Highlands Estates Subdivision Project

Mitigation Monitoring and Reporting Program Environmental Compliance Matrix

Report Period: November 1, 2019 to November 30, 2019

Reporter Name: Kristen Outten, SWCA Environmental Consultants

Acronyms

C - Complete

NC - Not Complete

O - Ongoing

A - Acceptable

GA - Generally Acceptable (Entered if the activities were generally acceptable for the reporting period with the exception of Non-Compliance Notices as noted in the Non-Compliance Notice column(s)

U - Unacceptable (Entered if all the activities related to this mitigation activity were unacceptable for the reporting period (e.g., Non-Compliance Notices only or Plan not finalize as required by mitigation measure).

			WMR	- Week	ly Moni	toring f	Report	port						
	Mitigation Measure	Monitoring and Reporting Action(s) Requirements) Mitigation Timing	Monitoring Schedule		Phase	ı		Pha	se II	Completion Status	Completio Novembe		
Impact					Lot 9	Lot 10	Lot 11	Lot 5	Lot 6	Lot 7	Completion Status (C/NC/O) (if complete, enter date & color block)	Compliance Level (NC, A, GA, U)/Supporting Document (WMR) or Notes	Non-Compliance and Non-Compliance Resolution Report	
Aesthetics			=											
AES-1	Improvement Measure AES-1a: The Project Applicant shall provide "finished floor verification" to certify that the structures are actually constructed at the height shown on the approved plans. The Project Applicant shall have a licensed land surveyor or engineer establish a baseline elevation datum point in the vicinity of the construction site. Prior to the below floor framing inspection or the pouring of concrete slab for the lowest floors, the land surveyor shall certify that the lowest floor height as constructed is equal to the elevation of that floor specified by the approved plans. Similarly, certifications of the garage slab and the topmost elevation of the roof are required. The application shall provide the certification letter from the licensed land surveyor to the Building Inspection Section.	,	Project design and review process	Confirm and document during building permit review and project construction	х	х	х	x	x	X	NC	NC		
	Improvement Measure AES-1b: The Project Applicant shall plant a total of four (4) trees (minimum 24-gallon each), one directly in front of each home on lots 5 through 8 to soften and screen views of the new homes from off-site locations. These trees will be in addition to the seven (7) 15- gallon replacement trees included in the proposed project.	County of San Mateo Planning and Building Department Shall oversee tree placement	Project design and review process and during construction	Confirm and document prior to completion of construction				х	х	X >	NC	NC		
AES-2	Improvement Measure AES-2: Construction contractors shall minimize the use of on-site storage and when necessary store building materials and equipment away from public view and shall keep activity within the project site and construction equipment laydown areas.	County of San Mateo Planning and Building Department Shall oversee monitoring of construction activities	During construction	Confirm and document during construction	х	х	х	х	x	x >	0	А		
Biological Resource	S													
	Mitigation Measure BIO-2a: No earlier than 30 days prior to the commencement of construction activities, a survey shall be conducted to determine if active woodrat nests (stickhouses) with young are present within the disturbance zone or within 100 feet of the disturbance zone. If active woodrat nests (stickhouses) with young are identified, a fence shall be erected around the nest site adequate to provide the woodrat sufficient foraging habitat at the discretion of a qualified biologist and based on consultation with the CDFG. At the discretion of the monitoring biologist, clearing and construction within the fenced area would be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur. If woodrats are observed within the disturbance footprint outside of the breeding period, individuals shall be relocated to a suitable location within the open space by a qualified biologist in possession of a scientific collecting permit. This will be accomplished by dismantling woodrat nests (outside of the breeding period), to allow individuals to relocate to suitable habitat within the adjacent open space.	County of San Mateo Planning and Building Department Shall oversee implementation of pre- construction survey recommendations	No earlier than 30 days prior to commencement of construction activities	Confirm completion of survey prior to grading and construction and monitor for compliance with construction limits during construction	x	x	x	x	x	x >	O for Lots 9 and 10 NC for Lots 5, 6, 7, 8, 11	А		

