

PLAN OF CONTROL
FOR
PARADISE VALLEY AREAS "I", "K" AND "L"
GEOLOGIC MAINTENANCE AND
MONITORING DISTRICT
FAIRFIELD, CALIFORNIA

SUBMITTED TO
ARCADIA DEVELOPMENT COMPANY
CAMPBELL, CALIFORNIA

PREPARED BY
ENGEO INCORPORATED
PROJECT NO. 5698.100.101
JULY 22, 2010

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Project No.
5698.100.101

July 22, 2010

Mr. Brad Durga
Arcadia Development Company
1500 East Hamilton Avenue, Suite 212
Campbell, CA 95008

Subject: Paradise Valley
Fairfield, California


**PLAN OF CONTROL FOR PARADISE VALLEY AREAS "I", "K" AND "L"
GEOLOGIC MAINTENANCE AND MONITORING DISTRICT**

Dear Mr. Durga:

The Paradise Valley Plan of Control has been prepared and is being submitted in conjunction with an Engineer's Report and a petition filed by your office to form the Paradise Valley Areas "I", "K", and "L" Geologic Maintenance and Monitoring District. The Paradise Valley Areas "I", "K" and "L" Geologic Maintenance and Monitoring District (GMMD) ("District") is a Geologic Hazard Abatement District (GHAD) within the meaning of Division 17. We have selected the above name to more accurately represent the function of the district to potential home buyers.

Very truly yours,

ENGEO Incorporated



Eric Harrell, CEG
eh/jf:poc



Uri Eliahu, GE

cc: 1 - Mr. Tim Cotton, William Lyon Homes
1 - Mr. Derek Pampe, DeNova Homes
1 - Mr. James Paluck, City of Fairfield

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REFERENCES

APPENDIX A:

- Exhibit 1 Limits of the Paradise Valley Areas "I", "K" and "L" Geologic Monitoring and Maintenance District
- Exhibit 2 Boundaries of the District Area
- Figure 1 Sedimentation Basins and Deflection Wall, Area "K"
- Figure 2 Deflection Wall, Area "K"
- Figure 3 Remedial Grading Plan, Area "I"

APPENDIX B:

- Open Space Management Program

I. AUTHORITY AND SCOPE

The Paradise Valley Areas "I", "K" and "L" Geologic Maintenance and Monitoring District ("District") is proposed to be formed under authority of the California Public Resources Code, Division 17, commencing with Section 26500. The District is a Geologic Hazard Abatement District (GHAD) within the meaning of Division 17. The boundaries of the District include a total of approximately 88 acres that will be developed with single- and multi-family residential housing. The District is being formed to permanently monitor and maintain slopes and slope correction measures, including retaining walls and detention basins within the District. As necessary, the GHAD will also monitor and maintain future improvements related to geologic hazard abatement including but not limited to basins, walls, ditches, maintenance roads etc. Currently it is not expected that the GHAD will provide monitoring, maintenance or repair services within the residential portion of the District, with the exception of those impacts that relate to slope instability originating within the open space areas.

Development of a Plan of Control is a requirement for formation of a GHAD. Pursuant to Section 26509, this Plan of Control was prepared by an Engineering Geologist Certified pursuant to Section 7822 of the Business and Professions Code. As required by Section 26509, it describes potential geologic hazards within the proposed District boundaries and provides a plan for the prevention, mitigation, abatement, or control thereof.

As used in this Plan of Control, and as provided in Section 26507, "geologic hazard" means an actual or threatened landslide, land subsidence, soil erosion, earthquake, fault movement, or any other natural or unnatural movement of land or earth.

Property Identification

The proposed District boundary is shown in the District Boundary Map on Exhibit 1, and further described in the District Boundary Description on Exhibit 2.

II. BACKGROUND

Existing Site Conditions

The site, consisting of three areas, Areas "I", "K" and "L", is located along Paradise Valley Drive in Fairfield, California. The irregularly shaped site is currently bordered by the Paradise Valley Golf Course to the southwest, open space to the north and east and single-family residences to the west and southeast. Paradise Valley Drive bisects Area "K", while Areas "I" and "L" are located north or east of the roadway.

The subject site is located near the base of a northwest- to southeast-trending ridge. Within the subdivision boundary limit, elevations range from a low of about 150 feet above mean sea level (msl) on the southern limit of the property, to a high of about 210 feet above msl at the northern edge of the site.

As stated in the Berlogar Geotechnical Consultants (BGC) Design Level Geotechnical Investigation for Paradise Valley Area "K", engineered fill, up to approximately 10 feet in thickness, has been placed on the site. It appears that this grading was completed prior to 1998 and was investigated as part of BGC site studies.

Proposed Development

The Area "K" final map for 150 single-family lots on 69.7 acres was approved on October 19, 2004. Site plans prepared for Areas "I" and "L" show a total of 230 townhomes are to be developed on 8.5 and 9.7 acres respectively in Areas "I" and "L." In addition, the plans show roadways, parking and a trail extension. A Debris Flow and Landslide Investigation was completed for Areas "I" and "L" by Berlogar Geotechnical Consultants (BGC) and dated September 8, 2003. The study included hillside portions of Areas "I" and "L" and upslope areas outside of the subdivision limits. A Geotechnical Investigation report dated March 1, 2005, was also completed for Areas "I" and "L."

The final map for Area "K" shows a total of 150 lots situated on both sides of the future extension of Paradise Valley Drive that will bisect the site. The building pads and streets were developed by cuts of up to 23 feet, and placement of engineered fill up to approximately 14 feet thick. A Design Level Geotechnical Investigation was completed by Berlogar Geotechnical Consultants for the site. Geotechnical corrective recommendations provided in these reports have been incorporated into plans labeled "Remedial Grading Plans, North of and for Paradise Valley "K-2", Fairfield, California" and dated January 17, 2002. Copies of the geotechnical investigation and grading plans for the project are maintained by the City of Fairfield.

Final grading work at the site will have been completed prior to acceptance of the property by the District, as further discussed in Section VI of this Plan of Control.

Mass and remedial grading have been completed within Area "K." In Areas "I" and "L" the grading has not been completed. Grading completed or planned north of the proposed residences, near the base of the uphill slope, will include three sedimentation basins, three deflection walls and three landslide repairs to remediate landslide and debris flow hazards from this area. In 2006, BGC completed mitigation work on the sedimentation basins and debris walls in Area "K" and this work is described in a BGC report dated March 5, 2008. The landslide and debris flow concerns for this area were described in the BGC reports titled "Debris Flow Hazard and Landslide Investigation, Paradise Valley "K-2"" dated December 3, 1999, and "Debris Flow Hazard and Landslide Investigation, Paradise Valley "I" and "L"" dated September 8, 2003.

The District will monitor and maintain the following site improvements:

- Sedimentation basins "A", "C-D" and "I", including riser maintenance and sediment removal.
- Three deflection walls with berms and riprap aprons (a total of approximately 635 linear feet).
- Maintenance roads (approximately 3,500 linear feet).
- Concrete-lined drainage ditches.
- Storm drain inlets, outfalls and pipelines within the open space area.

In addition, the District will monitor, maintain and repair slopes, including repaired or partially repaired landslides as indicated on the remedial grading plans or future landslide areas and as further discussed below.

Open Space

The District will have authority and responsibility to manage erosion and geologic hazards within the open space area shown in Exhibit 1. Accordingly, ownership of the open space will pass from the owner/developers to the District on, or approximately on, the date the District commences its activities and becomes responsible for oversight of the actual physical maintenance of the open space as provided in Section VI. Maintenance of the open space shall be consistent with this Plan of Control and the Open Space Management Plan (Appendix B).

III. GEOLOGY

Regional Geology and Geologic Maps

The site is located within the Coast Ranges geologic province of California, a series of northwest-trending ridges and valleys. Bedrock in the province has been folded and faulted during regional uplift beginning in the Pliocene period, approximately 4 million years before present. Regional geologic maps were reviewed as part of the Berlogar Geotechnical Consultants investigations of Paradise Valley Areas "I", "K" and "L." Along with others, regional geologic maps of the area have been prepared recently by Majmundar (1987) and Jennings (1994). The regional mapping prepared by Majmundar indicates that the main portion of the site is underlain by recent alluvium overlying the Cretaceous-age Guinda Formation, consisting of massive- to well-bedded sandstone. Regional mapping shows that bedrock units are striking in a general north-south trend and dipping to the east in the area of the site.

The site is not located within a State of California Earthquake Fault Zone for active faults (CDMG, 1982). The nearest mapped active fault is the Green Valley fault located approximately 9½ miles west of the site. Berlogar Geotechnical Consultants state that they did not find evidence of faults on or trending towards the site.

Site Geology

The geologic units mapped on the site include bedrock and surficial deposits consisting of artificial fill, alluvium, colluvium and landslides that are described below. The geologic units described below are adapted from reports completed by Berlogar Geotechnical Consultants for the site in 1999, 2001 and 2003.

In general, the site is underlain by alluvium deposits. At the base of the hills, at the northern end of the site, bedrock was encountered at a depth of approximately 30 feet. Between 1 to 10 feet of engineered fill was encountered in exploratory borings completed by BGC in 2001.

Geologic Units

Artificial Fill. Artificial fill encountered on the site is related to the previous site grading and ranges between 1 and 10 feet in thickness in the exploratory borings within Area "K." The fill materials were described as silty clay with lesser amounts of sandy silt, sand and gravel.

Landslides. Landslide deposits consist of masses of unconsolidated material and/or bedrock that have moved downslope by sliding, falling, or flowing. Landslides ranging in size from very small to relatively large occur along the northern edge of the site. The landslides include soil slips, earth flows, debris slides, areas of shallow slumps and gullying, large predominantly rotational slumps, and translational slides.

