



Appendix D

Preserve Edge Plan

Preserve Edge Plan

Draft

12/18/13

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A. INTRODUCTION

The purpose of the Preserve Edge Plan is to identify allowable uses within appropriate land use designations for areas adjacent to the Otay Ranch Preserve (Preserve). In accordance with Policy 7.2 of the Otay Ranch Resource Management Plan (RMP), a Preserve Edge Plan is to be developed for all Sectional Planning Area (SPA) Plans that contain areas adjacent to the Preserve. The Village 9 SPA Plan will border the Preserve on its southerly boundary. The Preserve Edge area is a public or privately owned 100-foot wide strip of land adjacent to the Preserve. No structures other than those listed in SPA Plan Section 7.3.3.A shall be constructed within the 100-foot Preserve Edge. Any improvement or structures shall be designed to minimize visual impacts to the Preserve and Otay Valley Regional Park (OVRP). To provide further guidance relating to the content of the Preserve Edge Plan, the Chula Vista Multiple Species Conservation Program (MSCP) Subarea Plan contains policies related to land use adjacency. RMP and MSCP policies are summarized and evaluated below. This plan has been reviewed by a qualified biologist (Dr. Patrick Mock, URS Corp.).

B. COMPLIANCE WITH RMP/MSCP SUBAREA PLAN POLICIES

The following discussion provides a description of the policies identified in the Chula Vista MSCP Subarea Plan, which were developed in consideration of the requirements of RMP, as well as compliance measures to be carried out by the various components of the SPA Plan.

1. Drainage

MSCP Policy:

“All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the Preserve. This can be accomplished using a variety of methods including natural detention basins, vegetated/infiltration swales or mechanical trapping devices. These systems should be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.”

Compliance:

Development of the site would reduce natural erosion and sedimentation potential through the increase in impervious surfaces and stabilized slopes. However, erosion potential may exist at the locations where runoff is ultimately released from the project. To avoid erosion impacts, the project has been designed to

include energy dissipation and infiltration structures to reduce runoff and flow velocities to below erosive velocity limits.

Post-construction Best Management Practices (BMPs) are included in the design of the Village 9 SPA Plan and associated Tentative Map (TM). The Post-construction BMPs are detailed in the Village 9 Water Quality Technical Report (WQTR).

As further described in the WQTR for Village 9, all stormwater runoff will be treated prior to entering the projects storm drain system which ultimately convey flows to the Otay River. Flow-based BMPs are provided in the WQTR for Village 9.

The BMPs will incorporate Low Impact Development (LID) techniques to assure water quality is being preserved, prior to discharge offsite. LID techniques will also be incorporated to treat dry weather flows and ‘first flush’ criteria as set forth by the Regional Water Quality Control Board (RWQCB). These methods will protect the open space Preserve adjacent to Village 9. Dry weather flows typically include landscape overwatering, washing driveways and automobiles. LID techniques to reduce dry weather flows include low water use landscaping and public education regarding washing vehicles and driveways. First flush flows take into account the initial runoff from rain events which may contain higher levels of pollutants than at the end of a rain event. BMPs will be implemented to reduce first flush pollutants and are detailed in the WQTR. The RWQCB will require a Storm Water Pollution Prevention Plan (SWPPP) to address water quality impacts associated with construction and operation of the project. To mitigate impacts from “first flush” runoff and dry weather flow, BMPs will be identified in the SWPPP and the appropriate BMPs will be implemented. The SWPPP will be consistent with the requirements of the Federal Clean Water Act. BMPs identified in the SWPPP will include, but are not limited to the following.

Construction-Related Measures:

- Existing vegetation will be retained where possible. To the extent feasible, grading activities will be limited to the immediate area required for construction.
- Temporary erosion control measures will be installed in disturbed areas. These control areas may include but are not limited to silt fencing, straw wattles, jute netting, or hydroseeding. The temporary erosion control measures will be detailed in the WQTR and the SWPPP.
- Disturbed surfaces will not be left without erosion control measures in place from October 1 through April 1, or when there is a potential for a rain event.
- Landscaping will be installed as soon as practical to reduce erosion potential.

