CITY OF MALIBU
FIRE REBUILD — GEOLOGIC/GEOTECHNICAL and COASTAL ENGINEERING GUIDELINES
(v1. APRIL 18, 2025)

INTRODUCTION

The City of Malibu ESD Geology Department has prepared these guidelines to assist property owners in safely and expeditiously rebuilding their fire-damaged properties. Emphasis is placed on allowing the use of existing geologic and geotechnical information for eligible properties to reduce time and costs typically associated with the preparation of a comprehensive engineering geologic and geotechnical engineering report. These Guidelines may be modified in the future as required by the Building Official.

While this this simplified approach emphasizes use of existing information and visual assessment of the fire-damaged property by qualified professionals, including review of records pertaining to the subject property and vicinity and evaluation of the historic geologic stability of the property and nearby areas, ***all report requirements are governed by the Malibu Municipal Code, Los Angeles County Code Sections 110 and 111 and California Building Code Section 1803.***

The Fire Rebuild Report Matrix attached to these Guidelines should be reviewed by the Project Geotechnical Consultants to determine the appropriate Report Category (Limited Report or Comprehensive Report, as described in later sections) for each property. Note that, with the exception of flat sites NOT in a known or mapped hazard zone, each fire-damaged property will require a report prepared by a Certified Engineering Geologist in addition to or in conjunction with a report prepared by an engineer with qualifying experience in geotechnical engineering (i.e., a licensed Geotechnical Engineer, Registered Civil Engineer, or Professional Engineer).

Brief Report Definitions (see matrix):

- **Category 1: *Limited Engineering Geologic and Geotechnical Engineering Report* ("Limited Report").** For PVPF (*Planning Verification – Palisades Fire*) projects where existing information may be sufficient to provide project recommendations. A Limited Report may include additional exploration and testing. A Limited Report is not acceptable for properties subject to liquefaction hazard.
- **Category 2: *Comprehensive Engineering Geologic and Geotechnical Engineering Report* ("Comprehensive Report").** For PVPF projects where existing information is insufficient to provide project recommendations and/or geotechnical mitigation of hazards requires additional exploration, testing, and analyses. A Comprehensive Report is mandatory for properties subject to liquefaction hazard.
- **Category 3: *Geologic Hazard Assessment for Temporary Housing*.** Acceptable for temporary housing only. Temporary housing that is intended to be made permanent where an accessory dwelling unit (ADU) is considered feasible requires a Comprehensive Report.
- **Category 4: *Supporting Geologic Report for Onsite Wastewater Treatment Systems*** ("Supporting Geologic Report"). This report is required when a new onsite wastewater treatment system is to be constructed. It may be combined with a Comprehensive report.

The Project Geotechnical Consultants are urged to consult with the ESD Geology Department prior to preparing a Limited Report to reduce the potential for misclassification. In the event a Limited Report does not meet the requirements and scope of the proposed rebuild project, a Comprehensive Report will be required. The ESD Geology Department will review the submitted project documents to ensure that the appropriate Report Category has been assigned.

NOTE: These Fire Rebuild Guidelines and the information contained herein are subject to revision by the ESD Geology Department; the proposed fire rebuild projects may be subject to stricter requirements on a case-by-case basis. These Guidelines do not confer any additional rights to the property owners, developers, or any other interested party that would otherwise exist. The ESD Geology Department does not have the discretion to recommend projects for approval to the Building Official that present a danger to the subject property, adjacent properties, or the general public. In the event that a conflict exists between these Guidelines and the current Malibu Municipal Code (which adopts and amends the Los Angeles County Building Code [Title 26] and the California Building Code by reference), and/or LCP Amendments or any other relevant regulation, a final determination will be made by the Building Official.

Only those projects that have been assigned the *Planning Verification – Palisades Fire* classification (PVPF, also called *in-kind* or *like-for-like* replacement with or without the additional 10%) by the Planning Department are eligible for a Limited Report. All other Planning classifications require the preparation of a Comprehensive Report, as defined in Report Category 2 below. Limited Reports are only acceptable for properties with single-family residences, multi-family residential structures that are three (3) units or fewer or structures otherwise designated as such by the Malibu Municipal Code (MMC). Fire rebuild projects for commercial structures, multi-family residential structures more than 3 units, and properties located on the beach (coastline) require a Comprehensive Report.

