

YEAR 5 (2007)

MITIGATION/MONITORING REPORT

FOR

**RIPARIAN IMPACTS ASSOCIATED WITH THE
RUBINO APARTMENT PROJECT**

SAN JOSE, CALIFORNIA

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May 2007

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| ATTACHMENT NO. 2. | SHEET L-35-A (Canoas Creek Planting Plan) |
| ATTACHMENT NO. 3 | SITE PHOTOGRAPHS (2007) |

This report should be cited as: Olberding Environmental, Inc. May 2007. *Year 5 Mitigation/Monitoring Report for Riparian Impacts Associated with the Rubino Apartment Project, San Jose, California.* 14 pp. plus attachments.
Prepared for Archstone - Smith, Santa Clara, California.

1.0 Summary

The following document has been prepared to present the Year 5 monitoring results for the Rubino Apartment Riparian Restoration Project (Restoration Project), located in San Jose, California. This report has been prepared as specified in the *Mitigation/Monitoring Plan for Riparian Impacts Associated with the Rubino Apartment Project*, prepared for Archstone - Smith (formerly Archstone Communities) by Olberding Environmental, Inc. (Olberding Environmental). Preparation of this report complies with the requirements established by the City of San Jose Planning Department in the "Conditions of Approval" developed for the Rubino Apartment Project.

The objectives of the Year 5 monitoring report are to ensure that plant survival goals were met, to identify maintenance activities needed, to provide photo documentation points, to identify remedial actions to be performed, and to provide final conclusions on the establishment of riparian habitat within the riparian mitigation site. The purpose of obtaining information on these monitoring elements is to evaluate the effectiveness of the revegetation project at providing the quality and quantity of riparian habitat along Canoas Creek that meet or exceed habitat values and functions prior to project implementation. This monitoring report is the fifth of eight that shall be used to determine the overall success of the Rubino Apartment Riparian Restoration Project site (mitigation site). The mitigation site will be monitored over a minimum 11-year period to ascertain whether the performance and success criteria are being met. Monitoring will be conducted annually for the first five years and then every other year until Year 11.

In summary, the site has gone from a 30 percent cumulative survival rate for the initial Year 1 period as of June 24, 2002, to a 123 percent cumulative survival rate as of July 21, 2003 (Year 1), to a 104 percent cumulative survival rate as of May 6, 2004 (Year 2), to a 110 percent cumulative survival rate as of April 21, 2005 (Year 3), to an 84 percent cumulative survival rate as of April 28, 2006 (Year 4), to an 82 percent cumulative survival rate as of April 21, 2007 (Year 5). A total of 322 plants were counted in 2007, which is 69 less plants than the number originally planted and 7 less plants than were counted last year. An initial total of 391 plants were installed between October and December 2001 along the Canoas Creek mitigation area, located at the southeastern corner of the Rubino Property directly east of the Archstone Apartment Complex (Attachment 1, Figures 1-6).

The goal for the mitigation site is 60 percent cumulative survival for the entire monitoring period. The mitigation site only achieved 30 percent survival after the initial Year 1 growing period from December 2001 through June 2002. Remedial actions were implemented in 2002 in order to meet the goals outlined in the mitigation monitoring report.

After the collection of monitoring data in June 2002 demonstrated a deficiency in cumulative survival, landscape crews were hired by Archstone - Smith to perform remedial actions and replace the missing or dead stock within the mitigation site with new plant material. These activities were conducted in the fall of 2002. As described in the Mitigation & Monitoring Plan, falling below the 60 percent cumulative survival mark requires that the initial monitoring period, following implementation of remedial actions, remain as the Year 1 Monitoring period.

The data taken in July 2003 (Year 1) incorporated all remedial activities done by the Archstone maintenance crews in 2002 and achieved a cumulative survival rate of 123 percent. Based on the data collected from the most recent monitoring event on April 21, 2007, the restoration area has attained an **82** percent cumulative survival rate, well over the goal of 60 percent needed for the Riparian Restoration Project. All remedial activities done by maintenance crews in 2002 were included in this report and will again be noted during the Year 7 monitoring period and included in the report prepared in 2009.

2.0 Introduction

2.1 Project Background

The Rubino Apartment Project is part of the larger Rubino Development Project which consists of a planned development that would allow the construction of up to 1,000 residential units at a variety of development densities, as well as commercial uses, park space, and area reserved for the future expansion of the Canoas Gardens Elementary School. The Rubino Development Project Site is located on a 97-acre parcel previously occupied by orchard trees and the Valley View Packing Plant. The proposed project would include construction of residential units consisting of single family detached homes, court homes, condominiums, and apartments.

The Rubino Apartment Project includes the construction of ten apartment clusters, community areas, parking, and landscaping on the southeastern corner of the 97-acre Rubino site near the terminus of Pearl Avenue. Proposed development associated with the Rubino Apartment Project would require encroachment into a 0.18-acre section of an established riparian corridor buffer along Canoas Creek.

The City of San Jose (City) has developed a Riparian Corridor Policy with the intent of minimizing impacts to riparian resources and protecting riparian habitat from future development activities. The City's Riparian Corridor Policy calls for a 100-foot buffer from the edge of the riparian corridor (dripline of riparian vegetation or top of bank when riparian vegetation is absent) to all buildings, structures, and improvements except in certain instances where setbacks of less than 100 feet are appropriate. A 50-foot buffer has been established along Canoas Creek. Development encroachment into the 50-foot setback buffer will result in the requirement of 0.18 acres of compensatory mitigation to offset impacts associated with the Rubino Apartment Project.

The Rubino Apartment Project was required to mitigate indirect impacts to the riparian setback buffer area along Canoas Creek. Indirect impacts from the Rubino Apartment Project consisted of parking lot and building encroachment into 0.18 acres of the 50-foot riparian setback buffer, which consisted of non-native annual grass and weed species. Mitigation requirements developed for the project include setback buffer infill planting of 0.18 acres utilizing native riparian trees and shrubs to offset the 0.18 acres of indirect impacts. A total of 391 trees and shrubs were specified for the mitigation site.

2.2 Location

The Rubino Apartment Project is part of the 97-acre Rubino Development Project that is located north of Old Hillsdale Avenue, south of Bluejay Drive, single family residences and the Canoas Gardens Elementary School, and is situated between the Guadalupe River to the west and Canoas Creek to the east, in the City of San Jose, Santa Clara County, California. The Rubino Apartment Project is situated in the southeastern corner of the 97-acre Rubino Development Site directly east of the terminus of Pearl Avenue. The mitigation site is bordered by Canoas Creek to the east, existing apartment buildings to the south, and new residential development to the north and west. The mitigation site is accessed by the newly constructed extension of Pearl Avenue and Rubino Drive. Attachment 1, Figure 1 contains a regional map of the Restoration Project site in relation to the Bay Area region, while Attachment 1, Figure 2 contains a vicinity map of the Restoration Project site in the City of San Jose. Attachment 1, Figure 3 displays the Restoration site on the USGS quadrangle map for San Jose East. Attachment 1, Figure 4 contains an aerial photograph of the Restoration Project site.

The mitigation site is situated within the existing buffer area, along Canoas Creek, at the southeastern corner of the Rubino Development Project (Attachment 1, Figure 5). The Santa Clara Valley Water District (Water District) has purchased a 20-foot wide section along the entire length of Canoas Creek as it flows through the Rubino Development site. The 20-foot wide area will be utilized as an access road for the District and will not be available for revegetation.