Design/Post-Construction Measures:

- Sediment will be retained on-site by a system of sediment basins, traps, or other appropriate measures.
- Where deemed necessary, storm drains will be equipped with silt and oil traps to remove oils, debris, and other pollutants. Storm drain inlets shall be labeled “NO Dumping-Drains to Ocean.” Storm drain inlets shall be regularly maintained to ensure their effectiveness.
- The parking lots will be designed when possible to allow storm water runoff to be directed to vegetative filter strips and/or oil –water separators to control sediment, oil, and other contaminants.
- Permanent energy dissipation structures will be installed for each drainage outfall to a natural watercourse.
- The project area drainage basins will be designed to provide effective water quality control measures, as outlined in the WQTR. Design and operational features of the drainage basins will include design features to provide maximum infiltration, maximum detention time for settling of fine particles; maximize the distance between basin inlets and outlets to reduce velocities; and establish maintenance schedules for periodic removal of sedimentation, excessive vegetation and debris.

In addition to the permanent drainage facilities, temporary desiltation basins to control construction related water quality impacts shall be constructed within the Plan area with each grading phase to control sedimentation during construction. The interim desiltation basins shall be designed to be consistent with RWQCB and National Pollutant Discharge Elimination System (NPDES) Certification / permitting requirements. Sediment from the project grading operations that drains into the natural drainage channels would incorporate water quality control features to maximize water quality. The exact size, location and component elements of these interim basins shall be identified on the grading plans.

2. Toxic Substances

MSCP Policy:

“All agricultural uses, including animal-keeping activities, and recreational uses that use chemicals or general by-products such as manure, potentially toxic or impactive to wildlife, sensitive species, habitat, or water quality need to incorporate methods on their site to reduce impacts caused by the application and/or drainage of such materials into the Preserve. Methods shall be consistent with requirements requested by the Regional Water Quality Control Board (RWQCB) and National Pollution Discharge Elimination System Permit (NPDES).”

Compliance:

Current agricultural activities on the site consist of dry-farming. The Village 9 SPA Plan area would phase out on-going agricultural uses adjacent to the Preserve consistent with the Village 9 SPA Plan Agricultural Plan.

3. Lighting

MSCP Policy:

“Lighting of all developed areas adjacent to the Preserve should be directed away from the Preserve, wherever feasible and consistent with public safety. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the Preserve and sensitive species from night lighting. Consideration should be given to the use of low-pressure sodium lighting.”

Compliance:

Village 9 SPA Plan has been designed to locate park open space and rear yards of single-family residential housing adjacent to the Preserve. In order to reduce night lighting in and adjacent to the preserve, low pressure sodium lighting and/or shielding will be required on streets or parking lots adjoining the Preserve. Trails, Parks and access roads within the Preserve and Preserve Edge will not be lighted.

Prior to the approval of any improvement plans containing light standards adjacent to the Preserve, the developer shall prepare a lighting plan and photometric analysis, to the satisfaction of the Development Services Director, confirming the location and type of proposed lighting standards (including shielding measures if required) to minimize spill over light into the Preserve. Lighting shall not be permitted within the Preserve Edge,

4. Noise

MSCP Policy:

“Uses in or adjacent to the Preserve should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas and any other use that could impact or interfere with wildlife utilization of the Preserve. Excessively noisy uses or activities adjacent to breeding areas, including temporary grading activities, must incorporate noise reduction measures or be curtailed during the breeding season of sensitive bird species.

Where noise associated with clearing, grading or grubbing will negatively impact an occupied nest for the least Bell’s vireo during the breeding season from March 15 to September 15, noise levels should not exceed 60 dBA Leq-h. However, on a case by case basis, if warranted, a more restrictive standard may be used. If an occupied Bell’s vireo nest is identified in a pre-construction survey, noise reduction techniques, such as temporary noise walls or berms, shall be incorporated into the construction plans to reduce noise levels below 60 dBA Leq-h.

