-feet below the existing ground surface.

2.4 Local Geology

2.4.1 Geologic Setting

Surficial geology of the site is mapped in the geologic literature as consisting of Quaternary (less than 2.8 million years before present) Marine Terrace deposits overlying early Miocene (16.5-23.0 million years before present) Nye Mudstone[3].

The Marine Terrace deposits are variously described as consisting of:

- Semi-consolidated uplifted beach sand overlain locally by fine-grained dune deposits with occasional localized gravel lenses[4],
- Unconsolidated to moderately consolidated gravel, beach and dune sand; locally containing minor consolidated clay-rich paleosols, colluvium, debris flows, and alluvial interbeds; to thin-bedded sandstone, conglomerate and tuffaceous siltstone with thick glauconitic sandstone beds[5].

Nye Mudstone underlies the Marine Terrace deposits in much of the site vicinity. Nye Mudstone deposits are described as massive to thick-bedded, gray, clayey marine siltstone with sandstone interbeds, including calcareous concretions in places.

Middle Miocene (10.4-16.5 million years old) Astoria Formation deposits are mapped overlying the Nye Mudstone a short distance to the south and in the wave zone west of the site.

Nye Mudstone bedding has been mapped in the vicinity to dip, generally, 11 to 15 degrees to the west/southwest and Astoria Formation deposits are mapped at 23 degrees to the west a few hundred feet to the south at "Jumpoff-Joe."

Our probes and borings confirm these two mapped geologic units – lightly cemented gravel and sand terraces overlying sedimentary mudstone – and the sloped surface of siltstone.

H.G. Schlicker investigated geologic conditions at the project site, and wrote a report in 1991. Schlicker's conclusion was that the old landslide area on the site is relatively stable, and recommend a geotechnical investigation to confirm subsurface conditions. This report summarizes our geotechnical investigation and verifies Schlicker's conclusions. A copy of the Schlicker report is attached in Appendix D.

[3]See DOGAMI Bulletin 81-3, OFR-O-04-09, USGS-OF-72-352-1 and USGS I-867.
[4] DOGAMI Bulletin B-81-3
[5] DOGAM Open-file report O-04-09

3 RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION

3.1 GEOLOGIC HAZARDS

3.1.1 General Discussion

The project site is located within a coastal environment that is documented to have active erosional processes at work on a continuous or intermittent basis. These processes include:

- Wave action which causes erosion of the toe of slopes ascending from beaches, eventually resulting in slope instability,
- Mass slope movement. These are more often the result of erosion but can also be caused by earthquake ground motion,
- Tsunami, and
- Surface erosion from concentrated surface runoff.

Other hazards typical for coastal geology include faulting, liquefaction, and lateral spreading.

We have developed a detailed geologic hazard assessment for the project site. The complete geologic hazard assessment report, by Gary C. Sandstrom, registered professional engineering geologist, is attached to this report, Appendix D.

3.1.2 Slope Movement

The project site is well within the area of high coastal erosion hazard and existing land sliding identified by the Oregon Department of Geology and Minerals Industries (DOGAMI)[6]. The project site is within the influence of the large "Jump-off Joe" landslide complex - a rather large, linear slide zone. See Figure 1. This landslide complex consists of numerous individual slope movements that likely occurred individually over long periods of time – thus the overlapping appearance. Slope movement in the area including the project site is believed to be Quaternary in age (sometime in the last 2.8 million years).

Severe slope movement, associated with this general feature, has been observed south of the intersection of NW Spring Street and NW 12th Street at the northwest side of existing condominiums.

Evidence of old slope movement on the site include:

- The steep embankment descending from the roadway (transition between Zone 1 and 2). This is an upper scarp to the old slope movement(s), having a mean slope gradient estimated to be approximately 1H : 1V (based on our field observations). There are areas of near-vertical faces in this scarp area. In the south half of tax lot 1900, we see evidence of an isolated block of marine terrace deposit that has moved away from the main scarp;
- Uneven ground surface (Zone 2); and
- Finding of jumbled, mixed soil debris in Zone 2 North subsurface soils.

[6] Open-file report O-04-09 and on-line geologic hazard viewer published by the Oregon Department of Geology and Minerals Industries (DOGAMI), HazVue. See http://www.oregongeology.org/hazvu/

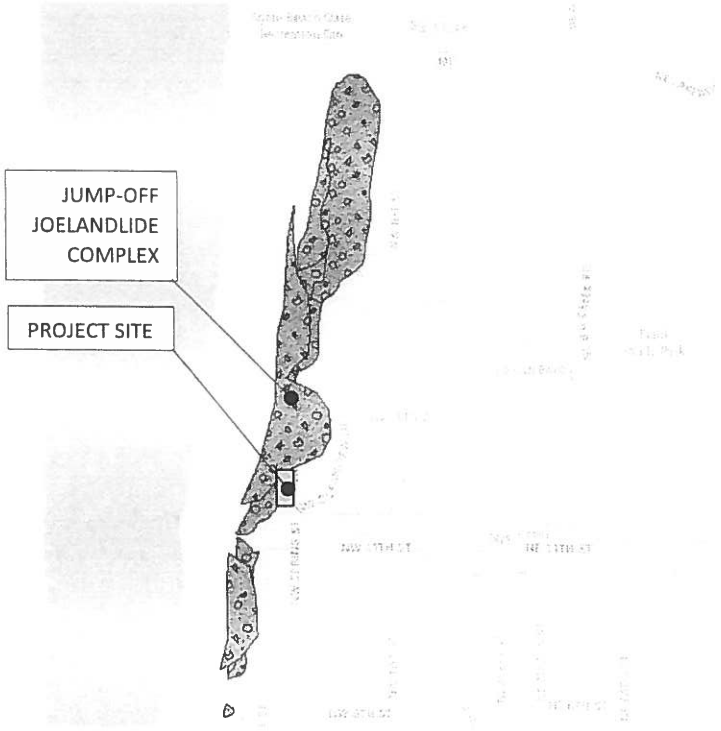


Figure 1 - HazVu Mapping of Jump-off Joe Landslide Area

Our field-developed cross section across tax lot 1903 indicates the overall concave shape of the ground surface due to the historic slope movement. See the attached drawing Field Developed Cross Section.

We have modeled slope stability using common methods of limit equilibrium analysis.[7] Limit equilibrium assesses stability based on a "factor of safety" (FOS) – the ratio of forces resisting movement to forces driving movement. Our modeling included:

- Ground surface boundaries defined by our field-developed cross section,
- Subsurface boundaries and material properties estimated from our probes and borings,
- Groundwater levels estimated from the probes and borings,
- Earthquake peak ground acceleration based on deaggregation of earthquake ground motion data.[8]

In the current static condition, the site is stable, with minimum FOS in the range of 1.4 to 1.6. This FOS is within the generally-acceptable limits for development.

In the event of the (extreme) Cascadian subduction-zone earthquake (475-year recurrence), peak ground accelerations are expected to exceed 30% of gravity, and our estimates of FOS for this condition are either slightly above or slightly below 1.0, depending on modeling method and estimates of

[7] We use proprietary software SLIDE, published by Roc Science, http://www.rocscience.com
[8] U.S. Geological Survey – Earthquake Hazards Program. https://earthquake.usgs.gov/hazards/interactive/

groundwater and soil shear strength. We believe that there will be some lateral movement with this magnitude of earthquake ground motion.

Graphic summaries of our analysis are attached in Appendix C to this report.

3.1.3 Beach Regression

DOGAMI has estimated a general beach regression of in the approximate range of 0.3 to 0.4-feet/year in this area. This is an overall estimate for screening purposes and is not meant to be site-specific. For this site, we believe that long-term regression may be less than this range due to several mitigating features specific to the project site:

- The protection of the toe of the Zone 2 slope by the terminal siltstone exposure found at the east edge of the beach area,
- Overall low-gradients of the ground in the Zone 2 area, and
- High densities of existing vegetation in Zones 2 and 1.

3.1.4 Design Earthquake

The design earthquake was determined using criteria including an event having a 10-percent chance, or higher, of occurring within a 50-year period. Based on analysis using current modeling of local sources of earthquake ground motion (crustal, deep, and subduction zone)[9], the design earthquake has a (modal) magnitude of 9.08 with a peak ground acceleration of 0.32g. A summary of the Deaggregation analysis is attached to this report in Appendix D.

3.1.5 Faulting and Lateral Spreading

Mapping by the State of Oregon Department of Geology and Minerals Industries (DOGAMI) of geologic hazards indicates that there is an ENE-WSW trending active fault approximately 1.5 miles southeast of the subject site. Direct rupture at the project site from this fault is unlikely.

Minor lateral spreading (several feet or less) at the site due to strong earthquake ground motion is likely, based on our pseudo-static stability analysis using the expected peak ground acceleration of 0.32g.

3.1.6 Liquefaction

We found no evidence of loose, saturated clean sands in the area investigated and it is our opinion that risks due to earthquake-induced liquefaction and resulting subsidence are low for the project site.

3.1.7 Tsunami

The majority of the project site is situated above the statutory tsunami inundation line (at 30 feet elevation). The exception is the western margin of lot 1800 near the vegetation line at the beach) which is below the inundation line, but our understanding is that proposed homesites are above and essentially in-line with development proposed for the remaining project site.

[9] 2014 Dynamic Conterminous NSHMP PSHA interactive deaggregation analysis, on-line at the USGS Geologic Earthquake Hazards Program. https://earthquake.usgs.gov/hazards/interactive/

DOGAMI's Tsunami Inundation Map includes inundation scenarios for earthquakes of several different magnitudes and indicates that a tsunami induced by a Cascadia Subduction Zone earthquake[10] could reach an elevation of approximately 80 feet, which would extend above NW Spring Street.

In general, aside from the aftermath of a Cascadia Subduction Zone earthquake, the site meets current criteria for tsunami.

3.1.8 Expansive Soils

Subsurface soils at this site are not expansive.

3.1.9 Foundation Settlement

Undocumented fills could represent a minor hazard of excessive differential settlement. We found undocumented sandy fill that has been placed over a relatively large area of the central portion of the project site. This hazard can easily be mitigated by following our recommendations for Foundations in this report.

3.2 Seismic Design Criteria

For designing lateral bracing systems and other structural elements for earthquake ground motion, we recommend that design criteria be selected based on a site class "D – Stiff soil profile."[11] The recommended design spectral response acceleration parameters[12] are shown on Table 2.

Table 1- Recommended Seismic Design Parameters

Design Parameter	Design Value
S_{MS} (site class "D")	1.729
S_{M1} (site class "D")	1.148
S_{DS} (site class "D")	1.153
S_{D1} (site class "D")	0.765

3.3 Foundations

3.3.1 General Foundation Recommendations

We assume that this site will be developed to support one or more conventional single-family residences.

To mitigate hazards associated with:

- Slope movement,
- Differential settlement from underlying slide debris, loose sands, and undocumented fills, and
- Erosion of loose sands;

[10] A rupture of the entire length of the fault zone from the southern Oregon to northern Washington costs, resulting in sub-marine landsliding.
[11] Section 1613.3.2 of the 2014 Oregon Structural Specialty Code.
[12] http://earthquake.usgs.gov/designmaps/us/application.php?

We are recommending that all permanent structures be supported on a foundation system consisting of reinforced concrete grade beams or isolated reinforced concrete pads supported by deep foundation elements.

Deep foundation elements should find support for all loads within underlying siltstone.

Helical piles or micropiles are the most economical and efficient deep foundation elements for this site. These systems can easily be installed through the overlying unconsolidated fill and slide debris and embedded into underlying load-bearing siltstone.

Micropiles have an advantage of very high individual allowable load capacity in compression and tension, and can be battered to provide the necessary resistance to lateral loads. Helical piles offer reasonable individual load capacity but, due to expected limited embedment in siltstone, should not be relied upon for uplift.

Deep foundation elements shall extend into the underlying native siltstone.

Battered deep foundation elements should be designed to resist lateral earthquake loads and provide additional security against lateral spreading.

3.3.2 Helical Pile Systems

The allowable design load capacity for helical piles shall be limited to 15-kips/square foot of helix bearing. We recommend use of single-helix helical piles with helix diameters in the range of 8 to 12-inches. Thus, the total allowable design load capacity will be in the range of 5 to 12-kips per pile.

Helical pile ultimate load capacity shall be evaluated by installation torque in the underlying siltstone according to the following relationship:

$$Q_u = \frac{2}{d_{eff}} T$$

Where:

$$Q_u = Ultimate\ capacity, kips$$

$$d_{eff} = Pile\ shaft\ diameter, ft.$$

$$T = Installation\ torque, k - ft.$$

Helical piles shall consist of the following elements:

- 2.875-inch O.D. x 0.25-inch wall (min.) tubular steel shafts with connections designed to prevent vertical slip during loading using a threaded connection,
- Single-helix plates having a minimum 0.325-inch thickness
- "Pre-construction" brackets designed for embedment in concrete.

Helical pile shafts shall consist of cold-formed welded and seamless carbon steel structural tubing meeting the requirement of ASTM A500 Grade B with a minimum yield strength of 42-ksi. Pile shafts, including the lead section with helix plate, shall be either hot-dipped galvanized or otherwise coated for corrosion resistance.

All helical piles shall be embedded a minimum of 1-foot into underlying native, undisturbed SILTSTONE as verified by K & A Engineering, Inc. in the field during construction.

The Installer shall provide K & A Engineering, Inc. with:

- A manufacturer's certification of materials (length, section, steel grade) for pile shafts and lead section with helix,
- Manufacturer's certification for shaft treatment for corrosion resistance (galvanization or other coatings),
- Schedule of shaft connection elements,
- Manufacturer's certification of materials (dimension and construction) for the pile bracket,
- A description and drawings detailing the connection of the pile bracket to the pile shaft and to the existing foundation including connector type/size/grade, epoxy adhesives (if used), and installation methods.
- Certification of drive head pressure meter calibration,
- Drive head manufacturer's published relationship between drive pressure and torque output for the drive head used.

Submittals must be made to K & A Engineering, Inc. a minimum of 1-week prior to installation.

K & A Engineering, Inc. shall inspect the installation of helical piles including:

- Observe installation of the helical piles
- Verify minimum depth of installation,
- Record installation pressures,
- Approve of installation based on installation torque and depth, and
- Provide a written installation summary that recommends acceptance by the local building official.

K & A Engineering, Inc. shall be notified a minimum of 2-weeks in advance of load test installation, load testing. and production pile installation.

3.3.3 Micropiles

For design purposes, micropiles shall be designed for an allowable design grout-siltstone bond strength of 1,000-pounds/square foot of bond. Load testing is required to verify actual bond capacity. Based on our preliminary analysis, micropiles consisting of a 5-inch nominal shaft diameter and using a No 8 solid steel reinforcing element should achieve allowable load capacities in the range of 15 to 20-kips, depending on the depth of embedment in siltstone.

We recommend an allowable design load capacity of 20-kips maximum, in tension and compression.

To achieve economy and reasonably high individual micropile load capacity, we recommend the following design criteria:

- Minimum diameter of the grout-siltstone bond zone of 5-inches,
- 4-inch x 0.25 tubular steel casing extending from the ground surface (grade beam or load pad) to 1-foot below the surface of siltstone, having a minimum yield strength of 36-ksi;

- Micropile reinforcement consisting of one solid No. 8 reinforcing bar, minimum yield strength of 60-ksi;
- Maximum design allowable grout-to-siltstone bond strength of 1.0-ksf.

Prior to installation of production micropiles, a minimum of one test pile should be installed into Mudstone and load tested to verify actual ultimate and allowable load capacity. The load test shall include:

- Ultimate load, in tension, to a minimum 200-percent of the maximum specified working load. The load test shall be made in increments of 10, 25, 50, 100, 150, and 200-percent of maximum specified working load.
- Creep Testing. A creep test shall be made a 133-percent of the maximum specified working load. Criteria for successful creep is less than 2-mm of creep over one log-cycle of time.

K & A Engineering, Inc. shall:

- Review and approve materials and construction methods submitted by Contractor prior to construction,
- Inspect installation of test piles,
- Inspect load testing and verify ultimate load at failure or that no failure occurred.
- Verify the validity of the preliminary allowable grout bond strength based on load test results, and make recommendations for embedment lengths of the production piles, accordingly, and
- Inspect and approve micropile construction.

3.4 Site Development

3.4.1 General Recommendations

We recommend that site development consist of the minimal amount of earthwork necessary for access and foundation construction. Site development should be planned and executed to incorporate the following requirements:

- **Fills.** No permanent fills other than low fills (less than 4-feet in height) and those associated with access driveways shall be created;
- **Revegetation:** Surface erosion shall be minimized by establishment of vegetation in all disturbed areas with species of grasses, shrubs, and trees *that are well adapted to local climate and soil conditions and that produce vigorous, deep, and dense root structures*. Areas to receive vegetative treatment include, but are not limited to:
  - Road cut and fill embankments
  - Disturbed areas around foundations
  - Disturbed areas associated with landscaping and retaining walls.

  Revegetation shall be installed immediately after completion of grading, foundation pad construction, and access road construction. *Temporary revegetation is required for temporary cuts, fills, and other disturbed areas during long (2-months or more) periods of inactivity and between construction phases.*

- **Stone Armoring.** In some areas of ground disturbance, it may be more beneficial, economical, or practical to place stone armoring in lieu of vegetation to minimize surface erosion. Stone armoring shall consist, at a minimum, of 12-inches of 4 to 7-inch crushed basalt quarry rock, machine placed.
- **No-Build Zone.** *No foundations, earthwork, or vegetative disturbance shall occur in a 20-foot wide "no-build" zone adjacent to the west edge of the existing NW Spring Street. This zone extends 20-feet west of the east property boundary.* The purpose of this requirement is to preserve the integrity of the Zone 1 scarp embankment described in this report, and thus preserve the integrity of the NW Spring Street roadway. The exception to this is minor necessary disturbance allowing for the construction of a low gravity retaining wall on the east side of the access driveway to be constructed at or near the west edge of the "no-build" zone.
- **Drainage.** Development shall result in positive sheet-flow drainage flowing west. Concentrated flows from roof drains shall be distributed to the ground surface as sheet flow using flow spreaders.

3.4.2 Access Drive Design and Construction

Our understanding is that the driveway accessing home sites will leave NW Spring Street somewhere in the south half of tax lot 1900 and extend northward on the project site, following the west edge of the specified "no-build" zone.

We recommend that the driveway consist of a "full-bench" style of construction – one in which the driveway has a virtually no fill embankment and low-height cut embankments (less than 4-feet in height).

The "no-build" zone stability shall be ensured in areas of cut embankments (along the east side of the driveway) by a low gravity retaining wall consisting of welded-wire gabion baskets filled with 4 to 7-inch open-graded quarry stone. This wall shall have a BASE : HEIGHT ratio of 1.0 or greater and the toe of the wall shall be buried a 1-foot below final grade at the toe.