3.0 Maintenance Activities and Monitoring Methods

3.1 Maintenance Activities

Archstone - Smith contracted with a landscape maintenance company to weed the site, maintain the irrigation system and check for leaks, clogs or other malfunctions in the drip line system. Based on the plant survey conducted on April 21, 2007, it was observed that maintenance crews had recently weeded selected portions of the site. Weeding had recently been conducted at the entrance to the mitigation site on the southeast corner near Brevins Loop and in the center of the site throughout the drainage ditch. Weeding had not been conducted at all on the east side of the site where most of the mitigation plants were installed. From the edge of the drainage ditch to the fence that blocks off access to Canoas Creek (approximately 50 feet in width) no weeding had been conducted. This has produced large and prevalent weeds, some even overtopping the mitigation plant stock, especially on the east side of the site and in the southwestern portion of the mitigation site adjacent to the parking lot. It was also observed that maintenance crews are once again inadvertently cutting or mowing mitigation plants. This is evident at the entrance to the mitigation site on the southeast corner near Brevins Loop, where several blackberry, California rose, and toyon were destroyed and the large trees throughout the site, which were observed to have weed whacker damage at the base of the trunks.

3.2 Monitoring Methods

The fifth vegetation monitoring of the Restoration Project site was conducted on April 21, 2007, by Olberding Environmental biological monitor, David Simi. Reconnaissance level site inspections were conducted within the mitigation site including visual inspections of the trees and shrubs that were previously installed. Each of the installed plants was individually counted and the ground adjacent to the plant marked with nonpermanent marking paint to avoid counting duplication. Each plant was counted and marked on the planting maps as present, dead, or missing. Additional information was gathered on plant vigor and health and recorded on field data sheets along with the number of volunteer plants that had grown within the mitigation site since baseline information was collected. Information gathered in 2007 was compared against revised baseline conditions established by Olberding Environmental in 2002.

During the monitoring event conducted on April 21, the total number of each plant species was counted, the condition of the plants recorded, and general observations made. Mr. Simi walked the mitigation site and visually inspected the trees and shrubs that were alive to assess the vigor and health of the material.

The map sheet provided for the monitoring effort consisted of the blue print maps drawn by Deneen Powell Atelier, Inc., dated 3/31/99. The planting plan for the southeastern corner of Canoas Creek is represented by Sheet L-35-A located in Attachment 2.

3.3 Data Analysis

The number of plants that were counted as alive, dead, or missing were tabulated and analyzed as a percentage of the total number specified on the as-built plans. In addition, the total number of volunteer plants identified in the mitigation site was included as a category for analysis. The total number of plants that were observed alive was subtracted from the number of plants specified on the map legend to determine the number of remedial plants necessary to meet mitigation requirements. The percent survival for each species is based on the combined number of dead and missing plants subtracted from the total as both of these categories need to be analyzed to compare to baseline specification numbers.

3.4 Performance Criteria

Percent cover and tree height were evaluated for the Restoration Project for the first time starting in Year 5. The goal for the mitigation site is to provide 60 percent total cover for trees and 40 percent total cover for shrubs within five years. These performance criterion values were not assessed during Year 4 monitoring period due to the relatively small size of the plants and the fact that the evaluation of this performance criterion would not have yielded a number large enough to quantify. These goals are not success criterion as the trees in the mitigation site are not anticipated to reach full maturity until sometime after the 11-year monitoring period. The current trend in growth, as observed on-site, indicate that the plants will reach the desired cover goals. Several of the shrub species such as toyon, blackberry, and California rose have grown to overlap each other in many areas of the mitigation site. If the plants continue to grow as

anticipated, the trend will be toward meeting the percent cover goals for the mitigation site. Additionally, the western sycamore trees exhibited excellent canopy cover for their size. The tree canopy covered an approximate 10 to 15-foot diameter around the tree trunk. Photo point locations that demonstrate the mitigation site was revisited and photos taken to record the 2007 conditions are located in Attachment 3.

4.0 Results

4.1 Planting Specifications

The planting specifications for the mitigation site were identified by the legend that indicated the species, size of plant material, and the number of plants to be installed in the mitigation area. The plant species used for the mitigation sites consisted of California Buckeye (*Aesculus californica*), California Flannel Bush (*Fremontodendron californicum*), California sycamore (*Platanus racemosa*), coast live oak (*Quercus agrifolia*), Mexican elderberry (*Sambucus mexicana*), California buckwheat (*Eriogonum fasciculatum*), California toyon (*Heteromeles arbutifolia*), bush lupine (*Lupinus arboreus*), California rose (*Rosa californica*), Pacific blackberry (*Rubus ursinus*), red willow (*Salix laevigata*), blue blossom (*Ceanothus thrysifloris*), coyote brush (*Baccharis pilularis*), snowberry (*Symphoricarpos alba*), valley oak (*Quercus lobata*), and coffeeberry (*Rhamnus californica*). Based on the remedial activities done by the Archstone maintenance crews in 2002, the bush lupine (*Lupinus arboreus*) has been replaced by California sage (*Artemisia californica*), monkey flower (*Mimulus aurantiacus*), and California Bay (*Umbellularia californica*).

4.2 General Conditions

On the first monitoring visit of June 3, 2002, weeds were observed to be overtopping the restoration stock at all locations within the mitigation site. The weed species observed consisted of common invasive plants which germinate in early winter at the first rains or with irrigation as provided by the mitigation site. The plant species consisted of Italian rye grass (*Lolium multiflorum*), milk thistle (*Silibum marianum*), cheese weed (*Malva parviflora*), goosefoot (*Chenopodium album*), poison hemlock (*Conium maculatum*), mustards (*Brassica* sp.), and many other miscellaneous annual grass and forb species. These species are fast growing and can remove the soil moisture intended for the newly planted mitigation stock. The height of the weeds on the site also shaded all of the restoration stock such that little if no light was reaching the plants. These types of conditions dramatically reduce the growth rate of the restoration material as there are less water and sunlight to promote healthy plant growth.

On the second monitoring visit of June 24, 2002, the weeds had been mowed or cut. One area in the southeastern corner of the site remained to be weeded and the tall vegetation obscured the restoration stock. The maintenance crew was not properly instructed to weed the site and, as a result, restoration plants were mowed and destroyed.

On the third monitoring visit of July 21, 2003, the weeds appeared to be maintained with more consistency. The site was not overrun with weeds and the weeds in the southeast corner of the site were no longer obscuring the restoration stock. However, several plants have still not recovered from the mowing they received from the year before. Those plants that have suffered the most and have not yet fully recovered are the ceanothus, toyon, monkey flower, and coffeeberry.

During the Year 2 monitoring visit of May 6, 2004, the weed growth appeared to be under control over most of the site and no further damage was observed on the restoration stock. Weed growth in the southeast corner of the site was moderate and must be cleared out as soon as possible to avoid obstruction with restoration stock. As was noted in 2003, the surviving ceanothus, toyon, monkey flower, and coffeeberry still have not fully recovered from the damage they received from weed maintenance crews in 2002.

During the Year 3 monitoring visit of April 21, 2005, moderate weed growth was observed throughout the site, mostly dominated by milk thistle. Weeding should be done as soon as possible to ensure the current health of the remaining restoration stock. Several coffeeberry and rose shrubs appeared to have been inadvertently weed whacked at the entrance to the site. A few blackberry bushes and one elderberry was also weed whacked in the southeast corner of the site. One live oak was observed to have fallen from its supports and needs to be restaked. As was noted in 2004, the surviving ceanothus, toyon, and coffeeberry still have not fully recovered from the damage they received from weed maintenance crews in 2002. The monkey flower and snowberry can no longer be found on the site.