Where noise associated with clearing, grubbing or grading will negatively impact, an occupied nest for raptors between January 15-July 31 or the California

gnatcatcher between February 15 and August 15 (during the breeding season), clearing, grubbing or grading activities will be modified if necessary, to prevent noise from negatively impacting the breeding success of the pair. If an occupied raptor or California gnatcatcher nest is identified in a pre-construction survey, noise reduction techniques shall be incorporated into the construction plans. Outside the bird breeding season(s) no restrictions shall be placed on temporary construction noise.”

Compliance:

Prior to issuance of any land development permits (including clearing and grubbing or grading permits), the project Applicant will be required to retain a qualified biologist to conduct pre-construction surveys for sensitive avian species including Chula Vista Covered species, raptors and/or any migratory birds protected under the MBTA . Based on those surveys and locations of nesting birds during construction, if it is determined that the noise impact thresholds established in the Chula Vista Subarea Plan would be exceeded, the applicant would be required to reduce the impact below 60 dBA Leq-h standard through either modification of construction activities mitigation using sound barriers such as temporary walls or berms, or avoiding clearing, grubbing, grading or construction activities within 500 feet of an active nest site from March 15 to September 15, during the breeding season.

The Village 9 SPA Plan design has located typically low noise generating uses adjacent to the preserve. These uses include single-family residential development, hiking trails, park open space, and low speed (25 MPH) narrow residential streets. Native landscaping that requires a minimal amount of maintenance will be installed within areas adjacent to the Preserve. To the extent practicable, non-emergency brush management in Zone 3 (the area closest to the Preserve) will be undertaken outside the bird breeding seasons (April 1 – June 30) in areas where breeding and/or nesting may occur.

5. Invasives

MSCP Policy:

“No invasive non-native plant species shall be introduced into areas immediately adjacent to the preserve. All slopes immediately adjacent to the Preserve should be planted with native species that reflect the adjacent native habitat. The plant list contained in the “Wildland / Urban Interface: Fuel Modification Standards,” and provided as Appendix L of the Subarea Plan, must be reviewed and utilized to the maximum extent practicable when developing landscaping plans in areas adjacent to the Preserve.”

Compliance:

Landscaping within 100 feet of the Preserve will not contain any invasive or undesirable plant species, as determined by the City of Chula Vista. A list of invasive and/or undesirable species is provided in Appendix A attached. A list of plant species that may be planted on manufactured slopes and open space park areas adjacent to the Preserve is provided in the attached Appendix B, entitled “Approved Plant List for the Village 9 Preserve Edge.” These plant lists have been developed consistent with Table 3-5 (Appendix A) of the City’s MSCP Subarea Plan and shall be incorporated into the Village 9 Landscape Master Plan. The Approved Plant List for the Village 9 Preserve Edge (Appendix B of the Edge Plan) also meets the requirements outlined in the Fire Protection Plan (FPPA-A) as these manufactured slopes are also within the 150’ Brush Management Zone required by the MSCP Subarea Plan. Any changes to the approved plant list must be approved by the Director of Planning and Building and Development Services Director. The area may be planted with container stock (liners) or a hydroseed mix.

6. Buffers

MSCP Policy:

“There shall be no requirements for buffers outside the Preserve, except as may be required for wetlands pursuant to Federal and/or State permits, or by local agency CEQA mitigation conditions. All open space requirements for the Preserve shall be incorporated into the Preserve. Fuel modification zones must be consistent with Section 7.4.4 of the Subarea Plan.”

Compliance:

Fuel modification zones have been incorporated into the proposed development areas of the SPA Plan pursuant to the requirements of the Subarea Plan. Fuel modification zones are allowed within the 100 foot Preserve Edge pursuant to RMP Policy 7.2 (Adjacent Land Uses). Where appropriate, graded landscaped slope areas will be maintained pursuant to Fire Department requirements and will be outside of the Preserve. A Fire Protection Plan for Village 9 has been prepared that provides specific fuel modification requirements for the entire SPA area. Consistent with the Chula Vista MSCP requirements, a 150’ Brush Management Zone has been established adjacent to the MSCP. A description of the Brush Management Zones is provided in the Fire Protection Plan.