Mitigation Measure BIO-2b: No earlier than two weeks prior to commencement of construction activities that to would occur during the nesting/breeding season of native bird species potentially nesting/roosting on the site (typically February through August in the project region), a survey for nesting birds shall be conducted by a qualified biologist experienced with the nesting behavior of bird species of the region. The intent of the survey would be to determine if active nests of special-status bird species or other species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the construction zone or within 500 feet of the construction zone. The surveys shall be timed such that the last survey is concluded no more than two weeks prior to initiation of construction or tree removal work. If ground disturbance activities are delayed, then an additional pre-construction survey shall be conducted such that no more than two weeks will have elapsed between the last survey and the commencement of ground disturbance activities. If active nests are found in areas that could be directly affected or subject to prolonged construction-related noise, a no-disturbance buffer zone shall be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them will be determined through consultation with the CDFG, taking into account factors such as the following: Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity; Distance and amount of vegetation or other screening between the construction site and the nest; and Sensitivity of individual nesting species and behaviors of the nesting birds. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers and cons	Building Department Shall oversee implementation of pre-	No earlier than two weeks prior to commencement of grading	Confirm and document prior to grading	x	x	x	x	x	x	х	O for Lots 9 and 10 NC for Lots 5, 6, 7, 8, 11	A	
Mitigation Measure BIO-2c: Prior to the commencement of construction activities during the breeding season of native bat species in California (generally occurs from April 1 through August 31), a focused survey shall be conducted by a qualified bat biologist to determine if active maternity roosts of special-status bats are present within any of the trees proposed for removal. Should an active maternity roost of a special- status bat species be identified, the roost shall not be disturbed until the roost is vacated and juveniles have fledged, as determined by the biologist. Once all young have fledged, then the tree may be removed. Species-appropriate replacement roosting habitat (e.g., bat boxes) shall be provided should the project require the removal of a tree actively used as a maternity roost. The replacement roosting habitat shall be subject to the approval of the CDFG.	Building Department Shall oversee implementation of pre-	Prior to commencement of construction activities during the breeding season (April 1 through August 31)	Confirm and document prior to grading and construction	х	х	х	x	х	x	x	O for Lots 9 and 10 NC for Lots 5, 6, 7, 8, 11	А	
preconstruction clearance survey shall be conducted by a qualified biologist for California red-legged frogs. The survey shall be conducted to determine whether individual California red-legged frogs are present within	County of San Mateo Planning and Building Department Shall oversee implementation of pregrading survey recommendations		Confirm and document prior to grading			х					NC	NC	
replacement shall occur at a minimum 1:1 ratio for all protected trees removed with a circumference of or exceeding 55 inches (17.5 inches diameter at breast height). The replacement of indigenous trees shall be in	County of San Mateo Planning and Building Department Shall oversee installation of temporary fencing	Prior to commencement of grading on lot 11	Confirm and document prior to grading	x	x	x	x	x	x	x	NC	NC	
,	,		Confirm and document prior to grading			х					0	A- Fencing has been installed but no work is expected until 2020. Fencing may require repair prior to construction.	
erosion control plan. The plan shall include measures such as silt fencing to prevent project-related erosion	County of San Mateo Planning and Building Department Shall review erosion control plan	Prior to issuance of grading permit	Document during grading and construction	х	х	х	х	х	х	х	С	A	