Colluvium. Mantling the bedrock and filling swales at the northern end of the site are colluvial deposits. These sediments are derived from weathering of the underlying bedrock and consist mostly of a silty clay matrix with sand and rock fragments. This material generally is moderately expansive and has low strength. Where colluvium is located on sloping ground, it may be characteristically unstable. Within swales, the colluvial deposits tend to be relatively thicker and may be subject to flow or slip downslope.

Alluvium. Alluvium underlies the majority of the site. Alluvium on the site is composed of interbedded clay, silt and sand with trace amounts of gravel. Typically, the alluvium consists of a moist, stiff silty clay.

Bedrock. Bedrock at and north of the site was identified during subsurface explorations by BGC as claystone, siltstone and sandstone. The bedrock was described in the boring and exploratory test pit logs as highly weathered and friable to moderately strong. In general, bedding was described as striking to the north-northwest and dipping to the east.

Groundwater

At the time of subsurface work, groundwater was encountered between 12½ to 18 feet below the ground surface. Areas of phreatophytes were mapped by BGC north of the subdivision limit in their 1999 study. In addition, in the 2003 study, a seep was noted at the head of an erosion gully above Area "L". Fluctuations in groundwater levels may occur seasonally and over a period of years because of precipitation, changes in drainage patterns, irrigation and other factors. Future irrigation may cause an overall rise in groundwater levels.

Seismic Sources

The nearest State of California-zoned, active¹ fault is the Green Valley fault located about 9½ miles west of the site. While the probability of ground rupture is considered low, as described in the BGC report, there is a high probability that the site and any improvements will be subject to strong ground shaking during the lifetime of the project.

¹ An active fault is defined by the State Mining and Geology Board as one that has had surface displacement within Holocene time (about the last 10,000 years) (Hart, 1994). The State of California has prepared maps designating zones for special studies that contain these active earthquake faults.

IV. GEOLOGIC HAZARDS

Geologic hazards identified for the site in the BGC reports include the following items. These geologic hazards are not expected to be eliminated by site grading.

- Slope instability
- Seismically induced ground shaking
- Expansive soils

Slope Instability

During mapping for the Debris Flow Hazard and Landslide Investigations, seven debris flow areas were identified within six drainage basins on the northern edge of the property and extending off-site to the north. The geologic hazard map showing the location of each of the debris flows and landslides is included as Figures 1 through 3. The table below identifies each of the landslide areas and the proposed corrective measures. The "Location and Landslide Type" column identifies the lot or lots that are immediately downslope of the identified slope instability and is not meant to imply that these are the only lots that could be potentially impacted if movement occurs in these areas. Potential District monitoring or maintenance activities for the specific areas listed in the table below are discussed in Section VII.

TABLE IV-1
Mapped Areas of Slope Instability
and Proposed Corrective Measures

DRAINAGE BASIN AREA DESIGNATION OR LANDSLIDE NUMBER	LOCATION AND LANDSLIDE TYPE	CORRECTIVE MEASURES (PROPOSED IF NOTED AS SUCH)	UNREMEDIED AREAS
A	Area above Lots 335 through 338. Debris flow and slump-type landslides.	Sedimentation basin with storm drain outlet.	Landslide material not removed above sedimentation berm.
B	Area above Lots 332 through 334. Debris flow.	Construction of Deflection Wall No. 1 (±280 feet).	Landslide material not removed except downslope of the deflection wall.
Landslide 1	Area above Lots 329 through 331. Slump-type landslide.	Landslide material removed and replaced with engineered fill on lower portion of landslide.	Landslide material above elevation 210 feet to remain in place.
C-D	Area above Lots 324 through 328. Debris flow and slump-type landslides.	Sedimentation basin with storm drain outlet.	Landslide material not removed above sedimentation berm.

DRAINAGE BASIN AREA DESIGNATION OR LANDSLIDE NUMBER	LOCATION AND LANDSLIDE TYPE	CORRECTIVE MEASURES (PROPOSED IF NOTED AS SUCH)	UNREMIEDIATED AREAS
Landslide 2	Area above Lots 318 and 319. Slump-type landslide.	Remove and replace.	None
E	Area above Lot 317. Debris flow.	Construction of Deflection Wall No. 2 (± 185 feet).	Landslide material not removed except downslope of the deflection wall.
I (Debris berm)	Area above Northeast corner of Area "I". Debris flow.	Proposed Construction of Deflection Wall (± 170 feet).	Landslide material not removed.
I (Sedimentation Basin)	Area above central portion of Area "I". Debris flow.	Proposed construction of a sedimentation basin with storm drain outlet.	Landslide material above sedimentation berm not to be removed.
L (Landslide)	Area above central portion of Area "L". Slump-type landslide.	Proposed removal and replacement.	None

In addition to the landslides listed above, other areas of slope instability or landsliding will likely be identified during the life of the development. Since earth stability is the District's prime geotechnical concern, this section describes several types of slope instability that may be within the District's area of responsibility, subject to Section V of this Plan of Control. Slope instability is not unique to this project, but is of importance for hillside projects throughout the San Francisco Bay Area. Future stability of these areas depends on various factors, including any introduction of natural or artificial groundwater, future grading and earthquake ground shaking. A landslide is defined as a mass of rock, soil and other debris that has been displaced downslope by sliding, flowing or falling. Landslides include cohesive block glides and disrupted slumps that have formed by displacement along a planar slip surface or rotation (displacement along a curved slip surface). Undercutting and erosion of hillside slopes trigger many slope failures.

Slope failures are also often triggered by increased pore water pressure due to the infiltration of rainwater. The resulting decrease of shear resistance (internal resistance to deformation by shearing) can cause the slope to move. The level of the groundwater table varies with the amount of rainfall for the area. If rainfall is higher than average during the winter season, the water table will be higher than average on a hillslope and groundwater pressures may become dangerously high. Under these conditions, hillside movement can be activated.

Areas of thicker soil cover on the hillslopes are known as colluvium (Qc). Colluvial deposits are typically the result of soil creep and may be in a weak, unconsolidated state, making them susceptible to landsliding if undercut. Colluvium is generally approximately ten to fifteen feet in thickness at the site. Landslides and colluvial deposits located within open space areas are

natural landforms that do not require mitigation except where they affect manmade improvements. Potential mitigation and repair measures for District areas near development are discussed in Section VII.

Seismically Induced Ground Shaking

As identified in the geotechnical report, an earthquake of moderate to high magnitude generated within the San Francisco Bay Region could cause considerable ground shaking at the site, similar to that which has occurred in the past. It appears that seismic slope stability has been considered in the BGC remedial grading plans; however, seismically generated slope failures could occur in open-space areas outside the development limits.

Expansive Soils

Near-surface colluvium and alluvium at the site could exhibit a low to moderate potential for expansion. These potentially expansive soils could impact the planned site development. Expansive soils shrink and swell as a result of moisture changes. This can cause heaving and cracking of slabs-on-grade, pavements and structures founded on shallow foundations. The potential for expansive soils has been identified in previous reports for the property. Shrink and swell of expansive soils on slopes is a portion of the mechanism of creep movement which can result in shallow slope instability. Within the open space area, slope instability caused by expansive soil creep will be addressed by the District subject to the exceptions in Section V.

V. AREAS OF DISTRICT RESPONSIBILITY

Prevention, Mitigation, Abatement and/or Control of Geologic Hazards

Subject to the following exceptions, the primary mission of the District shall be the prevention, mitigation, abatement and/or control of geologic hazards within its boundaries that have damaged, or that pose a significant threat of damage to site improvements within the developed areas of the project. As used herein, the term "site improvements" means buildings and outbuildings, roads, sidewalks, improved paths, utilities, improved trails, swimming pools, tennis courts, gazebos, cabanas, geologic stabilization features or similar improvements.

Exceptions

The intent of this Plan of Control is not to require or to create the expectation that the District will take action to address every threatened or actual geologic hazard. Subject to the provisions of this Section V, the District will not prevent, mitigate, abate or control geologic hazards under the following circumstances:

Isolated or Remote Slope Instability. The District shall not have responsibility and may place a low priority on its responsibility to monitor, abate, mitigate or control slope instability that does not involve damage to or pose a significant threat to damage site improvements.

Single Property. The District will not prevent, mitigate, abate or control geologic hazards which are limited in area to a single parcel of property unless the geologic hazard has damaged, or poses a significant threat of damage, to site improvements located on other property within the District boundaries. This exclusion does not apply to geologic hazards existing on common area property owned by the HOA or within open space owned by the District.

Hazard(s) or Failure(s) Resulting From Negligence. The District will not prevent, mitigate, abate or control geologic hazards or failures if, in the sole judgment of the District Manager, such hazards occur as the sole result of negligence of a property owner and/or a property owner's contractors, agents or employees in developing, grading, constructing, or maintaining any work on the subject property.

Property Not Located Within District Boundaries. Except as provided in this paragraph, the District shall not prevent, mitigate, abate or control geologic hazards located on property that is not located within the District boundaries. In the event, however, that all or any portion of a geologic hazard existing on property located outside the District boundaries has damaged or poses a significant risk of damage to site improvements located on property within the District boundaries, the District may prevent, mitigate, abate, or control the geologic hazard. Any work conducted on property located outside of the District boundaries shall be strictly limited to that which, in the sole judgment of the District, is absolutely necessary to prevent, mitigate or control the damage, or threat of damage, to property located within the boundaries of the District. The District will obtain the necessary agreements from offsite property owners prior to the start of

remedial work. Should the District be required to respond to a geologic hazard outside the boundaries of the District, the District may take such actions as may be appropriate to recover costs incurred as a result of preventing, mitigating, abating or controlling such geologic hazard from the responsible party, if any.

Notwithstanding the above exceptions from District responsibility, the District may take any action necessary to prevent, mitigate, abate or control damage to property or site improvements for which, in the sole judgment of the District, the District would be legally responsible.