During the Year 4 monitoring visit of April 28, 2006, heavy weed growth was observed throughout the site, mostly dominated by milk thistle. The weeds on the site are large and prevalent, some even overtopping the mitigation plant stock, especially at the entrance to the mitigation site on the southeast corner near Brevins Loop and in the southwestern portion of the mitigation site adjacent to the parking lot. It does appear that maintenance crews have shown an effort in avoiding the inadvertent cutting or mowing of mitigation plants during their maintenance activities. Weeding should be done as soon as possible to ensure the current health of the remaining restoration stock.

During the most recent monitoring visit of April 21, 2007 (Year 5), heavy weed growth was observed throughout the site, mostly dominated by milk thistle and wild oat (*Avena fatua*). Weeding had recently been conducted at the entrance to the mitigation site on the southeast corner near Brevins Loop and in the center of the site throughout the drainage ditch. However, weeding had not been conducted at all on the east side of the site where most of the mitigation plants were installed. From the edge of the drainage ditch to the fence that blocks off access to Canoas Creek (approximately 50 feet in width) no weeding had been conducted. This has produced large and prevalent weeds, some even overtopping the mitigation plant stock, especially on the east side of the site and in the southwestern portion of the mitigation site adjacent to the parking lot. It was also observed that maintenance crews are once again inadvertently cutting or mowing mitigation plants. This is evident at the entrance to the mitigation site on the southeast corner near Brevins Loop, where several blackberry, California

rose, and toyon were destroyed and the large trees throughout the site, which were observed to have weed whacker damage at the base of the trunks. Weeding must be done as soon as possible to ensure the current health of the remaining restoration stock.

Several coffeeberry and rose shrubs still have not fully recovered from the weed whacker damage they received two years ago near the entrance to the site at Brevins Loop. 41 coffeeberry and 39 rose shrubs are still missing or dead from this area. 11 buckeyes are missing or dead from the mitigation site as well. Those buckeyes that were found dead appeared to have either been not watered or sprayed with an herbicide. The 15-foot live oak, which was observed to have fallen from its supports in 2005 at the southwestern end of the site (near the parking lot), was observed to have completely uprooted and fallen over in 2006, has yet to be replaced. One live oak is missing at the entrance to the site on the southeast corner, one is weak and turning yellow in this area, and one is missing from the southwestern end of the mitigation site. One sycamore is missing from the southeastern corner of the site and one is weak and turning yellow in this area. One Mexican elderberry is missing from the southeastern corner of the mitigation site. As was noted from 2002-2006, the surviving ceanothus, toyon, and coffeeberry still have not fully recovered from the damage they received from weed maintenance crews in 2002. A total of 22 ceanothus, 28 toyon, and 41 coffeeberry are still missing or dead from the mitigation site. The monkey flower, flannel bush, and snowberry can no longer be found on the site. The majority of the remaining plant stock looks healthy.

4.3 Mitigation Planting Survivorship

The results of survivorship count for the Year 5 monitoring survey are included in Table 1, "Survivorship for the Year 5 Monitoring Period," and include the remedial plants that were planted by maintenance crews in 2002. The total survivorship for the mitigation site was determined to be **82** percent for trees and shrubs. For the bush lupine, snowberry, flannel bush, and monkey flower, there were no remaining plants identifiable in the mitigation area. The ceanothus, rose, coffeeberry, toyon, and buckeye suffered a large loss in numbers as well. Conditions are suitable to grow these plant species on-site as they all are present in the adjacent mitigation area immediately north of the Archstone mitigation site. The reason for the failure of these plants is likely due to a combination of poor weed control methods and weed competition and, to a lesser extent, lack of irrigation and poor planting techniques.

The California buckwheat only suffered minor losses on the mitigation site. The sycamore, live oak, and elderberry that were missing in Year 4 were replanted to achieve 100 percent survival for each of these species in Year 5. No other species were replanted throughout the mitigation site. Several volunteer California rose, coyote brush, blackberry, and black walnut saplings were observed within the mitigation area and were included in the total for the site.

| Table 1 Survivorship for the Year 5 Monitoring Period | | | |
|--|--|-------------------|---|
| Planting Area | # Plants Alive/ # Plants Specified on Plans | % Survival | Total # Remedial Plants Needed |
| Sheet L-35-A (Canoas Creek) | 322/391 | 82 | 0 |

| Table 2 Survival Ratio for Trees and Shrubs | | | |
|--|----------------------------------|--|-------------------|
| Plant Type | Total Dead or Missing | # Counted Alive/ # Specified on Plans | % Survival |
| Tree | 12 | 49/54 | 91 |
| Shrub | 149 | 273/337 | 81 |
| Total | 161 | 322/391 | 82 |

5.0 Data Analysis

5.1 Plant Survival

The percent survival data for the mitigation monitoring of the Riparian Restoration Project mitigation site from April 2006, which include the remedial activities from 2002, is provided in Table 3. The percent survival data for the mitigation monitoring from April 2007 is provided in Table 4. The number of plants counted alive, dead or missing, number recorded on the map legend, the number of remedial plants needed, and the percent survival is provided for each species.

| Table 3 Species Summary for Sheet L-35-A Canoas Creek Planting Area (April 2006) | | | | | |
|---|--------------------------------|--|--|---|-----------------------|
| Common Name (Scientific Name) | # Counted Alive | # Counted Dead or Missing | # Plants Recorded on Map Legend | # Remedial Plants Needed | % Survival |
| California Buckeye (<i>Aesculus californica</i>) | 9 | 5 | 14 | 0 | 64 |

Table 3
Species Summary for Sheet L-35-A Canoas Creek Planting Area (April 2006)

| Common Name (Scientific Name) | # Counted Alive | # Counted Dead or Missing | # Plants Recorded on Map Legend | # Remedial Plants Needed | % Survival |
|--|--------------------------------|--|--|---|-----------------------|
| California Flannel Bush (<i>Fremontodendron californicum</i>) | 0 | 2 | 2 | 0 | 0 |
| California Sycamore (<i>Platanus racemosa</i>) | 16 | 2 | 18 | 0 | 89 |
| Coast Live Oak (<i>Quercus agrifolia</i>) | 15 | 3 | 18 | 0 | 83 |
| Valley Oak (<i>Quercus lobata</i>) | 5 | 0 | 2 | 0 | 250 |
| Mexican Elderberry (<i>Sambucus mexicana</i>) | 15 | 1 | 16 | 0 | 94 |
| California Buckwheat (<i>Eriogonum fasciculatum</i>) | 19 | 6 | 25 | 0 | 76 |
| California Toyon (<i>Heteromeles arbutifolia</i>) | 10 | 26 | 36 | 0 | 28 |
| Bush Lupine* (<i>Lupinus arboreus</i>) | 0 | 6 | 6 | 0 | 0 |
| Coffeeberry (<i>Rhamnus californica</i>) | 30 | 34 | 64 | 0 | 47 |
| California Rose (<i>Rosa californica</i>) | 45 | 20 | 65 | 0 | 69 |
| Red Willow (<i>Salix laevigata</i>) | 2 | 0 | 2 | 0 | 100 |
| Snowberry (<i>Symphoricarpos alba</i>) | 0 | 8 | 8 | 0 | 0 |
| Blue Blossom (<i>Ceanothus thrysifloris</i>) | 12 | 22 | 34 | 0 | 35 |
| Coyote Brush (<i>Baccaris pilularis</i>) | 11 | 0 | 11 | 0 | 100 |
| Pacific Blackberry (<i>Rubus ursinus</i>) | 73 | 0 | 70 | 0 | 104 |
| California Sage (<i>Artemisia californica</i>) | 12 | 9 | NA | 0 | NA |