GEOLOGIC HAZARDS PRESENT IN MALIBU

It is important to note that in some areas (often depending upon the age of the pre-fire structure), potential geologic and geotechnical hazards may not have been identified during the original development of a site. Many hazards or hazard areas have been identified because of past disasters, through comprehensive studies, through regional mapping by government agencies, through state legislative acts, through studies associated with the City's General Plan Safety Element, and by general advancements in geotechnical hazard identification. Typical known geologic or geotechnical hazards that may constrain rebuilding of a fire-destroyed property under the Planning Verification classification include:

1. Active or potentially active fault splays mapped within 500 feet of the pre-fire residence foundation envelope as delineated on CGS Seismic Hazard Zone maps, faults mapped by Treiman (FER-229, 1994), or faults mapped by other consultants.

2. Active landslides mapped by the USGS, CGS, Landslide Assessment Districts, or other consultants.

3. Debris flow hazard areas identified post-fire by the USGS.

4. Restricted Use Areas or Geologic Hazard Areas identified on Assessor Parcel Maps or mapped by other consultants.

Potential geologic and geotechnical hazards identified through legislative acts by the State of California that may affect the property include:

1. Zones of required investigation for liquefaction or earthquake-induced landsliding according to the Seismic Hazards Mapping Act (1990).

2. Zones of required investigation for surface fault rupture per the Alquist-Priolo Earthquake Fault Zoning Act (1972) or City Geotechnical Guidelines (2013).

Offsite Hazards

Owners of properties with known geologic or geotechnical hazards that may impact the property but occur offsite (and thus are beyond the ability of the property owner to correct) must sign and record an *Assumption of Risk and Release* (ARR) unless the proposed project can be constructed to eliminate the hazard or the proposed structure can be relocated outside of the area of impact of the hazard (avoidance). More information about the ARR requirement is provided at the end of these Guidelines. If the known hazard cannot be eliminated and an ARR is to be executed by the property owner, a key element of the required geotechnical report is for the risks and potential consequences associated with the hazard to be clearly identified by the Project Geotechnical Consultant, so that the property owner is informed of the risks that they are assuming.

Relocation of Building Envelope to Avoid Hazards

If possible, the existing (pre-fire) residential foundation envelope for a PVPF project should be relocated farther from a known and mapped geologic and geotechnical hazard, as allowed by the Planning Department under the rebuild ordinance.

Required Findings in Geotechnical Reports

In general, the subject property and the proposed building area must be found to not be subject to geotechnical hazards, including landslide, settlement, or slippage, through appropriate geotechnical data and analysis. This is not always possible when rebuilding in existing geotechnical hazard areas; but in areas demonstrated to be free from geotechnical hazards, the submitted report(s) must include complete findings required by Los Angeles County Building Code (LACBC) Section 111, as adopted by the MMC. Geotechnical hazard areas that are identified on the property but are located away from the proposed building area (and thus do not affect it) must be designated as Geological Hazard Areas on the plans, and in some cases may need to be recorded as Restricted Use Areas.

If the proposed building area is found to be subject to geotechnical hazards, but the hazard(s) will be eliminated through geotechnical design and mitigation measures, the submitted report must comply with the provisions of LACBC Section 111, including required findings therein (reference: LACBC Section 110.2.3.1).

If the proposed building area is found to be subject to geotechnical hazards, but the hazard(s) will be avoided (such as through relocation of the building envelope as described above), the submitted report must comply

with the provisions of LACBC Section 111, including the required findings therein, and demonstrate that the site is safe for the intended use (reference: LACBC Section 110.2.3.2). Areas on the property that remain subject to geotechnical hazards must be designated as Geological Hazard Areas on the plans and in some cases may need to be recorded as Restricted Use Areas.

Replacement of structures located on a historically active, dormant, or ancient landslide that are subject to hazard from landslide, settlement, or slippage that cannot be eliminated or avoided will be subject to the provisions of LACBC Section 110.2.3.6. The report must include a qualitative or conditional finding that the proposed work complies with LACBC Section 110.2.1 and shall provide recommendations to enhance site stability.