Geologic Hazards in Open Space and Maintenance of Open-Space Areas

Consistent with the exceptions discussed above, the District may prevent, mitigate, abate, or control the geologic hazards in open space areas and other unimproved areas within the boundaries of the District if said geologic hazards have damaged or have the potential to damage site improvements located on properties within the boundaries of the District. In conjunction with this responsibility, the District is authorized to maintain geologic stabilization features (e.g. ditches, benches, walls, drains, subdrains, etc.) that are located in open space areas or other unimproved areas, including hillside slopes extending uphill from debris benches.

General maintenance of the surface drainage improvements in the open space and on the hillsides, such as the concrete V-ditches, will be the District's responsibility. The District is also responsible for general maintenance of the storm drain inlets and outlets in open space and subdrain outlets.

Potential geologic hazards such as landslides and slope erosion within the open space, including the unimproved hillsides, shall be the responsibility of the District. Clearing of fire breaks and general maintenance of the open space (other than hazard abatement) will be approved by the District (as described in the Governing Documents of the HOA).

The District's sedimentation basin maintenance responsibilities include periodic inspections, as necessary, to check for accumulated sediment, the condition of inlets and outfalls, and vegetation. District maintenance and monitoring procedures will include:

- Inspection and repair of inlet and outfall structures.
- Stabilization and/or repair of eroded areas or failures on the embankment surrounding the basin.
- Pruning/cutting of the vegetation within and surrounding the basin.
- Maintenance of the access areas.
- Monitoring and repair of any perimeter fencing for public safety.
- Sediment accumulation measurement and removal.

Maintenance roads have been or will be constructed to service remedial structures in Drainage Basins "A", "B", "C-D" and "I". These roads will be approximately 10 feet wide with a geotextile fabric overlain by an 8-inch-thick layer of aggregate base. A concrete-lined drainage ditch is located at the uphill edge of the roadways. As shown on the remedial grading plans, corrective grading is not planned below the maintenance road. The maintenance roads are planned to be located on colluvium, alluvium, fan deposits or engineered fill, so it should be expected that periodic maintenance and repair of the roadways will be necessary.

District Funding or Reimbursement for Damaged or Destroyed Structures or Site Improvements

In the event a residence or any other private structure, site improvement or landscape feature is damaged or destroyed as a result of a geologic hazard, the District may fund, or reimburse the property owner for the expenses necessary to repair or replace the damaged or destroyed structure, site improvement or landscaping. Unless otherwise authorized by the Board of Directors, the total dollar amount of the District funding or reimbursement paid to all property owners whose property is damaged by the geologic hazard may not exceed ten percent (10%) of the total costs incurred by the District in actually mitigating, abating or controlling the geologic hazard that causes the damage. For example, if a landslide causes \$10,000 in structural damage to each one of four neighboring homes for a total of \$40,000 in structural damage; and it costs the District \$100,000 to design and install a new retaining wall to abate the slide; the District may only reimburse each property owner \$2,500 of their \$10,000 in structural damage. In the event the geologic hazard damaged or destroyed a structure, site improvement or landscaping which violated any provisions of the City Building Code or City Code at the time of its installation or improvement, the District may decline to provide any funding, or reimbursement to the property owner for repair or replacement of the damaged structure, improvement or landscaping.

No Reimbursement of Expenses Incurred by Property Owners

The District will not be obligated to reimburse a property owner for expenses incurred for the prevention, mitigation, abatement, or control of a geologic hazard nor for reimbursement for damaged or destroyed structures or site improvements absent a written agreement between the property owner and the District to that effect, which agreement has been executed prior to the property owner incurring said expenses, and following an investigation conducted by the District.

VI. FUNDING AND ACCEPTANCE OF RESPONSIBILITY BY THE DISTRICT

Property Owner Assessments

The activities of the District are anticipated to be funded through property owner assessments levied against properties within the District boundaries. An annual assessment shall be authorized on all residential parcels in the District. The assessment shall be levied by the District on each individual parcel beginning the first fiscal year following issuance of a building permit for that parcel. In the event the estimated assessment revenue from Areas "I" and "L" is less than the amount shown for each year within the approved Engineer's Report (Exhibit 4), the owner of the developable parcels within each area will be required to fund the shortfall within each area, if any. Adjustments will be determined annually on each June 30.

All activities of the District, as defined in this Plan of Control, assume and are subject to a continuation of the property owner assessments.

Responsibility for District Activities, Timing of the Levy of the Assessment

The party that, on the date each Final Map within the boundaries of the District is approved by The City of Fairfield, owns the developable parcels shown on that Final Map, shall have the responsibility to perform all the activities of the District on property within that Final Map. Such responsibility shall automatically transfer to the District at 9:00 a.m. on the day exactly 60 days after the first residential building permit is issued by Fairfield, provided, however, that the transfer shall only occur when the reserve amount, including cash and receivables from the Solano County Tax Collector, is at least \$200,000. This turnover date may be extended at the sole discretion of the project developer provided that the assessments shall continue to be levied during the extension period and that notice of such extension is delivered to the District Manager at least 30 days prior to the turnover date. The petitioners for formation of the District intend that the minimum initial reserve amount of \$200,000 will allow, along with the levying of assessments on parcels with building permits, funding of GHAD activities during the early years of the District.

Ownership of the Open Space

Ownership of the open space will pass from the owner/developers to the District on, or approximately on the date the District commences its activities and becomes responsible for oversight of the actual physical maintenance of the open space as provided in this section.

Process for Transferring Responsibility for GHAD Activities

After the Transfer Eligibility Date for parcel(s), the process for transferring responsibility for performing GHAD activities on such parcel(s) shall be as follows:

- (a) In the calendar year of the Transfer Eligibility Date or in any subsequent year, at its discretion, the Developer may apply to the GHAD ("Transfer Application") to transfer the responsibility for performing GHAD Activities for parcel(s) to the District.
- (b) Within 30 days of receiving such notice, a representative of the GHAD shall verify that all the facilities for which the GHAD will have maintenance responsibility have been constructed and maintained according to the City-approved plans and specifications for the individual improvements, and that such facilities are operational and in good working order.
- (c) Within 15 days of such inspection, the GHAD will send the Developer a list ("Punch List") of all of the items that need to be constructed, repaired or otherwise modified in order to comply with the City-approved plans and specifications.
- (d) The developer shall notify the GHAD when it has completed the items identified on the Punch List.
- (e) Within 30 days of receipt of such notice, the GHAD shall verify that all Punch List items have been completed and notify the Developer that the District accepts responsibility for performing all future GHAD Activities on the parcel(s).
- (f) The GHAD shall confirm that the reserve requirement defined in the Engineer's Report dated April 1, 2010, has been met.

As part of the transfer activities, the developer of parcel(s) to be transferred shall provide the GHAD, for its use, copies of the applicable geotechnical exploration reports, grading plans, corrective grading plans, improvement plans, field-verified geologic maps, as-built subdrain plans and other pertinent documents as requested by the GHAD.

VII. GEOTECHNICAL TECHNIQUES FOR MITIGATION OF LANDSLIDE AND EROSION HAZARDS

Landslide Mitigation for Existing Debris Flows and Landslides

For existing debris flows and landslide areas, the following mitigation measures have been proposed and shown on the corrective grading plans. General landslide mitigation measures are shown below.

TABLE VII-1
Selected District Mitigation and Monitoring Areas

DRAINAGE BASIN AREA DESIGNATION OR LANDSLIDE NUMBER	CORRECTIVE MEASURES (PROPOSED IF NOTED AS SUCH)	UNREMEDIED AREAS	POTENTIAL DISTRICT MAINTENANCE OR MONITORING ACTIVITIES
A	Sedimentation basin with storm drain outlet.	Landslide material not removed above sedimentation berm.	Observation of this area during periodic site monitoring events. Higher potential for slope instability in future with 15-foot-high 2:1(H:V) cut slope in alluvium and fan deposits at the rear of sedimentation basin. Periodic removal of any accumulated landslide debris from rear slope and sedimentation area to maintain adequate catchment area and riser. See Section VII for potential landslide mitigation techniques.
B	Construction of Deflection Wall No. 1 (±280 feet).	Landslide material not removed except downslope of the deflection wall.	Observation of this area during periodic site monitoring events. Higher potential for corrective work in future if landslide debris movement impacts debris wall, berm or rip-rap apron. Removal of any accumulated landslide debris from behind debris berm to maintain adequate freeboard. See Section VII for potential landslide mitigation techniques.
Landslide 1	Landslide material removed and replaced with engineered fill on lower portion of landslide.	Landslide material above Elevation 210 feet to remain in place.	Observation of this area during periodic site monitoring events. Higher potential for corrective work in future if landslide debris movement impacts rebuilt portion or site improvements. See Section VII for potential landslide mitigation techniques.

