SAN JOSE
CAPITAL OF SILICON VALLEY

GEOLOGIC CLEARANCE (GC)

Department of Public Works, Development Services
200 East Santa Clara Street, San Jose, CA 95113
http://www.sanjoseca.gov/pwdev
(408) 535-3555

Applicability

For development sites located within a City Geologic Hazard Zone or within the State of California Seismic Hazard Zone of Required Investigation for Earthquake Induced Landslides, a **Geologic Hazard Clearance** must be obtained from the Director of Public Works prior to any discretionary approval for development, including site development, special use, lot line adjustment, zoning approval, grading or building permits.

For development sites located within a State of California Seismic Hazard Zone of Required Investigation for Liquefaction, a **Geologic Clearance** approval must be obtained from the City of Geologist prior issuance of a grading or building permit.

To determine if your project is located in a Geohazard zone please visit the Public GIS viewer.

Project Review Procedure

Project Related – If the project has been or is going through the Planning Permit process a Public Works Development Review Team would have been assigned to the Project. The Public Works Development Review Team will be your single point of contact for all Public Works permits related to the project. If you already know the name of the Public Works Project Engineer, please be sure to indicate him/her within the additional project information when submitting your permit.

Stand Alone – If you have not yet submitted a Planning Permit or a Planning Permit is not required for your proposed construction and you are unsure of the type of Clearance you need to submit for please contact Public Works counter staff at (408) 535-7802.

Below is a list of the different Geologic Clearances that could be required for your project with a brief description of each type.

Geologic Hazard Clearance – City Geologic Hazard and State Seismic Hazard Landslide Zones

Geologic Hazards are any condition in earth, whether naturally occurring or artificially created, which is dangerous or potentially dangerous to life, limb, property, or improvements due to movement, failure or shifting of earth. These conditions may lead to damage to structures located on or adjacent to soils or rocks having such conditions.

Geologic hazards, whether natural or artificial, pose a serious threat to public safety. Geologic conditions are subject to change over time and knowledge about geologic hazards and technology is evolving. The intent of this clearance is to ensure an appropriate level of review to projects which are located in geologically sensitive areas. This is done in order to identify any geologic hazard and impose necessary mitigations before development may be permitted.

Geologic Hazards are defined by the San Jose Municipal Code to include, but is not limited to, fault ruptures, landslides, mudslides and rock falls, ground failure due to earthquake shaking, erosion and sedimentation, and creeping soil. Geologic Hazard Zone boundaries are defined the City of San Jose Municipal Code Section 17.10.225.

Geologic Clearance - State of California Seismic Hazard Liquefaction Zone

The State of California Seismic Hazards Mapping Act (1990) direct the State Geologist to delineate regulatory "Zones of Required Investigation" to reduce the threat to public health and safety and to minimize the loss of life and property posed by earthquake-triggered ground failures. Cities and counties affected by the zones must regulate certain development projects within them. Geotechnical seismic hazard evaluation reports must be submitted to and approved by the City Geologist prior to permit issuance, or project approval, if a development site is located within a State of California Zone of Required Investigation for Liquefaction.

Refer to pages 3 and 4 for specific instructions for either a full Geologic Hazard Clearance or Geologic Clearance that could be required.

Application Submittal, Plans and Documents

Submission Methods:

1) **Online Application:** Visit the following site to apply for your Geologic Clearance online: www.sjpermits.org. You will need to have an online account which you can create on the website. You will also need to attach all required documents as attachments during your online application; or

   When applying online you will have the option to create both the permit application and to initiate a San Jose ePlan project. If you initiate an ePlan project you will receive a separate invitation email with log-in information and submission instructions for the project. The benefit of submitting via SJePlans is that the platform integrates with the City's permitting system and provides one place for you to upload plans digitally, receive plan check comments, monitor project status, and obtain copies of issued permits. Please visit our SJePlans Resources page for more information.

   For ePlan submissions you will upload all required documents directly to the SJePlan Project. All other submissions you will need to attach all required documents as attachments during your online application.