FIRE REBUILD GUIDELINES - REPORT MATRIX FOR LIMITED GEOTECHNICAL REPORT ELIGIBILITY

PROPERTY TYPE	IS A GEOLOGIC OR GEOTECHNICAL HAZARD* IMPACTING THE PROPERTY?	HAS THE HAZARD BEEN PREVIOUSLY ELIMINATED, MITIGATED, OR AVOIDED?		ELIGIBLE FOR LIMITED REPORT
Flat Sites: Properties without slopes steeper than 3:1 (H:V, 18°) onsite or that may otherwise impact the property	No known hazards	N/A	**THEN**	**YES** - Complete Section 111 findings required.
	Yes	Eliminated or Avoided	**THEN**	**YES** - Complete Section 111 findings required (if hazard eliminated) or "safe for intended use" findings (Section 110.2.3.2) if avoided.
	Yes	No	**THEN**	**YES** - If the property has not been determined by the City to be unsafe to occupy, proposed project shall comply with the provisions of Section 111 or subsections of 110.2.3 as applicable.
Sloping Sites: Properties with slopes steeper than 3:1 (H:V, 18°) onsite or that may otherwise impact the property (not bluff sites)	No known hazards	**N/A**	**THEN**	**YES** - Ensure Limited Report addresses ascending (building clearance) and descending (foundation setback) slope setbacks, slope stability, etc.; complete Section 111 findings required.
	Yes	Eliminated or Avoided	**THEN**	**YES** - Ensure Limited Report addresses ascending (building clearance) and descending (foundation setback) slope setbacks, slope stability, etc.; complete Section 111, or Section 110.2.3 subsection findings required as applicable.
	Yes	Mitigated but not Avoided (i.e., properties within Landslide Assessment Districts)	**THEN**	**YES** - Ensure Limited Report presents the most recent land movement and groundwater level information from the Landslide Assessment District reports where applicable; proposed project shall comply with the provisions of Section 110.2.3.6 (including "Assumption of Risk and Release").
	Yes	No	**THEN**	**NO** - a Comprehensive Report is required in accordance with Section 111 if the hazard can be eliminated, or compliance with Section 110.2.3 subsections as applicable, or Section 110.2.3.6 if the property is located on a historically active, dormant or ancient landslide.
Bluff Sites: Properties located along the bluff edge, as described in a "Bluff Edge Determination" by the Planning Department	No known hazards	Foundation setback from bluff conforms to CBC 1808.7	**THEN**	**YES** - Ensure the structure and any proposed additions conform to the Planning Department's requirement for bluff-edge setback. Complete Section 111 findings required.
	Yes	Eliminated or Avoided	**THEN**	**YES** - Ensure the structure and any proposed additions conform to the Planning Department's requirement for bluff-edge setback. Complete Section 111 findings, or Section 110.2.3 subsection findings required as applicable.
	Yes	No	**THEN**	**NO** - a Comprehensive Report is required; ensure the structure and any proposed additions conform to the Planning and CBC requirements for bluff setback and foundation setbacks, respectively. Complete Section 111 findings required, or Section 110.2.3 subsection findings if applicable.

FIRE REBUILD GUIDELINES - REPORT MATRIX FOR LIMITED GEOTECHNICAL REPORT ELIGIBILITY

PROPERTY TYPE	IS A GEOLOGIC OR GEOTECHNICAL HAZARD* IMPACTING THE PROPERTY?	HAS THE HAZARD BEEN PREVIOUSLY ELIMINATED, MITIGATED, OR AVOIDED?		ELIGIBLE FOR LIMITED REPORT
Sites Mapped Within a Zone of Required Investigation for Liquefaction per the California Geological Survey	Yes	No	**THEN**	**NO** - a Comprehensive Report is required to evaluate and mitigate liquefaction hazards per Building Code Section 110.2.3.8., unless the existing foundation system adequately mitigates liquefaction hazards and is certified for re-use. Complete Section 111 findings required.
Sites Mapped Within a Zone of Required Investigation for Earthquake-Induced Landsliding per the California Geological Survey	Yes	No	**THEN**	**YES** - If structure(s) are not affected by the zone of potential seismically-induced failure. This can be demonstrated by recommending foundations be located outside a zone defined by either projecting a 2:1 (H:V) plane OR projecting a plane defined by the lowest unsupported bedding plane upward from the toe of slope to the building area, whichever is more restrictive.
	Yes	No	**THEN**	**NO** - a Comprehensive Report is required to evaluate and mitigate earthquake-induced landslide hazards. Complete Section 111 findings required. Exceptions: rebuilds that are otherwise subject to exceptions identified in Building Code Section 110.2.3. Mitigation may include relocating proposed structures to avoid the hazard.
Sites Mapped Within 500 Feet of the Malibu Coast Fault, as Depicted on CGS Fault Evaluation Report FER-229 (Treiman, 1994)	Yes	No	**THEN**	**NO** - a Comprehensive Report is required to evaluate surface fault rupture hazards per Building Code Section 113. Applies to PV and PV+10% projects where the new footprint extends more than 5 feet outside of existing footprint. For PV projects staying within the existing footprint, applicant may sign "Assumption of Risk and Release," provided that Consultant addresses fault surface rupture hazards qualitatively, including discussions of: • Site location relative to the mapped traces of the Malibu Coast Fault Zone. • Recency of activity on the Malibu Coast Fault Zone. • Relative risk and consequences (potential damage) of fault rupture at the site if a fault were to extend below the proposed development and an earthquake occurred on that fault. • Measures that could be taken to assess the likelihood of a fault traversing the property (e.g., trenching).