DRAINAGE BASIN AREA DESIGNATION OR LANDSLIDE NUMBER	CORRECTIVE MEASURES (PROPOSED IF NOTED AS SUCH)	UNREMEDIED AREAS	POTENTIAL DISTRICT MAINTENANCE OR MONITORING ACTIVITIES
C-D	Sedimentation basin with storm drain outlet.	Landslide material not removed above sedimentation berm.	Observation of this area during periodic site monitoring events. Higher potential for slope instability in future with 14-foot-high 2:1(H:V) cut slope in alluvium and fan deposits at the rear of sedimentation basin. Periodic removal of any accumulated landslide debris from rear slope and sedimentation area to maintain adequate catchment area and riser. See Section VII for potential landslide mitigation techniques.
Landslide 2	Remove and replace.	None	Routine observation during periodic site monitoring events.
E	Construction of Deflection Wall No. 2 (±185 feet).	Landslide material not removed except downslope of the deflection wall.	Observation of this area during periodic site monitoring events. Higher potential for corrective work in future if landslide debris movement impacts debris wall, berm or rip-rap apron. Removal of any accumulated landslide debris from behind debris berm to maintain adequate freeboard. See Section VII for potential landslide mitigation techniques.
I (Debris berm)	Proposed construction of Deflection Wall (±170 feet).	Landslide material not removed.	Observation of this area during periodic site monitoring events. Higher potential for corrective work in future if landslide debris movement impacts debris wall, berm or rip-rap apron. Removal of any accumulated landslide debris from behind debris berm to maintain adequate freeboard. See Section VII for potential landslide mitigation techniques.
I (Sedimentation Basin)	Planned sedimentation basin with storm drain outlet.	Landslide material above sedimentation berm not to be removed.	Observation of this area during periodic site monitoring events. Higher potential for slope instability in future with 15-foot-high 2:1(H:V) cut slope in alluvium and fan deposits at the rear of sedimentation basin. Periodic removal of any accumulated landslide debris from rear slope and sedimentation area to maintain adequate catchment area and riser. See Section VII for potential landslide mitigation techniques.
L (Landslide)	Proposed Removal and replacement.	None	Routine observation during periodic site monitoring events.

General Landslide Mitigation

The techniques the District may employ to prevent, mitigate or abate landsliding or adverse erosion damage might include, but are not necessarily limited to:

- Removal of the unstable earth mass.
- Stabilization (either partial or total) of the landslide by removal and replacement with compacted drained fill.
- Construction of structures to retain or divert landslide material or sediment.
- Construction of erosion control devices such as gabions, rip rap, geotextiles, or lined ditches.
- Placement of drained engineered buttress fill.
- Placement of subsurface drainage devices (e.g. underdrains, or horizontal drilled drains).
- Slope correction (e.g. gradient change, biotechnical stabilization, and slope trimming or contouring).
- Construction of additional surface ditches and/or detention basins, silt fences, sediment traps, or backfill or erosion channels.

Potential landslide and erosion hazards can often best be mitigated by controlling soil saturation and water runoff and by maintaining the surface and subsurface drainage system. Maintenance shall be provided for lined surface drainage ditches and drainage terraces including debris catchment structures or drop inlets.

VIII. BIOTECHNICAL RECOMMENDATIONS FOR PREVENTION AND MITIGATION OF EXISTING OR POTENTIAL EROSION HAZARDS

Fill slopes within the boundaries of the District are expected to be erodible as will cut slopes in bedrock; therefore, the maintenance of vegetative cover is especially important. Vegetation provides a protective role on soil and exposed rock. It absorbs the impact of raindrops, reduces the velocity of runoff and retards erosion.

In many instances, adequate erosion protection for slopes can be accomplished with carefully selected and placed biological elements (plants) without the use of structures (e.g. brush layering and willow waddling).

In other areas, biotechnical slope protection may involve the use of mechanical elements or structures in combination with biological elements to provide erosion control and help prevent small-scale slope failures. Locally, crib walls, welded-wire walls, gabion walls, rock walls, riprap and reinforced earth walls used in combination with carefully selected and planted vegetation can provide high quality slope protection. The vegetation may be planted on the slope above a low retaining structure or toe wall, or the interstices of the structure can be planted.

IX. PRIORITY FOR DISTRICT FUNDED REPAIRS

Emergency response and scheduled repair expenditures are to be prioritized by the General Manager, utilizing its discretion, based upon available funds, a prudent reserve and the approved operating budget. The GHAD Manager is a geotechnical practitioner/firm who is hired by and reports to the GHAD Board of Directors.

Should available funds not be sufficient to undertake all of the identified remedial and preventive stabilization measures; the expenditures shall be prioritized as follows in descending order of priority:

- A. The prevention, mitigation, abatement or control of geologic hazards that have either damaged or pose a significant threat of damage to residences, critical underground utilities or paved streets.
- B. The prevention, mitigation, abatement or control of geologic hazards that have either damaged or pose a significant threat of damage to private or community recreation facilities (e.g. pools, spas, etc.).
- C. The prevention, mitigation, abatement or control of geologic hazards that have either damaged or pose a significant threat of damage limited to loss of landscaping or other similar non-essential amenities.
- D. The prevention, mitigation, abatement or control of geologic hazards existing entirely on open-space property and which have neither damaged nor pose a significant threat of damage to any site improvements.

X. MAINTENANCE AND MONITORING SCHEDULE

Geologic features and District-maintained facilities should be inspected on a regular basis. Budget permitting, inspections should be scheduled to occur a minimum of two times per year in normal years and three or more times per year in years of heavy rainfall. The inspections should be scheduled to take place in October, prior to the first significant rainfall; mid-winter as necessary during heavy rainfall years; and in early April at the end of the rainy season. The frequency of the inspections should be increased in years of higher than average rainfall intensity and/or recurrence.

- A District-employed Engineer and/or Geologist should inspect the lined surface of concrete-lined drainage ditches within the District boundaries on a regular schedule. If possible, inspections should be scheduled twice each year, budget permitting. One inspection should be in the fall prior to the onset of winter rains. The inspector should check for sedimentation, cracking or shifting of the concrete-lined ditches. Repairs and maintenance should be performed on a regular schedule. Excess silt or sediment in ditches should be removed and cracked or broken ditches should be patched or repaired as required before the beginning of the next rainy season.
- Several types of debris catchment structures are planned along the northern edge of the development including debris walls and sedimentation basins. Repairs and maintenance should be performed on a regular schedule. Excess debris should be removed to allow the structures to maintain adequate catchment area.
- Subsurface drain outlets and horizontal drilled drain outlets, if any, should be inspected on a regular schedule. Water flowing from these outlets should be measured and recorded during each inspection. If possible, inspections should be scheduled twice each year, preferably in the fall and spring. Any suspicious interruption in flow should signal a need to unplug or clean by flushing the affected drain.
- If installed, piezometers used to measure groundwater levels, or other instruments such as inclinometers and tiltmeters, should be monitored on a regular schedule.
- Settlement monitoring devices, if any, should be monitored on a regular schedule. In the event of anomalous readings or excessive settlement, the monitoring frequency should be increased.
- Inlets, outfalls or trash racks, if used, must be kept free of debris and spillways maintained. Attention should be given to plantings or other obstructions, which may interfere with access, by power equipment.

The District should review its inspection schedule annually and assess the effectiveness of its preventive maintenance program on a regular basis. District-employed staff should prepare an annual report to the Board of Directors with recommendations for maintenance and/or repair

projects. Consultants, if necessary, may be retained to undertake the needed studies. The Engineer and/or Engineering Geologist retained by the District shall prepare an annual inspection report for presentation to the District Board of Directors.

XI. RIGHT-OF-ENTRY

District officers, employees, consultants, contractors, agents, and representatives shall have the right to enter upon all lands within the District boundary, as shown on Exhibit 2, for the purpose of performing the activities described in the Paradise Valley Plan of Control. Such activities include, but are not limited to: (1) the inspection, maintenance and monitoring of site improvements including sedimentation basins, maintenance roads, deflection walls, drainage ditches, storm drains, outfalls and pipelines; (2) the monitoring, maintenance and repair of slopes, including repaired or partially repaired landslides; and (3) the management of erosion and geologic hazards within the open space areas shown on Exhibit 1. Should the District need to access private residential lots to fulfill its duties under the Plan of Control, the District shall provide the affected landowner and/or resident with 72 hours advanced notice unless, in the reasonable judgment of the District, an emergency situation exists which makes immediate access necessary to protect the public health and safety, in which case no advanced notice is required, but the District shall inform the landowner and/or resident as soon as reasonably possible.

The foregoing right-of-entry and indemnity provision shall be recorded in the chain of title for all residential parcels and common area lots, and it shall be included in all Covenants, Conditions and Restrictions (CC&Rs) and homebuyer disclosure statements prepared for parcels within the District boundary.

REFERENCES

- Berlogar Geotechnical Consultants, Debris Flow Hazard Investigation, Paradise Valley "K-2", Fairfield, California, dated December 3, 1999; Job No. 2396.100.
- Berlogar Geotechnical Consultants, Design Level Geotechnical Investigation, Paradise Valley Area K, Fairfield, California, dated September 14, 2001; Job No. 2396.100.
- Berlogar Geotechnical Consultants, Addendum to Design Level Geotechnical Investigation, Paradise Valley Area K, Fairfield, California, dated December 26, 2001; Job No. 2396.100.
- Berlogar Geotechnical Consultants, Remedial Grading Plans, North of and for Paradise Valley "K-2", Fairfield, California, dated July 18, 2001 revised October 24, 2002.
- Berlogar Geotechnical Consultants, Grading Plan Pier Review Area KII Debris Basin Borrow Site at The Colony at Paradise Valley, Paradise Valley Drive, Fairfield, California, dated March 7, 2002; Job No. 2396.003.
- Berlogar Geotechnical Consultants, Response to Pier Review Area K1/K2 Transition, Paradise Valley Area K-1, Fairfield, California, dated August 14, 2002; Job No. 2396.004.
- Berlogar Geotechnical Consultants, Debris Flow and Landslide Investigation, Paradise Valley Areas I and L, Fairfield, California, dated September 8, 2003; Job No. 2396.101.
- Berlogar Geotechnical Consultants, Geotechnical Investigation, Paradise Valley Areas I and L, Fairfield, California, dated March 1, 2005; Job No. 2396.104.
- Berlogar Geotechnical Consultants, Design-Level Geotechnical Investigation, Paradise Valley Areas I and L, Paradise Valley Drive, Fairfield, California, dated May 26, 2006; Job No. 2396.105.
- Berlogar Geotechnical Consultants, Observation During Reconstruction, Debris Flow Mitigation Features, Paradise Valley Area K-2, Fairfield, California, dated March 6, 2008; Job No. 2396.302.
- Carlson, Barbee and Gibson, Inc., The Area "K" at Paradise Valley, City of Fairfield, Solano County, California, April 2002; Job Number 1022-30.
- Carlson, Barbee and Gibson, Inc., Area "K" Debris Basin – Civil Plans, City of Fairfield, Solano County, California, August 2002; Job Number 1022-30.
- Frisbee Planning, 125 Townhomes, Area "I", Paradise Valley, Revised Site Plan, Fairfield, California; Project No. 03009, dated February 28, 2004.
- Frisbee Planning, 105 Townhomes, Area "L", Paradise Valley, Revised Site Plan, Fairfield, California; Project No. 03009, dated February 28, 2004.