| Table 3 | | | | | |
|--|--------------------------------|--|--|---|-----------------------|
| Species Summary for Sheet L-35-A Canoas Creek Planting Area (April 2006) | | | | | |
| Common Name (Scientific Name) | # Counted Alive | # Counted Dead or Missing | # Plants Recorded on Map Legend | # Remedial Plants Needed | % Survival |
| Monkey Flower (<i>Mimulus aurantiacus</i>) | 0 | 16 | NA | 0 | NA |
| California Bay (<i>Umbellularia californica</i>) | 2 | 0 | NA | 0 | NA |
| Total Plants | 276 | 154 | 391 | 0 | 70 |
| Volunteer Plants | | | | | |
| Coyote brush | 4 | | | | NA |
| Black Walnut (<i>Juglans hindsii</i>) | 5 | | | | NA |
| California Rose | 44 | | | | NA |
| Total with Volunteer Plants | 329 | 154 | 391 | 0 | 84 |
| * Based on the remedial activities done by the Archstone maintenance crews in 2002, the bush lupine has been replaced by California sage, monkey flower, and California Bay. | | | | | |

| Table 4 | | | | | |
|---|--------------------------------|--|--|---|-----------------------|
| Species Summary for Sheet L-35-A Canoas Creek Planting Area (April 2007) | | | | | |
| Common Name (Scientific Name) | # Counted Alive | # Counted Dead or Missing | # Plants Recorded on Map Legend | # Remedial Plants Needed | % Survival |
| California Buckeye (<i>Aesculus californica</i>) | 3 | 11 | 14 | 9 | 21 |
| California Flannel Bush (<i>Fremontodendron californicum</i>) | 0 | 2 | 2 | 2 | 0 |
| California Sycamore (<i>Platanus racemosa</i>) | 18 | 0 | 18 | 0 | 100 |
| Coast Live Oak (<i>Quercus agrifolia</i>) | 21 | 1 | 18 | 0 | 116 |

Table 4
Species Summary for Sheet L-35-A Canoas Creek Planting Area (April 2007)

| Common Name (Scientific Name) | # Counted Alive | # Counted Dead or Missing | # Plants Recorded on Map Legend | # Remedial Plants Needed | % Survival |
|---|--------------------------------|--|--|---|-----------------------|
| Valley Oak (<i>Quercus lobata</i>) | 5 | 0 | 2 | 0 | 250 |
| Mexican Elderberry (<i>Sambucus mexicana</i>) | 17 | 0 | 16 | 0 | 106 |
| California Buckwheat (<i>Eriogonum fasciculatum</i>) | 22 | 3 | 25 | 0 | 88 |
| California Toyon (<i>Heteromeles arbutifolia</i>) | 8 | 28 | 36 | 21 | 22 |
| Bush Lupine* (<i>Lupinus arboreus</i>) | 0 | 6 | 6 | 0 | 0 |
| Coffeeberry (<i>Rhamnus californica</i>) | 23 | 41 | 64 | 29 | 36 |
| California Rose (<i>Rosa californica</i>) | 26 | 39 | 65 | 26 | 40 |
| Red Willow (<i>Salix laevigata</i>) | 2 | 0 | 2 | 0 | 100 |
| Snowberry (<i>Symphoricarpos alba</i>) | 0 | 8 | 8 | 7 | 0 |
| Blue Blossom (<i>Ceanothus thrysifloris</i>) | 12 | 22 | 34 | 16 | 35 |
| Coyote Brush (<i>Baccharis pilularis</i>) | 11 | 0 | 11 | 0 | 100 |
| Pacific Blackberry (<i>Rubus ursinus</i>) | 88 | 0 | 70 | 0 | 126 |
| California Sage (<i>Artemisia californica</i>) | 12 | 9 | NA | 0 | NA |
| Monkey Flower (<i>Mimulus aurantiacus</i>) | 0 | 16 | NA | 0 | NA |
| California Bay (<i>Umbellularia californica</i>) | 2 | 0 | NA | 0 | NA |
| Total Plants | 270 | 186 | 391 | 110 | 69 |
| Volunteer Plants | | | | | |

Table 4
Species Summary for Sheet L-35-A Canoas Creek Planting Area (April 2007)

| Common Name (Scientific Name) | # Counted Alive | # Counted Dead or Missing | # Plants Recorded on Map Legend | # Remedial Plants Needed | % Survival |
|--|--------------------------------|--|--|---|-----------------------|
| Coyote brush | 4 | | | | NA |
| Black Walnut (<i>Juglans hindsii</i>) | 5 | | | | NA |
| California Rose | 43 | | | | NA |
| Total with Volunteer Plants | 322 | 186 | 391 | 110 | 82 |
| * Based on the remedial activities done by the Archstone maintenance crews in 2002, the bush lupine has been replaced by California sage, monkey flower, and California Bay. | | | | | |

5.2 Plant Vigor and Health

Both the shrubs and the trees that were observed present on the site were noted to be in generally moderate to high health. The pacific blackberry shrubs were noted to be growing very well, as dense brambles are continuing to grow overtop one another. One coast live oak and one California sycamore were noted to be weak and turning yellow at the entrance to the site on the southeast corner near Brevins Loop.

5.3 Species Composition

Shrub species were noted as incurring the highest mortality of the restoration stock planted. Those shrub species that incurred the highest mortality were the California toyon (22% survival), coffeeberry (36% survival), California rose (40% survival), and blue blossom ceanothus (35% survival). The monkey flower, flannel bush, and snowberry also suffered high mortality rates and can no longer be found on the site. This is attributed to the shrubs being overgrown with weeds, which block light and compete for water. As the shrubs were overtaken by weeds, they slowed in growth or died. The yarrow, however, is spreading well as are the California brome and meadow barley. The taller tree species were able to receive light due to their initial size when planted. They are also easier to see at the time of weeding due to their larger size and the presence of tree stakes and are therefore not accidentally cut down during maintenance activities. The California buckeye incurred the highest mortality among the tree species, losing 6 individuals compared to last year for a 21% cumulative survival rate. This is likely due to weed competition and lack of water.

5.4 Percent Cover

The goal for the mitigation site is to provide 60 percent total cover for trees and 40 percent total cover for shrubs within five years. These goals are not success criterion as the trees in the mitigation site are not anticipated to reach full maturity until sometime after the 11-year monitoring period. Percent cover and tree height were evaluated for the Restoration Project for the first time starting in Year 5. Based on the Year 5 monitoring event, total percent cover for trees is 60 percent, while total percent cover for shrubs is 40 percent. The average height for the buckeyes is 7 feet; the average height for the sycamores is 30 feet; the average height for the live oaks is 15 feet; and the average height for the valley oaks is 12 feet.