* Geologic and geotechnical hazards include building sites subject to landslide, settlement, or slippage as identified in Building Code sections 110 and 111 and fault rupture hazards identified in Building Code Section 113. This includes areas of slope instability (i.e., shallow and deep landslides, mud/debris flows, rockfalls, etc.), and properties mapped within a zone of required investigation for liquefaction or earthquake-induced landsliding.

REPORT CATEGORY 1

LIMITED ENGINEERING GEOLOGIC AND GEOTECHNICAL ENGINEERING REPORT ("LIMITED REPORT")

The preparation of a *Limited Engineering Geologic and Geotechnical Engineering Report* ("Limited Report") allows the Project Geotechnical Consultants to rely on existing geologic and geotechnical data to provide recommendations for eligible fire rebuild projects. Only those projects that have been assigned the PVPF classification (*in-kind* or *like-for-like* replacement with or without the additional 10%) by the Planning Department are eligible for a Limited Report. Limited Reports do not preclude subsurface exploration that the geotechnical consultant deems necessary to verify existing information.

The Limited Report does not waive the requirements of the City's 2013 *Guidelines for the Preparation of Engineering Geology and Geotechnical Engineering Reports* ("Geotechnical Guidelines"), which require findings to be made with respect to site safety and stability, including, but not limited to, slope stability, seismic hazards analysis, fault rupture analysis, and analysis for geotechnical hazards such as liquefaction, seismic settlement, hydroconsolidation, and expansive soils.

A Limited Report may need to be expanded to a Comprehensive Report in order to provide recommendations for elimination or avoidance of a geologic or geotechnical hazard. These specific measures must eliminate the potential for either catastrophic movement or other life-threatening conditions. Note that an ARR will not be allowed for projects where the hazard to the property is catastrophic or life-threatening. In the event a property owner elects to eliminate or avoid the hazard as recommended by their Project Geotechnical Consultant, and the hazard is eliminated or avoided prior to occupancy, an ARR will not be required.

CONTENTS OF LIMITED REPORTS

Limited Reports must provide appropriate and sufficient site-specific data and analysis to address all of the proposed project elements in accordance with the current California Building Code, Los Angeles County Building Code, Malibu Municipal Code, or any other relevant regulations.

- A replacement foundation design or foundation addition design requires a geotechnical investigation to determine soils values such as shear strength, allowable bearing pressure, expansivity, etc. This investigation does not necessarily require a deep boring — rather, only to the depth of influence for the proposed foundations. It is, however, essential to the design of the replacement or new foundation.

- For a Limited Report, existing geologic and geotechnical data can be supplemented with localized subsurface exploration to verify site conditions and provide additional recommendations, as determined by the Project Geotechnical Consultant.

- If the existing geologic and geotechnical data are not sufficient to fully characterize the property or cannot be supplemented with site-specific exploration to fully characterize the property, or if

extensive subsurface exploration is needed to supplement existing information, then a Comprehensive Report is required.

Use of Code-based Presumptive Load-bearing Values

In certain cases, a flat site with no known geologic or geotechnical hazards will not have appropriate and sufficient site-specific data from which to prepare a Limited Report. A qualified Geologist or Engineer with experience of such sites may utilize presumptive load-bearing values provided in Chapter 18 of the California Building Code, at the discretion of the Building Official. The Project Geotechnical Consultants must verify the bearing material during construction operations and provide recommendations to address any unanticipated conditions encountered; **steps to address unanticipated conditions must be shown or included as notes on the civil and structural plans**. Revisions to approved design and construction plans should not be implemented during construction without the review and approval of the City Inspector.

Limited Reports should include, at a minimum:

1. Research of City files (OnBase) for the subject property and those properties within 300 feet of the subject property; the Project Geotechnical Consultants should contact the ESD Geology Staff for additional information that may be relevant to the subject property but not readily available.
2. A statement by the Project Geotechnical Consultants that they assume geotechnical responsibility for the use and inclusion of any engineering geologic and/or geotechnical engineering reports or data utilized in the preparation of the Limited Report. If only portions of those referenced reports are incorporated into the Limited Report, a statement should be provided that defines which portions of those referenced reports have been used.
3. A discussion on how the existing geologic and geotechnical data obtained from the referenced reports are representative of conditions on the subject property and are appropriate for use and inclusion into the Limited Report.
4. A review of published and available maps and reports for geologic and geotechnical hazards that may impact the subject property.
5. A site observation and description of the geologic conditions observed, including any evidence of earth movement (slope instability, creep, settlement, foundation distress, etc.).
6. A thorough description of the onsite earth materials, groundwater conditions, and surface drainage conditions.
7. A discussion regarding the historical performance of the subject property from a geologic and geotechnical perspective. Aerial photograph review is recommended.
8. A discussion regarding the geologic stability of the site (both surficial and gross stability).
9. A discussion on the property's susceptibility to rockfall, debris flows, mudflows, and flooding resulting from the recent fires.
10. For sites mapped within an active landslide that is within a Landslide Assessment District (LAD), a review of the most recent LAD geology reports and a discussion of historic and future anticipated earth movements. The Limited Report should include geotechnical recommendations to address future ground movement and enhance the stability of the site.