MSCP Adjacency Guidelines

All new development must adhere to the Adjacency Guidelines for drainage found on Page 7-25 of the Subarea Plan. In summary, the guidelines state that:

1. All developed areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements the might degrade or harm the natural environment or ecosystem processes within the Preserve.
2. Develop and implement urban runoff and drainage plans which will create the least impact practicable for all development adjacent to the Preserve.
3. All development located within or directly adjacent to or discharging directly to an environmentally sensitive area are required to implement site design, source control, and treatment control Best Management Practices (BMPs).

To adhere to these MSCP guidelines, excessive runoff into the Preserve from adjacent irrigated slopes shall be minimized. The linear park incorporates grading techniques that direct flows away from preserve edge to an inlet located in the central portion of the park. In addition, erosion control BMPs must be installed prior to planting and watering to prevent siltation into the Preserve. The irrigation system installed on the slopes should have an automatic shutoff valve to prevent erosion in the event the pipes break. Irrigation heads shall be directed away from the Preserve. Irrigation schedules for the slopes adjacent to the open space Preserve should be evaluated and tested in the field to determine the appropriate water duration and adjusted, as necessary, to prevent runoff. Once landscaping is mature and irrigation is no longer necessary, the temporary irrigation system in Zone 2 and Zone 3 will be removed.

In addition, a manual weeding program shall be prepared and implemented to the satisfaction of the Development Services Director within areas adjacent to the Preserve to control the spread of invasive species. The manual weeding program shall be prepared in conjunction with the Landscape Master Plan, and shall describe at a minimum, the entity responsible for controlling invasive species, the maintenance activities and methods required to control invasives, and a maintenance/monitoring schedule. A qualified biological monitor shall check the irrigated slopes during plant establishment to verify that excessive runoff does not occur and that weed infestations are controlled.

7. Restrict Access

Both the Otay Ranch RMP and Chula Vista MSCP Subarea Plan contain policies that restrict or limit access into the Preserve. These policies are discussed below:

Policy 6.5 of the Otay Ranch Resource Management Plan states the following:

“Identify restricted use areas within the Preserve.”

Standard: Public access may be restricted within and adjacent to wetlands, vernal pools, restoration areas, and sensitive wildlife habitat (e.g., during breeding season) at the discretion of the Preserve Owner/Manager.

Guidelines:

1. The Preserve Owner/Manager shall be responsible for identifying and designating restricted areas based on biological sensitivity.

MSCP Policy:

“The public access to finger canyons will be limited through subdivision design, fencing to other appropriate barriers, and signage.”

“Install barriers (fencing, rocks/boulders, appropriate vegetation) and/or signage in new communities where necessary to direct public access to appropriate locations.”

Compliance:

Pursuant to the requirements of the MSCP Subarea and RMP, Village 9 land plans have been designed to limit access to the adjacent Preserve area. Public access to the on-site trail system within the Preserve Edge is illustrated in Exhibit 1. Signage will be installed at trailheads or junction points to restrict public access outside the designated trails. Maintenance access will also be provided via the trail access points. The trail system within the preserve edge will be constructed during the adjacent single-family development phase. Access will be restricted using gates, fences, and signs until the trails are completed.

Access shall be restricted south of Village 9 until the Otay Valley Regional Park (OVRP) East/West Connector Trail is established. Otay Land Company will contribute to the cost of a future trail connection to OVRP south of the Village 9 boundary; however, the future off-site trail is not a part of the proposed Village 9 SPA Plan will be subject to additional siting criteria and environmental review.