BIO-2

BIO-3

BIO-5

ı	Mitigation Measure BIO-5c: Prior to the issuance of a grading permit, the Project Applicant shall develop a	I	Prior to issuance of grading permit	Document prior to	Í	1 1	j	I	ı	ĺ	I	I	
	lighting plan. The lighting plan shall require that all lighting be directed and shielded as to minimize light spillage into nearby willow scrub habitat, as well as adjacent oak woodland habitats. The lighting plan shall be	County of San Mateo Planning and Building Department Shall review lighting plan	rrior to issuance or grading permit	completion of construction	х	х	х	х	х х	х	С	A	
	subject to approval by the County of San Mateo Planning Department.	Shall review lighting plan											
BIO-6	Mitigation Measure BIO-6: Prior to the commencement of construction on lot 8, the occurrence of purple needlegrass shall be mapped, including all stands on the lot with 20 percent or greater cover of native grasses and having a diameter greater than 10 feet. The area of purple needlegrass to be lost due to development of the lot shall then be calculated. As part of the proposed project, approximately 92 acres of open space would be maintained as open space under a conservation easement. This open space contains a serpentine grassland (on the slope west of the water tanks) that is dominated by native grasses (including purple needlegrass) and other native plant species. These native grasses, including purple needlegrass, would be permanently protected by the conservation easement. In addition, non-native plant areas adjacent to the serpentine grassland shall be restored to support native grasses over an area twice the acreage (2:1) of the stands of purple needlegrass to be lost on lot 8.	County of San Mateo Planning and Building Department Shall oversee mapping of purple needlegrass and dedication of open space	Mapping: Prior to commencement of grading on lot 8; Granting of conservation easement: Prior to recordation of final subdivision map; Native grass planting: Prior to completion of construction	Mapping: Prior to commencement of grading or lot 8; Granting of conservation easement: Prior to recordation of final subdivision map; Native grass planting: Prior to completion of construction						x	NC	NC	
Geology and Soils													
GEO-1	Mitigation Measure GEO-1: A design-level geotechnical investigation of the site shall be performed prior to any project grading including static and seismic slope stability analysis of the areas of the project site to be graded and developed. The specific mitigation measures to be utilized in order to stabilize existing landslides and areas of potential seismically induced landslides shall be presented in the report. The specific mitigation measures shall include some of the following measures or measures comparable to these: • Landslide debris on lots 7 and 8 shall be excavated and replaced with a fully drained conventional buttress fill that is founded in the underlying Franciscan mélange, as recommended by the project geotechnical engineer. (Lots 7-8) • Retaining walls shall be designed to withstand high lateral earth pressure from adjoining natural materials and/or backfill shall be installed at the rear of lots 5 through 8. In addition, retaining walls shall be built in the front of lots 5 and 6 to aid in maintaining the slopes behind the lots and the more extensive cut required for lots 5 and 6. (Lots 5-8) • A surface drainage system shall be installed for each lot to mitigate new landslides developing within the thin veneer of soil mantling the bedrock on the slope below lots 1 through 4. (Lots 1-4) • Subsurface drainage galleries may be installed to control the flow of groundwater and reduce the potential for slope instabilities from occurring in the future. (All lots) • Over-steepening of slopes shall be avoided. Horizontal benches shall be constructed on all reconstructed slopes at an interval of 25 to 30 feet. New fill shall be compacted to at least 90 percent relative compaction (as determined by ASTM test method D1557). (All lots) • Drilled piers and grade-beam foundations shall be used to support foundations in accordance with recommendations of the project geotechnical engineer. (All lots)	County of San Mateo Planning and Building Department Shall oversee implementation of design-level geotechnical investigation recommendations County of San Mateo Planning and	Prior to issuance of grading permit	grading and building permit review	х	x	x	x	x x	x	C for Lot 9 and 10 per Planning review on 11/12/20 NC for lots 11, 5, 6, 7, 8	A	
	parameters equal to or better than the parameters used in the Treadwell & Rollo 2009 study. (Lots 7 and 8)	Building Department Shall oversee implementation of design-level geotechnical investigation recommendations	Prior to issuance of grading permit	building permit review	8				x	x	NC	NC	
GEO-2	Mitigation Measure GEO-2b: The following mitigation measures shall be implemented to ensure the stability of proposed structures that are located on deep fill soils: • A site-specific, design-level geotechnical investigation shall be completed during the design phase of the proposed project, and prior to approval of new building construction within the site for specific foundation design, slope configuration, and drainage design. (All lots) • The geotechnical investigation shall provide recommendations to prevent water from ponding in pavement areas and adjacent to the foundation of the proposed residences, and to prevent collected water from being discharged freely onto the ground surface adjacent to the residences, site retaining walls, or artificial slopes. The project geotechnical engineer shall identify on site areas downslope of the homes where the collected water may be discharged utilizing properly designed energy dissipaters. (All lots) • Fills used at the project site shall be properly placed with keyways and subsurface drainage, and adequately compacted following the recommendations of the final geotechnical report and Geotechnical Engineer, in order to significantly reduce fill settlement. (All lots) • Underground utilities shall be designed and constructed using flexible connection points to allow for differential settlement. (All lots) • Foundation plans shall be submitted to the County for review prior to issuance of a building permit. All foundation excavations shall be observed during construction by the project Geotechnical Engineer to insure that subsurface conditions encountered are as anticipated. As- built documentation shall be submitted to the County. (All lots) • Drilled pier and grade-beam foundations or other appropriate foundations per the recommendations of the design-level geotechnical investigation shall be developed for lots that are determined to likely experience soil creep. (All lots)	County of San Mateo Planning and Building Department Shall oversee implementation of design-level geotechnical investigation recommendations	Prior to issuance of grading permit	Confirm and document during grading and building permit review	X	X	x	x	X X	x	C for Lot 9 and 10 per Planning review on 11/12/20 NC for lots 11, 5, 6, 7, 8	А	