Gabion baskets shall consist of 9-gage ArtWeld welded wire baskets manufactured by Hilfiker Retaining Walls[13]. K & A Engineering, Inc. shall review and approve of wall design and construction details prior to installation, and shall provide quality assurance of wall construction.

3.4.3 Foundation Pads

Our understanding is that, at the time of this report, two-story "daylight" designs for single-family residences are being considered. In this concept, a lower "daylight" level will face the west at a grade that is lower than the east side of the foundation pad.

We recommend that all soils excavated from basement areas and foundation pad should be removed from the project site and disposed of off-site. The purposes of this requirement include:

- Avoiding creation of load surcharges which could reduce slope stability
- Avoid grading problems which could adversely affect drainage of surface runoff.

[13] See http://www.hilfiker.com/awg.html Technical specifications, drawings, and construction details are readily available from the manufacturer.

Foundation pads should be graded appropriately to provide temporary support for:

- Access for helical pile or micropile installation
- Forming and construction of reinforced concrete grade beams

Note that the undocumented fills found at the site are not suitable for temporary support and should be completely removed from foundation areas.

4 LIMITATION AND USE OF GEOTECHNICAL RECOMMENDATIONS

This report has been prepared for the exclusive use of Bill Lund for the subject project.

This geotechnical investigation, analysis, and recommendations meet the standards of care of competent geotechnical engineers providing similar services at the time these services were provided.

We do not warrant or guarantee site surface or subsurface conditions. Exploration test holes indicate soil conditions only at specific locations (i.e. the test hole locations) to the depths penetrated. They do not necessarily reflect soil/rock materials or groundwater conditions that exist between or beyond exploration locations or limits.

The scope of our services does not include construction safety precautions, techniques, sequences, or procedures, except as specifically recommended in this report. Our services should not be interpreted as an environmental assessment of site conditions.

Appendix A

Maps

Geotechnical Engineering Report
Proposed Residential Development
Tax Lots 1900 and 1903
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
October 11, 2017

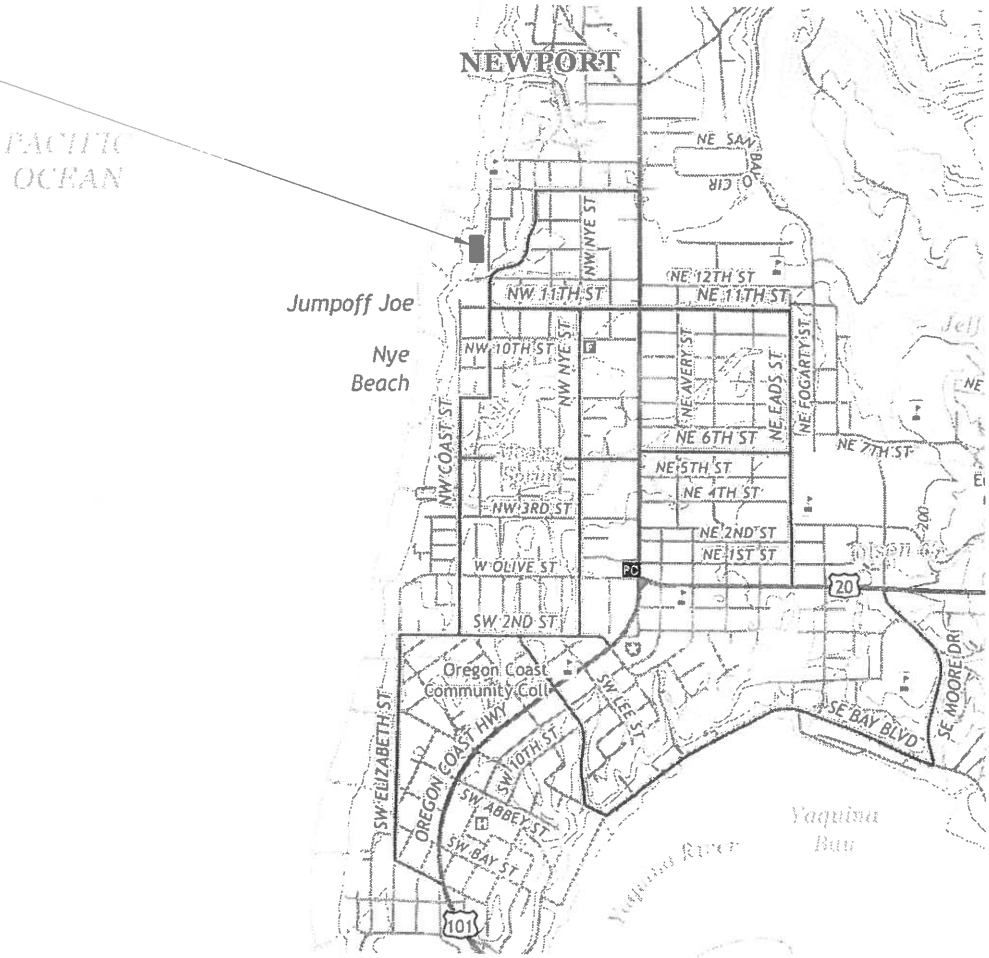
Prepared for:

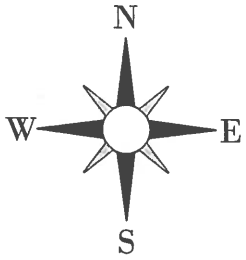
Bill Lund
P.O. Box 22
Seal Rock, OR 97376

Prepared by:

Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.
Coburg, Oregon

PROJECT SITE LOCATION
TAX LOTS 1900, 1903
NW SPRING STREET
NEWPORT, OREGON





0 2000' 4000'

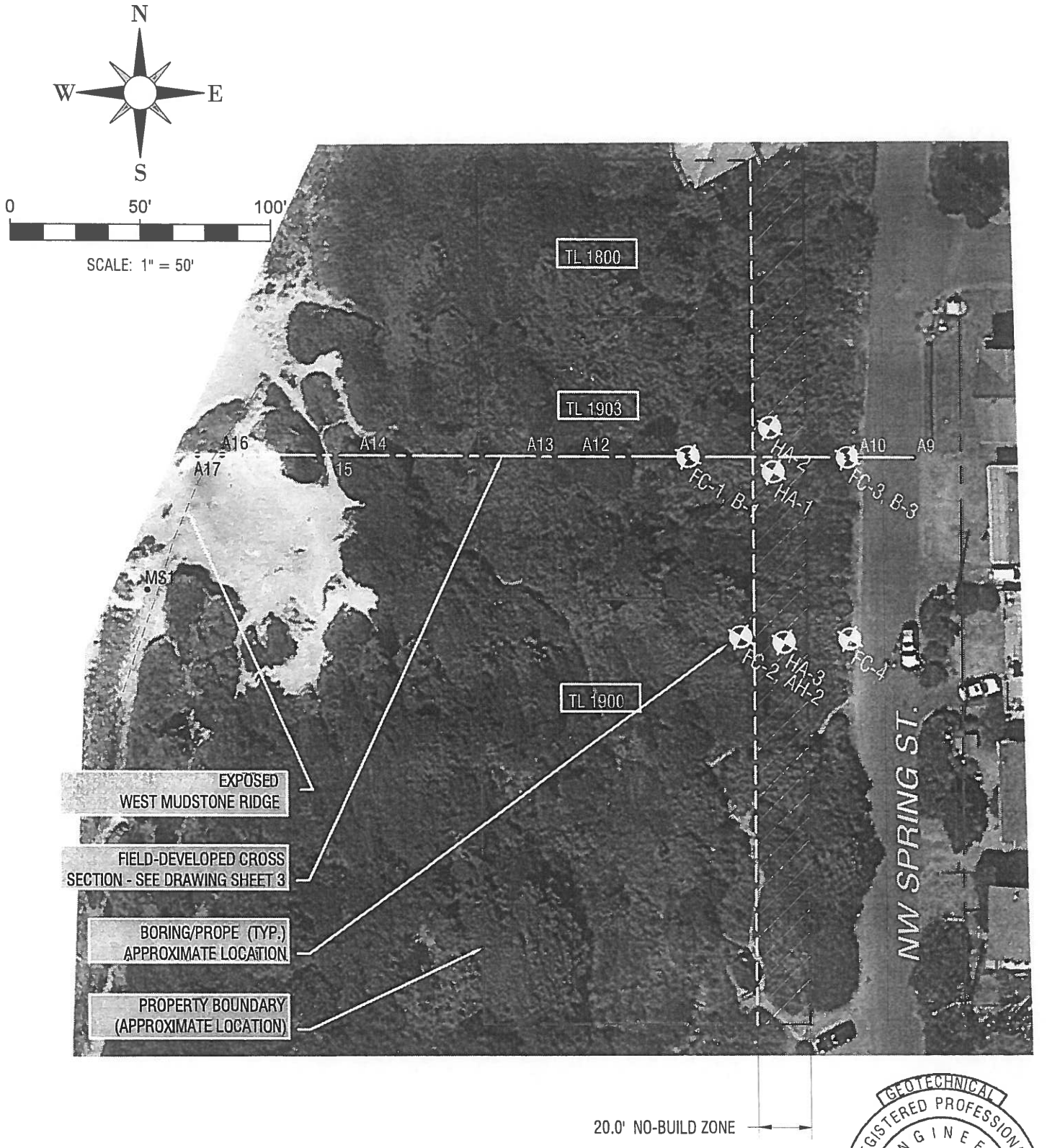
SCALE: 1" = 2000'

K & A Engineering,Inc
91051 S. Willamette St.
Coburg, OR 97408
541 684 9399 541 684 9358 fax

k·a engineering

VICINITY MAP
Geotechnical Site Investigation
Lund Development
Tax Lots 1900, 1903; NW Spring St., Newport, OR
11/27/17 Project: 17056 Drawing 1 / 3

EXPIRES: DECEMBER 31, 2018



K & A Engineering,Inc
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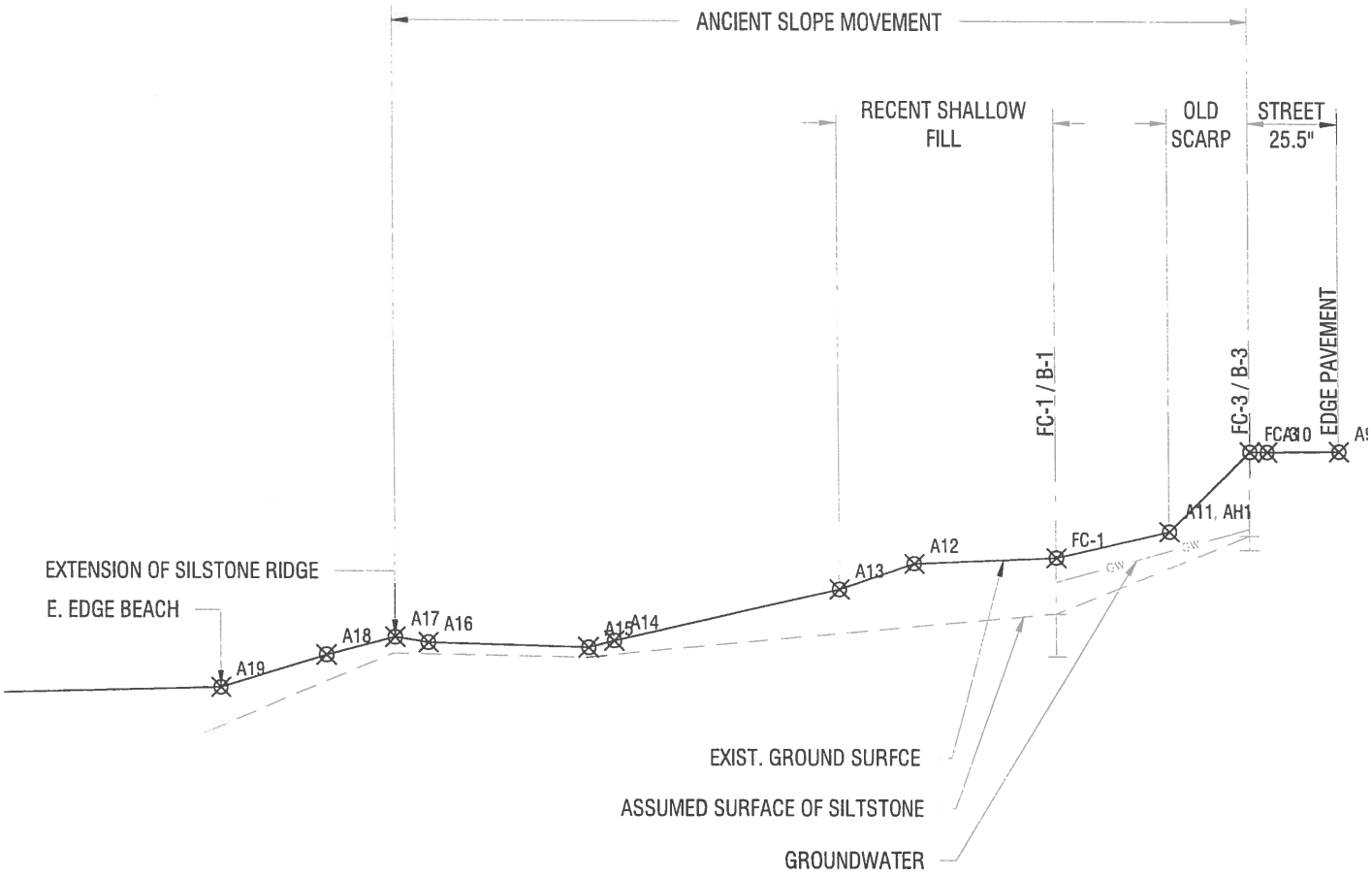
k·a engineering

GEOTECHNICAL SITE PLAN
Geotechnical Site Investigation
Lund Development
Tax Lots 1900, 1903; NW Spring St., Newport, OR
11/27/17 Project: 17056 Drawing 2 / 3

GEOTECHNICAL REGISTERED PROFESSIONAL ENGINEER
19,474
OREGON
SEPTEMBER 16, 1997
MICHAEL DENNIS REMBOLDT

EXPIRES: DECEMBER 31, 2018



1/3 FIELD-DEVELOPED CROSS SECTION

1" =50'

0 50' 100'

SCALE: 1" = 50'

K & A Engineering,Inc
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Coburg, OR 97408
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k·a engineering

FIELD-DEVELOPED CROSS SECTION
Geotechnical Site Investigation
Lund Development
Tax Lots 1900, 1903; NW Spring St., Newport, OR
11/27/17 Project: 17056 Drawing 3 / 3

GEOTECHNICAL REGISTERED PROFESSIONAL ENGINEER 19,474 OREGON SEPTEMBER 16, 1997 MICHAEL DENNIS REMBOLDT

EXPIRES: DECEMBER 31, 2018

Appendix B

Probes and Boring Logs

Geotechnical Engineering Report
Proposed Residential Development
Tax Lots 1900 and 1903
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
November 30, 2017

Prepared for:

Bill Lund
P.O. Box 22
Seal Rock, OR 97376

Prepared by:

Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.
Coburg, Oregon

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER AH-2 Sheet 1 of 1

SURFACE ELEVATION 55.80

NORTH | EAST

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
2.5				Tan, damp, loose to moderately dense, silty-SAND or SAND with some silt (FILL?). Contains pockets of brown SILT, organics, and roots.		1.0
5.0				White/gray, loose to moderately dense, coarse, poorly-graded, SAND with trace silt (dune sand or terrace deposits). Some orange staining.		
				End of Boring @ 6 feet		2.0
7.5						
10.0						3.0
12.5						4.0
15.0						
						5.0
17.5						
20.0						6.0
22.5						
						7.0
25.0						
						8.0
27.5						

⊗ Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/8/17
BORING COMPLETED 11/8/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER JDB
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER B-1 Sheet 1 of 1
SURFACE ELEVATION 42.60
NORTH EAST

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
2.5	1			Tan/brown, damp, loose to moderately dense, silty-SAND or SAND with some silt (FILL). Contains pockets of brown silt, gravel, and roots.		1.0
5.0	2	ACR		Brown, damp, loose to moderately dense, silty-SAND (FILL) mixed with decomposed mudstone fragments (gravel and cobble sized). Glass shards and garbages from 2 to 6-ft. Additional samples retrieved to 6-ft using 3.5-in AMS hand auger.		2.0
7.5				Brown, moist, soft, high plasticity, SILT or CLAY with rounded gravels.		
10.0	3			Dark gray or black, damp, very stiff to hard, friable, CLAY with some sand (decomposed siltstone). Some orange staining below 12-ft. Stiffer with depth.		3.0
12.5						4.0
15.0	4					
17.5	5			Dark gray or black, hard, weathered SILTSTONE BEDROCK (Nye Formation) (not friable).		5.0
20.0				End of Boring @ 19.5 feet		6.0
22.5						7.0
25.0						8.0
27.5						

⊗ Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/7/17	16:05	ACR			6.8

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG AMS 9410-VTR
ENGINEER MDR
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon
Job No. 17056

BORING NUMBER B-3 Sheet 1 of 1
SURFACE ELEVATION 73.00
NORTH EAST

Unconfined Compressive Strength, tons/ft.^{2}
PL MC LL
N VALUE, blows/ft.