REFERENCES (Continued)

Majmundar, Hasmukhrai H., Preliminary Geologic Maps of the Fairfield North Quadrangle, Solano County, California; 1987.

Majmundar, Hasmukhrai H., Landslide Hazard Identification Map No. 11, South Half of Fairfield North Quadrangle, Solano County, California; 1987.

State of California, Department of Conservation, Division of Mines and Geology, Fault-Rupture.

APPENDIX A

EXHIBITS AND FIGURES

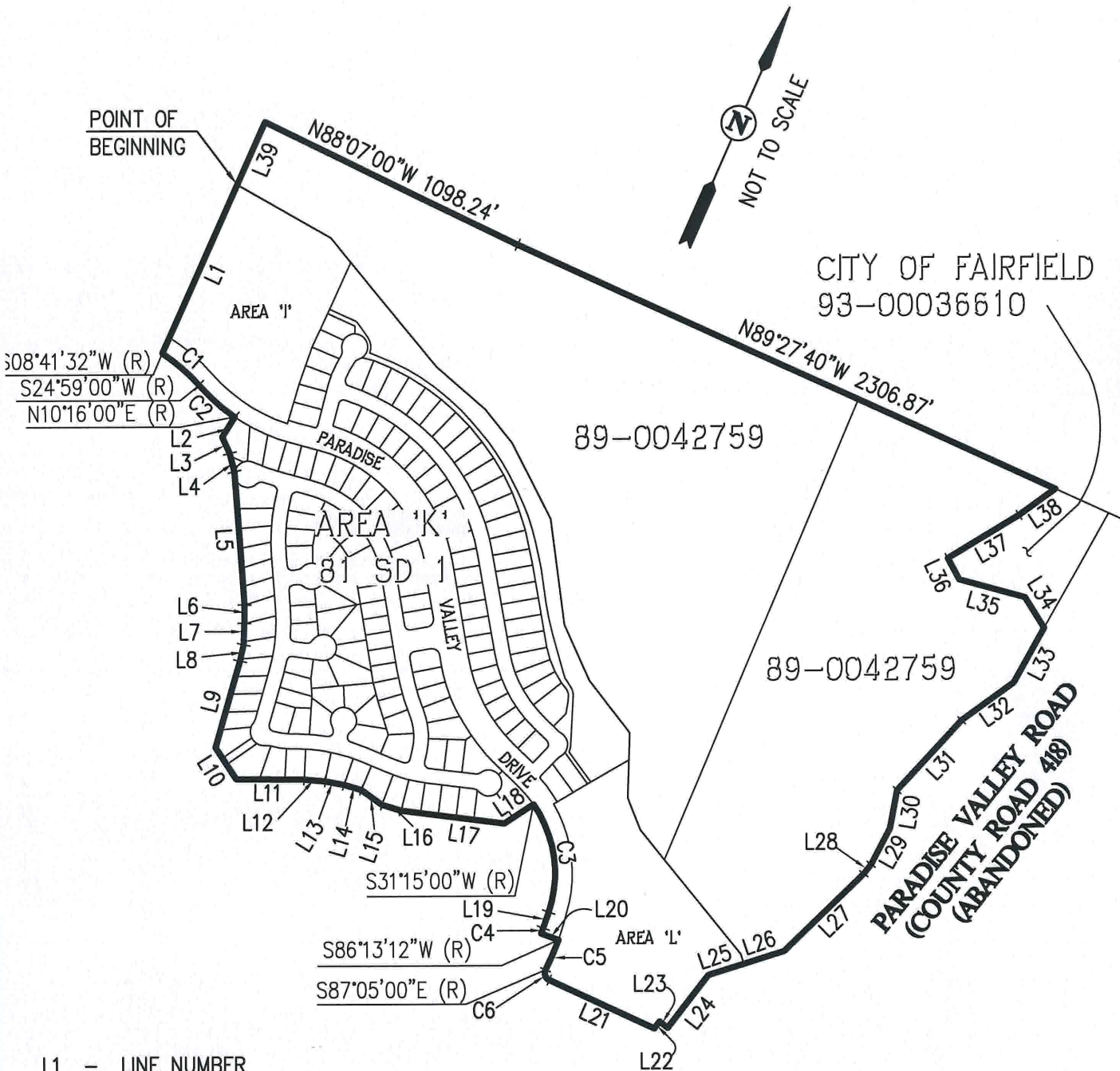
Exhibit 1 - District Boundary Map

Exhibit 2 - District Boundary Description

Figure 1 - Sedimentation Basins and Deflection Wall (Area "K")

Figure 2 - Deflection Wall (Area "K")

Figure 3 - Remedial Grading Plan (Area "I")



DATE: APRIL 2010

EXHIBIT 1

SHEET 1 OF 2

**GEOLOGIC HAZARD ABATEMENT DISTRICT
AREA 'I', 'K' & 'L'**

PARADISE VALLEY, CITY OF FAIRFIELD, CA

Carlson, Barbee, & Gibson, Inc.

CIVIL ENGINEERS • SURVEYORS • PLANNERS

6111 BOLLINGER CANYON ROAD, SUITE 150 SAN RAMON, CALIFORNIA 94583

TELEPHONE: (925) 866-0322 FAX: (925) 866-8575

LINE TABLE		
NO.	BEARING	LENGTH
L1	S00°07'40"W	719.26'
L2	S08°25'00"W	93.09'
L3	S49°31'00"E	69.31'
L4	S38°12'00"E	72.96'
L5	S28°11'00"E	521.48'
L6	S23°09'00"E	71.86'
L7	S22°03'00"E	83.36'
L8	S11°38'00"E	65.67'
L9	S07°51'00"E	350.94'
L10	S57°06'00"E	146.66'
L11	N66°28'00"E	265.68'
L12	N70°33'00"E	82.01'
L13	N76°47'00"E	75.56'
L14	N82°28'00"E	70.25'
L15	S78°22'00"E	100.21'
L16	N83°08'00"E	78.21'
L17	N73°18'40"E	406.40'
L18	N33°00'00"E	135.61'
L19	S05°05'28"E	66.48'
L20	N86°13'12"E	71.50'

NO.	BEARING	LENGTH
L21	S89°12'50"E	451.79'
L22	N13°47'10"E	33.81'
L23	S76°12'50"E	40.00'
L24	N13°47'10"E	259.90'
L25	N48°37'10"E	145.45'
L26	N48°37'10"E	165.41'
L27	N21°52'10"E	432.96'
L28	N13°32'10"E	46.86'
L29	N03°47'10"E	159.72'
L30	N13°12'50"W	149.82'
L31	N19°02'10"E	372.24'
L32	N30°12'10"E	252.13'
L33	N05°30'00"E	244.00'
L34	N55°59'00"W	142.52'
L35	S81°11'00"W	266.01'
L36	N52°24'00"W	94.18'
L37	N35°06'00"E	325.55'
L38	N30°30'00"E	175.41'
L39	S00°07'40"W	266.79'

CURVE TABLE			
NO.	RADIUS	DELTA	LENGTH
C1	671.50'	16°17'28"	190.93'
C2	728.50'	14°43'00"	187.12'
C3	471.50'	53°39'32"	441.57'
C4	1017.50'	01°18'40"	23.28'
C5	1089.00'	06°41'48"	127.28'
C6	30.00'	92°07'50"	48.24'

DATE: APRIL 2010

EXHIBIT 1

SHEET 2 OF 2

**GEOLOGIC HAZARD ABATEMENT DISTRICT
AREA 'I', 'K' & 'L'**

PARADISE VALLEY, CITY OF FAIRFIELD, CA

Carlson, Barbee, & Gibson, Inc.

CIVIL ENGINEERS • SURVEYORS • PLANNERS

6111 BOLLINGER CANYON ROAD, SUITE 150 SAN RAMON, CALIFORNIA 94583

TELEPHONE: (925) 866-0322 FAX: (925) 866-8575

EXHIBIT 2
LEGAL DESCRIPTION
GEOLOGIC HAZARD ABATEMENT DISTRICT
AREAS 'I', 'K' & 'L'
FAIRFIELD, CALIFORNIA

REAL PROPERTY, SITUATE IN THE INCORPORATED TERRITORY OF THE CITY OF FAIRFIELD, COUNTY OF SOLANO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING ALL OF THAT CERTAIN MAP ENTITLED "THE AREA 'K', PARADISE VALLEY", RECORDED DECEMBER 16, 2004, IN BOOK 81 OF SUBDIVISION MAPS AT PAGE 1, IN THE OFFICE OF THE COUNTY RECORDER OF SOLANO COUNTY, AND A PORTION OF THAT CERTAIN PARCEL OF LAND GRANTED TO FIRST AMERICAN TITLE GUARANTEE COMPANY BY DEED RECORDED JUNE 30, 1989, IN SERIES NUMBER 1989-0042759 OF OFFICIAL RECORDS, IN SAID OFFICE OF THE COUNTY RECORDER OF SOLANO COUNTY, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWESTERN CORNER OF SAID MAP (81 SD 1);