Perimeter fencing will be installed along the rear yards of the Village 9 to restrict unauthorized access into the Preserve. In addition, a lodge pole railing, post

markers with signage or equal shall be installed along the MSCP limit or along the Village 9 boundary as depicted on Exhibit 1. The location and type of access controls (i.e., gates, fencing, post markers and signage) shall be incorporated into the Village 9 Landscape Master Plan to the satisfaction of the Development Services Director.

APPENDIX "A"

UNDESIRABLE PLANT LIST

The following species are highly flammable and should be avoided when planting within the first 50 feet adjacent to a structure. The plants listed below are more susceptible to burning, due to rough or peeling bark, production of large amounts of litter, vegetation that contains oils, resin, wax, or pitch, large amounts of dead material in the plant, or plantings with a high dead to live fuel ratio. Many of these species, if existing on the property and adequately maintained (pruning, thinning, irrigation, litter removal, and weeding), may remain as long as the potential for spreading a fire has been reduced or eliminated.

BOTANICAL NAME	COMMON NAME
<u>Abies species</u>	Fir Trees
<u>Acacia species</u>	Acacia (trees, shrubs, groundcovers)
<u>Adenostoma sparsifolium**</u>	Red Shanks
<u>Adenostoma fasciculatum**</u>	Chamise
<u>Agonis juniperina</u>	Juniper Myrtle
<u>Araucaria species</u>	Monkey Puzzle, Norfolk Island Pine
<u>Artemisia californica**</u>	California Sagebrush
<u>Bambusa species</u>	Bamboo
<u>Cedrus species</u>	Cedar
<u>Chamaecyparis species</u>	False Cypress
<u>Coprosma pumila</u>	Prostrate Coprosma
<u>Cryptomeria japonica</u>	Japanese Cryptomeria
<u>Cupressocyparis leylandii</u>	Leylandii Cypress
<u>Cupressus forbesii**</u>	Tecate Cypress
<u>Cupressus glabra</u>	Arizona Cypress
<u>Cupressus sempervirens</u>	Italian Cypress
<u>Dodonea viscosa</u>	Hopseed Bush
<u>Eriogonum fasciculatum**</u>	Common Buckwheat
<u>Eucalyptus species</u>	Eucalyptus
<u>Heterotheca grandiflora**</u>	Telegraph Plant
<u>Juniperus species</u>	Junipers
<u>Larix species</u>	Larch
<u>Lonicera japonica</u>	Japanese Honeysuckle
<u>Miscanthus species</u>	Eulalia Grass
<u>Muehlenbergia species**</u>	Deer Grass
<u>Palmae species</u>	Palms
<u>Picea species</u>	Spruce Trees
<u>Pickeringia Montana**</u>	Chaparral Pea
<u>Pinus species</u>	Pines
<u>Podocarpus species</u>	Fern Pine
<u>Pseudotsuga menziesii</u>	Douglas Fir
<u>Rosmarinus species</u>	Rosemary
<u>Salvia mellifera**</u>	Black Sage
<u>Taxodium species</u>	Cypress
<u>Taxus species</u>	Yew
<u>Thuja species</u>	Arborvitae
<u>Tsuga species</u>	Hemlock
<u>Urtica urens**</u>	Burning Nettle

APPENDIX "A"

** San Diego County native species

References: Gordon, H. White, T.C. 1994. Ecological Guide to Southern California Chaparral Plant Series. Cleveland National Forest.

Willis, E. 1997. San Diego County Fire Chief's Association. Wildland/Urban Interface Development Standards

City of Oceanside, California. 1995. Vegetation Management. Landscape Development Manual. Community Services Department, Engineering Division.

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County of Los Angeles Fire Department. 1998. Fuel Modification Plan Guidelines. Appendix I, Undesirable Plant List, and Appendix II, Undesirable Plant List.