These performance criterion values were not assessed during the Year 4 monitoring period due to the relatively small size of the plants and the fact that the evaluation of this performance criterion would not have yielded a number large enough to quantify. The current trend in growth, as observed on-site, indicate that the plants will reach the desired cover goals. Several of the shrub species such as toyon, blackberry, and California rose have grown to overlap each other in many areas of the mitigation site. If the plants continue to grow as anticipated, the trend will be toward meeting the percent cover goals for the mitigation site. Additionally, the western sycamore trees exhibited excellent canopy cover for their size. The tree canopy covered an approximate 10 to 15-foot diameter around the tree trunk.

6.0 Photo Documentation and Maps

Four photo points were established within the mitigation site to document vegetative changes over the course of the monitoring period. The transects were established in a south to north orientation and occur in the swale, allowing for unobscured photographs in the future. Please see Attachment 2 for specific locations of the photos' documentation sites. Photographs taken during the 2007 Year 5 survey are included in Attachment 3.

7.0 Remedial Actions to be Performed

As specified in the mitigation monitoring plan, if at any point in time during the first three years cumulative survival of the site falls below 60%, then replanting must take place and the monitoring period shall start anew.

- Based on the data taken from April 2007, remedial actions taken in 2002 have improved the site's plant survival rate from 30 percent to 82 percent. 322 plants have been accounted for out of the 391 plants required for the restoration, therefore no further planting is required at this time.
- Maintenance crews must not pull weeds until they can determine the difference between weeds and restoration plants. All planted material should be identified at the time of weeding to distinguish the stock species from the weed species. This has been an ongoing problem since 2002.

- Maintenance crews must conduct a thorough check of the irrigation throughout the site.
- Mitigation site maintenance (especially weeding) must be performed as early as possible to adequately control the rampant weed growth on the site.
- Trees that have fallen from their stakes or that have been uprooted due to wind or growth must be retied to their supports, especially at the southwestern end of the site (near the parking lot).

8.0 Names, Titles and Companies of Persons Conducting Field Work and Preparing Report

Jeff Olberding
Wetland Regulatory Specialist
Olberding Environmental

David Simi
Biological Monitor
Olberding Environmental

9.0 Conclusions

In conclusion, remedial actions taken in 2002 have helped to bring the number of surviving plants up to and exceed the original cumulative target goal of 60 percent. However, despite the increase in percent cumulative survival rate from 2002, the survival rate dropped since last year's monitoring event, going from 329 plants (84% survival) in 2006 to 322 plants (82% survival) in 2007, for a loss of 7 plants in one year. Several restoration plant species are still struggling to survive due to weed competition and incidental weeding. Those plants which have still yet to recover are toyon, coffeeberry, California rose, ceanothus, and buckeye. A total of 28 toyon (22% survival), 41 coffeeberry (36% survival), 39 California rose (40% survival), 22 ceanothus (35% survival), and 11 buckeye (21% survival) are still missing or dead from the mitigation site. The monkey flower, bush lupine, flannel bush, and snowberry can no longer be found on the site. This is mainly attributed to the shrubs being overgrown with weeds, which block light and compete for water. Other reasons include poor weed control methods, lack of irrigation, and poor planting techniques. One coast live oak and one California sycamore were noted to be weak and turning yellow at the entrance to the site on the southeast corner near Brevins Loop. The 15-foot live oak, which was observed to have fallen from its supports in 2005 at the southwestern end of the site (near the parking lot), was observed to have completely uprooted and fallen over. The majority of the remaining plant stock looks healthy.

Landscape maintenance crews need to maintain the site to the specifications of the original planting plan to avoid further losses in the coming monitoring years. Maintenance crews must also inspect planting techniques and irrigation line installation, as well as mark restoration plants to avoid accidental weeding. Trees that have fallen from their stakes or that have been uprooted due to wind or growth must be retied to their supports. It is also recommended that Archstone - Smith coordinate with the Santa Clara Valley Flood Control District regarding maintenance activities along the access road above Canoas Creek. It appears that overspray is still negatively impacting some plants along the fenceline adding to plant mortality.

ATTACHMENTS

ATTACHMENT NO. 1

FIGURES

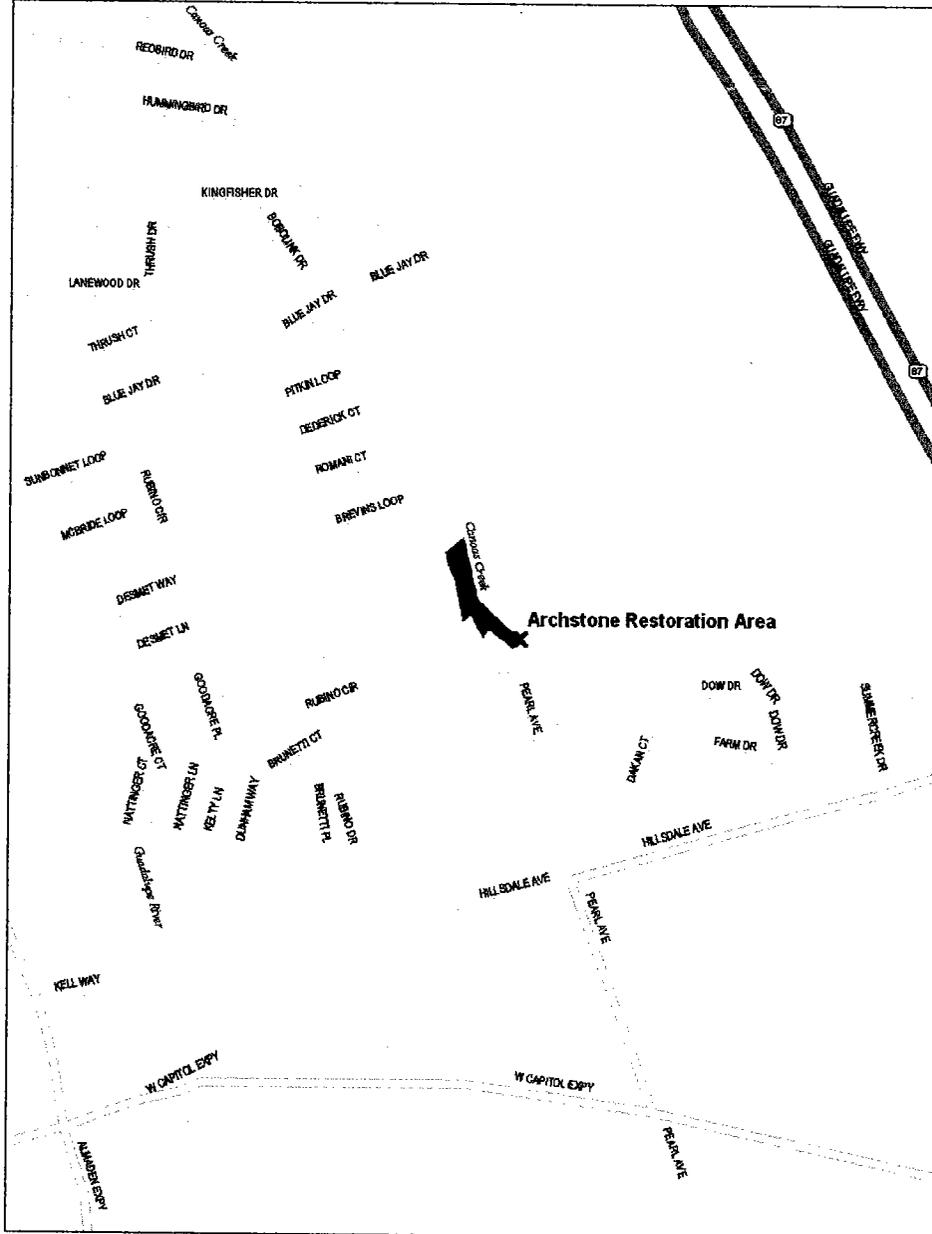
| | |
|---------------------|--|
| Figure No. 1 | Regional Map |
| Figure No. 2 | Vicinity Map |
| Figure No. 3 | USGS Quadrangle Map for San Jose East |
| Figure No. 4 | Aerial Photograph |
| Figure No. 5 | Rubino Site Map |
| Figure No. 6 | Canoas Creek Riparian Corridor |

Figure No. 1

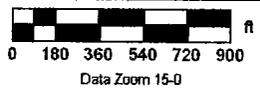
Regional Map

Figure No. 2

Vicinity Map



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 1390 Willow Pass Road, Suite 370
 Concord, CA 94520
 Phone: (925) 825-2111

Figure 2
Vicinity Map of the Archstone
Restoration Area
San Jose, California

This document is not intended for detail design work.