THENCE, ALONG THE WESTERN, SOUTHWESTERN AND SOUTHEASTERN LINE OF SAID MAP (81 SD 1), THE FOLLOWING THIRTY-ONE (31) COURSES:

- 1) SOUTH 00°07'40" WEST 719.26 FEET,
- 2) ALONG THE ARC OF A NON-TANGENT 671.50 FOOT RADIUS CURVE TO THE RIGHT, FROM WHICH THE CENTER OF SAID CURVE BEARS SOUTH 08°41'32" WEST, THROUGH A CENTRAL ANGLE OF 16°17'28", AN ARC DISTANCE OF 190.93 FEET,
- 3) ALONG THE ARC OF A REVERSE 728.50 FOOT RADIUS CURVE TO THE LEFT, FROM WHICH THE CENTER OF SAID CURVE BEARS NORTH 24°59'00" EAST, THROUGH A CENTRAL ANGLE OF 14°43'00", AN ARC DISTANCE OF 187.12 FEET,
- 4) SOUTH 08°25'00" WEST 93.09 FEET,
- 5) SOUTH 49°31'00" EAST 69.31 FEET,
- 6) SOUTH 38°12'00" EAST 72.96 FEET,
- 7) SOUTH 28°11'00" EAST 521.48 FEET,
- 8) SOUTH 23°09'00" EAST 71.86 FEET,
- 9) SOUTH 22°03'00" EAST 83.36 FEET,
- 10) SOUTH 11°38'00" EAST 65.67 FEET,

LEGAL DESCRIPTION

Page 2 of 4

APRIL 13, 2010
JOB NO.: 1022-30

- 11) SOUTH 07°51'00" EAST 350.94 FEET,
- 12) SOUTH 57°06'00" EAST 146.66 FEET,
- 13) NORTH 66°28'00" EAST 265.68 FEET,
- 14) NORTH 70°33'00" EAST 82.01 FEET,
- 15) NORTH 76°47'00" EAST 75.56 FEET,
- 16) NORTH 82°28'00" EAST 70.25 FEET,
- 17) SOUTH 78°22'00" EAST 100.21 FEET,
- 18) NORTH 83°08'00" EAST 78.21 FEET,
- 19) NORTH 73°18'40" EAST 406.40 FEET,
- 20) NORTH 33°00'00" EAST 135.61 FEET,
- 21) ALONG THE ARC OF A NON-TANGENT 471.50 FOOT RADIUS CURVE TO THE RIGHT, FROM WHICH THE CENTER OF SAID CURVE BEARS SOUTH 31°15'00" WEST, THROUGH A CENTRAL ANGLE OF 53°39'32", AN ARC DISTANCE OF 441.57 FEET,
- 22) SOUTH 05°05'28" EAST 66.48 FEET,
- 23) ALONG THE ARC OF A TANGENT 1,017.50 FOOT RADIUS CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 01°18'40", AN ARC DISTANCE OF 23.28 FEET,
- 24) NORTH 86°13'12" EAST 71.50 FEET,
- 25) ALONG THE ARC OF A NON-TANGENT 1,089.00 FOOT RADIUS CURVE TO THE RIGHT, FROM WHICH THE CENTER OF SAID CURVE BEARS SOUTH 86°13'12" WEST, THROUGH A CENTRAL ANGLE OF 06°41'48", AN ARC DISTANCE OF 127.28 FEET,
- 26) ALONG THE ARC OF A REVERSE 30.00 FOOT RADIUS CURVE TO THE LEFT, FROM WHICH THE CENTER OF SAID CURVE BEARS SOUTH 87°05'00" EAST, THROUGH A CENTRAL ANGLE OF 92°07'50", AN ARC DISTANCE OF 48.24 FEET,
- 27) SOUTH 89°12'50" EAST 451.79 FEET,
- 28) NORTH 13°47'10" EAST 33.81 FEET,
- 29) SOUTH 76°12'50" EAST 40.00 FEET,

- 30) NORTH 13°47'10" EAST 259.90 FEET, AND
- 31) NORTH 48°37'10" EAST 145.45 FEET TO THE EASTERN CORNER OF SAID MAP (81 SD 1), SAID CORNER ALSO BEING A POINT ON THE SOUTHEASTERN LINE OF SAID PARCEL OF LAND (89-0042759);

THENCE, ALONG SAID SOUTHEASTERN LINE OF SAID PARCEL OF LAND (89-0042759), THE FOLLOWING EIGHT (8) COURSES:

- 1) NORTH 48°37'10" EAST 165.41 FEET,
- 2) NORTH 21°52'10" EAST 432.96 FEET,
- 3) NORTH 13°32'10" EAST 46.86 FEET,
- 4) NORTH 03°47'10" EAST 159.72 FEET,
- 5) NORTH 13°12'50" WEST 149.82 FEET,
- 6) NORTH 19°02'10" EAST 372.24 FEET,
- 7) NORTH 30°12'10" EAST 252.13 FEET, AND
- 8) NORTH 05°30'00" EAST 244.00 FEET TO THE SOUTHEASTERN CORNER OF THAT CERTAIN PARCEL OF LAND GRANTED TO THE CITY OF FAIRFIELD BY DEED RECORDED APRIL 28, 1993, IN SERIES NO. 1993-00036610 OF OFFICIAL RECORDS, IN SAID OFFICE OF THE COUNTY RECORDER OF SOLANO COUNTY;

THENCE, FROM SAID SOUTHEASTERN CORNER, ALONG THE SOUTHERN AND WESTERN LINE OF SAID PARCEL OF LAND (1993-00036610), THE FOLLOWING FIVE (5) COURSES:

- 1) NORTH 55°59'00" WEST 142.52 FEET,
- 2) SOUTH 81°11'00" WEST 266.01 FEET,
- 3) NORTH 52°24'00" WEST 94.18 FEET,
- 4) NORTH 35°06'00" EAST 325.55 FEET, AND
- 5) NORTH 30°30'00" EAST 175.41 FEET TO A POINT ON THE NORTHERN LINE OF SAID PARCEL OF LAND (89-0042759);

LEGAL DESCRIPTION

Page 4 of 4

APRIL 13, 2010
JOB NO.: 1022-30

THENCE, ALONG SAID NORTHERN LINE AND WESTERN LINE OF SAID PARCEL OF LAND (89-0042759), THE FOLLOWING THREE (3) COURSES:

- 1) NORTH 89°27'40" WEST 2,306.87 FEET,
- 2) NORTH 88°07'00" WEST 1,098.24 FEET, AND
- 3) SOUTH 00°07'40" WEST 266.79 FEET TO SAID POINT OF BEGINNING.

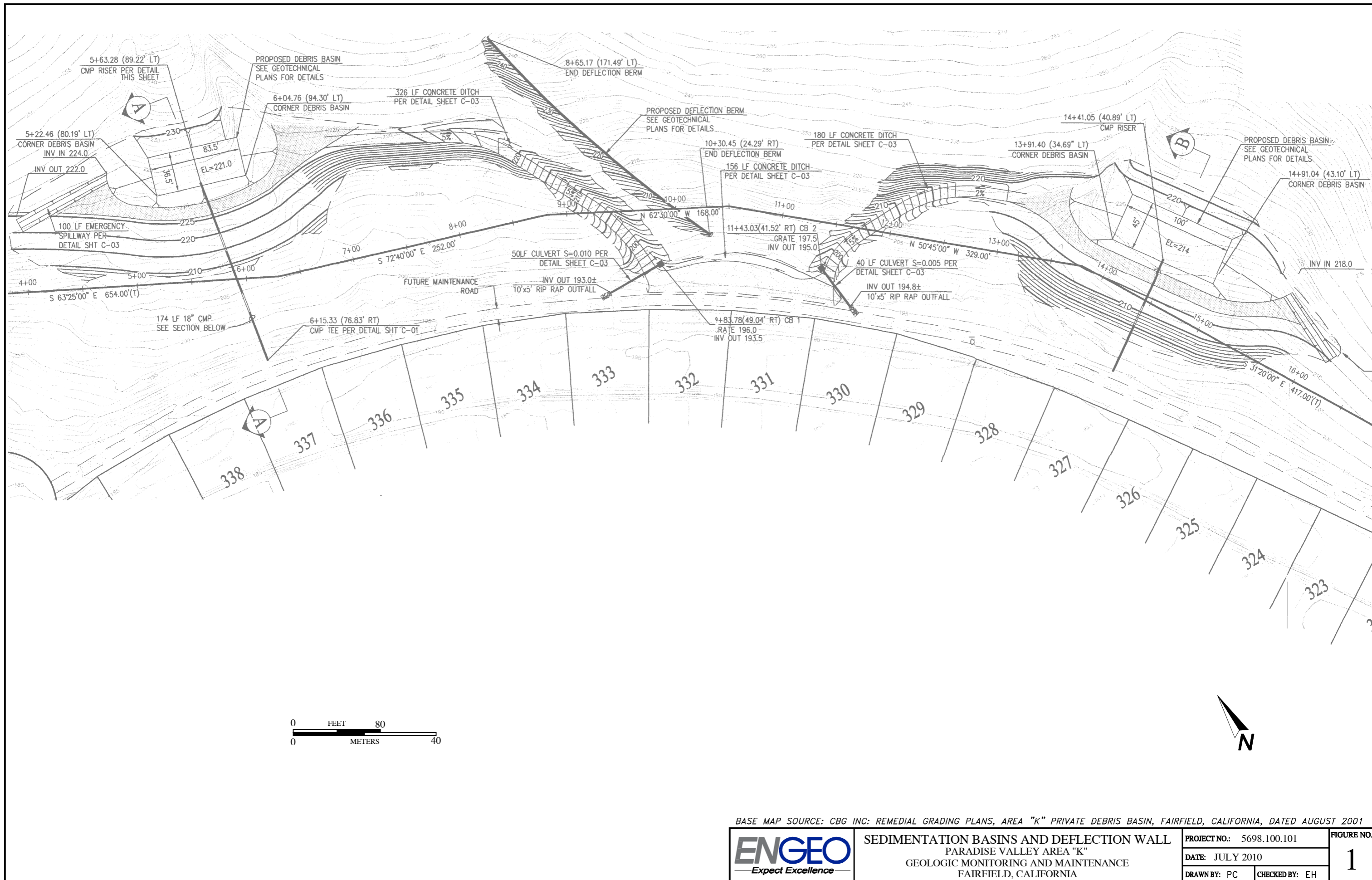
CONTAINING 157.43 ACRES OF LAND, MORE OR LESS.