   For a list of required ePlans and Online Application Attachments for each type of Geologic Clearance Application refer to Attachment A & B

   Schedule an Appointment with Staff (Optional): Prior to or after you have made the online application submittal you may wish to contact the Project Engineer or team member assigned to your project to schedule an intake meeting. This meeting will help the applicant determine what documents are required for a full submittal, what documents were missing from the online submittal or the required corrections of the online submitted documents prior to being accepted for review. The Project team will also be able to provide the invoice for payment at the meeting, if not provided previously. If the meeting is scheduled prior to making the submittal, the online application must be made prior to the meeting.

2) **Standard Application - Schedule an Appointment with Staff**

   Project Related – Schedule an appointment or submit directly to the Public Works Project Engineer. If you already know the name of the PW Project Engineer, please contact him/her directly to schedule an appointment for plan submittal. If you are unsure of the PW Project Engineer assigned to your

project, please contact staff at (408) 535-7802 with your Planning Permit number, and we will look up the name of the Project Engineer assigned to your project.

Stand Alone - Submit a completed **Application for Public Works Encroachment Permit** with the items listed below directly to the Public Works Counter on the 1st Floor of City Hall or by emailing a request to pwgeneralinfo@sanjoseca.gov. Questions can be emailed or by calling the number above. Submit a completed and signed application, along with the items listed below directly to the Public Works Counter on the 1st Floor of City Hall or by emailing pwgeneralinfo@sanjoseca.gov.

Geologic Hazard Clearance

This Clearance is typically a two stage approval process. The first stage of this review process typically starts with the application of the Geologic Hazard Clearance. As part of this application the Applicant is required to provide:

- Description of the proposed project
- Site Plan indicating the location of the proposed improvements, proposed grading and other pertinent data.

Upon submittal of the above items, the City Engineering Geologist will conduct a preliminary review of the proposed project and available geotechnical data for the site. Based on this review the following items may be required to obtain the Geohazard Clearance.

- Geologic Assessment – This includes both a site-specific evaluation and an off-site evaluation. This would be required to assess the potential of the development creating, adding to, affecting or being affected by any on or off-site geologic hazard. The off-site evaluation shall be limited to areas potentially affecting or affected by the site for which a Geologic Hazard certificate is sought. The assessment would be required to identify any existing geologic hazard, the potential for erosion and sedimentation and recommendations for the mitigation of any geologic hazard.

- Geologic Investigation – This would include, but is not limited to, a subsurface exploration including boring and trenching and shall include recommendations for mitigation of any identified geologic hazard. This would need to demonstrate:
    - Identification of all potential geologic hazards.
    - Feasible geotechnical mitigation of all geologic hazards.
    - That the proposed development will not create new hazardous geologic conditions (by improper grading and drainage etc.).
    - If methods used and scope of work performed are adequately based on current professional standards.
    - Thoroughness in that all geologic hazards are adequately characterized and mitigated.
    - Conclusions must be supported by data presented.
    - Consistency with available geologic information.

- Geotechnical (Soil) Engineering Investigation: This report should include, but is not limited to: foundation, earthwork, utility trenching, retaining and drainage recommendations.

- All Investigations and Assessment Reports submitted must be wet signed and stamped or electronically signed and stamped original Geotechnical reports. Xeroxed copies of the report will not be accepted. The report submitted for review and approval should also be prepared by a

consultant currently retained under contract by the applicant and have been prepared within the past 3 years.

Geologic Clearance

These clearances are obtained prior to Grading or Building Permit issuance. These clearances require the following:

- Geotechnical Investigation Report: The report must address the potential hazard of liquefaction. The report should also include, but not limited to: foundation, earthwork, utility trenching, retaining and drainage recommendations. The investigation should be consistent with the guidelines published by the State of California (CGS Special Publication 117A; 2008) and the Southern California Earthquake Center (SCEC, 1999). A recommended minimum depth of 50 feet should be explored and evaluated in the investigation. Geotechnical Reports submitted must be wet signed and stamped or electronically signed and stamped originals. Xeroxed copies of the report will not be accepted. The report submitted for review and approval should also be prepared by a consultant currently retained under contract by the applicant and have been prepared within the past 3 years.