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
				Brown, moist, loose, organic-laden, gravelly-silty-SAND (FILL) - contains concentrated, thin roots.		
2.5	1			Grayish-brown, moist, moderately dense, fine silty-SAND (FILL). Relatively high fines content.		
				Black, damp, moderately stiff, low plasticity, organic silty-SAND or sandy-SILT (original native).		1.0
5.0	2			White/tan, damp, moderately dense, fine, poorly-graded SAND (terrace deposits?). Top 1-ft stained orange from overlying layer.		2.0
7.5						
10.0	3					3.0
12.5						4.0
15.0	4			Gray and white, moist or damp, moderately dense, coarse, poorly-graded SAND (terrace deposits). Some orange staining.		
17.5	5					5.0
20.0						6.0
22.5	6			Gray, wet, moderately dense, poorly-graded, gravelly-SAND or SAND with some gravel - coarse sands and rounded gravels up to 0.5-in in diameter. Gray/white, wet, moderately dense, poorly-graded SAND. Orange staining at 22.6 and 23.3-ft.		7.0
25.0	7			Dark gray/black, damp, very stiff/hard, friable, laminated, fine-grained, weathered SILTSTONE (Nye Formation).		
27.5				End of Boring @ 24.8 feet		8.0

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/8/17	09:30	ACR		21.3	

BORING STARTED 11/8/17
BORING COMPLETED 11/8/17
DRILLER K & A
RIG AMS 9410-VTR
ENGINEER MDR
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER HA-1 Sheet 1 of 1
SURFACE ELEVATION 50.20
NORTH EAST

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
				FILL - basalt cobbles - most likely end-dumped from street		
2.5				Brown, moist, loose to mod. dense, fine-grained, non-plastic organic poorly-graded SAND - native "topsoil."		1.0
5.0				Brown, moist, loose, non-plastic, fine-grained, poorly-graded SAND. Trace organics. Grading into marine terrace deposits. No Groundwater.		
				End of Boring @ 5 feet		2.0
7.5						
10.0						3.0
12.5						4.0
15.0						
17.5						5.0
20.0						6.0
22.5						7.0
25.0						
27.5						8.0

Unconfined Compressive Strength, tons/ft.^{2}
1 2 3 4 5
PL MC LL
N VALUE, blows/ft.
10 20 30 40 50 60 70 80 90

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER GS
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER HA-2 Sheet 1 of 1
SURFACE ELEVATION 53.60
NORTH EAST

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
				Brown, moist, loose to mod. dense, fine-grained, non-plastic organic poorly-graded SAND - native "topsoil."		
2.5				Brown to light grayish-white, wet, gravelly poorly-graded SAND. Weathered Marine Terrace Deposits.		1.0
5.0				Dk. reddish-brown, wet to sl. wet, stiff, blocky SILTY-CLAY. Residual soil from decomposing Nye Formation. Stiffer, brittle/friable, blocky with depth. No Groundwater		2.0
7.5				End of Boring @ 5 feet		
10.0						3.0
12.5						4.0
15.0						5.0
17.5						6.0
20.0						
22.5						7.0
25.0						8.0
27.5						

Unconfined Compressive Strength, tons/ft.^{2}
1 2 3 4 5
PL MC LL
N VALUE, blows/ft.
10 20 30 40 50 60 70 80 90

⊗ Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER GS
APPROVED

LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

K & A Engineering, Inc.
91051 S. Willamette St.; P. O. Box 8486
Coburg, OR 97408
Telephone: 541-684-9399
Fax:

Job No. 17056

CLIENT: Bill Lund
PROJECT: Proposed Residential Development
SITE ADDRESS: NW Spring Street, Newport, Oregon

BORING NUMBER HA-3 Sheet 1 of 1
SURFACE ELEVATION 58.00
NORTH | EAST

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5
PL MC LL
N VALUE, blows/ft.: 10 20 30 40 50 60 70 80 90

DEPTH, ft	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	UNIT DRY WT. LBS./FT.^{3}	DEPTH m.
				Brown, loose, moist, non-plastic organic SAND - native "topsoil."		
2.5				Brown to gray-brown or greyish-white with red stain, moderately dense, gravelly poorly-graded SAND. Terrace Deposits. No Groundwater.		1.0
5.0				End of Boring @ 6 feet		2.0
7.5						
10.0						3.0
12.5						4.0
15.0						5.0
17.5						
20.0						6.0
22.5						7.0
25.0						8.0
27.5						

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER

BORING STARTED 11/7/17
BORING COMPLETED 11/7/17
DRILLER K & A
RIG 3.5" Hand Auger
ENGINEER GS
APPROVED

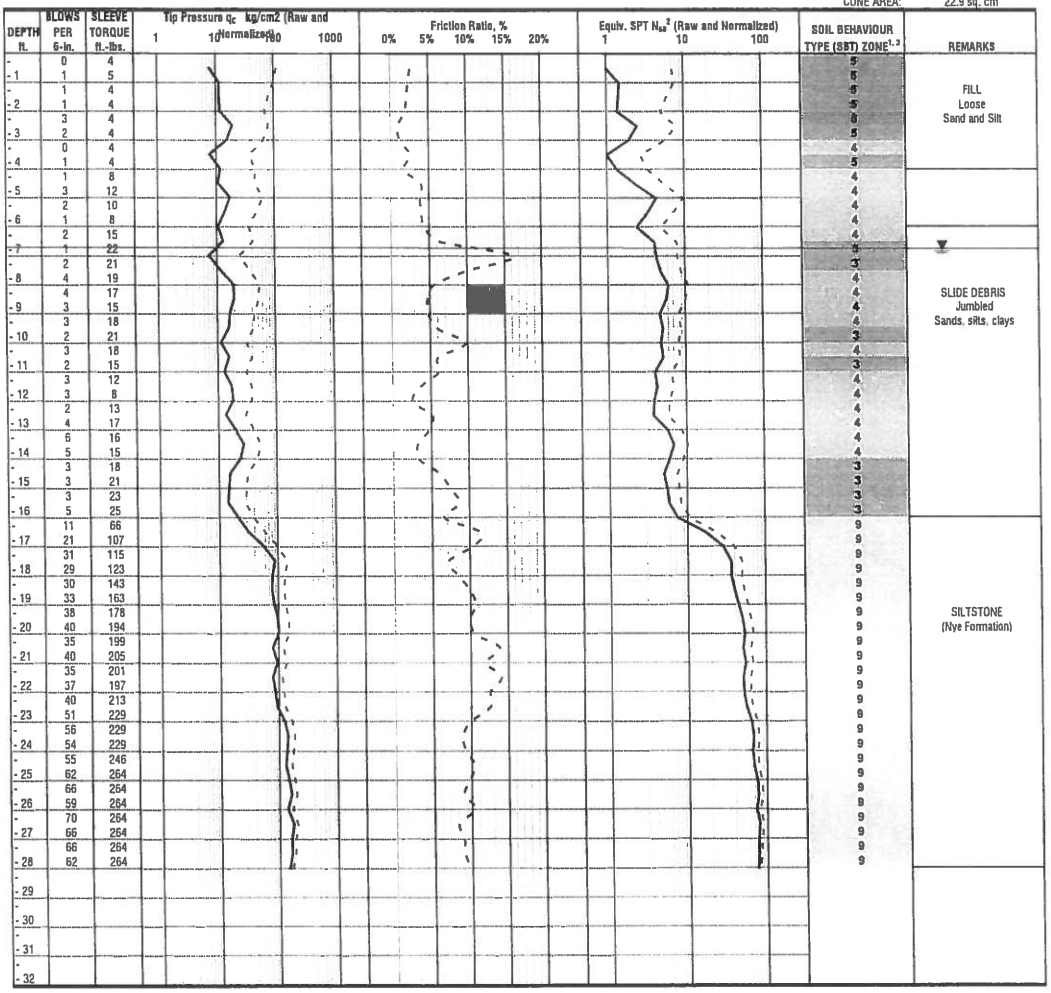
LOG A GNGN03 BORING LOGS SPRING ST 11 13 17.GPJ LOG A GNGN03.GDT 11/27/17

DYNAMIC PROBE LOG
FC-1

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-1
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903, NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER: 17056
DATE STARTED: 11-07-2017
DATE COMPLETED: 11-07-2017
DEPTH COMPLETED (ft): 28.0
SURFACE ELEVATION: 42.6 ft
STATIC WATER DEPTH ON COMPLETION (ft): 6.8
FIRST ENCOUNTERED WATER DEPTH (ft): 6.8
HAMMER WEIGHT: 63.5 kg
CONE AREA: 22.9 sq. cm



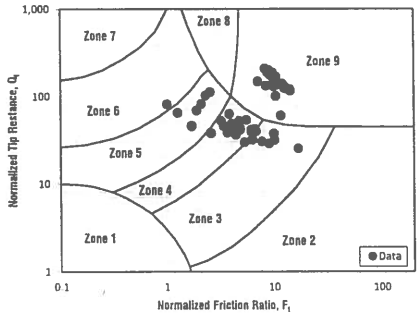
[1]P.K. Robertson, 2010. "Evaluation of flow liquefacton and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6. and P.K. Robertson, 2000. "Soil classification using the cone penetration test," Canadian Geotechnical Journal, 27(1).

[2]John H. Schmertmann, "Statics of SPT", Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering, 6th Edition" Gregg Drilling and Testing, Inc.

Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
	Sensitive, fine grained
	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
	Gravelly sand to dense sand
	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)



DYNAMIC PROBE LOG
FC-2

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-2
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903; NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER: 17056
DATE STARTED: 11-07-2017
DATE COMPLETED: 11-07-2017
DEPTH COMPLETED (ft): 32.0
SURFACE ELEVATION: 55.8 ft
STATIC WATER DEPTH ON COMPLETION (ft): 6.0
FIRST ENCOUNTERED WATER DEPTH (ft): 6.0
HAMMER WEIGHT: 63.5 kg
CONE AREA: 22.9 sq. cm

DEPTH ft.	BLOWS PER 6-in.	SLEEVE TORQUE ft.-lbs.	SOIL BEHAVIOUR TYPE (SBT) ZONE[1,3]	REMARKS
-	0	2		
- 1	0	2		
-	0	2		
- 2	1	2		
-	1	3		
- 3	1	4		
-	1	4		
- 4	1	4		
-	2	6		
- 5	3	8		
-	3	7		
- 6	3	6		Loose SAND
-	5	31	9	
- 7	11	56	9	
-	14	58	9	
- 8	12	59	9	
-	10	83	9	
- 9	19	107	9	
-	23	133	9	
- 10	24	158	9	
-	34	188	9	
- 11	34	217	9	
-	30	199	9	
- 12	33	182	9	
-	36	185	9	
- 13	39	188	9	
-	37	199	9	
- 14	25	211	9	
-	29	217	9	
- 15	40	223	9	
-	36	217	9	
- 16	30	211	9	
-	29	211	9	
- 17	32	211	9	
-	30	211	9	
- 18	28	211	9	
-	29	202	9	
- 19	29	194	9	
-	24	163	9	
- 20	21	131	9	
-	21	131	9	
- 21	19	131	9	SILTSTONE (Nye Formation)
-	15	138	3	
- 22	20	144	9	
-	22	169	9	
- 23	22	194	9	
-	23	199	9	
- 24	26	205	9	
-	23	193	9	
- 25	23	180	9	
-	22	168	9	
- 26	15	155	9	
-	15	165		
- 27	16	174		
-	21	184	4	
- 28	22	194	4	
-	22	183	4	
- 29	20	173	4	
-	20	163	4	
- 30	23	153	9	
-	19	158	4	
- 31	20	164	4	
-	17	170		
- 32	20	176		SILTSTONE (Nye Formation) Weathered Interbeds

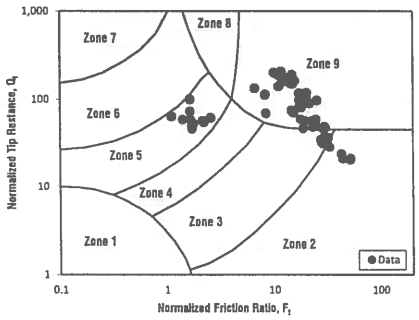
[1]P.K. Robertson, 2010. "Evaluation of flow liquefacton and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6. and P.K. Robertson, 2000. "Soil classification using the cone penetration test." Canadian Geotechnical Journal, 27(1).

[2]John H. Schmertmann. "Statics of SPT". Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering, 6th Edition" Gregg Drilling and Testing, Inc.

Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
	Sensitive, fine grained
	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
	Gravelly sand to dense sand
	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)



DYNAMIC PROBE LOG
FC-3

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-3
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903; NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER: 17056
DATE STARTED: 11-08-2017
DATE COMPLETED: 11-08-2017
DEPTH COMPLETED (ft): 28.0
SURFACE ELEVATION: N/A
STATIC WATER DEPTH ON COMPLETION (ft): 20.8
FIRST ENCOUNTERED WATER DEPTH (ft): 20.8
HAMMER WEIGHT: 63.5 kg
CONE AREA: 22.9 sq. cm

DEPTH ft.	BLOWS PER 6-in.	SLEEVE TORQUE ft.-lbs.	SOIL BEHAVIOUR TYPE (SBT) ZONE[1,3]	REMARKS
0	2	3	5	
1	3	4	5	FILL
1	2	4	5	Gravelly silty-sands
2	2	5	5	
2	1	8	4	Sandy Silts
3	1	11	4	Native Topsoil (?)
3	2	10	4	
4	4	8	5	
4	8	15	5	
5	9	22	5	
5	11	21	5	
6	11	21	5	
6	11	21	5	
7	12	22	5	
7	12	22	5	
8	12	22	5	
8	12	23	5	
9	11	24	5	Terrace Deposits
9	10	20	5	lightly-cemented
10	8	16	5	silts, sands
10	6	15	4	
11	6	15	4	
11	7	24	4	
12	8	33	4	
12	10	30	4	
13	9	27	4	
13	10	27	4	
14	9	27	4	
14	10	28	4	
15	11	29	4	
15	13	38	4	
16	14	46	4	
16	14	52	4	
17	17	58	4	
17	17	54	6	
18	15	50	4	
18	12	49	4	
19	13	49	4	
19	11	45	4	
20	11	41	3	
20	10	46	4	
21	12	50	3	
21	10	44	4	
22	12	38	3	
22	11	46	4	
23	7	55	3	
23	6	29	3	
24	14	2	3	
24	12	94	5	
25	28	185	6	SILTSTONE
25	17	184	9	(Nye Formation)
26	20	183	6	
26	23	197	9	
27	24	211	6	
27	22	214	9	
28	21	217	6	
28				
29				
29				
30				
30				
31				
31				
32				

Tip Pressure q_c kg/cm2 (Raw and Normalized): 1, 10, 100, 1000
Friction Ratio, %: 0%, 10%, 20%, 30%, 40%
Equiv. SPT N_{60}[2] (Raw and Normalized): 1, 10, 100

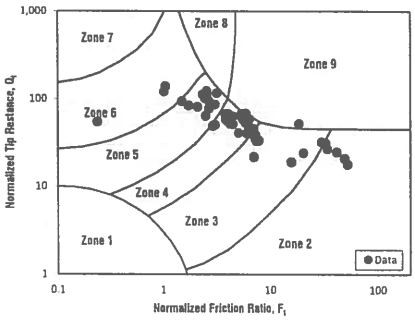
[1]P.K. Robertson, 2010. "Evaluation of flow liquefaction and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6. and P.K. Robertson, 2000. "Soil classification using the cone penetration test." Canadian Geotechnical Journal, 27(1).

[2]John H. Schmertmann, "Statics of SPT". Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering. 6th Edition" Gregg Drilling and Testing, Inc.

Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
	Sensitive, fine grained
	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
	Gravelly sand to dense sand
	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)

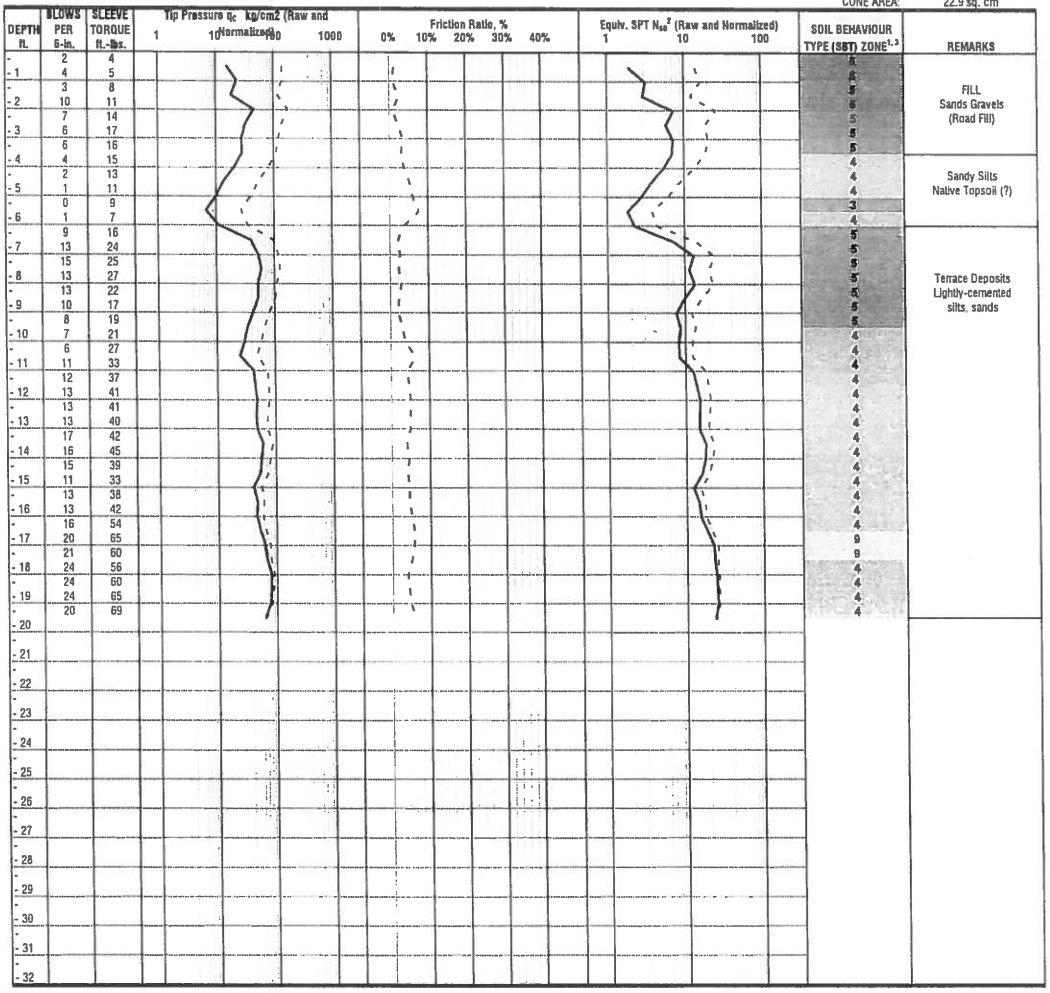


DYNAMIC PROBE LOG
FC-4

K & A Engineering, Inc.
541-684-6966
kaengineers.com

HOLE #: FC-4
CREW: K & A Engineering, Inc.
PROJECT: Proposed Residential Development
ADDRESS: Tax Lots 1900 & 1903; NW Spring Street
LOCATION: Newport, OR

PROJECT NUMBER: 17056
DATE STARTED: 11-08-2017
DATE COMPLETED: 11-08-2017
DEPTH COMPLETED (ft): 19.5
SURFACE ELEVATION: 72.0 ft
STATIC WATER DEPTH ON COMPLETION (ft): None Observed
FIRST ENCOUNTERED WATER DEPTH (ft): None Observed
HAMMER WEIGHT: 63.5 kg
CONE AREA: 22.9 sq. cm



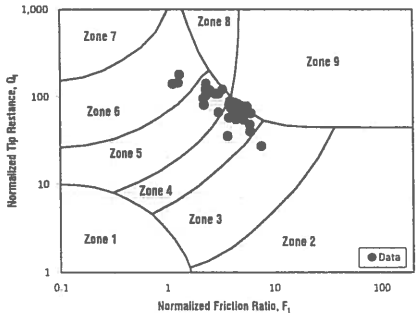
[1]P.K. Robertson, 2010. "Evaluation of flow liquefaction and liquefied strength using Cone Penetration Test." ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol 136, No. 6. and P.K. Robertson, 2000. "Soil classification using the cone penetration test." Canadian Geotechnical Journal, 27(1).

[2]John H. Schmertmann, "Statics of SPT", Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. May 1979.

[3]P.K. Robertson, K.L. Cabal (Robertson), 2015. "Guide to Cone Penetration Testing for Geotechnical Engineering, 6th Edition" Gregg Drilling and Testing, Inc.

