
IV. MITIGATION MONITORING PROGRAM

MITIGATION MONITORING PROGRAM PROCEDURES

Section 21081.6 of the Public Resources Code requires a Lead Agency to adopt a “reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment” (Mitigation Monitoring Program, Section 15097 of the CEQA Guidelines provides additional direction on mitigation monitoring or reporting). The Los Angeles Department of City Planning (City Planning) is the Lead Agency for the Palisades Landmark Condominium Project.

A Draft Environmental Impact Report (Draft EIR) has been prepared to address the potential environmental impacts of the project. Where appropriate, this environmental document identified project design features or recommended mitigation measures to avoid or to mitigate potential impacts identified to a level where no significant impact on the environment would occur. This Mitigation Monitoring Program (MMP) is designed to monitor implementation of the mitigation measures required for the Palisades Landmark Condominium Project. The required mitigation measures are listed and categorized by impact area, with an accompanying identification of the following:

- Monitoring Phase, the phase of the project during which the mitigation measure shall be monitored
 - Pre-Construction, including the design phase
 - Construction
 - Occupancy (post-construction)
- The Enforcement Agency, the agency with the power to enforce the mitigation measure
- The Monitoring Agency, the agency to which reports involving feasibility, compliance, implementation and development are made.

The MMP for the Palisades Landmark Condominium Project will be in place throughout all phases of the project. The project applicant shall be responsible for implementing all mitigation measures unless otherwise noted. The applicant shall also be obligated to provide certification, as identified below, to the appropriate monitoring agency and the appropriate enforcement agency that compliance with the required mitigation measure has been implemented. The City’s existing planning, engineering, review and inspection processes will be used as the basic foundation for the MMP procedures and will also serve to provide the documentation for the reporting program.

The substance and timing of each certification report that is submitted to City Planning shall be at the discretion of City Planning. Generally, each report will be submitted to City Planning in a timely manner following completion/implementation of the applicable mitigation measure and shall include sufficient information to reasonably determine whether the intent of the measure has been satisfied. City Planning in conjunction with the project applicant shall assure that project construction occurs in accordance with the MMP. The South Coast Air Quality Management District shall be responsible for the implementation of corrective actions relative to violations of SCAQMD rules associated with mitigation. Departments listed below are all departments of the City of Los Angeles unless otherwise noted.

VISUAL RESOURCES

1. The proposed project shall comply with the City's Hillside Development Guidelines.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety, Department of City Planning
Monitoring Agency: Department of Building and Safety, Department of City Planning

2. Prior to the issuance of a grading permit, a plot plan prepared by a reputable tree expert, indicating the location, size, type, and condition of all existing trees on the site shall be submitted for approval by the Department of City Planning and the Street Tree Division of the Bureau of Street Services. All trees in the public right-of-way shall provide per the current Street Tree Division standards.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of City Planning, Street Tree Division of the Bureau of Street Services
Monitoring Agency: Department of City Planning, Street Tree Division of the Bureau of Street Services

3. The plan shall contain measures recommended by the tree expert for the preservation of as many trees as possible. Mitigation measures such as replacement by a minimum of 24-inch box trees on the site, on a 1:1 basis, shall be required for the unavoidable loss of desirable trees on the site, and to the satisfaction of the Street Tree Division of the Bureau of Street Services and the Advisory Agency.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of City Planning, Street Tree Division of the Bureau of Street Services
Monitoring Agency: Department of City Planning, Street Tree Division of the Bureau of Street Services

- 4. All open areas not used for buildings, driveways, parking areas, or walkways shall be attractively landscaped and maintained in accordance with a landscape plan, including an automatic irrigation plan, prepared by a licensed landscape architect to the satisfaction of the City Planning Department.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Department of City Planning
Monitoring Agency: Department of Building and Safety, Department of City Planning

- 5. Landscape buffers shall be planted between the project site and adjacent residential uses.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Department of City Planning
Monitoring Agency: Department of Building and Safety, Department of City Planning

- 6. Outdoor lighting shall be directed on-site and designed and installed with shielding so that the light source can not be seen from adjacent land uses.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

- 7. The exterior of the proposed buildings shall be constructed of non-reflective building materials.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

AIR QUALITY

- 1. Conduct pre-construction assessments for Asbestos Containing Materials (ACMs). Prior to the issuance of the demolition permit, the applicant shall provide a letter to the Department of Building and Safety from a qualified asbestos abatement consultant that no ACMs are present in the building. If ACMs are found to be present, they will need to be abated in compliance with the South Coast Air Quality Management District’s Rule 1403 as well as all other state and federal rules and regulations.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: South Coast Air Quality Management District
Monitoring Agency: Department of Building and Safety

2. All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD District Rule 403. Wetting could reduce fugitive dust by as much as 50 percent.

Monitoring Phase: Construction
Enforcement Agency: South Coast Air Quality Management District
Monitoring Agency: Department of Building and Safety

3. All materials transported off site shall be securely covered to prevent excessive amounts of dust.

Monitoring Phase: Construction
Enforcement Agency: South Coast Air Quality Management District
Monitoring Agency: Department of Building and Safety

4. All clearing, grading, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 mph), so as to prevent excessive amounts of dust.

Monitoring Phase: Construction
Enforcement Agency: South Coast Air Quality Management District
Monitoring Agency: Department of Building and Safety

5. General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.

Monitoring Phase: Construction
Enforcement Agency: South Coast Air Quality Management District
Monitoring Agency: Department of Building and Safety

6. Cover any on-site stockpiles of debris, dirt or other dusty material.

Monitoring Phase: Construction
Enforcement Agency: South Coast Air Quality Management District
Monitoring Agency: Department of Building and Safety

7. Actively stabilize any cleared area that is planned to remain inactive for more than 30 days after clearing is completed.

Monitoring Phase: Construction
Enforcement Agency: South Coast Air Quality Management District
Monitoring Agency: Department of Building and Safety

8. Establish an on-site construction equipment staging area and construction worker parking lot, located on either paved surfaces or unpaved surfaces subjected to soil stabilization treatments, as close as possible to a public highway.