END OF DESCRIPTION




Christopher S. Harmison
CHRISTOPHER S. HARMISON, P.L.S.
L.S. NO. 7176
EXPIRES: DECEMBER 31, 2011

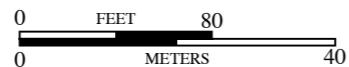
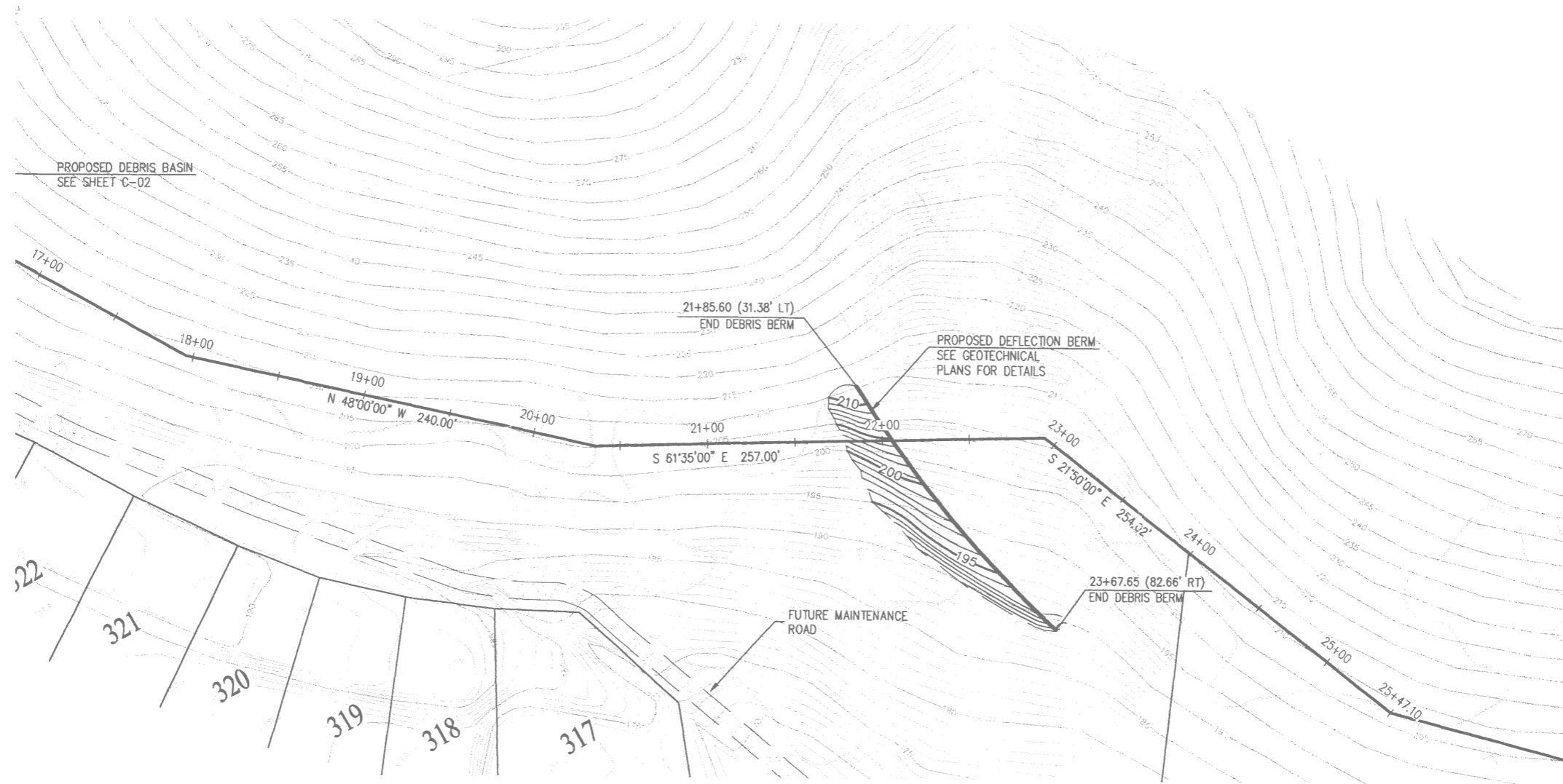
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BASE MAP SOURCE: CBG INC: REMEDIAL GRADING PLANS, AREA "K" PRIVATE DEBRIS BASIN, FAIRFIELD, CALIFORNIA, DATED AUGUST 2001

	SEDIMENTATION BASINS AND DEFLECTION WALL PARADISE VALLEY AREA "K" GEOLOGIC MONITORING AND MAINTENANCE FAIRFIELD, CALIFORNIA		PROJECT NO.: 5698.100.101	FIGURE NO. <div style="font-size: 2em; font-weight: bold; text-align: center;">1</div>
			DATE: JULY 2010	
			DRAWN BY: PC	CHECKED BY: EH

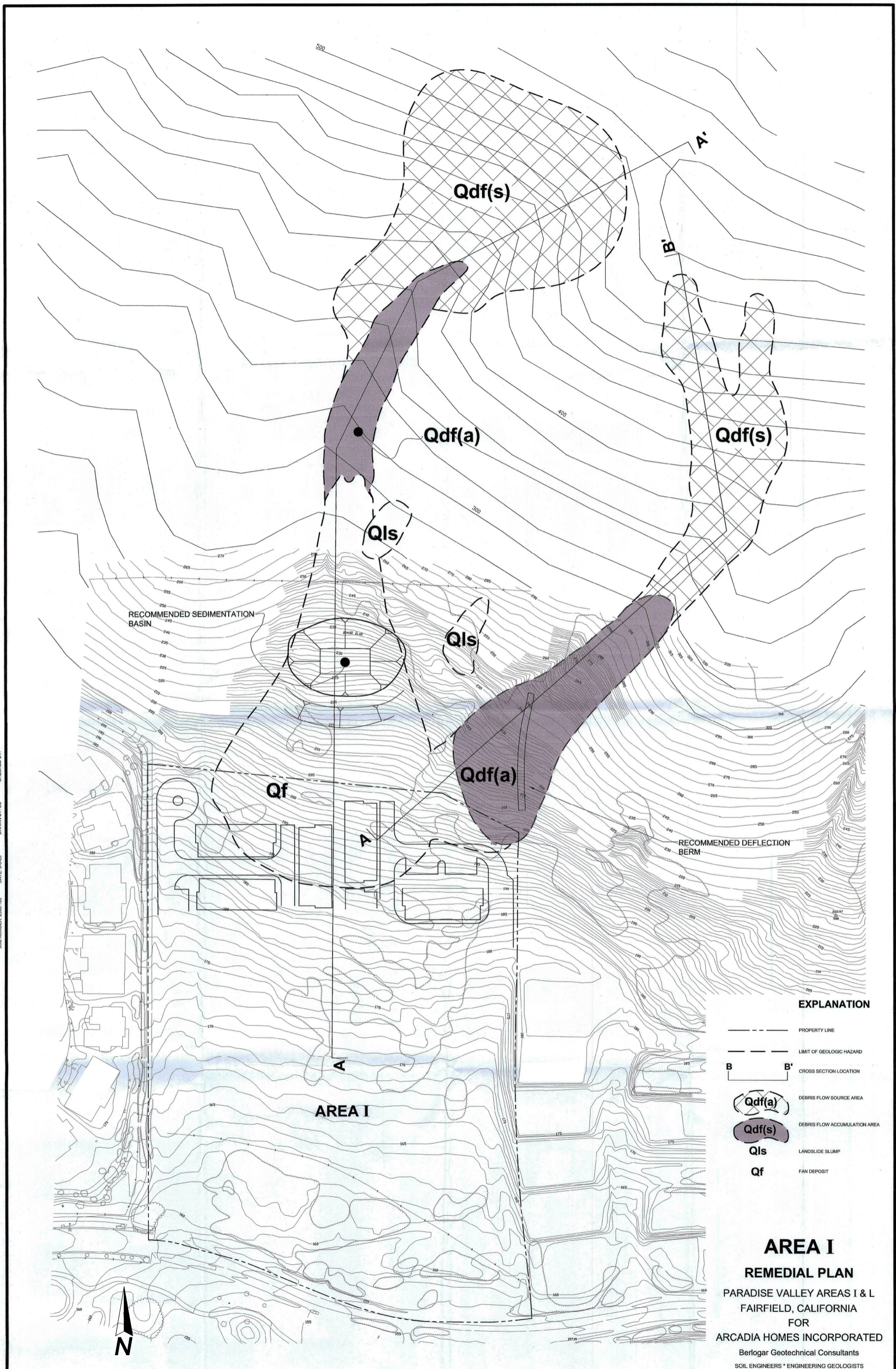
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BASE MAP SOURCE: CBG INC: REMEDIAL GRADING PLANS, AREA "K" PRIVATE DEBRIS BASIN, FAIRFIELD, CALIFORNIA, DATED AUGUST 2001

	DEFLECTION WALL PARADISE VALLEY AREA "K" GEOLOGIC MONITORING AND MAINTENANCE FAIRFIELD, CALIFORNIA		PROJECT NO.: 5698.100.101	FIGURE NO. 2
			DATE: JULY 2010	
			DRAWN BY: PC CHECKED BY: EH	