11. For sites with known geologic or geotechnical hazards, a regional hazard map at a suitable scale showing the location of the affected property in relation to the identified hazard.
12. A geologic and/or geotechnical map at a suitable scale depicting the locations of all exploration performed at the site (past or present). The geologic and/or geotechnical map shall use as its base a topographic survey prepared by a licensed professional surveyor and depicting the existing (post-fire) site conditions. Both the pre-fire and proposed residence footprints, and location of the Onsite Wastewater Treatment System (OWTS), should be clearly depicted on the map.
13. Geologic and/or geotechnical cross sections that depict the existing surface and subsurface conditions (including earth materials and groundwater), the proposed project, and geotechnical recommendations for the proposed project. All existing and proposed grades and proposed foundations should be shown on the cross sections.
14. A discussion of all potential geologic and geotechnical hazards as required by the Geotechnical Guidelines, including, but not limited to: earthquake-induced landsliding, liquefaction and lateral spread, surface fault rupture, rockfall, tsunami and/or seiche, hydroconsolidation, seismic settlement, expansive soils, and slope stability. If the property is not impacted by a known hazard and/or is not mapped within a zone of required investigation for a hazard, a statement clearing the property of the hazard should be provided.
15. Geotechnical recommendations for foundations, retaining walls, slabs, pools, and other proposed structures, as appropriate. Include recommendations for lateral loads of deepened foundations, as appropriate.
16. Geotechnical recommendations for grading and shoring, as appropriate.
17. Geotechnical recommendations to eliminate, mitigate, or avoid geotechnical hazards, including, but not limited to, liquefaction, lateral spread, seismic consolidation, hydroconsolidation, creep, slope instability including debris flows, and expansive soils.
18. For bluff sites: A qualitative assessment of bluff edge setback based on the height, gradient, geology, and drainage; the post-fire residential foundation envelope should be relocated farther from the bluff edge if allowed by the Planning Department.
19. Reports must be stamped and signed by the Project Geotechnical Consultants.

The Project Geotechnical Consultants are encouraged to review the Geotechnical Guidelines to ensure the Limited Report contains conclusions and recommendations that sufficiently address the fire rebuild project. Findings provided in a Limited Report must be based on appropriate and sufficient analysis. The geologic and geotechnical reports referenced in the Limited Report should demonstrate adequate Factors of Safety for slope stability analyses and/or liquefaction analyses, or provide sufficient data for the Consultant to provide Factors of Safety in conformance with the current code standards. If the existing geologic and geotechnical data and localized subsurface exploration are insufficient for the Project Geotechnical Consultant to arrive at the necessary findings concerning the geologic and geotechnical hazards to the property, then a Comprehensive Report will be required.

Additions up to 10%: Additional habitable square footage for a PVPF project, including proposed square footage for new accessory dwelling units (ADUs), shall not be built closer to a known geologic or geotechnical hazard than the closest extent of the pre-fire structural foundation envelope. The intent is to not increase the structure's exposure to the hazard beyond that which existed prior to the fire. This shall apply to all properties with these hazards:

1. Active fault splays mapped within 500 feet of the pre-fire residence foundation envelope as described on CGS Seismic Hazard Zone maps, faults mapped by Treiman (FER-229, 1994), or faults mapped by other consultants.
2. Active landslides mapped by the USGS, CGS, Landslide Assessment Districts, or other consultants.
3. Debris flows based upon susceptibility maps prepared by the USGS.
4. Restricted Use Areas and Geologic Hazard Areas as presented on Assessor Parcel Maps or as mapped by other consultants.

Note that additions for PVPF projects cannot encroach into the setback area or designated future(s) area of an onsite wastewater treatment system (OWTS).