Monitoring Phase: Construction
Enforcement Agency: South Coast Air Quality Management District
Monitoring Agency: Department of Building and Safety

9. Encourage car-pooling for construction workers.

Monitoring Phase: Construction
Enforcement Agency: South Coast Air Quality Management District
Monitoring Agency: Department of Building and Safety

10. Sweep access points daily.

Monitoring Phase: Construction
Enforcement Agency: South Coast Air Quality Management District
Monitoring Agency: Department of Building and Safety

GEOLOGY AND SOILS

Seismic

1. The design and construction of the project shall conform to the Uniform Building Code seismic standards as approved by the Department of Building and Safety.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Site Preparation

Grading Specifications

2. The areas to receive compacted fill shall be prepared by removing all vegetation, debris, existing fill, soil, colluvium and slide debris. The exposed excavated area shall be observed by the soils engineer or geologist prior to placing compacted fill. The exposed grade shall be

scarified to a depth of six inches, moistened to optimum moisture content, and recompacted to 90 percent of the maximum density.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

3. The proposed building site for buildings 1 and 2 shall be excavated to a minimum depth of 10 feet below the bottom of all footings. The excavation shall extend a minimum of 10 feet beyond the building footprint. The excavated areas shall be observed by the soils engineer or geologist prior to placing compacted fill.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

4. Fill, consisting of soil approved by the soils engineer, shall be placed in horizontal lifts and compacted in six-inch layers with suitable compaction equipment. The excavated on-site materials are considered satisfactory for reuse in the controlled fills. Any imported fill shall be observed by the soils engineer prior to use in fill areas. Rocks larger than six inches in diameter shall not be used in the fill.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

5. The fill shall be compacted to at least 90 percent of the maximum laboratory density for the material used. The maximum density shall be determined by ASTM D 1557-91 or equivalent.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

6. Field observation and testing shall be performed by the soils engineer during grading to assist the contractor in obtaining the required degree of compaction and the proper moisture content. Where compaction is less than required, additional compactive effort shall be made with adjustment of the moisture content, as necessary, until 90 percent compaction is obtained. One compaction test is required for each 500 cubic yards or two vertical feet of fill placed.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Fill Slopes

7. Compacted fill slopes may be constructed at a 2:1 gradient and shall be keyed and benched into bedrock or supported laterally with retaining walls or soldier piles.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Subdrain

8. A subdrain system is recommended at the back of the proposed repair. The subdrain shall consist of an eight inch perforated pipe surrounded by five cubic feet of gravel per foot of subdrain. Gravel ‘chimney’ drains are recommended along the uphill sides of the repair. The gravel chimney drains shall consist of a 12 inch wide strip of 34 inch gravel placed between the compacted fill and the shored excavation. The chimney drains shall have hydraulic connectivity to the main subdrain.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Excavation Characteristics

9. In the event a hard cemented layer is encountered during foundation excavation, coring or the use of jackhammers may be necessary. Groundwater and caving zones may also be encountered in soldier pile excavations. Casing and/or drilling muds may be required shall caving zones be encountered.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Foundation Design

Spread Footings

10. Continuous and/or pad footings may be used to support the proposed buildings and garage retaining walls provided they are founded in bedrock, approved compacted fill (buildings 1 and 2) or alluvial terrace. Continuous footings shall be a minimum of 12 inches in width. Pad footings shall be a minimum of 24 inches square. Table IV.D-2 depicts the recommended design parameters.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

**Table IV.D-2
Design Parameters**

Bearing Material	Minimum Embedment Depth of Footing	Vertical Bearing (psf)	Coefficient of Friction	Passive Earth Pressure (pcf)	Maximum Earth Pressure (psf)
Bedrock	12 inches	4,000	0.35	500	6,000
Alluvial Terrace	12 inches	1,500	0.3	300	3,000
Future Compacted Fill	18 inches	1,500	0.3	300	3,000

11. Increases in the bearing values of the compacted fill, terrace and bedrock are allowable at a rate of 20 percent for each additional foot of footing width or depth to a maximum of 3,000 pounds per square foot for the fill and terrace and 6,000 pounds per square foot for the bedrock. For bearing calculations, the weight of the concrete in the footing may be neglected.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

12. The bearing values shown above are for the total of dead and frequently applied live loads and may be increased by one third for short duration loading, which includes the effects of wind or seismic forces. When combining passive and friction for lateral resistance, the passive component shall be reduced by one third.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

13. All continuous footings shall be reinforced with a minimum of four #4 steel bars; two placed near the top and two near the bottom of the footings. Footings shall be cleaned of all loose soil, moistened, free of shrinkage cracks and approved by the geologist prior to placing forms, steel or concrete.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Deepened Foundations - Friction Piles

14. Drilled, cast in place concrete friction piles are recommended to support portions of the proposed buildings located over deep fill and adjacent to slopes to achieve the required slope setbacks. Also, piles are recommended to support the southern portion of Building 2 below the 1:1 setback plane. Piles shall be a minimum of 24 inches in diameter and a minimum of eight feet into bedrock or eight feet into fill below the setback plane. Piles may be assumed fixed at three feet into bedrock or three feet into fill below the setback plane. The piles may be designed for a skin friction of 700 and 500 pounds per square foot for that portion of pile in contact with the bedrock and compacted fill, respectively. All piles shall be tied in two horizontal directions with grade beams.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Lateral Design

15. The existing fill and soil on the site are subject to downhill creep. Pile shafts are subject to lateral loads due to the creep forces. Pile shafts shall be designed for a lateral load of 1,000 pounds per linear foot for each foot of shaft exposed to the existing fill and soil. Friction piles supporting the portion of Building 2 within the foundation zone shall be designed for an arbitrary creep force of 5 kips, with a point of application at the ground surface.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

16. The friction values are for the total of dead and frequently applied live loads and may be increased by one third for short duration loading, which includes the effects of wind or seismic forces. Resistance to lateral loading may be provided by passive earth pressure within the bedrock.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

17. Passive earth pressure may be computed as an equivalent fluid having a density of 380 pounds per cubic foot. The maximum allowable earth pressure is 6,000 pounds per square foot. For design of isolated piles, the allowable passive and maximum earth pressures may be increased by 100 percent. Piles spaced more than 2½ pile diameters on center may be considered isolated.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Foundation Settlement

18. Settlement of the foundation system is expected to occur on initial application of loading. A settlement of ¼ to ½ inch may be anticipated. Differential settlement shall not exceed 1/4 inch.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Foundation Setback

19. The Building Code requires that foundations be a sufficient depth to provide horizontal setback from a descending slope steeper than 3:1. The required setback is ½ the height of the slope with a minimum of five feet and a maximum of 40 feet measured horizontally from the base of the foundation to the slope face.