GEO-3	Improvement Measure GEO-3: In compliance with the NPDES regulations, the Project Applicant shall file a Notice of Intent with the State Water Resources Control Board (SWRCB) prior to the start of grading and prepare a SWPPP. The SWPPP shall include specific best management practices to reduce soil erosion. The SWPPP shall include locations and specifications of recommended soil stabilization techniques, such as placement of straw wattles, silt fence, berms, and storm drain inlet protection. The SWPPP shall also depict staging and mobilization areas with access routes to and from the site for heavy equipment. The SWPPP shall include temporary measures to reduce erosion to be implemented during construction, as well as permanent measures. County staff and/or representatives shall review the SWPPP to ensure adequate compliance with State and County standards. County staff and/or representatives shall visit the site during grading and construction to ensure compliance with the SWPPP, as well as note any violations, which shall be corrected immediately. A final inspection shall be completed prior to occupancy.		Prior to issuance of grading permit; During construction	Confirm and document during grading, building permit review, construction, and prior to project occupancy	X	x	х	x	x	x	X	C		A - NOI submitted on 02/2017; COI submitted on 10/30/2019	
GEO-4	Mitigation Measure GEO-4: The Project Applicant shall be required to use the seismic design criteria listed below to design structures and foundations to withstand expected seismic sources in accordance with the California Building Code (2007) as adopted by the County of San Mateo. Site Class: C Soil Profile Name: Very Dense Soil and Soft Rock Occupancy Category: II Seismic Design Category: E Mapped Spectral Response for Short Periods- 0.2 Sec (Ss): 2.226 g Mapped Spectral Response for Long Periods- 1 Sec (S1): 1.273 g Site Coefficient- Fa, based on the mapped spectral response for short periods: 1.0 Site Coefficient- Fv, based on the mapped spectral response for long periods: 1.3 Adjusted Maximum Considered EQ Spectral Response for Short Periods (SMS): 2.226 Adjusted Maximum Considered EQ Spectral Response for Long Periods (SM1): 1.655 Design (5-percent damped) Spectral Response Acceleration Parameters at short periods (SD1): 1.103	County of San Mateo Planning and Building Department Shall oversee compliance with California Building Code	Project design and review process	Confirm and document during building permit review	×	x	x	x	x	x	x	C	A- I	ot 9 and 10 per Planning review on 11/12/20	
GEO-5	Mitigation Measure GEO-5: During site grading, soils in each lot shall be observed and tested by the project Geotechnical Engineer to determine if expansive soils are exposed. Should expansive soils be encountered in planned building or pavement locations, the following measures shall be implemented under the direction of the Geotechnical Engineer in order to mitigate the impact of expansive soils: • Expansive soils in foundation areas shall be excavated and replaced with non-expansive fill to the specifications of the geotechnical engineer. • A layer of non-expansive fill soils 12 to 24 inches in thickness shall be placed over the expansive materials and prior to the placement of pavements or foundations. • Moisture conditioning of expansive soil shall be applied to a degree that is several percent above the optimum moisture content or lime treating of the expansive soil. • Foundations shall be constructed to be below the zone of seasonal moisture fluctuation or to be capable of withstanding the effects of seasonal moisture fluctuations. • Specific control of surface drainage and subsurface drainage measures shall be provided. • Low water demand landscaping shall be used.	County of San Mateo Planning and Building Department Shall oversee implementation of geotechnical investigation recommendations	During grading activities	Confirm and document prior to issuance of building permit	x	х	x	x	x	x	X	NC		NC	
Air Quality					ı			L			<u> </u>				
AQ-1	Mitigation Measure AQ-1: The Project Applicant shall require that the following BAAQMD recommended and additional PM10 reduction practices be implemented by including them in the contractor construction documents: The first phase of construction shall require 30 percent of construction equipment to meet Tier 1 EPA certification standards for clean technology. The remainder of construction equipment (70 percent), which would consist of older technologies, shall be required to use emulsified fuels. • The second phase of construction shall require 30 percent of construction equipment to meet Tier 2 EPA certification standards for clean technology and 50 percent to meet Tier 1 EPA certification standards. The remaining 20 percent of construction equipment, which would consist of older technologies, shall use emulsified fuels. • For all larger vehicles, including cement mixers or other devices that must be delivered by large trucks, vehicles shall be equipped with CARB level three verified control devices. • Water all active construction areas at least twice daily. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. • Pave, apply water three times daily, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at the construction sites. • Sweep daily (with water sweepers) all paved access roads, parking eas, and staging areas at the construction sites. • Sweep public streets adjacent to construction sites daily (with water sweepers) if visible soil material is carried onto the streets. • Hydroseed or apply non-toxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). • Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.). Limit traffic speeds on unpaved roads to 15 miles per hour. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Rep	Building Department Shall oversee implementation of recommendations	During grading and construction	Confirm and document during grading and building permit review	x	x	x	x	x	x	x	0		A	