Figure No. 3

**USGS Quadrangle Map
for San Jose East**




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 Concord, CA 94520
 Phone: (925) 825-2111

Figure 3
USGS Quadrangle Map of the
Archstone Restoration Area
 San Jose East Quad
 San Jose, California

This document is not intended for detail design work.

Figure No. 4

Aerial Photograph



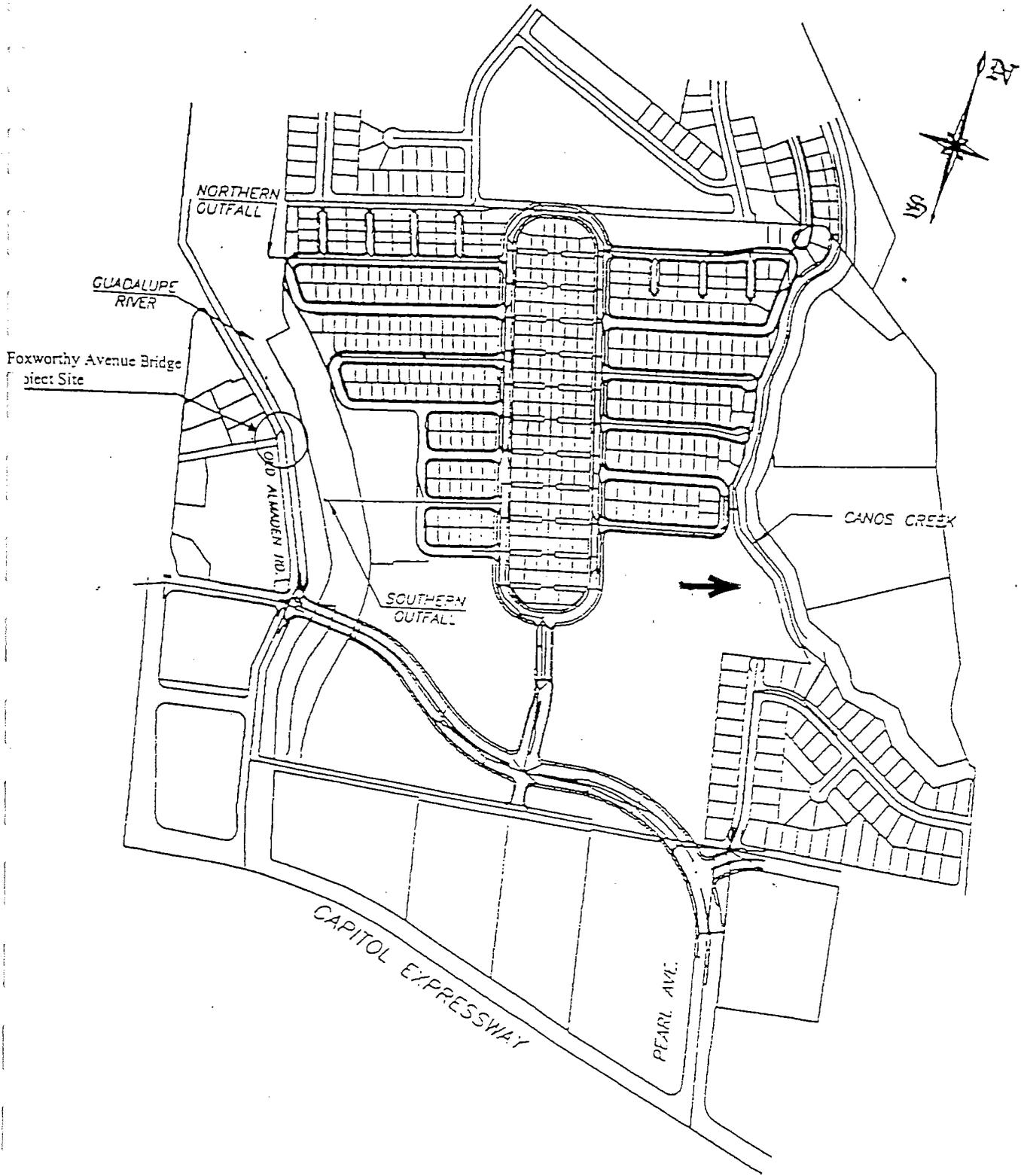
Olberding Environmental, Inc.
1390 Willow Pass Road, Suite 370
Concord, CA 94520
Phone: (925) 825-2111

Figure 4
Aerial Photograph of the
Archstone Restoration Area
San Jose, California

This document is not intended for detail design work.