Cases where a Limited Report MAY NOT be acceptable: In the event the proposed project includes any of the following cases, a Comprehensive Report will be required:

1. New foundations outside of the existing (pre-fire) footprint (this may be acceptable for flat sites in certain cases).
2. New foundations within the existing (pre-fire) footprint where the proposed bearing material is determined to be unacceptable for foundation support (i.e., uncertified fill or landslide debris; this may be acceptable for flat sites in certain cases).
3. Underpinning of existing (pre-fire) foundations (this may be acceptable for flat sites in certain cases).
4. Existing uncertified fill for foundation support, unless the fill has been fully evaluated by the Project Geotechnical Consultants and recommendations have been provided to remove, replace, penetrate through into acceptable bearing material, or avoid the fill.

Cases where a Limited Report IS NOT acceptable: In the event the proposed project includes any of the following cases, a Comprehensive Report will be required:

1. Significant grading, topographic changes, or structural improvements such as new retaining walls that did not previously exist will be made to the property, particularly to eliminate or mitigate a geologic or geotechnical hazard.
2. Any work that significantly affects the geologic and geotechnical stability of the property.
3. If geotechnical analysis determines that a slope on the property (local slope) is not grossly or seismically stable, or may otherwise adversely impact habitable structures on or off site.
4. If geotechnical analysis determines that the property is subject to liquefaction.
5. All beachfront properties.

REPORT CATEGORY 2
COMPREHENSIVE ENGINEERING GEOLOGIC AND GEOTECHNICAL ENGINEERING REPORT ("COMPREHENSIVE REPORT")

A *Comprehensive Engineering Geology and Geotechnical Engineering Report* ("Comprehensive Report") is required for all fire-damaged properties that are not eligible for a Limited Report. A Comprehensive Report should conform to the requirements of the 2013 Geotechnical Guidelines and may be necessary to provide site-specific recommendations for safe design of fire rebuild projects within known or potential geologic hazard areas. Note that multi-parcel Comprehensive Reports are acceptable.

Fire rebuild projects for commercial structures, multi-family residential structures (of 4 or more units), and properties located on the beach (beachfront or coastline properties) require a Comprehensive Report. Similarly, projects that are assigned a Coastal Development Permit (CDP) or an Administrative Plan Review (APR) by the Planning Department will require a Comprehensive Report. Properties along the beach will also require a Coastal Engineering Report that conforms to the City's 2014 *Guidelines for the Preparation of Coastal Engineering Reports*.

Projects that fall under certain sections of the building code will mandatorily require signing and recordation of an Assumption of Risk and Release (ARR). If the proposed project is otherwise eligible for an *Assumption of Risk and Release* (ARR), but the owner does not wish to sign and record an ARR, then a Comprehensive Report will be required that provides recommendations to eliminate or avoid any geologic or geotechnical hazards affecting the property in conformance with the Malibu Municipal Code, which includes complying with the provisions of Section 111 of the Los Angeles County Building Code.

Properties that require a Comprehensive Report may also require a Supporting Geologic Report for a new onsite wastewater treatment system (OWTS; Report Category 4 below), unless the property will be serviced by an existing municipal sewer or the existing (pre-fire) OWTS passes an OWTS Fire Damage Assessment that has been reviewed and accepted by the Environmental Health Supervisor.

If existing (pre-fire) foundations, retaining walls, or shoreline protection devices are intended to be re-used in the fire rebuild project, then a favorable Structural Foundation Feasibility Report must be submitted and accepted by the Building Official (refer to the Forms & Handouts Page of the Malibu Rebuilds website: https://maliburebuilds.org/forms-and-handouts/). If a favorable determination cannot be made for the structures intended for re-use, then a Comprehensive Report will be required to provide geotechnical recommendations to repair or reconstruct those structures or construct replacement structures elsewhere onsite.

REPORT CATEGORY 3
GEOLOGIC HAZARD ASSESSMENT FOR TEMPORARY HOUSING

Limited Geologic Hazard Assessments are required for temporary housing as defined under recent amendments to Malibu Municipal Code Section 17.40.040 Section A18 (a-k) Residential Development Standards. The siting of temporary housing shall be supported by a limited geotechnical report prepared by appropriately licensed professionals which evaluates the location of the proposed temporary housing with respect to geologic and flood hazards that the specific location(s) may be exposed to during the proposed four (4) year use of the location. These reports shall be signed by both a certified engineering geologist and either a registered civil engineer practicing soils engineering or a registered geotechnical engineer.

The Project Geotechnical Consultants are encouraged to review the information in the following resources to prepare the Hazard Assessment:

USGS Postfire debris-flow hazards:
https://www.usgs.gov/programs/landslide-hazards/science/postfire-debris-flow-hazards

CGS Watershed Emergency Response Team Assessments:
https://www.conservation.ca.gov/cgs/bwg/recent

A finding is required that the specific location of the temporary housing is safe for its intended use for the duration of use. The report must be submitted to the City for review by the ESD Geology Department and accepted by the Building Official.