Monitoring Phase:	Pre-Construction, Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

Toe of Slope Clearance

20. The Building Code requires a level yard setback between the toe of an ascending slope and the rear wall of the proposed structure of one half the slope height to a maximum 15 feet clearance for slopes steeper than 3:1. For retained slopes, the face of the retaining wall is considered the toe of the slope.

Monitoring Phase:	Pre-Construction, Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

Retaining Walls

General Design

21. Cantilevered retaining walls up to 15 feet high, supporting compacted fill with backslopes between level and 2:1 may be designed for an equivalent fluid pressure of 43 pounds per cubic foot. Cantilevered retaining walls higher than 15 feet will require specific calculations based upon the backslope and surcharge conditions. Restrained basement and parking garage walls, where wall deflection is limited, shall be designed for a pressure of 30H, where H is the height of the restrained wall in feet. Retaining walls shall be provided with a subdrain or weepholes covered with a minimum of 12 inches of 3/4 inch crushed gravel.

Monitoring Phase:	Pre-Construction, Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

Backfill

22. Retaining wall backfill shall be compacted to a minimum of 90 percent of the maximum density as determined by ASTM D 1557-91, or equivalent. Where access between the retaining wall and the temporary excavation prevents the use of compaction equipment, retaining walls shall be backfilled with 3/4 inch crushed gravel to within two feet of the ground surface. Where the area between the wall and the excavation exceeds 18 inches, the gravel must be vibrated or wheel-rolled, and tested for compaction. The upper two feet of backfill above the gravel shall consist of a compacted fill blanket to the surface. Retaining wall backfill shall be capped with a paved surface drain.

Monitoring Phase:	Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

Foundation Design

23. Retaining wall footings may be sized per the “Deepened” and “Spread Footings’ mitigation measures listed above.

Monitoring Phase:	Pre-Construction, Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

Freeboard

24. Retaining walls surcharged by a sloping condition shall be provided freeboard for slough¹ protection. For manufactured 2:1 slopes, a minimum of 12 inches of freeboard is recommended. For retaining walls supporting existing or natural slopes, the recommended freeboard is 18 inches. An open “V” drain shall be placed behind the wall so that all upslope flows are directed around the structure to the street or approved location.

Monitoring Phase:	Pre-Construction, Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

Temporary Excavations - Soldier Piles

25. Soldier piles are recommended as part of the stabilization plan to support the compacted fill laterally and to increase the safety factor. Southeast facing vertical excavations are not recommended in the slide debris. All southeast facing excavations in the slide debris shall be trimmed to 1:1 or along other flatter planes of weakness. Non-southeast facing temporary excavations in the slide debris may be created vertically up to five feet high. Where non-southeast facing vertical excavations in the slide debris exceed five feet in height, the upper portion shall be trimmed to 1:1(45 degrees). Northeast-facing excavations in the bedrock will weaken bedding in the down-dip direction. Northeast-facing excavations shall be trimmed to 1:1, or shored.

¹ Rock material that has crumbled from the sides of a borehole.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

26. Soldier piles will be required to support temporary excavations and the landslide along the uphill property line and to support offsite properties (Soldier Piles P1 through P40 on the Geologic Map). Soldier piles will also be required to support excavations along the downhill (southern) property line. Soldier piles shall be spaced a maximum of 10 feet on center. Piles may be assumed fixed at 10 feet into bedrock below the slide debris, below the 1 1/2: 1 setback plane, or below the base of the excavation, whichever is deeper.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

27. The temporary load on soldier piles P1 through P10 is 170 kips per foot. From P17 to P35, the recommended design force is 145 kips per foot. Between piles P10 and P17, the design force shall decrease linearly from 170 to 145 kips per foot. The point of application is assumed to be 1/3 the retained height of the pile. Piles P1 through P35 shall be embedded in the bedrock below the base of the slide.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

28. Piles P36 through 40 shall be founded below a 1½: 1 plane projected up from the base of the slide. The recommended design equivalent fluid pressure is 65 pounds per cubic foot for the portion of the pile between the ground surface and the 1½: 1 setback plane. Piles along the upslope property line may also be utilized to support temporary vertical excavations to construct the required rear yard retaining walls.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

29. Due to the large forces and high retaining heights, cantilevered piles may not be feasible. Bracing, rakers, tie-back anchors, and additional row(s) of soldier piles, may be used to assist the property line retaining walls. Slopes may be trimmed offsite to reduce the heights of shored excavations with permission from the offsite property owner. The installation of tie-back anchors offsite will also require permission from the offsite property owner.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Lateral Design - Soldier Piles

30. Resistance to lateral loading may be provided by passive earth pressure within the bedrock. Passive earth pressure may be computed as an equivalent fluid having a density of 380 pounds per cubic foot. The maximum allowable earth pressure is 6,000 pounds per square foot. For design of isolated piles, the allowable passive and maximum earth pressures may be increased by 100 percent. Piles spaced more than 2½ pile diameters on center may be considered isolated.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Tie-back Anchors

31. Tie-back earth anchors may be used to assist the soldier piles in resisting the lateral loads. Either friction anchors or belied anchors may be used.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

32. For design purposes, the active wedge within the slide debris is defined by the base of the slide as shown in the cross sections. For earth anchors remote to the slide, it is assumed that the active wedge adjacent to the shoring is defined by a plane drawn at 35 degrees with the vertical through the bottom of the excavation. Friction anchors shall extend at least 25 feet beyond the potential active wedge, or to a greater length if necessary to develop the desired capacities.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Testing

33. The capacities of the anchors shall be determined by testing of the initial anchors. For preliminary design purposes, it is estimated that drilled friction anchors will develop an average value of 400 pounds per square foot. Only the frictional resistance developed beyond the active

wedge shall be considered in resisting lateral loads. If the anchors are spaced at least six feet on center, no reduction in the capacity of the anchors need be considered due to group action.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

34. The frictional resistance between the soldier piles and the retained earth may be used in resisting a portion of the downward component of the anchor load. The coefficient of friction between the soldier piles and the retained earth may be taken as 0.35. In addition, the soldier piles below the excavated level may be used to resist downward loads. The downward frictional resistance between the concrete soldier piles and the soils below the excavated level may be taken as equal to 700 pounds per square foot.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