Figure No. 5

Rubino Site Map



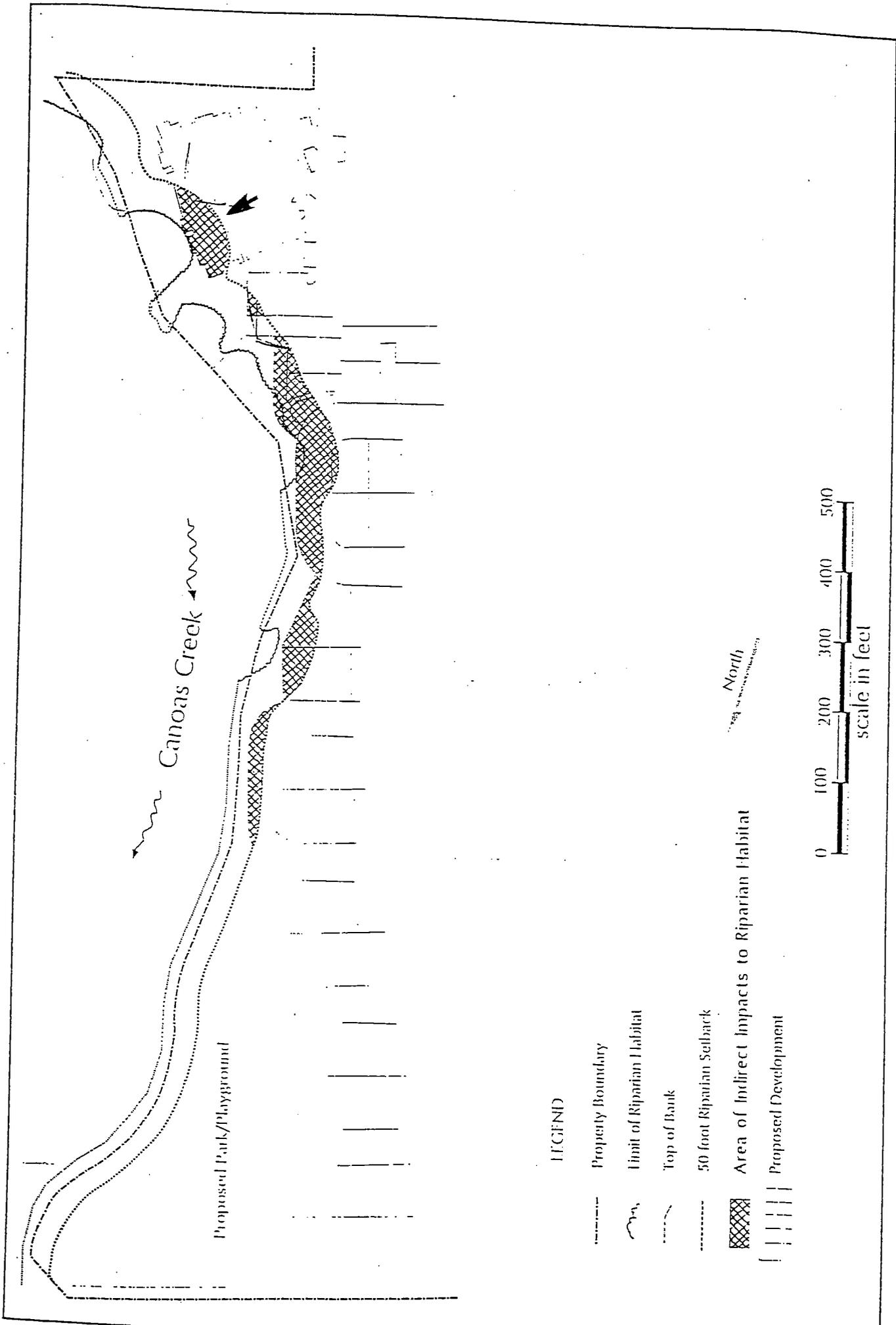
RUBINO
SITE MAP

DATE: 3/11/98
 SCALE: AS SHOWN
 DRAWN BY: BDW
 CHECKED BY:
 JOB NO.: 1537

Charles W. Davidson & Co.
 A CALIFORNIA CORPORATION
 CONSULTING CML ENGINEERS
 255 W. JULIAN ST. #200, SAN JOSE, CA.
 PH. (408) 295-9162

Figure No. 6

Canoas Creek Riparian Corridor



LEGEND

- Property Boundary
- - - Limit of Riparian Habitat
- Top of Bank
- - - 50 foot Riparian Setback
- ▣ Area of Indirect Impacts to Riparian Habitat
- ||| Proposed Development

North



CANOAS CRITK RIPARIAN CORRIDOR

FIGURE 6

ATTACHMENT NO. 2

SHEET L-35-A (Canoas Creek Planting Plan)

REVISIONS BY
 EDY L. MITCHELL JP
 4/1/99

DATE: 3/31/99
 SAN DIEGO, CA 92108
 TEL: (619) 444-9900
 FAX: (619) 444-9901



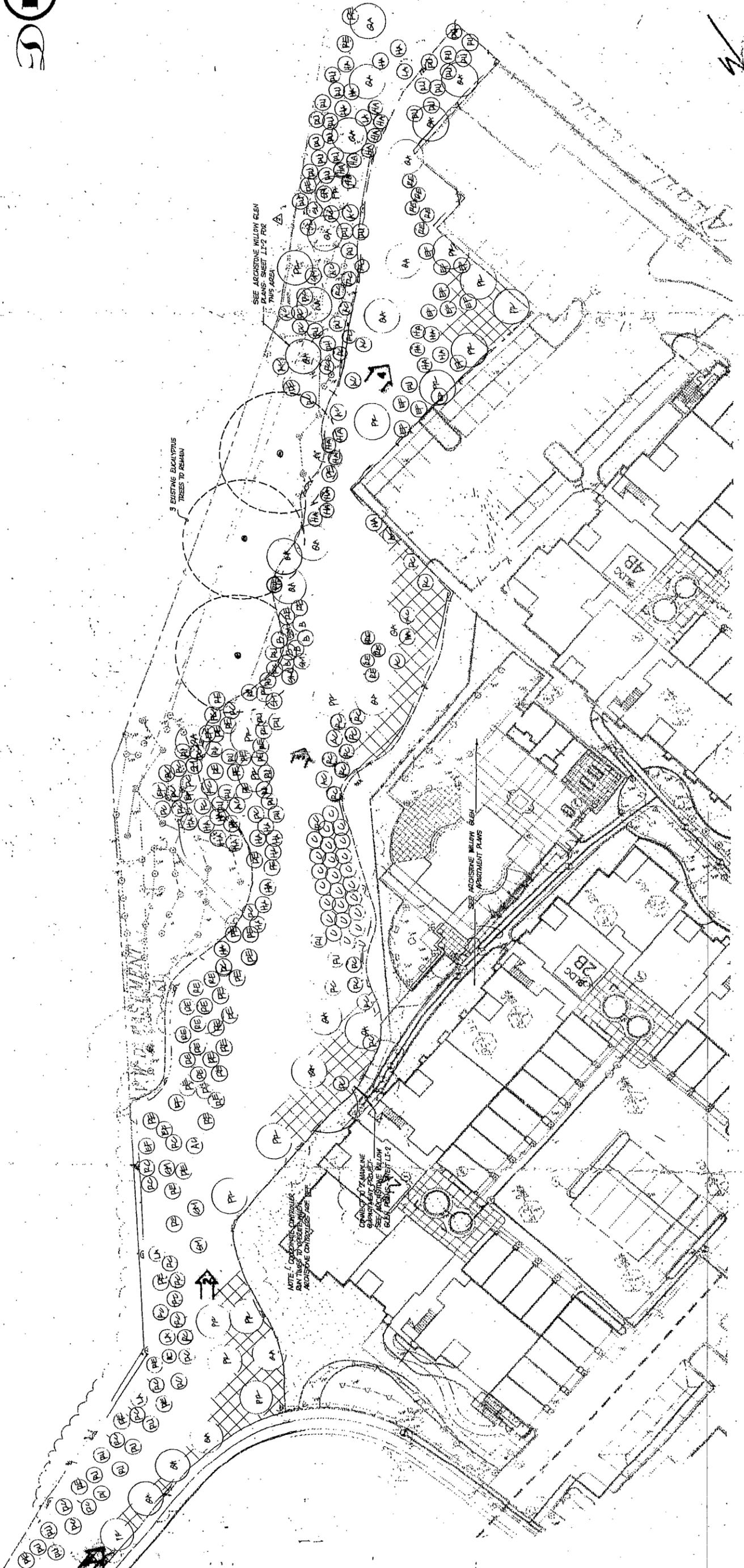
RUBINO PROPERTY
 SAN JOSE, CALIFORNIA

ARCHSTONE SITE MITIGATION IRRIGATION PLAN

DATE: 3-31-99
 SCALE: 1"=20'-0"
 DRAWN: JLP
 PROJECT NO.: 97-171
 SHEET: L-35.A
 EASTERN
 LANDSCAPE ARCHITECTS
 115 BUCHANAN ST.
 PACIFIC PALMS, CA 94553
 (925) 680-0877
 FAX: (925) 680-0878
 A.S. BUILTS

| Symbol | Scientific Name | Common Name | Quantity |
|--------|------------------------------|-------------------------|----------|
| AC | Aesculus californica | California buckeye | 14 |
| FC | Fremontodendron californicum | California flannel bush | 2 |
| PR | Platanus racemosa | California sycamore | 18 |
| OA | Quercus agrifolia | Coast live oak | 18 |
| SM | Sambucus mexicana | Mexican elderberry | 16 |
| EF | Eriogonum fasciculatum | California buckwheat | 25 |
| HA | Heteromeles arbutifolia | California toyon | 96 |
| LA | Lupinus arboreus | Bush lupine | 6 |
| OL | Quercus lobata | Valley oak | 2 |
| RE | Rhamnus 'Eve Cass' | Coffeberry | 64 |
| RC | Rosa californica | California rose | 65 |
| RU | Rubus ursinus | Pacific blackberry | 70 |
| SL | Salix laevigata | Red willow | 2 |
| SA | Symphoricarpos alba | Snowberry | 8 |
| C | Ceanothus thyrsiflorus | Blue blossom | 34 |
| B | Baccharis pilularis | Coyote brush | 11 |