APPENDIX "A"

The California Invasive Pest Plant Council

List A-1: Most Invasive Wildland Pest Plants; Widespread

Latin Name	Common Name	Habitats of Concern and Other Comments	Distribution ^a
<i>Ammophila arenaria</i>	European beach grass	Coastal dunes	SCo,CCo,NCo
<i>Arundo donax</i>	giant reed, arundo	Riparian areas	cSNF,CCo,SCo,SnGb,D,GV
<i>Bromus tectorum</i>	cheat grass, downy brome	Sagebrush, pinyon-juniper, other desert communities; increases fire frequency	GB,D
<i>Carpobrotus edulis</i>	iceplant, sea fig	Many coastal communities, esp. dunes	SCo,CCo,NCo,SnFrB
<i>Centaurea solstitialis</i> ^c	yellow starthistle	Grasslands	CA-FP (uncommon in SoCal)
<i>Cortaderia jubata</i>	Andean pampas grass, jubatagrass	Horticultural; many coastal habitats, esp. disturbed or exposed sites incl. logged areas	NCo,NCoRO,SnFrB,CCo,WTR,SCo
<i>Cortaderia selloana</i>	pampas grass	Horticultural; coastal dunes, coastal scrub, Monterey pine forest, riparian, grasslands; wetlands in ScV; also on serpentine	SnFrB,SCo,CCo,ScV
<i>Cynara cardunculus</i> ^B	artichoke thistle	Coastal grasslands	CA-FP, esp. CCo,SCo
<i>Cytisus scoparius</i> ^c	Scotch broom	Horticultural; coastal scrub, oak woodlands, Sierra foothills	NW,CaRF,SNF,GV,SCo,CW
<i>Eucalyptus globulus</i>	Tasmanian blue gum	Riparian areas, grasslands, moist slopes	NCoRO,GV,SnFrB,CCo;SCoRO;SCo,nCh
<i>Foeniculum vulgare</i>	wild fennel	Grasslands; esp. SoCal, Channel Is.; the cultivated garden herb is not invasive	CA-FP
<i>Genista monspessulana</i> ^c	French broom	Horticultural; coastal scrub, oak woodlands, grasslands	NCoRO,NCoRI,SnFrB,CCo;SCoRO,sCh,WTR,PR
<i>Lepidium latifolium</i> ^B	perennial peppenweed, tall whitetop	Coastal, inland marshes, riparian areas, wetlands, grasslands; potential to invade montane wetlands	CA (except KR,D)
<i>Myriophyllum spicatum</i>	Eurasian watermilfoil	Horticultural; lakes, ponds, streams, aquaculture	SnFrB,SnJV,SNF(?),prob. CA
<i>Pennisetum setaceum</i>	fountain grass	Horticultural; grasslands, dunes, desert canyons; roadsides	Deltaic GV,CCo,SCo,SnFrB
<i>Rubus discolor</i>	Himalayan blackberry	Riparian areas, marshes, oak woodlands	CA-FP
<i>Senecio mikanoides</i> (= <i>Delairea odorata</i>)	Cape ivy, German ivy	Coastal, riparian areas, also SoCal (south side San Gabriel Mtns.)	SCo,CCo,NCo,SnFrB,SW
<i>Taeniatherum caput-medusae</i> ^c	medusa-head	Grasslands, particularly alkaline and poorly drained areas	NCoR,CaR,SNF,GV,SCo
<i>Tamarix chinensis</i> , <i>T. gallica</i> , <i>T. parviflora</i> & <i>T. ramosissima</i>	tamarisk, salt cedar	Desert washes, riparian areas, seeps and springs	SCo,D,SnFrB,GV,NCoR,sSNF,Teh,SCoRI,SNE,WTR
<i>Ulex europaeus</i> ^B	gorse	North, central coastal scrub, grasslands	NCo,NCoRO,CaRF,n&cSNF,SnFrB,CCo

Noxious Weed Ratings

- F: Federal Noxious Weed, as designated by the USDA; targeted for federally-funded prevention, eradication or containment efforts.
- A: CA Dept. of Food & Agriculture, on "A" list of Noxious Weeds; agency policies call for eradication, containment or entry refusal.
- B: CA Dept. of Food & Agriculture, on "B" list of Noxious Weeds; includes species that are more widespread, and therefore more difficult to contain; agency allows county Agricultural Commissioners to decide if local eradication or containment is warranted.
- C: CA Dept. of Food & Agriculture, on "C" list of Noxious Weeds; includes weeds that are so widespread that the agency does not endorse state or county-funded eradication or containment efforts except in nurseries or seed lots.
- Q: CA Dept. of Food & Agriculture's designation for temporary "A" rating pending determination of a permanent rating.