Note: Dashed lines show tip pressure and N normalized for overburden pressure

Zone	Soil Behaviour Type (SBT) Description
1	Sensitive, fine grained
2	Organic soils - clay
3	Clays - silty-clay to clay
4	Silt Mixtures - clayey-silt to silty-clay
5	Sand Mixtures - silty-sand to sandy-silt
6	Sands - clean sand to silty-sand
7	Gravelly sand to dense sand
8	Very stiff sand to clayey sand
9	Fine grained (weak rock, cemented, relic structure)



Appendix C

Slope Stability Analysis

Geotechnical Engineering Report
Proposed Residential Development
Tax Lots 1900 and 1903
Tax Map 11-01-05-BC
NW Spring Street
Newport, Oregon
Project: 17056
November 30, 2017

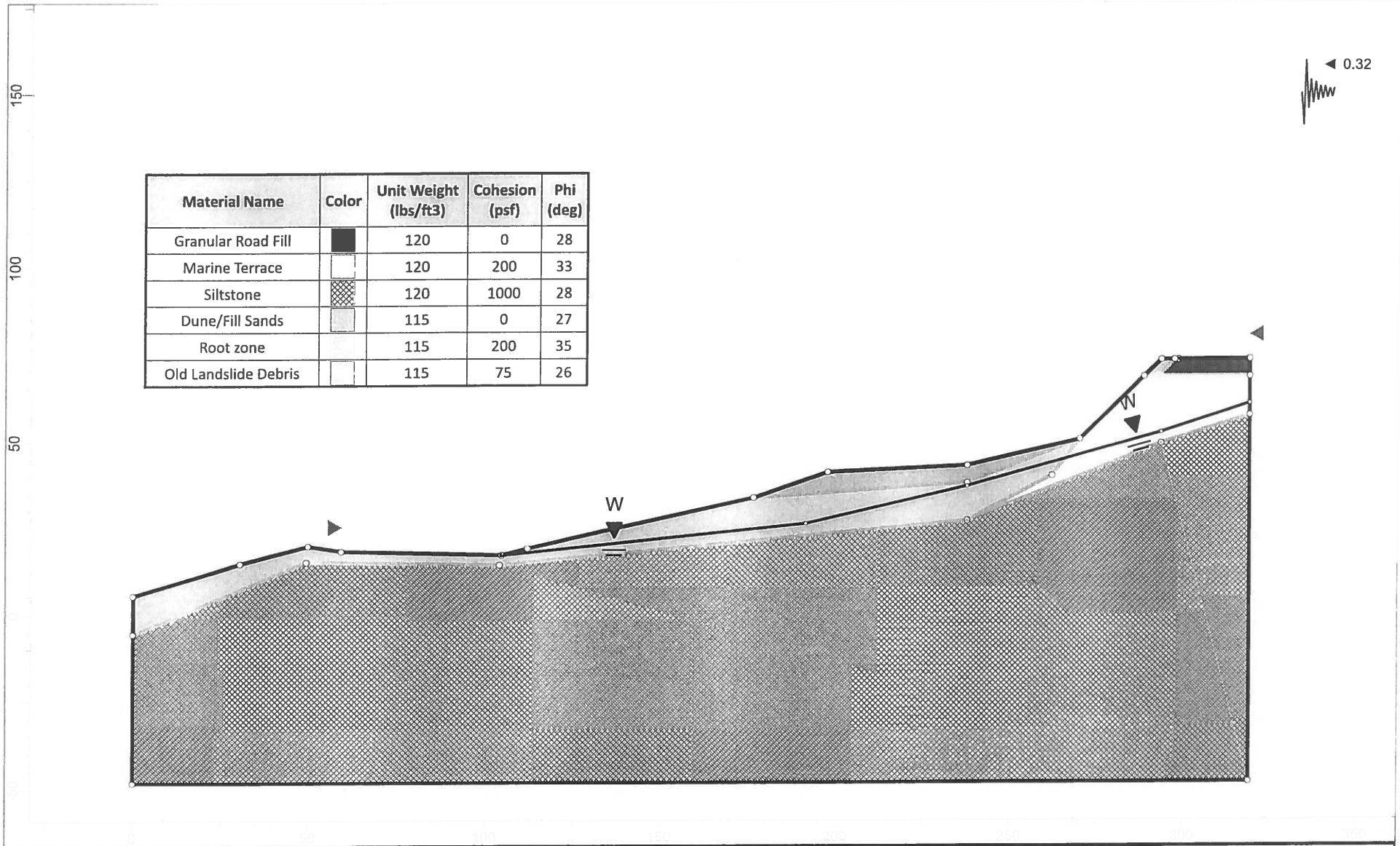
Prepared for:

Bill Lund
P.O. Box 22
Seal Rock, OR 97376

Prepared by:

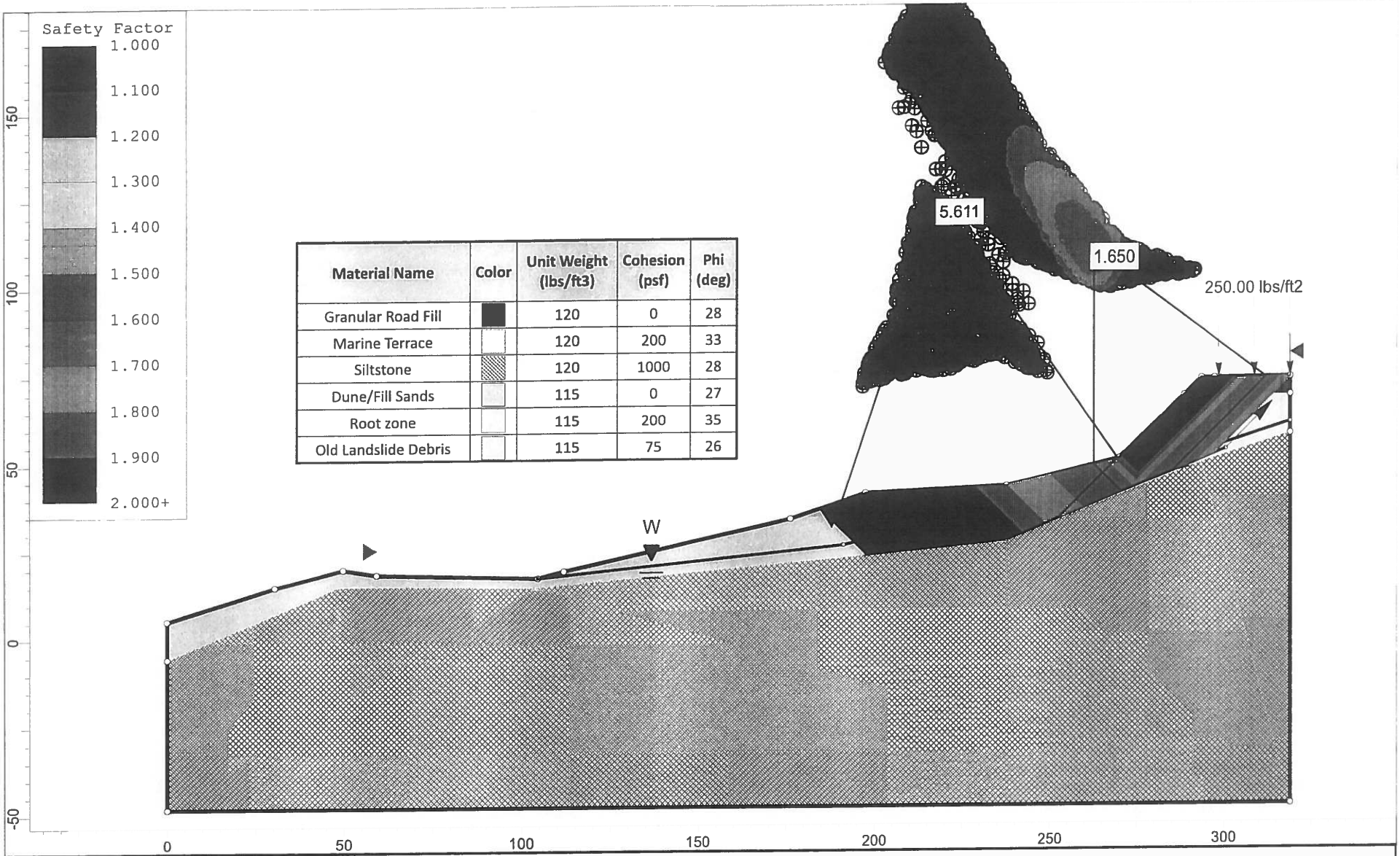
Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.
Coburg, Oregon

Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26



Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	North Cross Section Subsurface Soil Profile		
Drawn By		Scale 1:455	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim

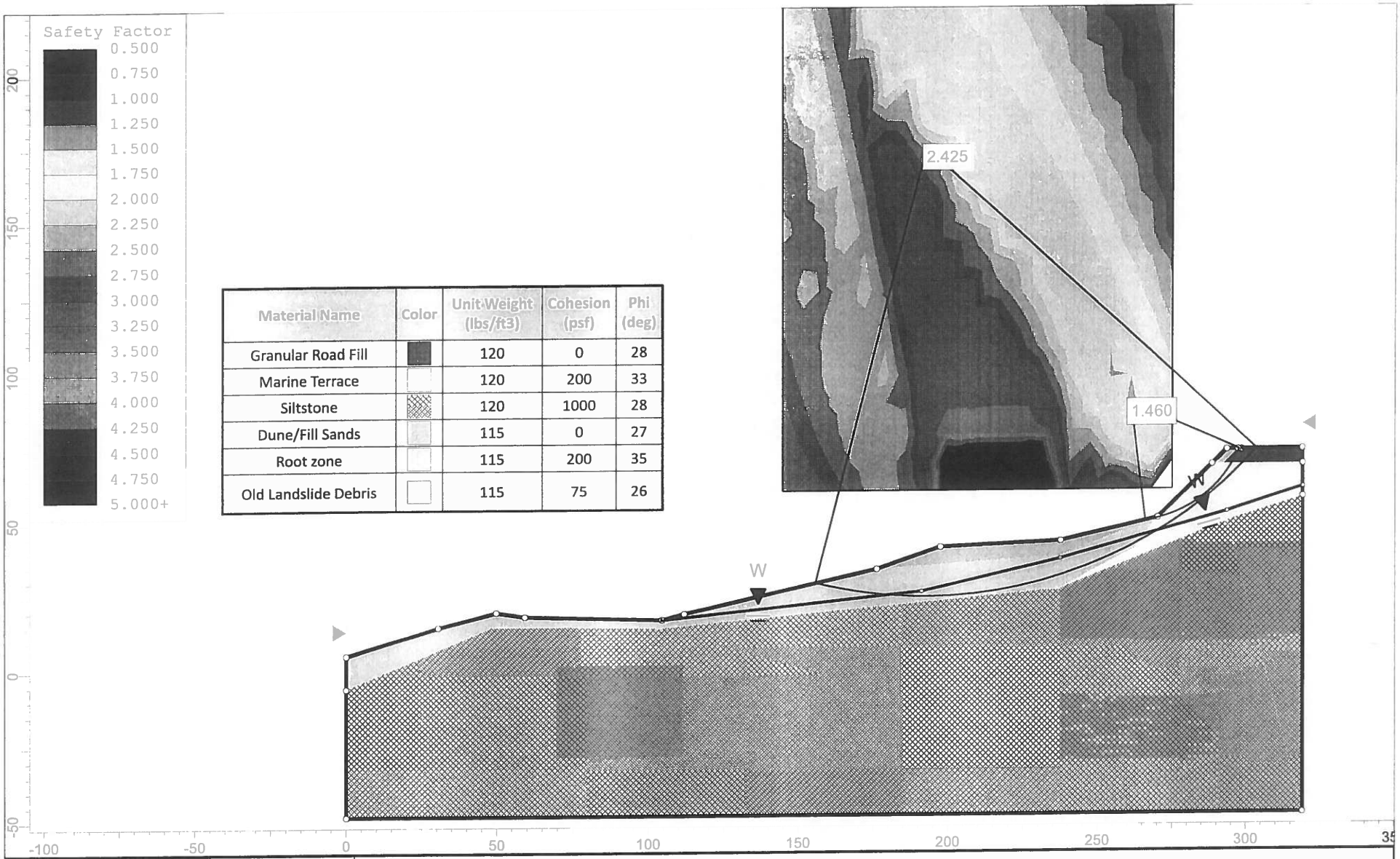
SLIDE 6.039



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039

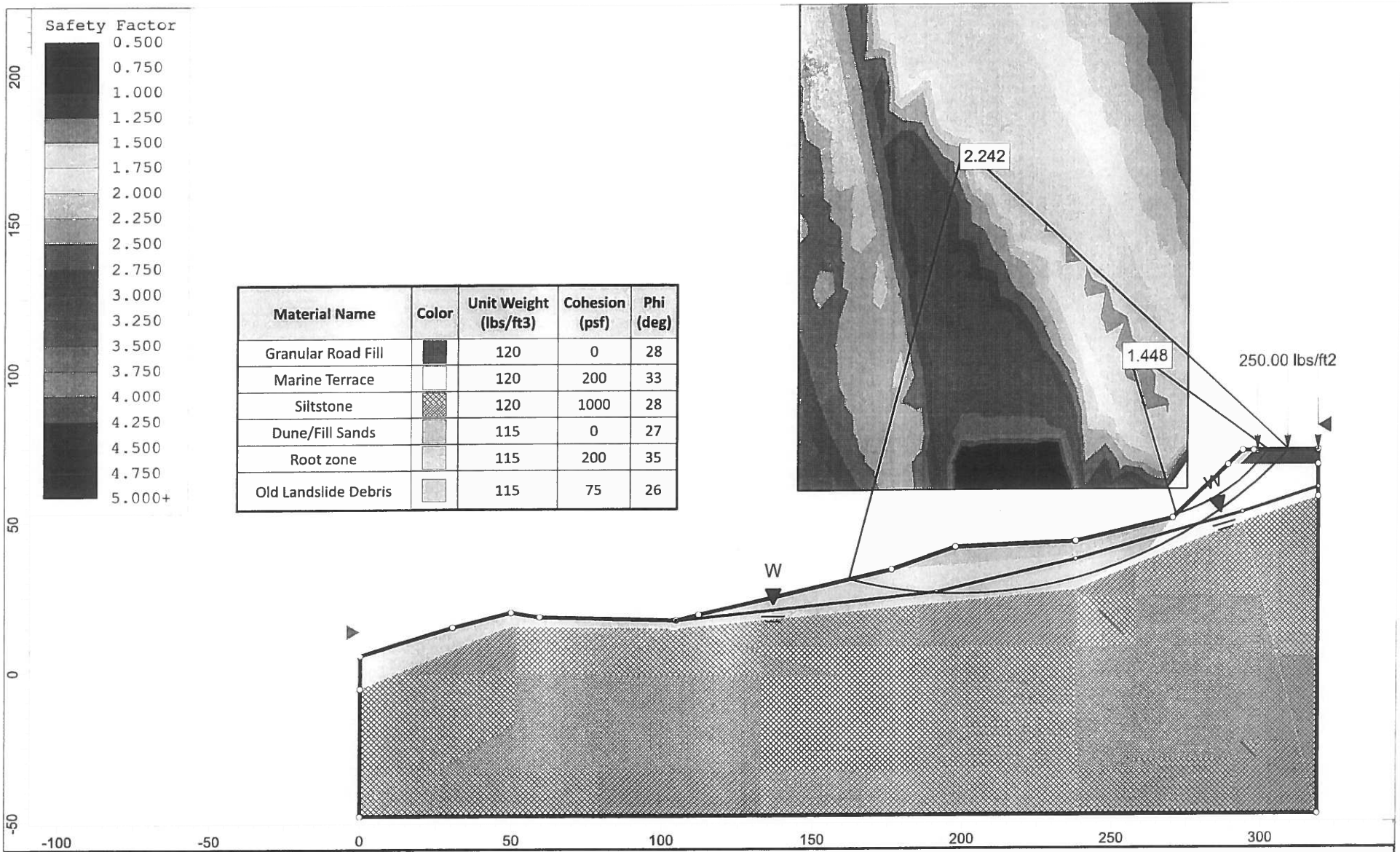
Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Block Failure on Underlying Siltstone		
Drawn By		Scale 1:452	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039 k·a engineering

Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Circular Failure in Old Slide Debris - No Earthquake or Traffic Load		
Drawn By		Scale 1:530	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim

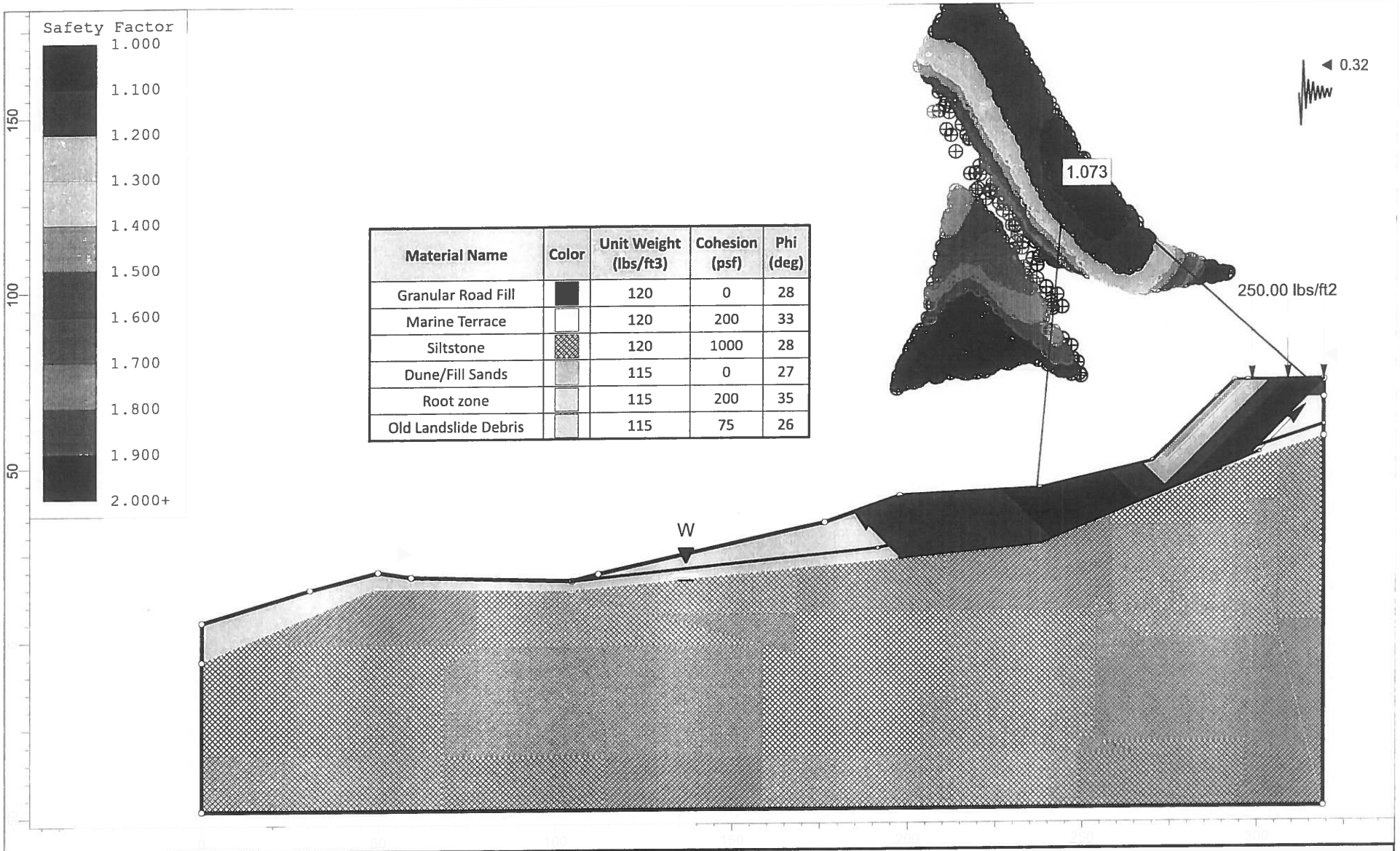


Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039

k·a engineering

Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Circular Failure in Old Slide Debris - No Earthquake Traffic Surcharge		
Drawn By		Scale 1:530	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim

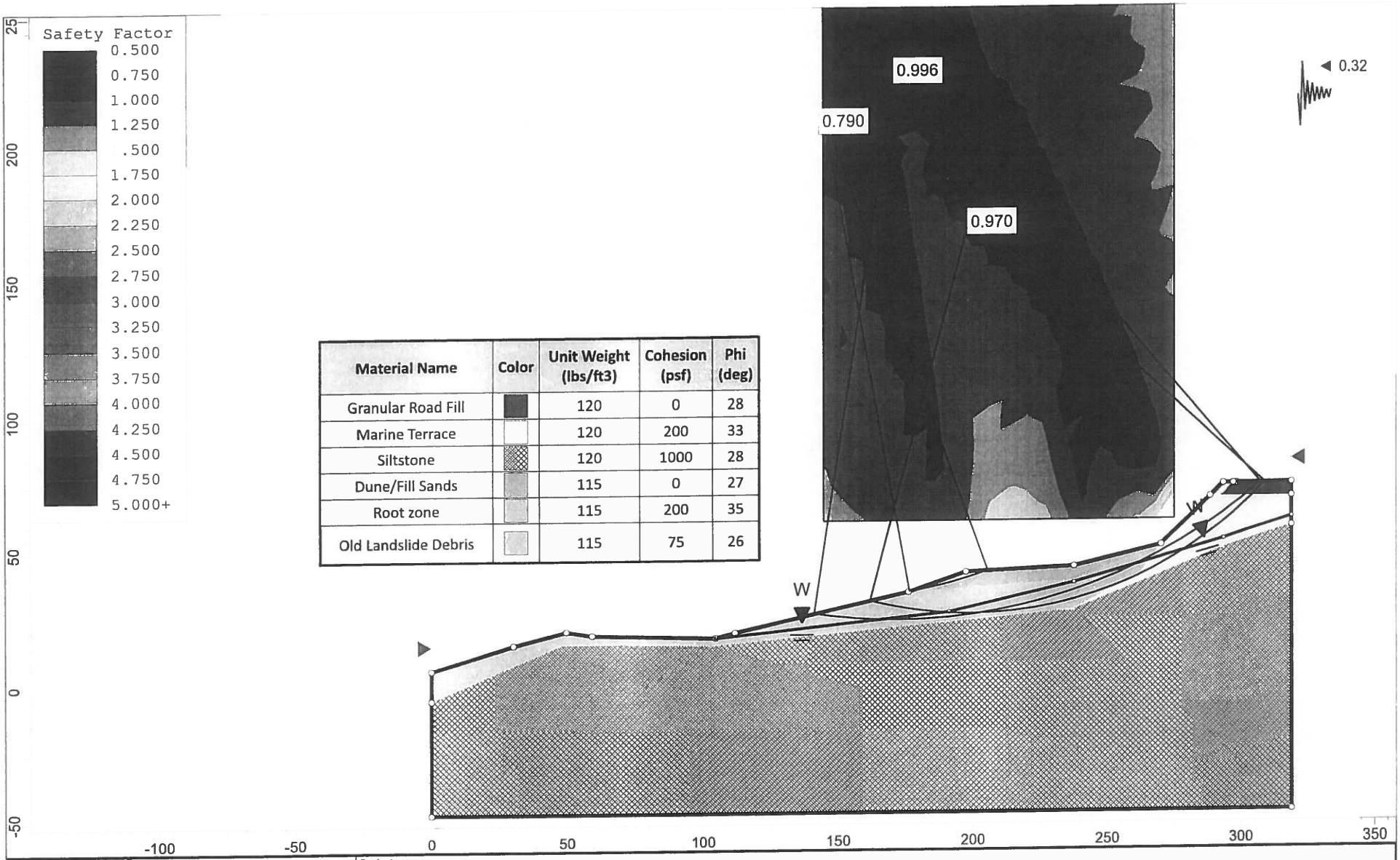


Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

SLIDEINTERPRET 6.039

k·a engineering

Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Block Failure on Underlying Siltstone		
Drawn By		Scale 1:452	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim



Material Name	Color	Unit Weight (lbs/ft3)	Cohesion (psf)	Phi (deg)
Granular Road Fill		120	0	28
Marine Terrace		120	200	33
Siltstone		120	1000	28
Dune/Fill Sands		115	0	27
Root zone		115	200	35
Old Landslide Debris		115	75	26

ka engineering

SLIDEINTERPRET 6.039

Project	Tax Lots 1900, 1903 NW Spring St., Newport, Oregon		
Analysis Description	Circular Failure in Old Slide Debris - With Earthquake Load 32%g		
Drawn By		Scale 1:588	Company
Date	11/28/2017, 2:05:02 PM		File Name North Cross Section 11 28 17.slim

Appendix D

Reference Reports

- USGS Earthquake Deaggregation
- USGS Seismic Design Summary Report
- Geologic Hazard Assessment – Gary C. Sandstrom, PEG
- H.G. Schlicker Report

Geotechnical Engineering Report

Proposed Residential Development

Tax Lots 1900 and 1903

Tax Map 11-01-05-BC

NW Spring Street

Newport, Oregon

Project: 17056

November 30, 2017

Prepared for:

Bill Lund

P.O. Box 22

Seal Rock, OR 97376

Prepared by:

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K & A Engineering, Inc.

Coburg, Oregon

U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

^ Input

Edition

Dynamic: Conterminous U.S. 2014 (v4.1.

Spectral Period

Peak ground acceleration

Latitude

Decimal degrees

44.643

Time Horizon

Return period in years

475

Longitude

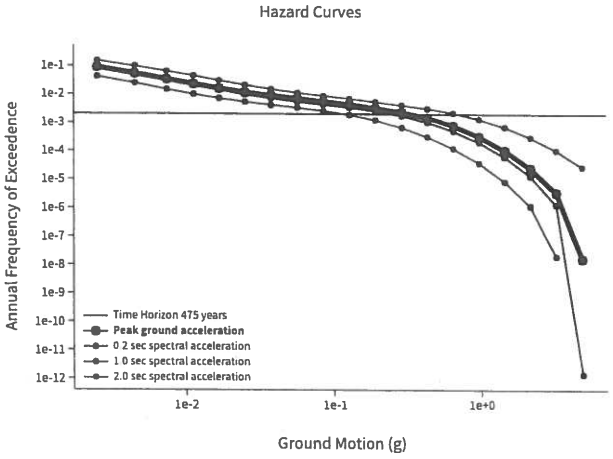
Decimal degrees, negative values for western longitudes

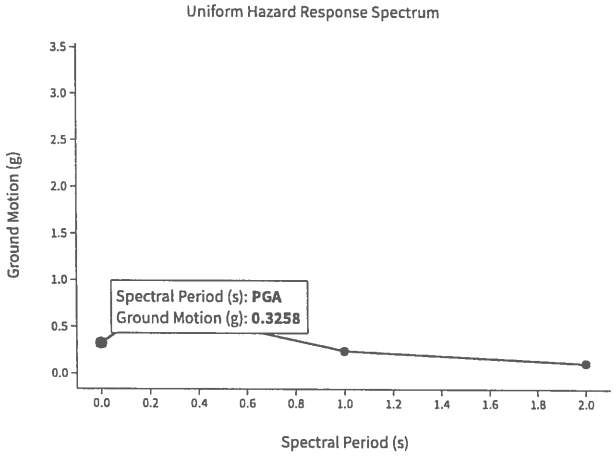
-124.061

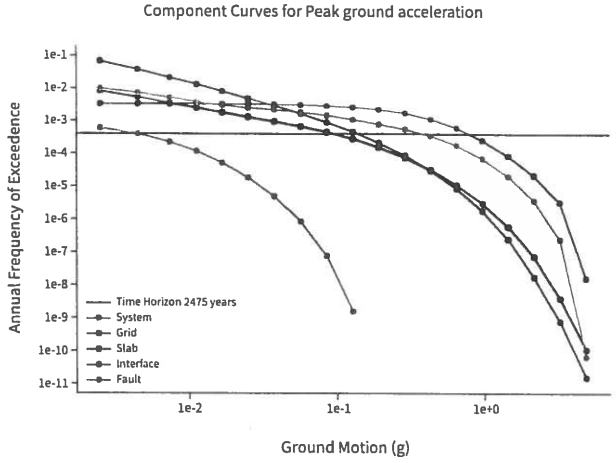
Site Class

760 m/s (B/C boundary)

Hazard Curve





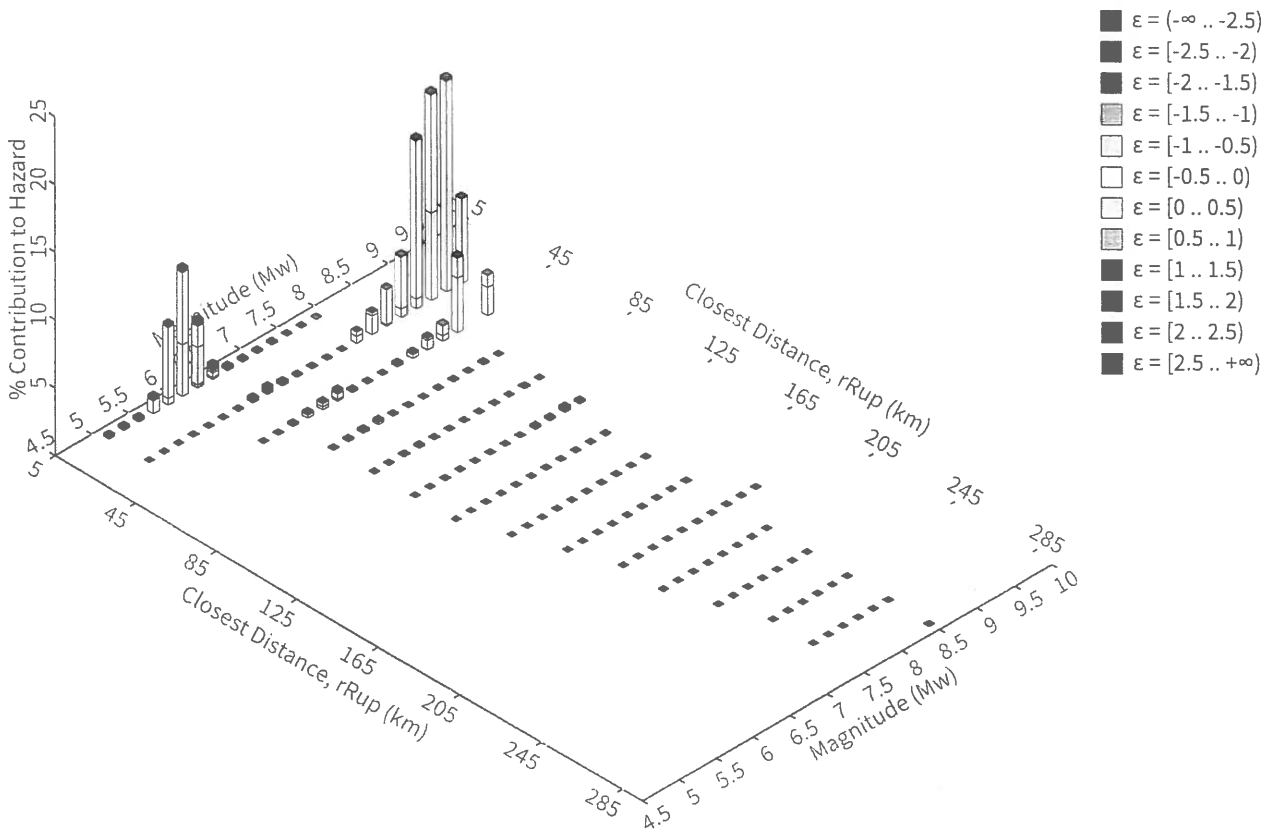


View Raw Data

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 475 yrs
Exceedance rate: 0.0021052632 yr^{-1}
PGA ground motion: 0.32577875 g

Recovered targets

Return period: 468.32514 yrs
Exceedance rate: 0.0021352687 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.63 %

Mean (for all sources)

r: 26.24 km
m: 8.09
ε₀: -0.26 σ

Mode (largest r-m bin)

r: 28.86 km
m: 9.08
ε₀: -0.54 σ
Contribution: 15.77 %

Mode (largest ε₀ bin)

r: 28.86 km
m: 9.08
ε₀: -0.57 σ
Contribution: 15.54 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

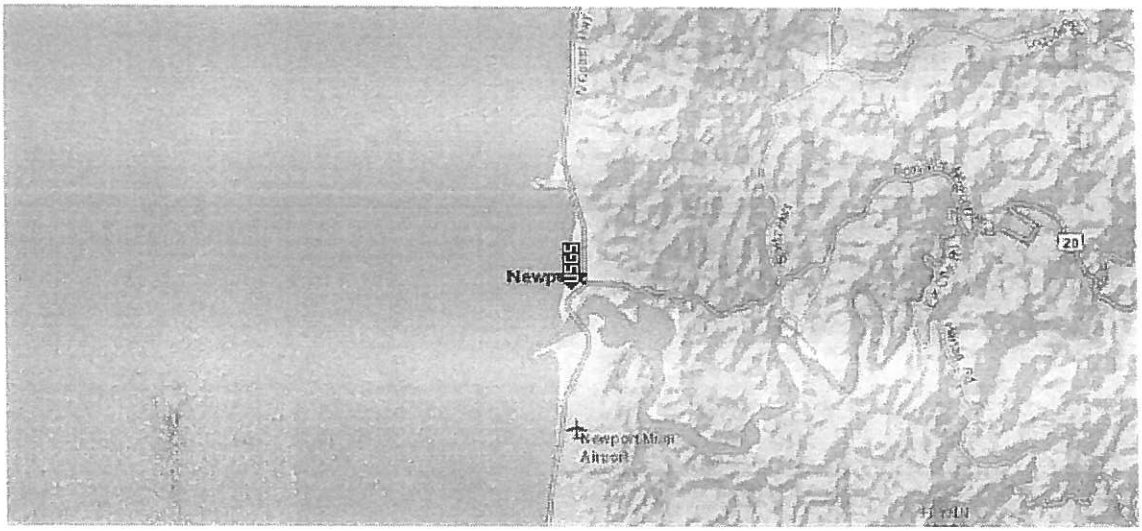
Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
sub0_ch_mid.in Cascadia Megathrust - whole CSZ Characteristic	Interface	31.26	8.88	-0.39	124.356°W	44.742°N	295.43	26.74 26.74
Geologic Model Small Mag Yaquina	Fault	2.04	6.10	-0.47	124.033°W	44.632°N	119.19	21.18 20.77
sub0_ch_bot.in Cascadia Megathrust - whole CSZ Characteristic	Interface	25.25	9.07	-0.64	123.734°W	44.757°N	63.80	18.13 18.13
sub0_ch_top.in Cascadia Megathrust - whole CSZ Characteristic	Interface	43.58	8.79	-0.01	124.567°W	44.738°N	284.99	8.20 8.20
sub2_ch_mid.in Cascadia Megathrust - Goldfinger Case C Characteristic	Interface	31.04	8.45	-0.21	124.356°W	44.742°N	295.43	2.96 2.96
coastalOR_deep.in	Slab							2.30
sub2_ch_bot.in Cascadia Megathrust - Goldfinger Case C Characteristic	Interface	25.15	8.71	-0.50	123.734°W	44.757°N	63.80	2.11 2.11
sub1_GRb0_mid.in Cascadia floater over southern zone - Goldfinger Case B	Interface	34.43	8.43	-0.11	124.356°W	44.742°N	295.43	1.92 1.92
sub1_GRb1_mid.in Cascadia floater over southern zone - Goldfinger Case B	Interface	35.08	8.31	-0.05	124.356°W	44.742°N	295.43	1.61 1.61
sub1_ch_mid.in Cascadia Megathrust - Goldfinger Case B Characteristic	Interface	31.05	8.59	-0.26	124.356°W	44.742°N	295.43	1.37 1.37
sub1_GRb0_bot.in Cascadia floater over southern zone - Goldfinger Case B	Interface	28.75	8.42	-0.30	123.734°W	44.757°N	63.80	1.30 1.30
sub1_GRb1_bot.in Cascadia floater over southern zone - Goldfinger Case B	Interface	29.40	8.30	-0.24	123.734°W	44.757°N	63.80	1.10 1.10

USGS Design Maps Summary Report

User-Specified Input

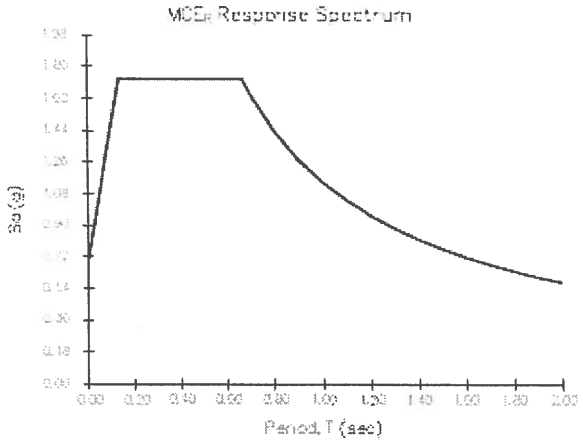
Report Title	Lund Project - NW Spring St., Newport, Oregon Wed November 29, 2017 01:07:38 UTC
Building Code Reference Document	ASCE 7-10 Standard (which utilizes USGS hazard data available in 2008)
Site Coordinates	44.64312°N, 124.06075°W
Site Soil Classification	Site Class D – "Stiff Soil"
Risk Category	I/II/III

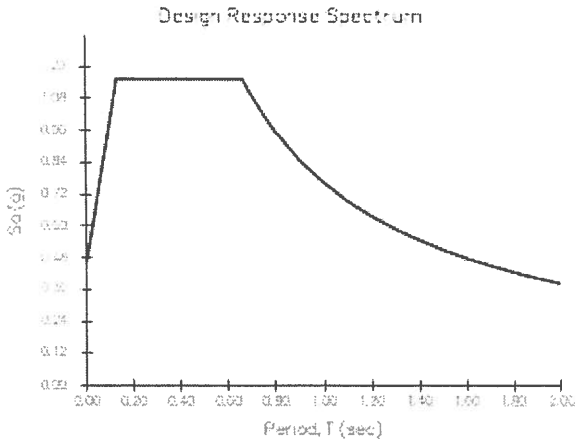


USGS-Provided Output

S_S =	1.729 g	S_{MS} =	1.729 g	S_{DS} =	1.153 g
S_1 =	0.765 g	S_{M1} =	1.148 g	S_{D1} =	0.765 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.