If the temporary housing is supported on anything OTHER than wheels or a trailer which can be readily moved, it shall comply with requirements for foundations as noted in Chapter 16, 18 and Appendix G – Floodproof Construction of the current California Building Code.

REPORT CATEGORY 4
SUPPORTING GEOLOGIC REPORT FOR ONSITE WASTEWATER TREATMENT SYSTEMS ("SUPPORTING GEOLOGIC REPORT")

A *Supporting Geologic Report for Onsite Wastewater Treatment Systems* ("Supporting Geologic Report") should conform to the requirements of Section 5.8 of the 2013 Geotechnical Guidelines. A Supporting Geologic Report will be required when a new OWTS is proposed or when an existing OWTS is proposed to be significantly repaired or modified.

The Supporting Geology report should include:

1. The current static and highest anticipated groundwater levels under the subject site.

2. A finding that the OWTS has the required clearance from the groundwater levels.

3. Interpretations of the geologic structure, including discontinuities such as fractures, faults, clay seams, and joint systems (for bedrock sites) or variations in sandy, clayey, and silty soils across the site (for terrace or alluvial sites).

4. A discussion of the anticipated path of effluent, the potential for mounding or daylighting of effluent, and any geologic changes across the site that may impact the movement of effluent.

5. Geologic cross sections that clearly depict the existing and/or proposed OWTS, the existing and proposed grades, the anticipated paths of effluent, current and highest anticipated groundwater levels, required setbacks, and recommended capping depths, as appropriate.

6. Surficial, static, and pseudo-static slope stability analyses that include the highest anticipated groundwater levels and that consider the proposed grades across the property. Saturated zones from effluent disposal must be evaluated as part of the analyses.

7. Complete findings in accordance with LACBC Section 111, or in the case of properties located on historically active, dormant, or ancient landslides, complete findings in accordance with LACBC Section 110.2.3.6.

Note that, for areas within known geologic and geotechnical hazards, such as within Landslide Assessment Districts or historically active, dormant or ancient landslides, the Project Geotechnical Consultant must demonstrate that the new OWTS and replacement landscaping, will not result in a greater amount of groundwater infiltration than occurred under the pre-fire condition, per Section 110.2.3.6 of the Los Angeles County Building Code. Emphasis will be on evaluating those affected properties for evapotranspiration (ET) systems prior to acceptance by the Building Official of conventional systems. Consult the ESD Environmental Heath Department for more information.

The Project Geotechnical Consultants are encouraged to contact the ESD Geology Department and/or the ESD Environmental Heath Department and review the Geotechnical Guidelines to ensure the Supporting Geology Report contains conclusions and recommendations that sufficiently address the proposed OWTS.

DEFINITIONS AND CLARIFICATIONS

Governors Executive Orders

The guidelines are intended to address the Governor's Executive Orders (as applicable to adopted Building Codes) to allow affected property owners to quickly rebuild their fire-damaged structures. While the Executive Orders do not directly impact soils reports, the Executive Order regarding construction of ADUs may be limited by Los Angeles County Code Section 110.

Definitions

For these guidelines, the following definitions have been adopted:

- ***Elimination*** of a geologic or geotechnical hazard entails complete removal or repair of the hazard such that it no longer poses a threat to the property and the proposed project, and the provisions of LACBC Section 111 can be met.
- ***Avoidance*** entails relocating the proposed project outside of the area of impact of the hazard, where it will be "safe for the intended use" in compliance with Section 110.2.3.2 of the LACBC (an ARR is required).
- ***Mitigation*** of the hazard entails modifying or controlling the hazard to a level such that the proposed project will not be subject to geotechnical hazards including landslide, settlement or slippage, and the provisions of LACBC Section 111 can be met.

Assumptions of Risk and Release (ARR)

An *Assumption of Risk and Release* is an acknowledgment and disclosure of hazards document that is signed by the property owner(s) and recorded against the property title by the Los Angeles County Recorder and references the report or reports prepared by licensed geologic and geotechnical professionals that:

1. Characterize the known and potential geologic and geotechnical hazards affecting a property (both onsite and offsite),

   — AND —

2. Characterize the risks to the property from those geologic and geotechnical hazards if the hazards cannot be eliminated or avoided but the habitable structures are found to be safe for the intended use..

An ARR requires that the property owner be informed by the Project Geotechnical Consultants of the risks to the property from a geologic or geotechnical hazard and accept that those hazards will continue to exist without intervention.