For most species nomenclature follows *The Jepson Manual: Higher Plants of California* (Hickman, J., Ed., 1993).

APPENDIX "B"

Approved Plant List for the Village 9 Preserve Edge

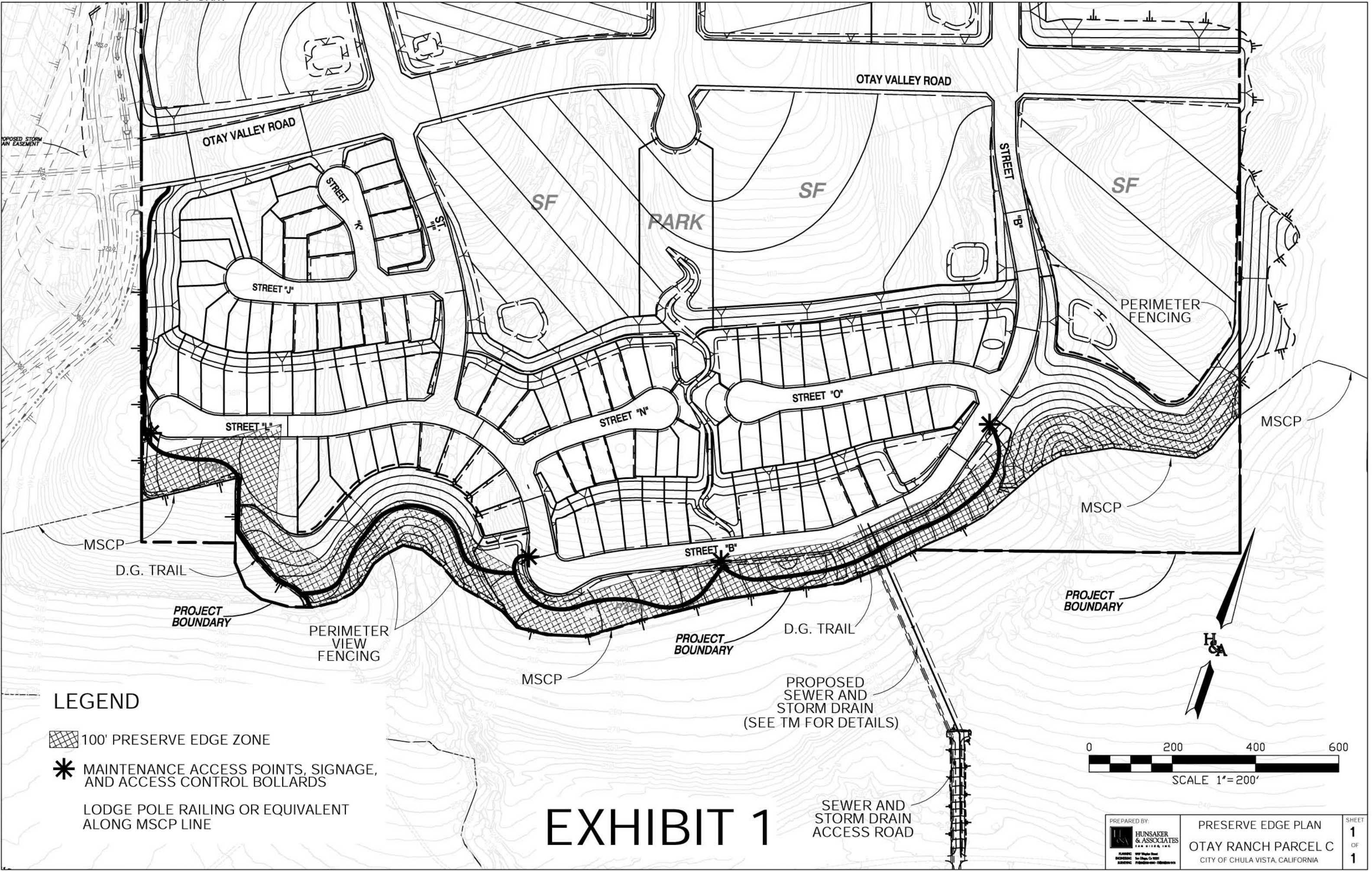
Existing Natives On Site*	Approved Village 2 Species**	BOTANICAL NAME - Common Name
		TREES:
		QUERCUS AGRIFOLIA - Coast Live Oak
		QUERCUS ENGELMANNII - Engelmann Oak
		PLATANUS RACEMOSA - California Sycamore
		LARGE SHRUBS:
◆	▲	HETEROMELES ARBUTIFOLIA - Toyon
◆	▲	ISOMERIS ARBOREA - Bladder Pod
◆	▲	RHAMNUS CROCEA - Redberry
◆	▲	SIMMONDSIA CHINENSIS - Jojoba
◆		YUCCA SCHIDIGERA - Mojave Yucca
		SUBSHRUBS / PERENNIALS / SUCCULENTS:
◆		BACCHARIS PILULARIS - Coyote Brush
◆	▲	CYLINDROPUNTIA CALIFORNICA - Snake Cholla
◆	▲	DEINANDRA (HEMIZONIA) FASCICULATA - Fascicled Tarplant
◆	▲	DISTICHLIS SPICATA - Spiked Salt Grass
◆		IVA HAYESIANA - San Diego Marsh-elder
◆	▲	LUPINUS SUCCULENTUS - Arroyo Lupine
◆		MALACHOTHAMNUS FASCICULATUS - Chaparral Bushmallow
◆	▲	NASSELLA PULCHRA - Purple Needlegrass
◆	▲	OPUNTIA LITTORALIS - Coastal Prickly Pear