For PGA_M, T_L, C_{RS}, and C_{R1} values, please view the detailed report.

1.0 Introduction

At the request of Robert Lund, Gary C. Sandstrom, Geologist, LLC, working with K&A Engineering Inc., of Coburg, Oregon, observed site conditions at Lots 1800, 1900 and 1903 immediately north of 1245 NW Spring St., Newport, Oregon, 97365. The site is situated in a geologic hazard zone defined by the City of Newport and Lincoln County and this report has been prepared to assess geologic hazard conditions relevant to the proposed purchase and development of the property.

2.0 Scope of Work

A site visit and geologic reconnaissance of surface features was conducted on October 10, 2017. A follow-up visit November 7-8, 2017 included geotechnical borings and additional site reconnaissance plus excavation of 3 hand auger borings and a hand-dug test pit to further characterize the site. In addition, the following literature and internet sources were reviewed:

- Google Maps, http://maps.google.com/maps
- Google Earth, earth.google.com
- USGS, http://store.usgs.gov, 1984 and 2014 Newport North Topographic Quadrangle maps from US Dept. of Interior, Geological Survey
- ORMAP GIS, http://www.ormap.org Oregon Map website listing tax lot numbers
- Lincoln County Assessor's Maps, tax maps and site surveys, www.co.lincoln.or.us
- H.G. Schlicker & Associates, Inc., *Geologic Reconnaissance of Lots 1, 2, 3, 4, 5, Block 37, NW Spring St, Newport, Oregon,* August, 1991
- Schlicker, H.G., Olcott, G.W., Beaulieu, J.D. and Deacon, R.J., *Environmental Geology of Lincoln County, Oregon,* State of Oregon, DOGAMI, Bulletin 81, 1973
- Snavely, P.D., MacLeod, N.S., Wagner, H.C. and Rau, W.W., *Geologic Map of the Yaquina and Toledo Quadrangles, Lincoln County, Oregon,* US Dept. of the Interior, Geological Survey, Misc. Investigation I-867, 1976
- Snavely, P.D., MacLeod, N.S. and Wagner, H.C., *Preliminary Bedrock Geologic Map of the Yaquina and Toledo Quadrangles, Lincoln County, Oregon,* US Dept. of the Interior, Geological Survey, Open File Report 72-352, 1972
- Priest, G.R. and Allan, J.C., *Evaluation of Coastal Erosion Hazard Zones Along Dune and Bluff-Backed Shorelines in Lincoln County, Oregon: Cascade Head to Seal Rock Technical Report to Lincoln County*; State of Oregon, DOGAMI, Open File Report O-04-09, 2004
- *Tsunami Inundation Map for Newport North, Linc-06,* State of Oregon, DOGAMI, TIM Linc-06, 2013

- State of Oregon, DOGAMI, (HazVu), http://oregongeology.org/sub/hazvu/index
- State of Oregon, DOGAMI, Statewide Landslide Inventory for Oregon (SLIDO), http://www.oregongeology.org/projects/slido/slido-map
- State of Oregon, DOGAMI, (LIDAR), http://oregongeology.org/sub/lidardataviewer/index
- State of Oregon, *Cascadia Magazine,* Cascadia EQ Time Line, DOGAMI, Winter 2010

This report was written to summarize the investigations. Geotechnical site explorations were conducted by K&A Engineering Inc.

3.0 Project Location and Description

The vacant subject property is situated on the bluff above the Pacific Ocean on the west side of NW Spring Street south of NW 14th Avenue in Newport, Oregon approximately ¾ mile north-northwest of the junction of US Highway 101 and US Highway 20, and a mile and a half north of the US 101 Yaquina River Bridge (see Google Earth Location Map and USGS 1984 and 2014 Newport Topographic Quadrangle Maps). The property (see the ORMAP and Lincoln County Photo tax maps and plat tax map) is listed as tax lots 1800 (104), 1903 (Parcels 4 and 5 of Ocean View Block 37) and 1900 (Parcels 2 & 3 and the northern half of Parcel 1, Block 37) in T11S, R11W, Section 5 SW ¼ of NW ¼. Combined Lots 1900 and 1903 are rectangular lots bounded on the east by NW Spring Street and measure approximately 303 feet north-south and 125 feet east-west. Lot 1800 is situated immediately north of Lot 1903 and measures 60 feet north-south and extends approximately 215-245 feet west from NW Spring Street to the vegetation line, and appears to be the abandoned right-of-way for NW 14th Avenue. The north-neighboring lot 1802 at 1409 NW Spring Street is occupied by a single-family residence, as are the lots on the east side of NW Spring Street opposite Lots 1900 and 1903. South-neighboring Lot 4400 is owned by the City of Newport, as is the NW 13th Avenue right-of-way south of Lot 4400 which extends to the vegetation line approximately 350 feet west of NW Spring Street. The City of Newport also owns parcel 1902 west of Lots 1900 and 1903, and all the adjoining City of Newport parcels are vacant. Single family residences (including the southern neighbor at 1245 NW Spring Avenue) are situated on the parcels west of NW Spring Street and south of the 13th Avenue right-of-way.

The eastern boundary of the heavily-vegetated subject parcel generally coincides with a landslide scarp ranging up to 10 to 15 feet high along the west margin of the NW Spring Street right-of-way. The slopes at the base of the scarp appear to have been cut and benched during construction of an access road at some point during site development, and the base of the scarp/cut-bank has been buttressed with basalt cobble fill in places. Moderate, generally hummocky, irregular slopes lead down to the beach. The vegetation line is approximately 250 west of NW Spring Street at the north end of the subject site and approximately 300 feet west at the south end. A generally SE-NW trending drainage channel traverses the site from the approximate midpoint of the southern boundary to the beach sand/vegetation line near the northwest corner. Site elevation ranges from approximately 93 feet at the southeast corner to 20 feet at the sand line near the northwest corner. The northeast site corner is approximately 85 feet and the southwest corner is approximately 65 feet. Several footpaths traverse the site and several primitive campsites were observed in the vicinity.

4.0 Geologic Setting

The slopes underlying the project site are classified in the geologic literature as Quaternary (less than 2.8 million years before present) Marine Terrace deposits overlying early Miocene (16.5-23.0 million years before present) Nye Mudstone (see DOGAMI Bulletin 81-3, OFR-O-04-09, USGS-OF-72-352-1 and USGS I-867 geologic maps). The Marine Terrace deposits are described in B-81 as up to 75 feet (in Lincoln County) of semi-consolidated uplifted beach sand overlain locally by fine-grained dune deposits, with occasional localized gravel lenses. Terrace deposits are described in O-04-09 as unconsolidated to moderately consolidated gravel, beach and dune sand; locally containing minor consolidated clay-rich paleosols, colluvium, debris flows, and alluvial interbeds; to thin-bedded sandstone, conglomerate, and tuffaceous siltstone with thick glauconitic sandstone beds; sandstone is fine- to coarse-grained and shows crossbedding, fore-set bedding, and scour and fill structures.
DOGAMI B-81 maps early Miocene (approximately 16.5-23 million years old) Nye Mudstone deposits at the base of the bluffs at the head of the beach west of the subject site and USGS OF-72-352-1 maps Nye Mudstone underlying the Marine Terrace deposits in much of the site vicinity. Nye Mudstone deposits are described as massive to thick-bedded, gray, clayey marine siltstone and very fine-grained sandstone containing sandstone interbeds near the base and calcareous concretions in places. Middle Miocene (10.4-16.5 million years old) Astoria Formation deposits are mapped overlying the Nye Mudstone a short distance to the south and in the wave zone west of the site. Nye Mudstone dips in the site vicinity are mapped at generally 11 to 15 degrees to the west to southwest and Astoria Formation deposits are mapped at 23 degrees to the west a few hundred feet to the south at Jumpoff Joe.
The USDA National Resource Conservation Service Pacific Northwest Soils website classifies the soils underlying the site as Urban land-Bandon complex on 12 to 50% slopes to the west, described as colluvium derived from sedimentary rock. No further information is provided on the NRCS website.

5.0 Geologic Hazard Mapping

DOGAMI O-04-09 and the HazVu website map active landslides underlying the subject site. The DOGAMI HazVu website maps two landslides underlying the site, the first is a Quaternary (sometime in the last 2.8 million years) landslide extending from about NW 12th Street on the south northward past NW 22nd Street and eastward to the intersection of NW 15th Street and NW Thompson Street. An active slide is mapped extending generally along the west side of NW Spring Street between NW 14th Street and NW 11th Street and corresponds to the scarp observed on the eastern margin of the subject site. The landslide hazard rating of the subject site is very high due to underlying landslides.
The DOGAMI HazVu website maps an ENE-WSW trending active fault approximately 1.5 miles southeast of the subject site and rates the site vicinity susceptible to severe shaking in the event of both Cascadia subduction zone earthquakes and lesser earthquakes. The majority of the site is situated above the statutory tsunami inundation line (at 30 feet elevation). The western margin of lot 1800 near the vegetation line is below the inundation line, but the homesites proposed for that lot are above the line. DOGAMI's Tsunami Inundation Map Linc-06 shows inundation scenarios for earthquakes of several different magnitudes, including a Cascadia Subduction Zone earthquake which could reach an elevation of approximately 80 feet, past the eastern property line. The site vicinity is classified by HazVu as at low risk of liquefaction in the event of earthquakes and the Flood Hazard zone for ocean flooding extends into the western margin of Lot 1800, but not the proposed homesite vicinity. The HazVu Coastal Erosion Hazard map, based on O-04-09 and not intended to be site-specific, maps almost the

entire subject site as an active erosion zone; the southern end of the eastern margin adjacent to NW Spring Street is classified at high hazard (high probability being affected by active erosion in the next 60-100 years). The attached OFR-04-09 Dune and Bluff Erosion Hazard diagrams are a pictorial explanation of the erosional hazard zones. The site vicinity is estimated (O-04-09) to be subsiding relative to sea level at a rate of approximately one and a half millimeters a year.

6.0 Previous Site Study

A geologic site reconnaissance was performed by H.G. Schlicker & Associates in 1991 to evaluate site geology. The report has these observations: "A prominent head scarp is present adjacent to Spring Street between 13th Street and 14th Street encompassing the eastern parts of lot 1 through 5, Block 37 (Lots 1900 and 1903). The slide debris appears to have moved towards the ocean as a unit and a major slide mass lies between the subject property and the beach. It is highly broken and distorted from sliding and is being eroded by the ocean waves and driving rains. The landslide, as it now exists, rests on a nearly level surface and is not capable of further sliding. Rather it acts as a buttress to the toe of the subject property. Small local slumps can occur along the face of the bluff. The east part of lots 3, 4 and 5, Block 37 slope moderately steeply. The slope is probably overlain by a thin (layer of) slide debris or other material which may be capable of slope movement unless toe support is provided." Schlicker's summary and conclusions: "The site is underlain by Coastal Terrace deposits, Nye Mudstone and possibly some Astoria rocks. The thickness of the overlying material is unknown but is believed to be a relatively thin deposit of landslide debris. Thick landslide debris, distorted Coastal Terrace and Nye form lie between the site and the beach. The bowl-shaped area present just east of Spring Street is an older landslide that has apparently been stable for many years. The area west of Spring Street probably moved initially prior to the Jump Off Joe landslide that began about 1942 and continued until recently. Movement in the vicinity of the site is limited to small local slumps since the driving force is no longer present to activate a large slide. Foundation conditions at the site depend upon the thickness of the debris and the character of the sediments to depths which might effect settlement or cause slope instability." A geotechnical site study was recommended.

7.0 Soils Observed

Soils observed on the site surface consisted generally of sandy silt topsoil with organics ranging to fine-grained sand consistent with classification as Marine Terrace Deposits. Exposures of Nye Mudstone were observed west of the subject site near the vegetation line and also in shallow explorations along the access road at the base of the scarp along the eastern site margin. Geotechnical borings on the subject site by K&A Engineering also encountered interpreted Marine Terrace deposits overlying Nye Mudstone. Angular basalt cobbles (two feet deep in the first hand-auger boring) were observed in places along the upper edge of the access road at the base of the scarp and are interpreted as fill placed to buttress the base of the scarp prior to current site explorations. Soils observed west of the subject site consisted generally of relatively loose fine-grained sand interpreted as disturbed Marine Terrace deposits weathered to or covered by dune sand. Nye Mudstone was observed near the vegetation line as mentioned above, and rock exposures were sighted in the surf zone corresponding to exposures of Astoria Formation materials mapped in the literature.

Three hand-auger borings were excavated on November 7, 2017 (see Boring Logs and Site Plan) on the upper shoulder of the access road near the base of the scarp along the eastern site margin to characterize soils in the vicinity, encountering residual siltstone at one location. A test pit was excavated with a

mattock in the access road near observed siltstone fragments and a seep, and encountered wet, light gray, gravelly sand overlying weathered siltstone. Mr. Lund reported siltstone was encountered in places during clearing of the access road at the base of the scarp.
Materials observed are consistent with descriptions in the geologic literature.

6.0 Drainage and Groundwater

A spring is mapped (USGS 2014 Newport North Topographic Quadrangle Map) in Lot 1903 and was observed on the access road during the reconnaissance. A hand-dug test at the location uncovered the contact between the Marine Terrace deposits and underlying Nye Mudstone at a depth of approximately a foot and a half below the surface. The resulting creek flows generally northwestward and onto the beach west of the NW 14th Street right-of-way.
A footpath leads from the City of Newport right-of-way south of the subject parcel along a generally north-northwest trending swale that traverses the vicinity west of the subject parcel, but no flowing water was observed and none is mapped, so the feature may be more a relict of landsliding than a watercourse.
A drain line from the southern neighboring residence leads down to the beach and has been disconnected and utilized as a water source by people camping in the vicinity. The channel below the disconnected line shows evidence of relatively rapid erosion.
A surface run-off collector grate was observed on the west shoulder of NW Spring Street south of the subject parcel and a one-foot diameter corrugated metal pipe discharges onto the steeper slopes below the scarp west of the grate. Other collection grates were observed near the intersection of NW Spring Street and NW 14th Street, but the discharge locations were not found. A section of loose concrete pipe about 2-3 feet long was observed sitting on the ground surface on the trail at the base of the scarp below the northern drains. Flow from the drains likely combines with flow from the spring in the drainage mapped by USGS.

7.0 Geohazard Inspection

Geohazard site inspections were performed on October 10, 2017 and November 7, 2017 (see Recon Photos, Site Plan and Cross Section). These included traversing the subject site and site vicinity where accessible observing conditions for evidence of instability. The eastern margin of the subject site generally coincides with a heavily-vegetated, 10-15 feet high landslide head-scarp situated a few feet west of the NW Spring Street right-of-way that is also obscured by piles of brushy landscaping debris likely from neighboring sites. Slopes to the east of the subject parcel are relatively gentle and underlain by Marine Terrace sand deposits. No curbs are present in the site vicinity and pavement runoff generally infiltrates into the sandy soil on the road shoulders. Several utility boxes/vaults on the east side of Spring Street appear to have settled, and a mailbox on the west side appears to be leaning as a result of soil creep. As mentioned above, stormwater collection inlet grates were observed in the pavement near the north and south ends of the subject site and the outfall of the southern drain was observed discharging onto the moderately-steep site slopes in the City of Newport right-of-way west of the scarp. The northern drain outfalls were not observed due to heavy vegetation, but the drains are likely discharged in a similar manner onto the slopes to the west. A path down to the beach near the northern drain location goes over a disconnected segment of concrete drain pipe.
An access road was apparently excavated below the scarp at some point during prior site development and was again cleared of vegetation for the present geotechnical investigation. The recent grading activities exposed organics and dark brown sandy silt topsoil grading to tan Marine Terrace sand

deposits at the level of the scarp near the southeast corner access point and residual siltstone soils and weathered siltstone further to the north below the scarp. Siltstone excavation spoils were observed on the roadbed at the same general location as the spring mapped by USGS and observed during the recon, and an exploratory test-pit dug at the spring location with a mattock encountered saturated Marine Terrace deposits overlying relatively-impermeable weathered siltstone. Residual/weathered siltstone was also encountered at the same elevation a couple dozen feet to the north near the base of the cut-bank and above the roadbed. Undisturbed angular basalt cobbles were observed in several locations on the upper margin of the access road and were likely placed to buttress the scarp, talus and cut-bank from previous site development. Two feet of cobbles with fragments of broken glass were encountered near the base of the scarp and above the primitive road directly upslope and east of the first tracked drill boring.

Site topography west of the scarp descending to the beach consists of generally moderate to gentle, very hummocky slopes underlain by sand and heavily vegetated with lodgepole pines, salal, ferns, blackberries and other brush, with several observed primitive campsites. Erosional scarps, pines with curved trunks and exposed roots are common. Materials interpreted as excavation spoils mixed with organic debris from previous development appear to have been pushed westward onto the slopes near the first track rig borehole in Lot 1903.

Exposures of Nye Mudstone up to a dozen feet or more were observed above the head of the beach sands west of Lots 1900 and 1903 and some grass-covered dunes have formed below the siltstone exposures and to the north.

8.0 Conclusions

The subject property is situated at the seaward edge of Quaternary (less than 2.8 million years old) Marine Terrace deposits, essentially beach sand compacted by wave action that has been uplifted due to regional tectonic movement from subduction of the Pacific Plate under the North American Plate. The terrace sands overlie early-Miocene age (approximately 16.5-23 million years old) Nye Mudstone deposits that were observed at the base of the bluffs at the head of the beach, in access road excavation and in explorational borings. The Nye Mudstone dips generally 10-15° westward to southwestward in the site vicinity and cross-sections drafted for the geotechnical report suggests a generally-similar contact orientation with the overlying Marine Terrace deposits. Geologic literature and the State of Oregon Geologic Hazards website suggest two stages of landsliding have occurred at the site. A relatively large landslide occurred at some point within the last 2.8 million years but is considered relatively stable (H.G. Schlicker 1991 site reconnaissance). A more recent landslide, classified as active, has apparently translated a block of Marine Terrace deposits westward and forming the scarp noted along the east margin of the site. The translated Marine Terrace sand deposits are significantly disturbed by the slide and have been eroded by subsequent rainfall producing an irregular hummocky topography. Schlicker's report concluded the slide mass is currently resting on a fairly level base and is unlikely to move, and provides a buttress to protect slopes along the eastern margin of the site. Geotechnical explorations encountered relatively hard siltstone at shallow to moderate depths in the proposed homesite vicinities in the eastern margin of the site.