35. The anchors may be installed at angles of 20 to 40 degrees below the horizontal. Caving and sloughing of the anchor hole shall be anticipated and provisions made to minimize such caving and sloughing. Groundwater and seeps should be anticipated for anchors drilled within the slide debris. The anchors shall be filled with concrete placed by pumping through the auger from the tip out, and the concrete shall extend from the tip of the anchor to the active wedge. To minimize chances of caving and sloughing, that portion of the anchor shaft within the active wedge shall be backfilled with sand before testing the anchor. This portion of the shaft shall be filled tightly and flush with the face of the excavation. The sand backfill shall be placed by pumping; the sand may contain a small amount of cement to facilitate pumping.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

36. A J. Byer Group representative shall select at least eight of the initial anchors for a 24-hour 200% test and eight additional anchors for quick 200% tests. The anchors shall be tested to develop twice the assumed friction value. Anchor rods of sufficient strength shall be installed in these anchors to support the 200 percent test loading. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length shall be increased until satisfactory test results are obtained. The total deflection during the 24-hour 200% test shall not exceed 12 inches. During the 24-hour test, the anchor deflection shall not exceed 0.75 inch measured after the 200% test load is applied. If the anchor movement after the 200% load has

been applied for 12 hours is less than 0.5 inch, and the movement over the previous four hours has been less than 0.1 inch, the 24-hour test may be terminated.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

37. For the quick 200% tests, the 200% test load shall be maintained for 30 minutes. The total deflection of the anchor during the 200% quick tests shall not exceed 12 inches; the deflection after the 200% test load has been applied shall not exceed 0.25 inch during the 30-minute period.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

38. All of the anchors shall be pretested to at least 150% of the design load; the total deflection during the test shall not exceed 12 inches. The rate of creep under the 150% test shall not exceed 0.1 inch over a 15-minute period for the anchor to be approved for the design loading.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

39. After a satisfactory test, each anchor shall be locked-off at the design load. The locked-off load shall be verified by rechecking the load in the anchor. If the locked-off load varies by more than 10% from the design load, the load shall be resent until the anchor is locked-off within 10% of the design load.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

40. The installation of the anchors and the testing of the completed anchors shall be observed by the J. Byer Group.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Lagging

41. Continuous lagging² is anticipated for shoring piles supporting slide debris. The soldier piles shall be designed for the full anticipated lateral pressure. However, the pressure on the lagging will be less due to arching in the soils. Lagging shall be designed for the recommended earth pressure, but may be limited to a maximum value of 400 pounds per square foot.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Rakers

42. Rakers may be used to internally brace the soldier piles. The raker bracing could be supported laterally by temporary concrete footings (deadmen) or by the permanent interior footings. For design of temporary footings or deadmen, poured with the bearing surface normal to rakers inclined at 45 degrees, a bearing value of 4,000 pounds per square foot may be used, provided the shallowest point of the footing is at least one foot below the lowest adjacent grade.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Deflection

43. Some deflection of the shored embankment shall be anticipated. If excessive deflection occurs during construction, additional bracing may be necessary to minimize deflection. If desired to reduce the deflection of the shoring, a greater active pressure could be used in the shoring design. Monitoring of the performance of the shoring system is recommended. The monitoring shall consist of periodic surveying of the lateral and vertical locations of the tops of all the soldier piles. Also, some means of periodically checking the load on selected anchors may be necessary.

Monitoring Phase: Pre-Construction, Construction, Post-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

² *Planking used especially for preventing cave-ins in earthwork or for supporting an arch during construction.*

44. The geologist shall be present during grading to see temporary slopes. All excavations shall be stabilized within 30 days of initial excavation. Water shall not be allowed to pond on top of the excavations or to flow toward it. No vehicular surcharge shall be allowed within three feet of the top of the cut.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Floor Slabs, Decking and Paving

45. Concrete floor slabs and concrete decking shall be cast over bedrock or approved compacted fill and reinforced with a minimum of #4 bars on 16 inch centers, each way. Slabs which will be provided with a floor covering shall be protected by a polyethylene plastic vapor barrier. The barrier shall be covered with a thin layer of sand, about one inch, to prevent punctures and aid in the concrete cure.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

46. Decking which caps a retaining wall shall be provided with a flexible joint to allow for the normal one to two percent deflection of the retaining wall. Decking which does not cap a retaining wall shall not be tied to the wall. The space between the wall and the deck will require periodic caulking to prevent moisture intrusion into the retaining wall backfill.

Monitoring Phase: Construction, Post-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

47. It shall be noted that cracking of concrete floor slabs is very common during curing. The cracking occurs because concrete shrinks as it dries. Crack control joints which are commonly used in exterior decking to control such cracking are normally not used in interior slabs. The reinforcement recommended above is intended to reduce cracking and its proper placement is critical to the slab's performance. The minor shrinkage cracks which often form in interior slabs generally do not present a problem when carpeting, linoleum, or wood floor coverings are used. The slab cracks can, however, lead to surface cracks in brittle floor coverings such as ceramic tile. A mortar bed or slip sheet is recommended between the slab and tile to limit, the potential for cracking.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Paving

48. Paving shall be placed over bedrock, terrace, or approved compacted fill. Base course shall be compacted to at least 95 percent of the maximum dry density. Trench backfill below paving, shall be compacted to 90 percent of the maximum dry density. Irrigation water shall be prevented from migrating under paving. Table IV.D-3 shows the recommended pavement sections.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

**Table IV.D-3
 Recommended Pavement Sections**

Service	Pavement Thickness (Inches)	Base Course (inches)
Light Passenger Cars	3	4
Moderate Trucks (Storage, etc.)	4	6

Drainage

49. Roof gutters are recommended for the proposed structures. Pad and roof drainage shall be collected and transferred to the street or approved location in non-erosive drainage devices. Drainage shall not be allowed to pond on the pad or against any foundation or retaining wall. Drainage shall not be allowed to flow uncontrolled over any descending slope. Planters located within retaining wall backfill shall be sealed to prevent moisture intrusion into the backfill. Planters located next to raised floor type construction shall be sealed to the depth of the footings. Drainage control devices require periodic cleaning, testing and maintenance to remain effective.