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EXPLANATION

---	PROPERTY LINE
- - - -	LIMIT OF GEOLOGIC HAZARD
B B'	CROSS SECTION LOCATION
	DEBRIS FLOW SOURCE AREA
	DEBRIS FLOW ACCUMULATION AREA
	LANDSLIDE SLUMP
	FAN DEPOSIT

AREA I
REMEDIAL PLAN
 PARADISE VALLEY AREAS I & L
 FAIRFIELD, CALIFORNIA
 FOR
 ARCADIA HOMES INCORPORATED
 Berlogar Geotechnical Consultants
 SOIL ENGINEERS * ENGINEERING GEOLOGISTS

CONCEPTUAL DEVELOPMENT LAYOUT PROVIDED BY ARCADIA HOMES INCORPORATED
 TOPO BASE PROVIDED BY CARLSON BARBEE GIBSON



REMEDIAL GRADING PLAN - AREA I
 PARADISE VALLEY
 GEOLOGIC MONITORING AND MAINTENANCE
 FAIRFIELD, CALIFORNIA

PROJECT NO.: 5698.100.101	FIGURE NO.
DATE: JULY 2010	3
DRAWN BY: PC CHECKED BY: EH	

APPENDIX B

Open Space Management Program

Project No.
5698.100.101

March 7, 2008

Mr. Brad Durga
Arcadia Development Company
1500 East Hamilton Avenue, Suite 212
Campbell, CA 95008

Subject: Paradise Valley
Fairfield, California

OPEN SPACE MANAGEMENT PROGRAM

Dear Mr. Durga:

ENGEO is pleased to present an Open Space Management Program for open space areas in the Paradise Valley development, Areas "I", "K" and "L" in Fairfield, California. As you are aware, the open space area is within and planned to be owned by the Paradise Valley Geologic Maintenance and Monitoring District (GMMD). The GMMD is a Geologic Hazard Abatement District (GHAD) within the meaning of the California Public Resources Code Section 17.

The Open Space Management Plan provides a framework for defining responsibilities and activities relating to slopes within the Paradise Valley GMMD. The program is a plan for the monitoring and maintenance of the open space amenities through the Paradise Valley GMMD. Since the Open Space Management Program, like the Plan of Control to which it is amended, is anticipated to be an enduring document, it is structured to allow for changes in the activities of responsible parties based on modifications in the site design that result from design-level plans or other conditions which may vary over time.

SCOPE

The scope of services included a review of the referenced documents for the site, including civil grading plans, geotechnical exploration reports, corrective grading plans, the Plan of Control and the Engineer's Report. Based on the review of the site documents, we prepared the following Open Space Management Program report that includes the following.

- A discussion of the open space and open-space improvements.
- Open-space ownership and maintenance funding.
- A monitoring and reporting schedule for the site open space areas for non-geologic/geotechnical items.

DESCRIPTION OF THE OPEN SPACE AND THE PROPOSED OR EXISTING OPEN SPACE IMPROVEMENTS

The open space area within the Paradise Valley GMMD is dominated by a northwest-southeast trending ridgeline. Annual grasses with widely scattered trees dominate the vegetation cover on the slopes and swale areas. A Solano Irrigation District water storage tank and an access road are located on the eastern portion of the site. As described within the Paradise Valley GMMD Plan of Control, sedimentation basins and deflection walls are proposed or have been constructed near the interface between the open space area and the residential portion of the site. Open space areas are located north and east of the subject open space. Existing or planned residential areas are or will be located south and west of the open space area. An unpaved roadway is located along the eastern edge of the open space. A barbed wire fence is located along the northern property boundary.

It is not anticipated that improved trails or improvements, other than those described above, will be constructed within the open space area. The open space area covered within this document will be completely within the Paradise Valley GMMD.

As provided for in the Plan of Control, the Paradise Valley GMMD will monitor and maintain the following site improvements and the monitoring and maintenance of the areas is discussed in the Plan of Control.

- Sedimentation basins “A”, “C-D” and “I”, including riser maintenance and sediment removal.
- Three deflection walls with berms and riprap aprons (a total of approximately 635 linear feet).
- Maintenance roads (approximately 3,500 linear feet).
- Concrete-lined drainage ditches.
- Storm drain inlets, outfalls and pipelines within the open space area.
- Open space perimeter fences.

In addition, the District will monitor, maintain and repair slopes, including repaired or partially repaired landslides as indicated on the remedial grading plans or future landslide areas. Additional responsibilities will include vegetation removal for fire suppression and trash removal.

OPEN SPACE OWNERSHIP AND MAINTENANCE FUNDING

Title to the open-space parcels owned by the Petitioner, will be conveyed to the GMMD as early as three years after issuance of the first building permit within the GMMD according to the provisions of the Plan of Control. Prior to the transfer of maintenance and monitoring responsibilities to the GMMD the petitioner or the current owner of the open space parcels will be responsible for all activities of the GMMD. Since long-term maintenance and stability of the GMMD property will protect the open space, which is an amenity that will benefit all of the current and future property owners, the funding for the GMMD's activities will be shared by all current and future property owners within the GMMD's boundaries.

Funding for the activities of the GMMD as described below within the open space parcels have been figured within the estimated budget within the referenced Engineer's Report.

MAINTENANCE AND MONITORING SCHEDULE

Under provisions of the Plan of Control the responsible party for the open space parcels should be prepared to conduct a minimum of 2 inspections per year. In addition, the responsible parties' budget should provide for four or more inspections in years of heavy rainfall. A heavy rainfall event is defined as 2 or more inches of rain in a 24-hour period. Generally, inspections should take place in October, prior to the first significant rainfall; mid-winter as necessary during heavy rainfall years; and in early April at the end of the rainy season. The frequency of the inspections should increase depending upon the intensity and recurrence of rainfall.

Vegetation management for fire suppression will be implemented for the open space parcels as required under Standard 95-45, Mechanical Weed Abatement Maintenance. We anticipate that that the open space parcel will be abated under the following conditions.

Exception No. 3 – Thirty (30) foot fire breaks shall be provided around the outside and around all combustible structures such as buildings, wooden fences, large area of trees or deadfall, or other combustible foliage. Other areas of the property may require additional firebreaks because of their potential capability to spread fire as: gullies, creeks, etc. The fire inspector on a case-by-case basis shall determine these additional needs.

In addition, the standard requires rubbish removal prior to weed abatement on the property. At a minimum, trash removal should be undertaken prior to the weed abatement and evaluated during the October monitoring event and if necessary undertaken at that time.

Fencing on the perimeter of the property should be observed for integrity during the scheduled site visits at a minimum of two times per year. If maintenance or repair of the perimeter fencing is required, it should be completed in a timely manner.

Arcadia Development Company
Paradise Valley
OPEN SPACE MANAGEMENT PROGRAM

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If you have any questions or would like any additional information, please do not hesitate to contact us.

Very truly yours,

ENGEO INCORPORATED



Eric Harrell, CEG
eh/pcg/jf:slope



Paul C. Guerin, GE

SELECTED REFERENCES

- Berlogar Geotechnical Consultants, Debris Flow Hazard Investigation, Paradise Valley “K-2”, Fairfield, California, dated December 3, 1999; Job No. 2396.100.
- Berlogar Geotechnical Consultants, Design Level Geotechnical Investigation, Paradise Valley Area K, Fairfield, California, dated September 14, 2001; Job No. 2396.100.
- Berlogar Geotechnical Consultants, Addendum to Design Level Geotechnical Investigation, Paradise Valley Area K, Fairfield, California, dated December 26, 2001; Job No. 2396.100.
- Berlogar Geotechnical Consultants, Remedial Grading Plans, North of and for Paradise Valley “K-2”, Fairfield, California, dated July 18, 2001 revised October 24, 2002.
- Berlogar Geotechnical Consultants, Grading Plan Pier Review Area KII Debris Basin Borrow Site at The Colony at Paradise Valley, Paradise Valley Drive, Fairfield, California, dated March 7, 2002; Job No. 2396.003.
- Berlogar Geotechnical Consultants, Response to Pier Review Area K1/K2 Transition, Paradise Valley Area K-1, Fairfield, California, dated August 14, 2002; Job No. 2396.004.
- Berlogar Geotechnical Consultants, Debris Flow and Landslide Investigation, Paradise Valley Areas I and L, Fairfield, California, dated September 8, 2003; Job No. 2396.101.
- Berlogar Geotechnical Consultants, Geotechnical Investigation, Paradise Valley Areas I and L, Fairfield, California, dated March 1, 2005; Job No. 2396.104.
- Berlogar Geotechnical Consultants, Design-Level Geotechnical Investigation, Paradise Valley Areas I and L, Paradise Valley Drive, Fairfield, California, dated May 26, 2006; Job No. 2396.105.
- ENGEO, Plan of Control for the Paradise Valley Areas “T”, “K” and “L” Geologic Maintenance and Monitoring District, Fairfield, California, dated March 7, 2008, September 13, 2005, Project No. 5698.1.001.01.
- ENGEO, Engineer’s Report for the Paradise Valley Areas “T”, “K” and “L” Geologic Maintenance and Monitoring District, Fairfield, California, dated March 7, 2008, Project No. 5698.100.101.
- Carlson, Barbee and Gibson, Inc., The Area “K” at Paradise Valley, City of Fairfield, Solano County, California, April 2002; Job Number 1022-30.
- Carlson, Barbee and Gibson, Inc., Area “K” Debris Basin – Civil Plans, City of Fairfield, Solano County, California, August 2002; Job Number 1022-30.
- Fairfield Fire Department, Standard 95-45, Mechanical Weed Abatement Maintenance, Updated March 17, 2005.

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