The site is situated within the Coastal Erosion Hazard Zone defined by the State of Oregon (DOGAMI – OFR O-04-09 and HazVu website) see attached Bluff Recession Diagram: the majority of the site is in the very high hazard – active erosion zone. The mean erosion rate of the Nye Mudstone at the base of the bluff is estimated at 0.30 foot per year, or about 6 feet every 20 years. Astoria Formation deposits are also mapped in the surf zone, and sand dunes are forming in places west of the siltstone exposures at

the base of the bluff. Rising sea levels from global warming combined with coastal subsidence in the Newport vicinity suggests that erosion will eventually undercut the cliff/bluff in the site vicinity, but in our opinion at a rate not likely to significantly effect the homesite vicinity within the design life of the structure if the recommended mitigations are followed. Erosion of the hummocky landslide debris will likely continue at a relatively high rate and any proposed structures will need to protect against such erosion. The underlying sand slopes are also rated at low soil liquefaction hazard in the event of an earthquake.

The homesite locations are not considered at risk from ocean flooding or most tsunamis, but a rupture of the Cascadia Subduction Zone, an event with a probability of 1 in 3 or 4 in the next 50 years estimated by OSU researcher Chris Goldfinger, could generate a surge of up to 80 feet high which could cover most if not all the subject site. The last subduction zone earthquake in the Pacific northwest with major tsunami and subsidence occurred January 26, 1700, and 19 such earthquakes are thought to have occurred over the last 10,000 years, leading to an estimated repeat interval of 530 years or so (DOGAMI IMS 28). Other research estimates an average interval of 240 years. A large subduction zone earthquake and resulting tsunami would cause widespread damage on the coast, especially if paired with high tides, major storms and saturated soils. Geologists believe such an event would remobilize old landslides and generate new slides in areas prone to sliding. Near-instantaneous subsidence of the coast of 3 to 5 feet is a possibility discussed in Open File Report O-04-09 and in more recent research. Any resident of the Oregon coast must acknowledge the possibility and probability of earthquakes and tsunamis and the substantial damage they would cause and weigh that against their enjoyment of the coast environment.

9.0 Recommendations

Relatively hard siltstone bedrock was encountered at shallow to moderate depths at the proposed homesite locations but is overlain by relatively weak sand that is very prone to wind and rain erosion. Deep foundations such as drilled piles set several feet into competent siltstone bedrock would likely provide vertical support for a single-family residence. The siltstone exposed at the head of the beach is expected to erode at approximately 0.3 feet per year but continued translational movement is relatively unlikely.

Residences should be constructed with well-drained upslope retaining walls to resist lateral pressure from the eroding Marine Terrace materials on the surface and east of the subject site. In our opinion, horizontal anchors tied into the foundations and set into competent siltstone would help mitigate lateral movement induced by percolation and migration of groundwater through the terrace sands and down the inclined contact between the permeable sand and impermeable siltstone towards the beach. The sands adjacent to the residences should be buttressed with rockeries, cribbing or retaining walls to counter lateral pressures and reduce erosion.

The seep observed near the middle of the subject site in the access road that feeds the creek flowing northwestward down to the beach should be diverted to a drain or tighline leading downslope as far as possible to reduce erosion. Gutter and foundation drains for new residences should also be tightlined as far downslope as possible to a level spreader system or erosion-resistant basin.

Maintaining deep-rooted, densely foliated vegetation on site slopes will help reduce the severity of wind and rain erosion. Bark mulch or other organic material held in place by jute netting can help protect bare soils until vegetation is established. Surface gravel can also reduce erosion in places where vegetation is not maintained. Impermeable soil should be placed against the footing walls, sloping outward, to reduce infiltration to the footing subgrade.

10.0 Report Limitations

This report presents site observations, site research, site explorations, and recommendations for the proposed site development by Gary C. Sandstrom, Geologist LLC. The conclusions in this report are based on the conditions described in this report and are intended for the exclusive use of the client(s) and their representatives for use in their evaluation of the site. The analysis and general recommendations provided herein may not be suitable for structures or purposes other than those described herein. Services performed by the geologist for this project have been conducted with the level of care and skill exercised by other current geotechnical professionals in this area under similar budget and time constraints. No warranty or guarantee is herein expressed or implied. The conclusions in this report are based on the site conditions as they currently exist and it is assumed that the limited site locations that were physically investigated generally represent the subsurface conditions at the site. Should site development or site conditions change, or if a substantial amount of time goes by between my site investigation and site development, I reserve the right to review this report for its applicability. If you have any questions regarding the contents of this report, or if I can be of further assistance, please contact me.

Gary C. Sandstrom, Geologist, LLC

H.G. Schlicker & Associates, Inc.
235 N.E. 122nd Avenue, Suite 300 • Portland, Oregon 97230
(503) 257-9666

Project #91-781

August 29, 1991

To: Mr. Hal Smith
P.O. Box 753
Newport, OR 97365

Subject: Geologic Reconnaissance
Lots 1, 2, 3, 4, 5, Block 37
N.W. Spring Street
Newport, Oregon

Dear Mr. Smith:

INTRODUCTION

This report presents the results of our preliminary investigation of the above referenced property. We understand that you plan to construct three or four single family homes adjacent to Spring Street, or possibly a cluster near the west side of the property.

The purpose for this report is to provide information concerning slope stability, foundation characteristics, and buildability of the site. A geotechnical report will be necessary providing the geologic conditions are reasonably favorable and mitigation costs will not exceed the final land value.

SCOPE

No drilling or excavation was be done for this preliminary study. Work included a site visit, review of published and unpublished geology and available reports of the area.

GEOLOGY

Regional Geology

The exposure along the sea cliffs at Jump Off Joe include the Nye Mudstone overlain by the Astoria Formation and unconformably overlain by the Coastal Terrace deposits. The Nye Mudstone and remnants of the Coastal Terrace deposits are present in the vicinity of the site.

Geologic Units

Nye Mudstone. The Nye is early Miocene in age. It is composed of siltstone, fine silty sand beds and occasionally with layers of volcanic sand and ash. It was deposited in marine environment and has been broadly folded with dips in the vicinity of 20 degrees or more except where distorted or modified by landsliding. Along the beach the Nye has been deeply weathered and fractured.

Astoria Formation. The Astoria, of middle Miocene age, overlies the older Nye Mudstone. It is composed of thin to thick bedded fine to medium grained sandstone. It contains limey concretions and sulfide nodules. In places it has convolute bedding formed by submarine landslides before the unit became consolidated. It crops out mainly in the surf in this area.

Coastal Terrace deposits. The Coastal Terraces are composed of Pleistocene to Recent age, flat lying beds of weakly consolidated fine sand and silty sand but with medium to coarse sand locally. The beds include brackish water deposits and occasionally peat or other organics. At the site a peat layer a foot or more thick is observed in the bluff exposures west of Block 37. The disrupted condition of the material is the result of landsliding.

SITE CONDITIONS

Typography

The site lies between Spring Street on the east and the Pacific Ocean on the west. The steepest slope adjacent to Spring street is about 24 degrees, however, the slope on lots 4 and 5 is only about 10 degrees. Elevations on the site lie between 40 and 80 feet MSL. The land rises to 57 feet about 90 feet to the west of the site and slopes to 10 feet MSL at the beach 110 feet west of the site.

Slope Stability

The area from Jump Off Joe northwards and from Spring Street west is old landslide. A prominent head scarp is present adjacent to Spring Street between 13th street and 14th street encompassing the eastern parts of lot 1 through 5, Block 37.

The slide debris appears to have moved towards the ocean as a unit and a major slide mass lies between the subject property and

the beach. It is highly broken and distorted from sliding and is being eroded by the ocean waves and driving rains. The landslide, as it now exists, rests on a nearly level surface and is not capable of further sliding. Rather it acts as a buttress to the toe of the subject property. Small local slumps can occur along the face of the bluff.

The east part of Lots 3, 4 and 5, Block 37 slope moderately steeply. The slope is probably overlain by a thin slide debris or other material which may be capable of slope movement unless toe support is provided.

SUMMARY AND CONCLUSIONS

The site is underlain by Coastal Terrace deposits, Nye Mudstone and possibly some Astoria rocks. The thickness of the overlying material is unknown but is believed to be a relatively thin deposit of landslide debris. Thick landslide debris, distorted Coastal Terrace and Nye formation lie between the site and the beach.

The bowl-shaped area present just east of Spring Street is an older landslide that has apparently been stable for many years.

The area west of Spring Street probably moved initially prior to the Jump Off Joe landslide that began about 1942 and continued until recently. Movement in the vicinity of the site is limited to small local slumps since the driving force is no longer present to activate a large slide.

Foundation conditions at the site depend upon the thickness of the debris and the character of the sediments to depths which might effect settlement or cause slope instability.

RECOMMENDATIONS

Because of the sensitive nature of old landslides and debris deposits, we recommend that:

1. A geotechnical study be performed to determine the thickness and engineering characteristics of the material to a depth of at least 50 feet unless drilling indicates competent material at a shallower depth.

2. At least two test holes should be drilled to approximately 50feet in depth.

3. Laboratory tests include direct shear be done.

4. Slope stability calculations be made.

5. Consideration be made for slope support including crib walls.

6. Various foundations systems be considered if development of the site is feasible.

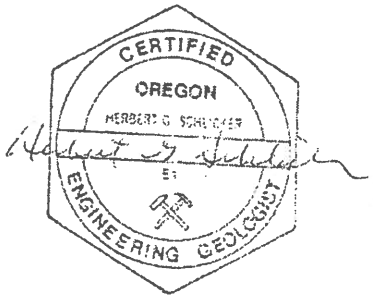
LIMITATIONS

Our investigation was based on geological reconnaissance and available published information. The date and recommendations presented in this report are believed to be representative of the site. The conclusions and recommendations herein are professional opinions derived in accordance with current standards of professional practice and no warranty is expressed or implied.

It has been our pleasure to serve you. If you have any questions concerning this report of the site, please contact us.

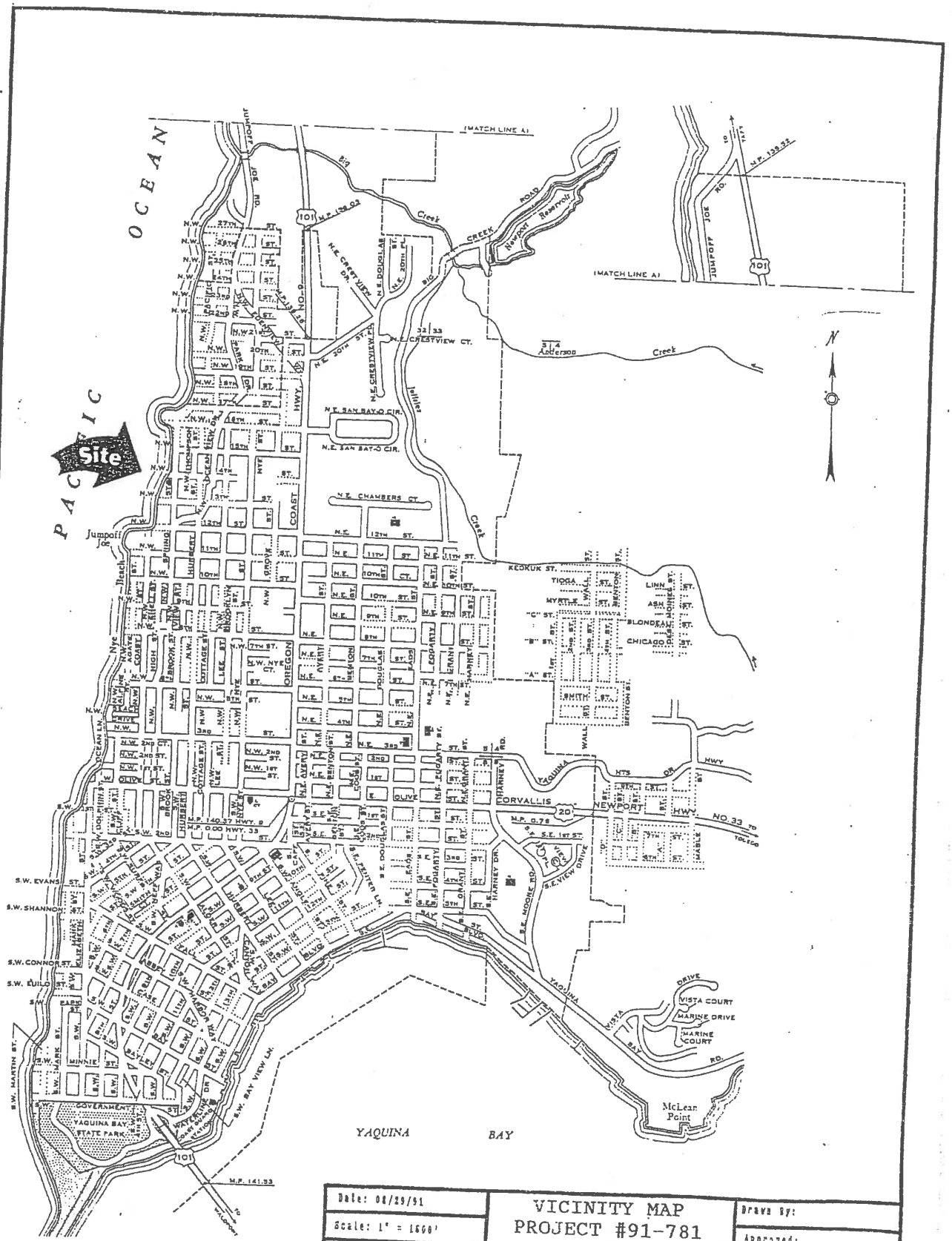
Respectfully submitted,

H.G. SCHLICKER AND ASSOCIATES, INC.



Herbert G. Schlicker, P.G., C.E.G.
President

HGS:mlr



Date: 08/29/91	VICINITY MAP PROJECT #91-781	Drawn By:
Scale: 1" = 1600'		Approved:

LOTS 1,2,3,4 & 5, BLOCK 37
N.W. SPRING STREET
NEWPORT, OREGON

Lincoln County Parcel Information

Western

Parcel Information

Parcel #:	**R127787**
Tax Lot:	**111105BC0190000**
Record Type:	**Residential**
Site Address:	Newport OR 97365
Owner:	Anderson Lonna
Owner2:	
Owner Address:	PO Box 6432 Miramar Beach, FL 32550
Phone:	
Twn/Range/Section:	T: 11S R: 11W S: 05 Q: NW
Parcel Size:	.45 Acres (19,576 SqFt)
Plat/Subdivision:	OCEANVIEW
Lot:	23N
Block:	37
Census Tract/Block:	950900/4006
Waterfront:	Pacific Ocean

Assessment Information

Market Value Land:	$169,770
Market Value Impr:	$0
Market Value Total:	$169,770
Assessed Value:	$48,620

Tax Information

Levy Code Area:	104
Levy Rate:	17.9558
Tax Year:	2014
Annual Tax:	$873.01

Legal

OCEANVIEW, BLOCK 37, LOT 2,3,N 1/2 OF 1 & PTN VAC ALLEY, DOC200501956

Land

Cnty Land Use:	100 - Residential Vacant Land	Land Use Std.:	VRES - VACANT RESIDENTIAL
Zoning:	R-2 - Residential-Medium Density Single-Family	Neighborhood:	NNOB
Watershed:	Rock Creek-Frontal Pacific Ocean	School District:	
Recreation:	-		

Improvement

Year Built:	0	Fin SqFt:	0	Bedrooms:	0
Bsmt Fin SqFt:	0	Flr 1 SqFt:	0	Bathrooms:	0.00
Bsmt UnFin SqFt:	0	Flr 2 SqFt:	0	Attic Fin SqFt:	0
Deck SqFt:	0	Garage SqFt:	0	Attic UnFin SqFt:	0
Carport:	0	Garage Desc:		Exterior:	
Roof Type:		Foundation:		Porch:	0
Roof Mtl:		AC:	No	Heat Type:	

Transfer Information

Rec. Date: 02/04/05	Sale Price:	Doc Num: 0000501956	Doc Type: Grant Deed
Orig Loan Amt:			
Loan Type:	Finance Type:	Lender:	

.45
.56
.81

10/21/2015

Screen Print from AbleTerm session(Lincoln County) 03:46 PM 10/21/2015

- - General Appraisal Information - -

Property ID : R127787 (Real Estate) 11-11-05-BC-01900-00
Owners Name : ANDERSON LONNA
Legal Desc : OCEANVIEW, BLOCK 37, LOT 2,3,N 1/2 OF 1 & PTN VAC ALLEY, DOC200501956

1. Last Apprsd: 11/23/07 Number Improvements : 0
2. Appraiser : KL Number Land Segments: 2
3. Next Apprsl:
4. Next Reason: Building Permits :
5. Maint Area : E-08

6. Utilities : OFF SITES SEW,CW,EL
7. Topography :
8. Access : PVD
9. Other :
10. Zone : R-2

11. Remarks :

Enter 'RM' for remarks or <RET> To Return:

FORM No. 106 – DEED CREATING E ...E ENTIRETY – Husband to Wife or Wife to Husband. © 1968-1993 STEVENS-... ...ISHING CO., PORTLAND, OR www.stevensness.com

EA ... NO PART OF ANY STEVENS-NESS FORM MAY BE REI...

WTE ACCO 2005038

Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550
Grantor's Name and Address

Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550
Grantee's Name and Address

After recording, return to (Name, Address, Zip):
Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550

Until requested otherwise, send all tax statements to (Name, Address, Zip):
Hal Smith & Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550

SPACE RESERVED FOR RECORDER'S USE

STATE OF OREGON
County of Lincoln

2 Pages

I, Dana W. Jenkins, County Clerk, in and for said county, do hereby certify that the within instrument was received for record, and recorded in the Book of Records of said county at Newport, Oregon.
WITNESS my hand and seal of said office affixed.

DANA W. JENKINS, Lincoln County Clerk

Doc : 200501956
Rect: 500983 31.00
02/04/2005 03:56:04pm

Witness my hand and seal of County affixed.

NAME TITLE

By ..... Deputy.

DEED CREATING ESTATE BY THE ENTIRETY

KNOW ALL BY THESE PRESENTS that ...Hal Smith..... hereinafter called grantor, the spouse of the grantee hereinafter named, for the consideration hereinafter stated, does hereby grant, bargain, sell and convey unto Lonna Anderson, herein called the grantee, an undivided one-half of that certain real property, with the tenements, hereditaments and appurtenances thereunto belonging or in any way appertaining, situated in Lincoln County, State of Oregon, described as follows, to-wit:

See Attached Exhibit "A"

(IF SPACE INSUFFICIENT, CONTINUE DESCRIPTION ON REVERSE)

To Have and to Hold an undivided one-half of the above described real property unto the grantee forever.