Monitoring Phase: Construction, Post-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Waterproofing

50. Interior and exterior retaining walls are subject to moisture intrusion, seepage, and leakage and shall be waterproofed. Waterproofing paints, compounds, or sheeting can be effective if properly installed. Equally important is the use of a subdrain that daylights to the atmosphere. The subdrain shall be covered with 34 inch crushed gravel to help the collection of water. Yard areas above the wall shall be sealed or properly drained to prevent moisture contact with the wall or saturation of wall backfill.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

51. Construction of raised floor buildings where the grade under the floor has been lowered for joist clearance can also lead to moisture problems. Surface moisture can seep through the footing and pond in the underfloor area. Positive drainage away from the footings, waterproofing the footings, compaction of trench backfill and subdrains can help to reduce moisture intrusion.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Plan Review

52. Formal plans ready for submittal to the Building Department shall be reviewed by The J. Byer Group. Any change in scope of the project may require additional work.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Site Observations During Construction

53. The Building Department requires that the geotechnical company provide site observations during construction. The observations include foundation excavations, tie-back excavations, shoring piles, keyways for fill, benching, and temporary slopes. All fill that is placed shall be

tested for compaction and approved by the soils engineer prior to use for support of engineered structures. The City of Los Angeles requires that all retaining wall subdrains be observed by a representative of the geotechnical company and the City Inspector.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

54. The J. Byer Group, Inc. shall be advised at least 24 hours prior to any required site visit. The agency approved plans and permits shall be at the jobsite and available to the J. Byer Group. The project consultant will perform the observation and post a notice at the jobsite of their visit and findings. This notice shall be given to the agency inspector.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Final Inspection

55. Final geologic and soils engineering reports shall be prepared upon completion of the grading and shall be approved by the City Department of Building and Safety.

Monitoring Phase: Construction, Post-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Construction Site Maintenance

56. It is the responsibility of the contractor to maintain a safe construction site. When excavations exist on a site, the area shall be fenced and warning signs posted. All pile excavations must be properly covered and secured. Soil generated by foundation and subgrade excavations shall be either removed from the site or properly placed as a certified compacted fill. Soil must not be spilled over any descending slope. Workers shall not be allowed to enter any unshored trench excavations over five feet deep.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

Department of Building and Safety, Grading Section Letter dated December 5, 2001

57. Prior to the recordation of the final map, a grading permit shall be obtained from the Department of Building and Safety.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

58. Prior to issuance of a permit, the owners shall record a sworn affidavit with the Office of the County Recorder which attests to their knowledge that the western portion of the site (buildings 1 & 2) will still be bordered by active landslide on three sides after the completion of the development, and that they are aware of the potential for debris to collect behind the rear property line wall and the western property line wall, affecting the surface drain system, and that there is the potential for the landslide to remove support from the lower property line which could require the future construction of walls between the piles to provide support, and that the owner and future homeowners association agrees to assume the responsibility to keep the surface drain system behind the retaining walls clear of debris, to take responsibility for any future maintenance/repairs, and to inform all future owners of these conditions. The owner and future homeowners association shall provide proof of compliance with this mitigation measure to the Department of Building and Safety on an annual basis.

Monitoring Phase: Pre-Construction, Post Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

59. All existing landslide debris shall be removed and replaced as certified compacted fill, as recommended.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

60. The following piles shall be designed for a minimum thrust, times pile spacing, as recommended:

- Piles P1 to P10 – 175 Kips
- Piles P11 to P17 – decreasing from 175 to 145 Kips
- Piles P17 to P35 – 145 Kips

- Piles P36 to P40 and all other pile supported retaining wall structures shall be designed for a minimum EFP of 65 PCF and 30 PCF, respectively, times pile spacing, as recommended.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

61. Piles P1 through P40 shall be designed so that the deflection at the top of the piles is a maximum of 1 (one) inch as recommended.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

62. Pile supporting building 2 shall derive support from below the 1:1 set back plane projected up from the bottom of the fill along the southern property line. Also, the piles shall be embedded a minimum of 8 feet into bedrock or compacted fill, as recommended.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

63. The structures shall be supported entirely either on compacted fill or bedrock.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

64. Seismic design shall be based on Soil Profile Type Sc, as recommended.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

65. A shoring monitoring program shall be implemented to the satisfaction of the soils engineer.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

66. The soils engineer shall review and approve the shoring plans prior to issuance of the permit. Installation of shoring shall be performed under the continuous inspection and approval of the soils engineer.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

67. Pile shafts shall be designed for a lateral load of 1000 pounds per linear foot of shaft exposed to the existing fill, soil and weathered bedrock. Friction piles supporting the portion of building 2, shall be designed for a minimum of 5 kips creep, with a point of application at the ground surface, as recommended.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

68. The pile excavations shall be logged by the geologist to verify that the geologic conditions are not different than presented in the reports; the data shall be submitted to the Department prior to beginning the grading of the landslide.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

69. All friction pile drilling and installation shall be performed under the continuous inspection and approval of the soils engineer.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

70. The grading of the landslide shall not begin until it is verified that groundwater levels are below the bottom of the landslide. Additionally, the grading of the landslide shall not begin unless there is adequate time to complete the grading before the start of the rainy season.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

71. A minimum of ten feet of freeboard shall be provided along the northern property line, above soldier pile Nos. P17 to P29; the freeboard shall be designed for a minimum EFP of 65 pcf, as recommended. The freeboard shall also be extended along the western property line.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

72. Prior to the issuance of any permit which authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the subject site shall provide the Department of Building and Safety with evidence that the adjacent property owner has been given a 30-day written notice of such intent to make an excavation.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

73. A registered grading deputy inspector approved by and responsible to the project geotechnical engineer shall be required to provide continuous inspection for the proposed shoring.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

74. Tie-backs are currently not proposed or approved.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

75. Subdrain systems shall be installed between the soldier piles in the landslide and along the bottom of the landslide removal. A minimum of three continuous drains shall be provided beneath the proposed fill, as shown on the cross-sections in the reports and a continuous drain shall be provided at the bottom of the fill along the western property line. The water from the subdrain systems shall be conducted by gravity flow to an acceptable location at Castellammare Drive.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

76. The 20-foot-wide strip of the property that extends up from Castellammare Drive shall be stabilized, as recommended in the reports.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

77. All new slopes shall be no steeper than 2:1.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

78. Adequate temporary erosion control devices acceptable to the Department, and if applicable the Department of Public Works, shall be provided and maintained during the rainy season.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety, Department of Public Works