NOI-1	Mitigation Measure NOI-1: The Project Applicant shall require that the following noise reduction practices be implemented by including them in the contractor construction documents: • Equipment and trucks used for project construction would utilize the best available noise control techniques (e.g., improved exhaust mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds) in order to minimize construction noise impacts. • Equipment used for project construction would be hydraulically or electrically powered impact tools (e.g., jack hammers and pavement breakers) wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. Compressed air exhaust silencers would be used on other equipment. Other quieter procedures would be used such as drilling rather than impact equipment whenever feasible. • The construction activity would be kept to the hours of 7:00 AM to 7:00 PM, Monday through Friday. Saturday hours (8:00 AM to 5:00 PM) are permitted upon the discretion of County approval based on input from nearby residents and businesses. Saturday construction (8:00 AM to 5:00 PM) would be allowed once the buildings are fully enclosed. • Residential property owners within 200 feet of planned construction areas shall be notified of the construction schedule in writing, prior to construction; the project sponsor shall designate a "disturbance coordinator" who shall be responsible for responding to any local complaints regarding construction noise; the coordinator (who may be an employee of the developer or general contractor) shall determine the cause of the complaint and shall require that reasonable measures warranted to correct the problem be implemented; a telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site fence and on the notification sent to neighbors adjacent to the site.	construction noise reduction practices	During grading	Confirm and document during grading and building permit review	x	x	x	x	x	x	x	0	A	
Hazardous Materials														
HAZMAT-1	Mitigation Measures HAZMAT-2: Individual property owners for lots 1-4 and 9, 10, and 11 shall be responsible for maintaining a fuel break by removing all hazardous flammable materials or growth from the ground around each home for a distance of not less than 100 feet from its exterior circumference, for the life of the project. Property owners of lots listed above shall arrange with the property owner of the open space parcel to obtain legal access to the open space parcel for the purpose of vegetation clearance. This would not include the authorization of tree removal for trees protected by the RM zoning regulations. This requirement shall be recorded as a deed restriction on lots 1 through 4, and 9, 10, and 11 prior to the start of construction on these	Protection Shall monitor maintenance of fuel breaks	During project occupancy	Confirm recordation of deed restriction prior to construction Confirm and document compliance during dry season annually	x	х	х					NC	NC	
HAZMAT-2	Mitigation Measure HAZMAT-3: During the design level geotechnical investigation, representative soil samples shall be obtained for each lot proposed on an area underlain or potentially underlain by serpentine bedrock. These samples shall be tested for the presence of naturally occurring asbestos by a state certified testing laboratory in accordance with requirements of the CARB and the BAAQMD and the results shall be provided to the County Planning Department. If naturally occurring asbestos is identified at the site, a site health and safety (H&S) plan including methods for control of airborne dust shall be prepared. This plan shall be reviewed and approved by the County of San Mateo prior to grading in areas underlain by serpentine-bearing soils or bedrock and naturally occurring asbestos. The H&S plan shall strictly control