◆		SALVIA APIANA - White Sage
◆	▲	SISYRINCHIUM BELLUM - Blue-eyed Grass
◆	▲	VIGUIERA LACINIATA - San Diego Sunflower
		SEEDED PLANTS:
◆		BLOOMERIA CROCEA - Common Goldstar
◆	▲	DEINANDRA (HEMIZONIA) FASCICULATA - Fascicled Tarplant
◆		HAZARDIA SQUARROSA - Sawtooth Goldenfields
◆	▲	LUPINUS SUCCULENTUS - Arroyo Lupine
◆		PLANTAGO ERECTA - Dot-seed Plantain
◆	▲	SISYRINCHIUM BELLUM - Blue-eyed Grass

NOTES:

All listed species are suitable for fuel modification zones

* Existing species on site per Biological Resources Report by URS, July 26, 2010

** Approved for Villages 2, 3, & portions of 4



LEGEND

 100' PRESERVE EDGE ZONE

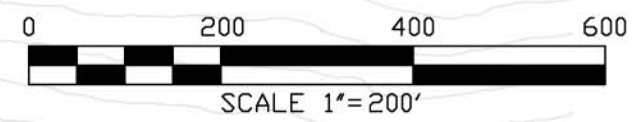
 MAINTENANCE ACCESS POINTS, SIGNAGE, AND ACCESS CONTROL BOLLARDS

LODGE POLE RAILING OR EQUIVALENT ALONG MSCP LINE

PROPOSED SEWER AND STORM DRAIN (SEE TM FOR DETAILS)

EXHIBIT 1

SEWER AND STORM DRAIN ACCESS ROAD



PREPARED BY:

 HUNSAKER & ASSOCIATES
 SAN DIEGO, CA

PRESERVE EDGE PLAN
 OTAY RANCH PARCEL C
 CITY OF CHULA VISTA, CALIFORNIA

SHEET
 1
 OF
 1