79. All recommendations of the reports dated 08/16/00, 11/29/00, 06/29/01, 08/28/01 and 10/02/01, prepared by Jon Irvine (CEG 1691, RCE 55005) of the J. Byer Group, which are in addition or more restrictive than the conditions contained herein shall be incorporated into the plans.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

80. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the State Construction Safety Orders enforced by the State Division of Industrial Safety.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

81. A grading permit shall be secured and a grading bond posted.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

82. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans. Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

83. The geologist and soil engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

84. Any recommendations prepared by the consulting geologist and/or the soils engineer for correction of geological hazards found during grading shall be submitted to the Department of Building and Safety for approval prior to utilization in the field.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

85. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557; or 95 percent where less than 15 percent fines passes 0.005mm.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

86. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

87. All roof and pad drainage shall be conducted to the street in an acceptable manner.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

88. Retaining walls shall be designed for a minimum EFP as specified on page 28 of the report dated 08/16/2000.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

89. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted to the street in an acceptable manner and in a non-erosive device.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

90. Prior to issuance of the building permit, the design of the subdrainage system required to prevent possible hydrostatic pressure behind retaining walls shall be approved by the soils engineer and accepted by the Department. Installation of the subdrainage system shall be inspected and approved by the soils engineer and by the City grading inspector.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

91. Footings adjacent to a descending slope steeper than 3:1 in gradient shall be located a distance of one-third the vertical height of the slope but need not exceed 40 feet measured horizontally from the face of the slope.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

92. Buildings adjacent to ascending slopes shall be set back from the toe of the slope a level distance equal to one half the vertical height of the slope, but need not exceed 15 feet in accordance with Code Section 91.1806.5.2.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

93. Pile caisson and/or isolated foundation ties are required by Code Section 91.1807.2. Exceptions and medication to this requirement are provided in Rule of General Application 662.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

94. For grading involving import or export of more than 1000 cubic yards of earth materials within the grading hillside area, approval is required by the Board of Building and Safety. Application for approval of the haul route must be filed with the Grading Section. Processing time for application is approximately 8 weeks to hearing plus 10-day appeal period.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

95. Prior to the placing of compacted fill, a representative of the consulting Soils Engineer shall inspect and approve the bottom excavations. He shall post a notice on the job site for the City Grading Inspector and the Contractor stating that the soil inspected meets the conditions of the report, but that no fill shall be placed until the City Grading Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be filed with the Department upon completion of the work. The fill shall be placed under the inspection and approval of the Foundation Engineer. A compaction report shall be submitted to the Department upon completion of the compaction.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

96. The consulting geologist shall periodically inspect the grading and upon completion submit a final report stating that the completed work complies with his recommendations. Geological data shall be obtained from grading exposure, particularly at back slope cuts for fills and buttress and on cut surfaces. This data shall be presented on a final geological map and as-graded plan.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

97. Prior to the pouring of concrete, a representative of the consulting Soil Engineer shall inspect and approve the footing excavations. He shall post a notice on the job site for the City Building Inspector and the Contractor stating that the work so inspected meets the conditions of the report, but that no concrete shall be poured until the City Building Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Department upon completion of the work.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

98. When water over 3 inches in depth is present in drilled pile holes, a concrete mix with a strength p.s.i. of 1000 over the design p.s.i. shall be tremied from the bottom up; an admixture that reduces the problem of segregation of paste/aggregates and dilution of paste shall be included.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

99. The dwellings shall be connected to the public sewer system.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

100. Prior to excavation, an initial inspection shall be called at which time sequence of shoring, protection fences, and dust and traffic control will be scheduled.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

HYDROLOGY AND WATER QUALITY

1. All waste shall be disposed of properly. Use appropriately labeled recycling bins to recycle construction materials including: solvents, water-based paints, vehicle fluids, broken asphalt and concrete; wood and vegetation. Non-recyclable materials/wastes must be taken to an appropriate landfill, such as the Calabasas Sanitary Landfill, the Azusa Landfill, or the Bradley Landfill. Toxic wastes must be discarded at a licensed regulated disposal site.

Monitoring Phase: Construction, Occupancy
Enforcement Agency: Department of Public Works, Bureau of Sanitation
Monitoring Agency: Department of Public Works, Department of Building and Safety

2. Clean up leaks, drips and spills immediately to prevent contamination soil on paved surfaces that can be washed away into the storm drains.

Monitoring Phase: Construction, Occupancy
Enforcement Agency: Department of Public Works, Bureau of Sanitation
Monitoring Agency: Department of Public Works, Department of Building and Safety

3. Do not hose down pavement at material spills. Use dry cleanup methods whenever possible.

Monitoring Phase: Construction, Occupancy
Enforcement Agency: Department of Public Works, Bureau of Sanitation
Monitoring Agency: Department of Public Works, Department of Building and Safety

4. Cover and maintain dumpsters. Place uncovered dumpsters under a roof or cover with tarps or plastic sheeting.

Monitoring Phase: Construction, Occupancy
Enforcement Agency: Department of Public Works, Bureau of Sanitation
Monitoring Agency: Department of Public Works, Department of Building and Safety

5. Use gravel approaches where truck traffic is frequent to reduce soil compaction and limit the tracking of sediment into streets.

Monitoring Phase: Pre-Construction, Occupancy
Enforcement Agency: Department of Public Works, Bureau of Sanitation
Monitoring Agency: Department of Public Works, Department of Building and Safety

6. Conduct all vehicle/equipment maintenance, repair, and washing away from storm drains. All major repairs are to be conducted off-site. Use drip pans or drop cloths to catch drips and spills.

Monitoring Phase: Construction, Occupancy
Enforcement Agency: Department of Public Works, Bureau of Sanitation
Monitoring Agency: Department of Building and Safety

7. The project shall comply with Ordinance No. 172,176 to provide for Stormwater and Urban Runoff Pollution Control which requires the application of BMPs, including the following mitigation measures:

- Any connection to the sanitary sewer must have authorization from the Bureau of Sanitation.
- Reduce impervious surface area by using permeable pavement materials where appropriate, including: pervious concrete/asphalt; unit pavers, i.e. turf block; and granular materials, i.e. crushed aggregates, cobbles.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Bureau of Engineering, Department of Building and Safety
Monitoring Agency: Bureau of Engineering, Department of Building and Safety, Bureau of Sanitation

LAND USE

No mitigation measures are required.