The above named grantor retains a like undivided one-half of that same real property, and it is the intent and purpose of this instrument to create, and there hereby is created, an estate by the entirety between husband and wife as to this real property.

The true and actual consideration paid for this transfer, stated in terms of dollars, is $ 5.00 ① However, the actual consideration consists of or includes other property or value given or promised which is ☐ part of the ☐ the whole (indicate which) consideration.② (The sentence between the symbols ①, if not applicable, should be deleted. See ORS 93.030.)

IN WITNESS WHEREOF, the grantor has executed this instrument on 2-3-2005

Hal Smith

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

STATE OF ~~OREGON~~ FLORIDA, County of Okaloosa) ss.

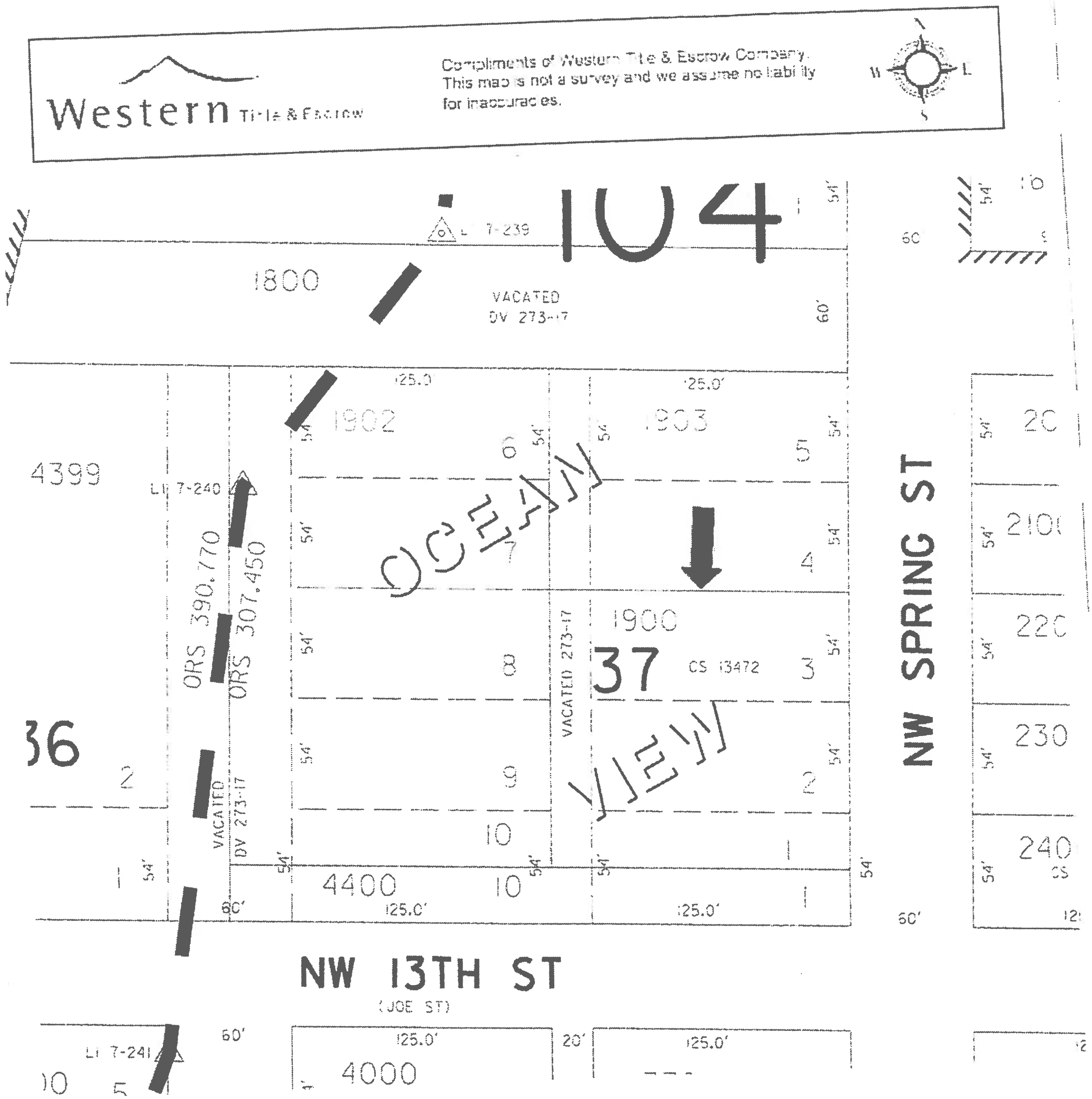
This instrument was acknowledged before me on February 3, 2005

by Hal Smith, who is personally known to me

Toni N. Bludworth
Commision No
DD0269610
Comm Expires
12/2/2007

Toni N. Bludworth
Notary Public for ~~Oregon~~ Florida

My commission expires 12/2/2007


Western Title & Escrow
Compliments of Western Title & Escrow Company.
This map is not a survey and we assume no liability for inaccuracies.
104
1800
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DV 273-17
1902
1903
4399
LI 7-240
ORS 390.770
ORS 307.450
OCEAN
VIEW
1900
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CS 13472
VACATED 273-17
36
VACATED
DV 273-17
4400
NW SPRING ST
NW 13TH ST
(JOE ST)
LI 7-241
4000
2100
230
240

Lincoln County Parcel Information

Western

Parcel Information

Parcel #: **R130144**
Tax Lot: **111105BC0190300**
Record Type: **Residential**
Site Address: Newport OR 97365
Owner: Anderson Lonna
Owner2:
Owner Address: PO Box 6432 Miramar Beach, FL 32550
Phone:
Twn/Range/Section: T: 11S R: 11W S: 05 Q: NW
Parcel Size: .36 Acres (15,660 SqFt)
Plat/Subdivision: OCEANVIEW
Lot: 45
Block: 37
Census Tract/Block: 950900/4006
Waterfront: Pacific Ocean

Assessment Information

Market Value Land:	$152,520
Market Value Impr:	$0
Market Value Total:	$152,520
Assessed Value:	$40,800

Tax Information

Levy Code Area: 104
Levy Rate: 17.9558
Tax Year: 2014
Annual Tax: $732.59

Legal

OCEANVIEW, BLOCK 37, LOT 4,5 & PTN VAC ALLEY, DOC200501956

Land

Cnty Land Use: 100 - Residential Vacant Land
Zoning: R-2 - Residential-Medium Density Single-Family
Watershed: Rock Creek-Frontal Pacific Ocean
Recreation: -
Land Use Std.: VRES - VACANT RESIDENTIAL
Neighborhood: NNOB
School District:

Improvement

Year Built: 0	Fin SqFt: 0	Bedrooms: 0
Bsmt Fin SqFt: 0	Flr 1 SqFt: 0	Bathrooms: 0.00
Bsmt UnFin SqFt: 0	Flr 2 SqFt: 0	Attic Fin SqFt: 0
Deck SqFt: 0	Garage SqFt: 0	Attic UnFin SqFt: 0
Carport: 0	Garage Desc:	Exterior:
Roof Type:	Foundation:	Porch: 0
Roof Mtl:	AC: No	Heat Type:

Transfer Information

Rec. Date: 10/18/91 Sale Price: $48,000 Doc Num: Doc Type:
Orig Loan Amt:
Loan Type: Finance Type: Lender:

Screen Print from AbleTerm session(Lincoln County) 03:49 PM 10/21/2015

- - General Appraisal Information - -

Property ID : R130144 (Real Estate) 11-11-05-BC-01903-00
Owners Name : ANDERSON LONNA
Legal Desc : OCEANVIEW, BLOCK 37, LOT 4,5 & PTN VAC ALLEY, DOC200501956

1. Last Apprsd: 11/23/07 Number Improvements : 0
2. Appraiser : KL Number Land Segments: 2
3. Next Apprsl:
4. Next Reason: Building Permits :
5. Maint Area : E-08

6. Utilities : OFF SITES SEW,CW,EL
7. Topography :
8. Access : PVD
9. Other :
10. Zone : B-2

11. Remarks :

Enter 'RM' for remarks or <RET> To Return:

WTE ACCO 2005038

Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550
Grantor's Name and Address

Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550
Grantee's Name and Address

After recording, return to (Name, Address, Zip):
Hal Smith
P. O. Box 6432
Miramar Beach, FL 32550

Until requested otherwise, send all tax statements to (Name, Address, Zip):
Hal Smith & Lonna Anderson
P. O. Box 6432
Miramar Beach, FL 32550

STATE OF OREGO[N]
County of Lincoln

2 Pages

I, Dana W. Jenkins, County Clerk, in and for said county, do hereby certify that the within instrument was received for record, and recorded in the Book of Records of said county at Newport, Oregon. WITNESS my hand and seal of said office affixed.

DANA W. JENKINS, Lincoln County Clerk

Doc : 200501956
Rect: 500983 31.00
02/04/2005 03:56:04pm

SPACE RESERVED FOR RECORDER'S USE

Witness my hand and seal of County affixed.

NAME TITLE

By ..... Deputy.

DEED CREATING ESTATE BY THE ENTIRETY

KNOW ALL BY THESE PRESENTS that Hal Smith, hereinafter called grantor, the spouse of the grantee hereinafter named, for the consideration hereinafter stated, does hereby grant, bargain, sell and convey unto Lonna Anderson, herein called the grantee, an undivided one-half of that certain real property, with the tenements, hereditaments and appurtenances thereunto belonging or in any way appertaining, situated in Lincoln County, State of Oregon, described as follows, to-wit:

See Attached Exhibit "A"

(IF SPACE INSUFFICIENT, CONTINUE DESCRIPTION ON REVERSE)

To Have and to Hold an undivided one-half of the above described real property unto the grantee forever.

The above named grantor retains a like undivided one-half of that same real property, and it is the intent and purpose of this instrument to create, and there hereby is created, an estate by the entirety between husband and wife as to this real property.

The true and actual consideration paid for this transfer, stated in terms of dollars, is $5.00. ① However, the actual consideration consists of or includes other property or value given or promised which is ☐ part of the ☐ the whole (indicate which) consideration.① (The sentence between the symbols ①, if not applicable, should be deleted. See ORS 93.030.)

IN WITNESS WHEREOF, the grantor has executed this instrument on 2-3-2005

Hal Smith

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

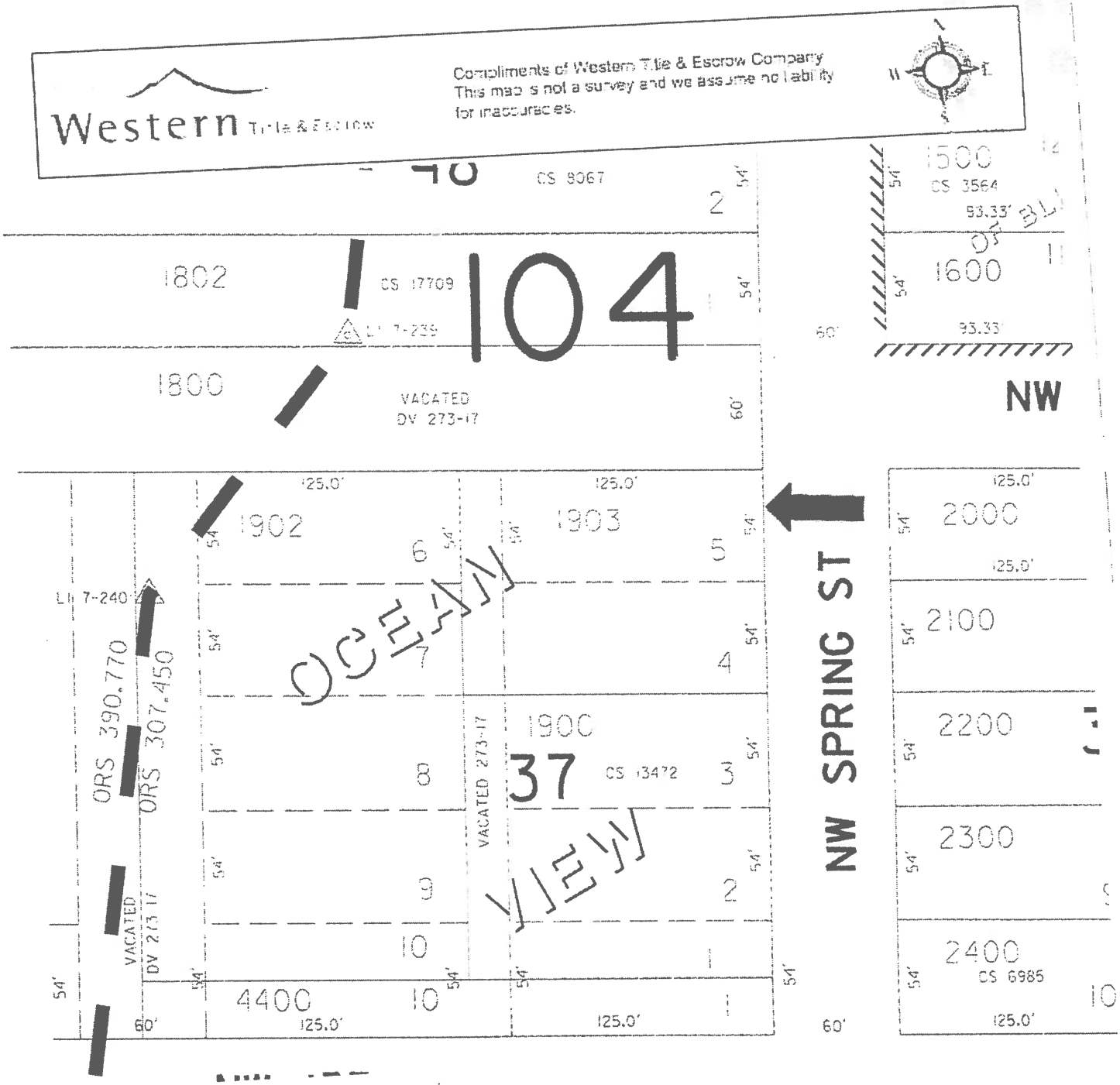
FLORIDA
STATE OF ~~OREGON~~, County of Okaloosa) ss.

This instrument was acknowledged before me on February 3, 2005

by Hal Smith, who is personally known to me

Toni N. Bludworth
Commision No
DD0269610
Comm Expires
12/2/2007

Toni N. Bludworth
Notary Public for ~~Oregon~~ Florida
My commission expires 12/2/2007


Western Title & Escrow
Compliments of Western Title & Escrow Company
This map is not a survey and we assume no liability
for inaccuracies.
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OV 273-17
1500
CS 3564
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1600
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NW
125.0'
1902
1903
2000
2100
2200
2300
2400
CS 6985
OCEAN
VIEW
NW SPRING ST
ORS 390.770
ORS 307.450
VACATED
OV 273-17
1900
37
CS 13472
4400
60'

K & A ENGINEERING, INC.
91051 S. WILLAMETTE STREET
P. O. BOX 8486, COBURG, OR 97408
(541) 684-9399 · KAENGINEERS.COM

May 3, 2018 **Project: 17056**

Bill Lund
P. O. Box 22
Seal Rock, OR 97376

Subject: Application of Geotechnical Report Recommendations
Revised Building Envelopes
Tax Lots 1900 and 1903; Tax Map 11-11-05-BC
NW Spring Street, Newport, Oregon

Dear Bill,

Our understanding is that, since the issuance of our geotechnical report for this project site, dated November 30, 2017, the City of Newport has determined that a 60-foot road right-of-way existed on the east end of the subject tax lots. You have requested that we evaluate the western portion of the subject tax lots to make a determination if the existing geotechnical report was valid considering the change in buildable area.

We have reviewed the geotechnical report, which included and extensive analysis of geologic hazards, and have determined that the revised building envelopes do not vary significantly from what was originally envisioned for development. The geologic cross section developed for the project and the overall hazard assessment, and the recommendations we made to address geologic hazards, included the revised building envelopes.

We recommend that the Geotechnical Report, dated November 30, 2017, applies to the revised building envelope for the subject project site(s), and no further investigation with respect to geologic hazards is needed.

Thank you for the opportunity to be of service. Please call me if you have any questions.

Sincerely,

M Remboldt

Michael Remboldt, P.E., G.E.
K & A Engineering, Inc.

EXPIRES: DECEMBER 31, 2018

City of Newport
Land Use Application

Applicant Name(s):	Property Owner Name(s)
WILLIAM LUND	SAME
Applicant Mailing Address:	**Property Owner Mailing Address:**
PO BOX 22, SEAL ROCK 97376	
Applicant Phone No.	**Property Owner Phone No.**
541-979-9560	
Applicant Email	**Property Owner Email**
WLUND-ALBANY@YAHOO.COM	SAME
Authorized Representative(s):	
Authorized Representative Mailing Address:	
Authorized Representative Telephone No.	
Authorized Representative Email.	

Project Information

Property Location: SPRING ST. & 13TH

Tax Assessor's Map No.: 11S-11W-05-BC Tax Lot(s): 1900 & 1903

Zone Designation: R2 Legal Description:

Comp.Plan Designation:

Brief description of Land Use Request(s):

1. GEOLOGICAL APPLICATION/ SUBMISSION
2.

Existing Structures: if any

N/A

Topography and Vegetation:

VARIES & BRUSH

Application Type (please check all that apply)

☐ Annexation	☐ Interpretation	☐ UGB Amendment
☐ Appeal	☐ Minor Replat	☐ Vacation
☐ Comp Plan/Map Amendment	☐ Partition	☐ Variance/Adjustment
☐ Conditional Use Permit	☐ Planned Development	☐ PC
☐ PC	☐ Property Line Adjustment	☐ Staff
☐ Staff	☐ Shoreland Impact	☐ Zone Ord/Map
☐ Design Review	☐ Subdivision	☐ Amendment
☒ Geologic Permit	☐ Temporary Use Permit	☐ Other

FOR OFFICE USE ONLY

File No. Assigned: 1-GP-18

Date Received: 5/3/18 Fee Amount: 211— Date Accepted as Complete:

Received By: SM Receipt No. 2152 Accepted By:

City Hall
169, SW Coast Hwy
Newport, OR 97365
541.574.0629

City of Newport
Land Use Application

I undestand that I am responsible for addressing the legal criteria relevant to my application and that the burden of proof justifying an approval of my application is with me. I aslo understand that this responsibility is independent of any opinions expressed in the Community Development and Planning Department Staff Report concerning the applicable criteria.

I certify that, to the best of my knowledge, all information provided in this application is accurate.

Applicant Signature(s)	Date: 5-2-2018
Property Owner Signature(s) (if other than applicant)	Date
Authorized representative Signature(s) (if other than applicant)	Date

Please note application will not be accepted without all applicable signatures.

Please ask staff for a list of application submittal requirements for your specific type of request.