An ARR may be required for additions constructed within areas impacted by known geologic or geotechnical hazards. In the event the Project Geotechnical Consultants demonstrate that the proposed addition will not be affected by the geologic or geotechnical hazards, an ARR will not be required.

COASTAL ENGINEERING REPORTS FOR BEACHFRONT PROPERTIES

For all beachfront property rebuilds, a Coastal Engineering report is required that conforms to the City of Malibu *Guidelines for the Preparation of Coastal Engineering Reports* and applicable sections of the California Building Code and Malibu Municipal Code. In addition, the following limitations and restrictions apply for beachfront fire rebuilds:

- If the property has an existing seawall that is NOT damaged, and is proposed to be re-used as is, the seawall must be demonstrated to be an engineered and permitted structure that conforms to current Building Code.
- If the property has an existing seawall that is damaged and proposed to be repaired and reused, a Structural Evaluation of the existing seawall must be performed in accordance with the City of Malibu's guidelines, Foundation Feasibility report for Fire Damage Structures. The seawall repair or modification must bring the structure into conformance with current code.
- All projects must conform to FEMA Floodplain requirements as codified in the Malibu Municipal Code, including Appendix G of the California Building Code – Flood Resistant Construction.
- No timber piles are allowed to be used or reused for any structure.
- Foundations for seawalls in FEMA VE Zones shall not be structurally connected to structural support for the house.

Applicable Code Sections

While the Governor's Order exempts Fire Rebuilds from the City's Local Coastal Program, this exemption does not apply to the Building Code or the Malibu Municipal Code, specifically the following sections related to both buildings and onsite wastewater treatment systems on the beachfront:

- 15.40.110 Shoreline Protection Devices, https://ecode360.com/44336047 and
- 15.42.030 Siting criteria, https://ecode360.com/44336095 (has setback Table **15.42.030(E))**
- 15.42.140 OWTS. https://ecode360.com/44336287
- 15.20.150 Coastal high Hazard Areas (Zone VE). https://ecode360.com/44335784
- California Building Code (2022 or latest adopted edition) Appendix G Flood Resistant Construction.
- Section 17.40.040 Residential Development Standards Section A.5.b which governs building heights with respect to wave uprush.

Coastal Engineering Report Requirements (See links under References below).

City of Malibu codes governing Residential Development Standards and OWTS standards require a 100-year wave action report, and coastal engineering guidelines require sea level rise to be addressed. It should be noted that FEMA Base Flood Elevations (BFE) on current FIRM maps do not incorporate sea level rise, and the findings of a site-specific coastal engineering report may result in a Design Flood Elevation that is higher than the FEMA BFE. The higher of the BFE or DFE shall be used for elevation criteria as it applies to elements of the new structure.

- The Coastal engineering report must be prepared by a California licensed civil engineer specializing in coastal engineering.
- Reports must conform to the adopted Guidelines for Preparation of Coastal Engineering Reports (2014).

- Sea Level Rise must be included in the wave uprush analyses. The current California Coastal Commission Guidelines recommend the use of Intermediate to High Sea level rise, where feasible, but indicate Intermediate is acceptable to evaluate sea level rise impacts.
- For Fire Rebuilds, both Intermediate and Intermediate to High Sea Level Rise scenarios should be evaluated for a 100-year period from the time a project is anticipated to be complete, based on Table F-11-- Sea Level Scenarios for Santa Monica in the CCC 2024 Guidance.
- Intermediate sea level rise is acceptable for use in design provided there are feasible future adaptations to the structure or on the property to mitigate greater sea level rise, should it occur.
- All reports should include recommendations for inspection and monitoring of the Shoreline Protection Device.

The Building Code and the policy and guidelines that address implementation of the code are about life safety and protection of property. In the event that there is a section of the code that requires interpretation, all final decisions rest with the Building Official.

References

City of Malibu, *GUIDELINES FOR THE PREPARATION OF COASTAL ENGINEERING REPORTS AND PROCEDURES FOR REPORT SUBMITTAL*
https://www.malibucity.org/DocumentCenter/View/5600/Coastal-Engineering-Guidelines?bidId=

City of Malibu, Foundation Feasibility report for Fire Damage Structures
https://maliburebuilds.org/wp-content/uploads/2025/03/2025-03-Malibu_FoundationFeasability_DRAFT-01a-1.pdf

CALIFORNIA COASTAL COMMISSION SEA LEVEL RISE POLICY GUIDANCE
https://documents.coastal.ca.gov/assets/slr/guidance/2024/2024AdoptedSLRPolicyGuidanceUpdate.pdf