NOISE

The proposed project will have no significant operational noise impacts. The project site does not exceed 60 dBA CNEL which would trigger any possible noise mitigation requirements for meeting usable exterior space standards, or for achieving an interior level of 45 dBA CNEL. The State Building Code requires that shared walls and floor/ ceiling assemblies in multi-unit dwellings meet

noise and impact transmission standards between adjacent or stacked units. Verification of structural compliance will be made at the plan check level.

On-site construction activities were shown to have a potentially significant temporary noise impact at the nearest neighbors due to heavy equipment operations. Dirt hauling noise impacts were also found to be significant.

Standard noise abatement conditions will be required by the City of Los Angeles as part of any grading/construction permits. These measures include:

1. The project shall comply with the City of Los Angeles Noise Ordinance No. 144,331 and 161,574, and any subsequent ordinances, which prohibit the emission or creation of noise beyond certain levels at adjacent uses unless technically infeasible.

Monitoring Phase:	Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

2. Construction shall be restricted to the hours of 7:00 A.M. to 6:00 P.M. Monday through Friday, and 8:00 A.M. to 6:00 on Saturday.

Monitoring Phase:	Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

3. The project contractor shall use power construction equipment with state-of-the-art noise shielding and muffling devices.

Monitoring Phase:	Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

HOUSING

Based on consultation with the City of Los Angeles Housing Department, the following mitigation measure is required to reduce the project's significant impact regarding the displacement of existing on-site residents:

1. The applicant shall comply with all applicable Mello Act Ordinance Guidelines that are in effect at the time the permits for the proposed project are processed.

Monitoring Phase: Pre-Construction, Construction, Occupancy
Enforcement Agency: Department of City Planning, Department of Housing
Monitoring Agency: Department of City Planning, Department of Housing

2. The applicant shall comply with the City of Los Angeles Housing Department’s relocation assistance requirements.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of City Planning, Department of Housing
Monitoring Agency: Department of City Planning, Department of Housing

PUBLIC SERVICES

Police Protection

1. The project applicant shall consult with the LAPD’s Crime Prevention Unit (CPU) on the design and implementation of a security plan for the proposed project and, which shall consider the following elements:
 - Design entryways, the lobby, and parking areas with lighting that eliminates areas of concealment;
 - Landscaping should be designed so as to not conceal potential criminal activities near windows or doors
 - Outdoor night lighting should be provided to aid crime prevention and enforcement efforts;
 - All garages should be enclosed;
 - Provide solid core doors with deadbolt locks to all units;
 - The use of louvered windows should be prohibited

Monitoring Phase: Pre-Construction
Enforcement Agency: Police Department, Department of Building and Safety
Monitoring Agency: Police Department

2. Upon the completion of the project, it is recommended that site plans for the property be provided to the West Los Angeles area commanding officer to help facilitate any police response.

Monitoring Phase:	Occupancy
Enforcement Agency:	Police Department, Department of Building and Safety
Monitoring Agency:	Police Department

Fire Protection

The proposed project shall comply with all applicable State and local codes and ordinances, and the guidelines found in the Fire Protection and Fire Prevention Plan, as well as the Safety Plan, both of which are elements of the City of Los Angeles C.P.C 19708. Additionally, the following recommendations of the Fire Department relative to fire safety shall be incorporated into building plans, which includes the submittal of a plot plan for approval by the Fire Department either prior to the recordation of a final map or the approval of a building permit. The plot plan shall include the following minimum design features:

- Adequate off-site public and on-site private fire hydrants may be required. Their number and location to be determined after the Fire Department's review of the plot plan;

Monitoring Phase:	Pre-Construction
Enforcement Agency:	Department of Building and Safety, Fire Department
Monitoring Agency:	Fire Department

- Construction of a private roadway in the proposed development shall not exceed 15 percent in grade;

Monitoring Phase:	Pre-Construction, Construction
Enforcement Agency:	Department of Building and Safety, Fire Department
Monitoring Agency:	Fire Department

- Private development shall conform to the standard street dimensions shown on Department of Public Works Standard Plan D-22549;

Monitoring Phase:	Pre-Construction, Construction
Enforcement Agency:	Department of Building and Safety, Fire Department
Monitoring Agency:	Fire Department

- Fire lane width shall not be less than 20 feet. When a fire lane must accommodate the operation of Fire Department aerial ladder apparatus or where fire hydrants are installed, those portions shall not be less than 28 feet in width;

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

- 7. Fire lanes, where required, and dead-ending streets shall terminate in a cul-de-sac or other approved turning area;

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

- 8. No proposed development utilizing cluster, group, or condominium design of one or two family dwellings shall be more than 150 feet from the edge of the roadway of an improved street, access road, or designated fire lane;

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

- 9. All access roads, including fire lanes, shall be maintained in an unobstructed manner, removal of obstructions shall be at the owner’s expense. The entrance to all required fire lanes or required private driveways shall be posted with a sign no less than three square feet in area in accordance with Section 57.09.05 of the Los Angeles Municipal Code;

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

- 10. Standard cut-corners will be used on all turns;

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

- 11. Where above ground floors are used for residential purposes, the access requirement shall be interpreted as being the horizontal travel distance from the street, driveway, alley, or designated fire lane to the main entrance, or exit of individual units;

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

12. The entrance or exit of all ground apartment units shall not be more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane;

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

13. No building or portion of a building shall be constructed more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane;

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

14. Where access for a given development requires accommodation of Fire Department apparatus, overhead clearance shall not be less than 14 feet;

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

15. Where fire apparatus will be driven onto the road level surface of the subterranean parking structure, that structure shall be engineered to withstand a bearing pressure of 8,600 pounds per square foot; and

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

16. The project shall be equipped with an automatic sprinkler system to the satisfaction of the Los Angeles Fire Department.

Monitoring Phase: Pre-Construction, Construction
Enforcement Agency: Department of Building and Safety, Fire Department
Monitoring Agency: Fire Department

Schools

17. The applicant is to pay the required school fees to the Los Angeles Unified School District.

Monitoring Phase:	Pre-Construction
Enforcement Agency:	LAUSD
Monitoring Agency:	LAUSD

Recreation and Parks

18. Per Section 17.12-A of the Los Angeles Municipal Code, the applicant shall pay all applicable Quimby fees for the construction of the proposed project.