Photo Point



SEE SHEET L-34 FOR IRRIGATION LEGEND
 SEE SHEET L-48 FOR SPECIFICATIONS, L-40 FOR DETAILS

ATTACHMENT NO. 3
SITE PHOTOGRAPHS



Photo No. 1. View to the southeast of the Archstone Restoration area along Brevins Loop.

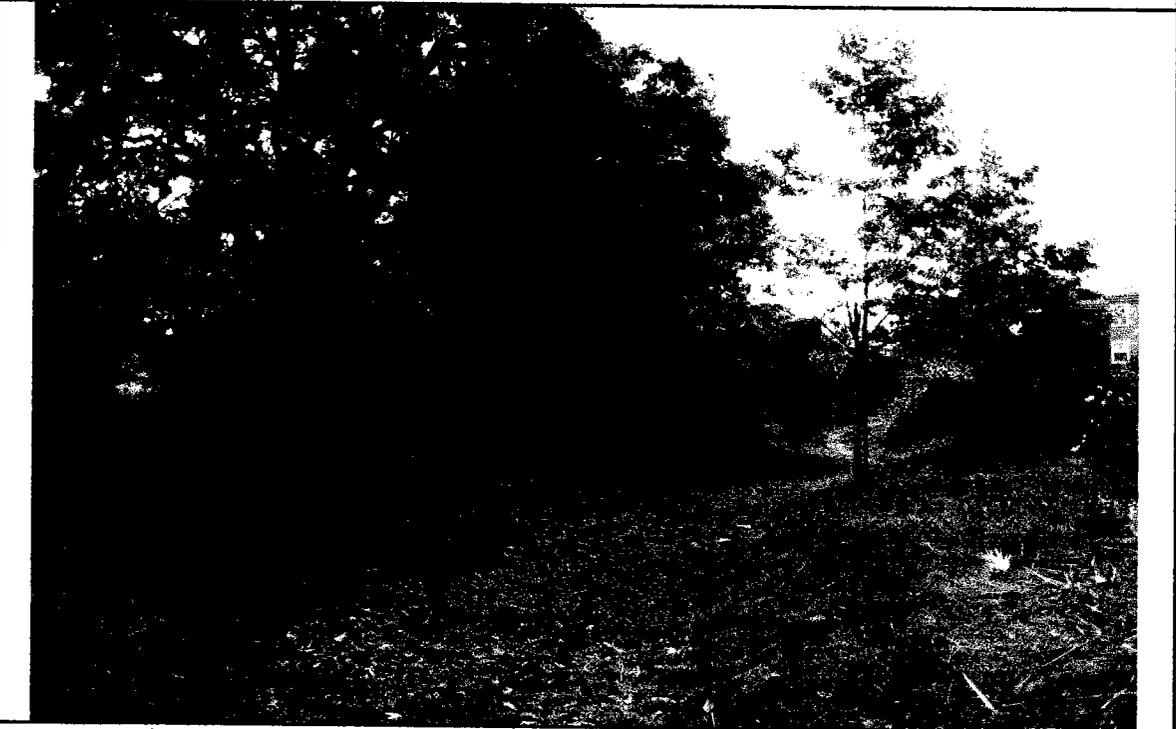


Photo No. 2. View of the Archstone Restoration site from the middle portion of the site.

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Archstone Restoration Area – April 2007**

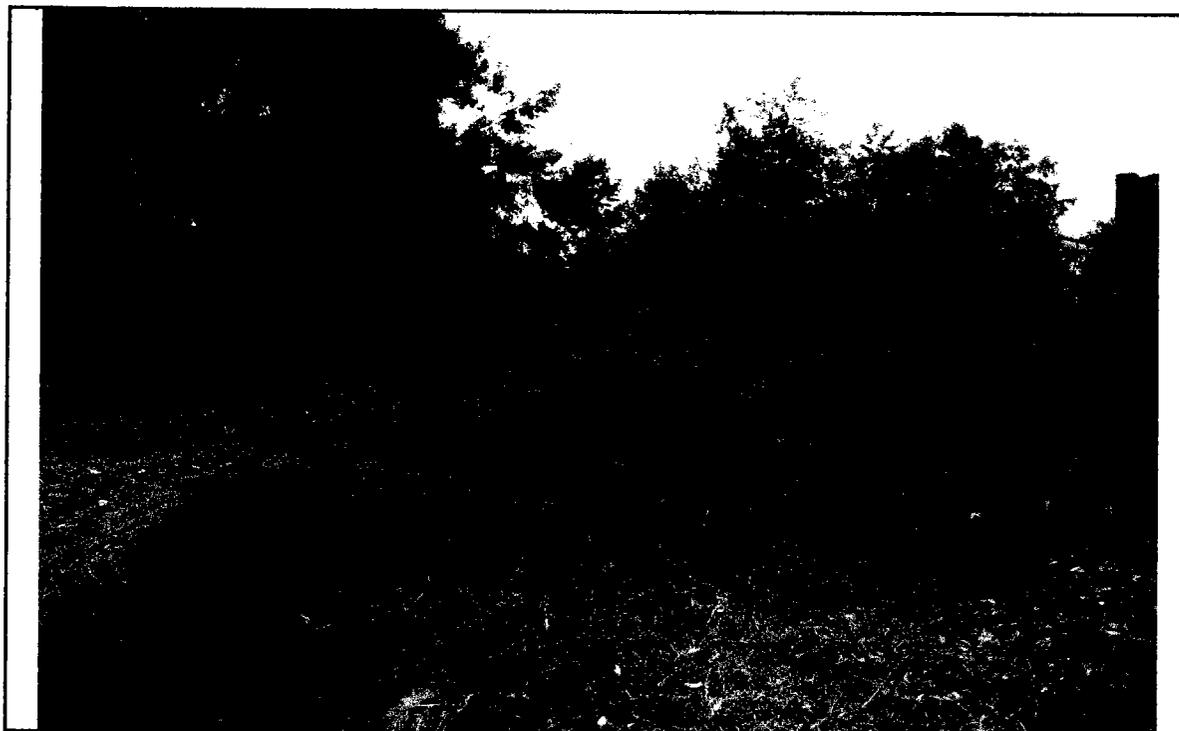


Photo No. 3. View of the Archstone Restoration area near the apartment pool area.



Photo No. 4. View of the southwestern portion of the Archstone Restoration area.

Olberding Environmental, Inc.

Archstone Restoration Area – April 2007