dust-generating excavation and compaction of material containing naturally occurring asbestos. The plan shall also identify site- monitoring activities deemed necessary during construction (e.g., air monitoring). Worker monitoring shall also be performed as appropriate. The plan shall define personal protection methods to be used by construction workers. All worker protection and monitoring shall comply with provisions of the Mining Safety and Health Administration (MSHA) guidelines, California Division of Occupational Safety and Health (DOSH), and the Federal Occupational Safety and Health Administration (OSHA). If naturally occurring asbestos is found at the site, a Soil Management Plan shall be developed and approved by the County Planning Department to provide detailed descriptions of the control and disposition of soils containing naturally occurring asbestos. Serpentine material placed as fill shall be sufficiently buried in order to prevent erosion by wind or surface water run-off, or exposure to future human activities, such as landscaping or shallow trenches. Additionally, the BAAQMD shall be notified prior to the start of any excavation in areas containing naturally occurring	of site Health and Safety Plan and Soil Management Plan	Completion of plan prior to grading and compliance with plar during grading	Completion of plan prior to grading and compliance with plan during grading	х	x	x	x	х	x	x	С	A - Asbestos Report completed March 17, 2017	
Transportation														
	Improvement Measure TRANS-1: The Project Applicant shall prepare and submit a Construction Management Plan that will, among other things, require that all truck movement associated with project construction occur outside the commute peak hours.	_	Project design and review proces:	Confirm and document prior to issuance of grading permit	х	Х	Х	х	х	х	X	C - Lots 9 and 10 NC - Lots 11, 5, 6, 7, 8	А	
TRANS-2	Mitigation Measure TRANS-2: The Project Applicant shall be required to pay for the installation of advisory traffic signs on Ticonderoga Drive in the vicinity of the proposed homes as determined necessary by the County of San Mateo Department of Public Works.	County of San Mateo Department of Public Works Shall collect fee from Project Applicant	Prior to Department of Public Works' final approval of building permits for lots 7 and 8	Complete upon installation of advisory traffic signs						х	х	NC	NC	
Utilities								Ī						

UTIL-1	Mitigation Measure UTIL-1: The Project Applicant shall mitigate the project-generated increase in sewer flow such that there is a "zero net increase" in flow during wet weather events, by reducing the amount of existing Inflow and Infiltration (INI) into the Crystal Springs County Sanitation District (District) sewer system. This shall be achieved through the construction of improvements to impacted areas of the sewer system, with construction plans subject to District approval. Construction of improvements, as approved by the District, shall be completed prior to the start of the construction of the residences. In addition, as project sewage will be treated by the City of San Mateo's Wastewater Treatment Plant, the Project Applicant shall submit payment of the City of San Mateo Wastewater Treatment Plant Expansion development impact fee to the City of San Mateo. This fee is based on the number of bedrooms in each residential unit and is calculated at the time of the final plans, using the City's fee schedule in effect at the time of the building permit application.	Shall review sewer system improvement	, .	Complete upon construction of sewer system improvements and payment of development impact fee (prior to construction of residences)	x	х	х	x	«	x x	C		A - Sewer Review complete 7/17/19		
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