- Grading & Drainage Plan: Plans must be in compliance with the requirements of the Grading Ordinance. The plans must include any Ground Improvement mitigations identified in the Geotechnical Investigation Report in order to appropriately mitigate the liquefaction potential of the site. Refer to the Grading Permit Instructions for more information on the requirements of these plans. Some examples of typical mitigations are listed below:

- Ground Improvement Plans (if applicable): Ground Improvement Plans are also required to provide a written review letter from the Project Geotechnical Engineer. This letter would need to state that the Geotechnical Engineer has reviewed the Ground Improvement Plans and that they are consistent with their recommendations. Some typical ground improvements that have utilized to mitigate the liquefaction potential are:
    - Drilled Displacement Columns (DDC). The DDC process uses a displacement drill to compact soil in the ground, resulting in higher capacity and lower spoils. The displaced soil produces the increased strength and ground improvement which are enhanced by the pressure grout effect during construction. DDC's increase bearing capacity, increases soil stiffness, reduces soil compressibility, increases soil resistance to liquefaction, and increases composite soil shear strength.
    - Rammed Aggregate Piers ("Geopiers").
    - Vertical and horizontal over excavation with placement of select fill or lime treated base in the areas of the proposed structures.

Fees

Payment of the Application Submittal Fee is required for either GeoHazard or Geologic Clearance submittals (refer to the fee schedule as listed in the Development Fee Schedule). The review fee will be assessed once the application is submitted and reviewed by City staff. The fee invoice will be provided and will be required to be paid prior to the application being deemed complete.

ePlan Attachment Requirements

Note: Submit the plans and documents in the indicated folder. If you did not initiate this project as an ePlan application submit the documents indicated in the Attachment B - "Online Application Only" section during the "Attachments" section of the online application. Please note that the City reserves the right to convert the project from being Online only to an ePlan application during the project intake review.

ePlan Application: Refer to the City of San Jose SJePlans Resources page for more information.

Geologic Hazard Clearance

Plans Folder

- Site Plan

Documents Folder

- ePlan Information Form
- Geologic Assessment (if required)
- Geologic Investigation (if required)
- Geotechnical (Soil) Engineering Investigation (if required)

Geologic Clearance

Plans Folder

- Grading and Drainage Plans
- Ground Improvement Plans (if applicable)

Documents Folder

- Geotechnical Investigation Report
- Geotechnical Review Letter - Ground Improvement Plan (if applicable)
- Ground Improvement Specifications / Calculations (if applicable

Online Application Attachment Requirements

Note: Submit the documents indicated in the Attachment B - "Online Application Only" section during the "Attachments" section of the online application. Please note that the City reserves the right to convert the project from being Online only to an ePlan application during the project intake review.

Online Application Only

When attaching these documents during the Add Application stage or using the "Add Attachments" on the My Permit Detail page of your permit application on SJPermits, make sure to select the following Attachment Type indicated after the dash. Each document will be required to provide a description of the uploaded attachment.

Geologic Hazard Clearance

- Site Plan – Other Plans
- Geologic Hazard Clearance Application – Miscellaneous Documents
- Geologic Assessment (if required) – Soils Report
- Geologic Investigation (if required) – Soils Report
- Geotechnical (Soil) Engineering Investigation (if required) – Soils Report

Geologic Clearance

- Grading and Drainage Plans – Grading / Erosions Control Plans
- Ground Improvement Plans (if applicable) – Plans Other
- Geotechnical Investigation Report – Soils Report
- Geotechnical Review Letter - Ground Improvement Plan (if applicable) – Miscellaneous Documents
- Ground Improvement Specifications / Calculations (if applicable) – Miscellaneous Documents