Monitoring Phase:	Pre-Construction
Enforcement Agency:	Department of Parks and Recreation
Monitoring Agency:	Department of City Planning

Road Maintenance

19. As a condition of each grading permit required of the project applicant by the City, the applicant would be responsible for the repair of any damage to roads resulting from the delivery of heavy machinery, equipment, and building materials to or from the project site, as well as the import and export of soil to and from the project site. Such roadway repair shall be to the satisfaction of the City of Los Angeles Bureau of Street Services.

Monitoring Phase:	Pre-Construction, Construction
Enforcement Agency:	Bureau of Street Services, Department of Building and Safety
Monitoring Agency:	Bureau of Street Services, Department of Building and Safety

20. If construction or haul trucks driving to and/or from the project site cause any substantial damage to private driveways in the immediate vicinity of the project site, such damage shall be repaired by, or paid for by, the project applicant.

Monitoring Phase:	Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

21. Tramonto Drive shall be dedicated and improved with standard street improvements by the applicant. A strip of land adjacent to Castellammare Drive shall also be dedicated for future street improvements to comply with the standard street width of the City of Los Angeles Bureau of Engineering's Standard Street Dimensions guidelines.

Monitoring Phase:	Pre-Construction, Construction
Enforcement Agency:	Bureau of Engineering
Monitoring Agency:	Bureau of Engineering

TRAFFIC

The following mitigation measure has been approved by LADOT and is required to improve the existing line of sight distance on Tramonto Drive at the project driveway. This measure will adequately improve the visibility between motorists making left turns into the project driveway and motorists traveling in the opposing direction on Tramonto Drive, and would reduce the significant access impact to a less than significant level.

1. The project applicant shall, at his own expense and to the satisfaction of the Department of Transportation and the Department of Public Works: A) remove any existing vegetation within the right-of-way between the roadway edge and the property line along the convex curve of Tramonto Drive, approximately eighty feet arc length, in the vicinity of the project driveway; and B) install a permanent aesthetic surface or material along this portion of the roadway that prevents the growth of vegetation within this right-of-way.

Monitoring Phase:	Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

In addition, as stated above, the project applicant shall implement the following measures in order to minimize the disruption and inconvenience to residents, businesses and other traffic in the vicinity:

2. No construction equipment shall be started in or in operation on-site outside the allowable construction hours of 8:00 a.m. – 4:30 p.m.

Monitoring Phase:	Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

3. Trucks and construction equipment shall not be staged in adjacent residential areas during the overall period of construction.

Monitoring Phase:	Construction
Enforcement Agency:	Department of Building and Safety
Monitoring Agency:	Department of Building and Safety

4. Temporary “Truck Crossing” warning signs shall be placed approximately 300 feet in advance of the construction driveway in each direction on Tramonto Drive.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

5. Up to two flag persons shall be used at the project site to assist the truck operators in and out of the project area, as well as minimize conflicts with motorists.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

6. Construction workers shall not be allowed to park on Sunset Boulevard or any residential or local street in the vicinity, except Los Liones Drive.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

7. A construction worker ridesharing plan shall be implemented in order to reduce construction-related trips and parking demand.

Monitoring Phase: Construction
Enforcement Agency: Department of Building and Safety
Monitoring Agency: Department of Building and Safety

UTILITIES

The proposed project would not result in any significant impacts to sewer or water supply or distribution; therefore, no mitigation measures are required. However, the following measures are recommended to reduce the less than significant water impacts of the proposed project:

1. Automatic sprinkler systems should be set to irrigate landscaping during early morning hours or during the evening to reduce water losses from evaporation. Care must be taken to reset sprinklers to water less often in cooler months and during the rainfall season to avoid wasting water by excessive landscape irrigation.

Monitoring Phase: Pre-Construction, Construction, Occupancy
Enforcement Agency: Department of Water and Power, Building and Safety
Monitoring Agency: Department of Water and Power, Building and Safety

2. Selection of native, drought-tolerant, low water consuming plant varieties should be used to reduce irrigation water consumption.

Monitoring Phase: Pre-Construction
Enforcement Agency: Department of City Planning
Monitoring Agency: Department of City Planning

3. Adherence to the provisions within the Water Conservation Ordinance of April 1988.

Monitoring Phase: Pre-Construction, Construction, Occupancy
Enforcement Agency: Department of Water and Power, Building and Safety
Monitoring Agency: Department of Water and Power, Building and Safety

The proposed project would not result in any significant solid waste impacts; therefore, no mitigation measures are required. However, the following recommendations are suggested to reduce the project's less than significant solid waste impacts:

4. The applicant shall institute a recycling program to the satisfaction of the Deputy Advisory Agency to reduce the volume of solid waste going to landfills in compliance with the City's goal of a 70 percent reduction in the amount of solid waste going to landfills by the year 2020.

Monitoring Phase: Pre-Construction, Construction, Occupancy
Enforcement Agency: Department of Public Works,
 Integrated Solid Waste Management Office
Monitoring Agency: Department of Public Works,
 Integrated Solid Waste Management Office

5. Recycling bins shall be provided at appropriate locations to promote recycling of paper, metal, glass, and other recyclable material.

Monitoring Phase: Pre-Construction, Construction, Occupancy
Enforcement Agency: Department of Public Works,
 Integrated Solid Waste Management Office
Monitoring Agency: Department of Public Works,
 Integrated Solid Waste Management Office

ENERGY CONSERVATION

The proposed project would not result in any significant electricity or natural gas impacts; therefore no mitigation measures are required. However, the following recommendations are suggested in order to reduce long-term electricity consumption by the proposed project:

1. The applicant should consult with DWP during the design process of the proposed project regarding potential energy conservation measures for the project. Examples of such energy conservation measures include:
 - Design windows (i.e., tinting, double pane glass, etc.) to reduce thermal gain and loss and thus cooling loads during warm weather, and heating loads during cool weather.
 - Install thermal insulation in walls and ceilings that meets or exceeds the requirements of the State Administrative Code Title 24.
 - Install high-efficiency lamps for outdoor security lighting.
 - Time control exterior lighting. These systems should be programmed to account for variations in seasonal daylight times.
 - Limit outdoor lighting while still maintaining minimum security and safety standards.
 - Built-in appliances, refrigerators, and space-conditioning equipment should exceed the minimum efficiency levels mandated in the California Code of Regulations.
 - Use natural ventilation wherever possible.

Monitoring Phase:	Pre-Construction, Construction
Enforcement Agency:	Department of Water and Power, Building and Safety
Monitoring Agency:	Department of Water and Power, Building and Safety