

APPENDIX S

BRISBANE BAYLANDS HABITAT ASSESSMENT

prepared for

**Sunquest Properties, Inc.
San Mateo County, California**

July 2003

Project No. 33623

prepared by

**Burns & McDonnell Engineering Company, Inc.
Kansas City, Missouri**

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1.0 INTRODUCTION

Sunquest Properties, Inc. (Sunquest) proposes to develop the Brisbane Baylands project, which is located on the former Southern Pacific Railroad Yard (railyard) and former landfill sites (Figure 1 in Appendix A). The property is located primarily within San Mateo County, but a portion to the north is located in San Francisco County. The property covers approximately 500 acres of land, of which 180 acres is within the railyard and 320 acres is within the landfill. Based on preliminary development plans, Sunquest proposes to convert their property to high-density office and industrial spaces along with the requisite infrastructure (Figure 2 in Appendix A). The plan also identifies a park area and creek on-site.

Sunquest purchased the property in 1989. Investigations in the railyard have revealed soil contamination involving bunker C oil, arsenic, and lead, prompting the submittal of a remedial action plan to the California Regional Water Quality Control Board (RWQCB). The RWQCB has approved the remedial action plan, which involves capping the soil contamination. However, contingent with the RWQCB's approval is clearance from the San Francisco District of the US Army Corps of Engineers (Corps) because remedial measures would involve filling of wetland ditches containing bunker C oil. Furthermore, approval of the grading plan by the City of Brisbane for future development on-site is contingent on Corps authorization.

In April 2001, the RWQCB issued waste discharge requirements (WDRs) to Sunquest to submit a work plan to mitigate for seepage of leachate into the central drainage channel that extends from the San Francisco Bay westward to the railyard. This channel is a tidal "watercourse" containing wetlands, impacts to which would trigger a Corps dredge and fill permit. The work plan was submitted to the RWQCB in September 2001 and subsequently approved. Design of the new channel configuration cannot be completed until discussions with the Corps have been conducted to determine permit and mitigation requirements.

Burns & McDonnell Engineering, Inc. (Burns & McDonnell) was retained to provide Sunquest with remedial, engineering, wetland, and habitat assessment services for the development project. This report is an environmental evaluation of available habitat for protected species at the landfill and railyard development area, hereafter referred to as the Project.

2.0 SURVEY RESULTS

In May of 2003, a biologist and a wetlands scientist from Burns & McDonnell completed a habitat assessment to identify any potential protected species habitats in the Project area. Surveys were conducted at the 540-acre Project area on May 27 to 30, 2003. The site was traversed on foot to evaluate the suitability and condition of habitats for protected species. The property is located primarily within San Mateo County, but a portion to the north is located in San Francisco County. The property covers approximately 500 acres of land, of which 180 acres is within the railyard and 320 acres is within the landfill (Photos 1 and 2 in Appendix B).

The landfill and former railyard are primarily bare ground and ruderal grassland habitat composed of non-native grasses and forbs. The majority of the surface of the landfill, which is being capped and graded, is bare dirt (Photos 3 and 4 in Appendix B). Construction debris, consisting of concrete rubble and fill dirt, is stored in piles at various locations on the landfill. Gravel and dirt haul roads cross the landfill providing trucks access to construction debris piles. The railyard has generally flat topography and is covered with ballast material and ruderal grassland habitat (Photos 5 and 6 in Appendix B). Visitacion Point, which reaches a height of approximately 200 feet above mean sea level (amsl), is located in the southwest corner of the Project site. Abandoned asphalt and concrete roadways (oriented north-south), buildings (roundhouse), and several loading ramps are all present in the western portion of the railyard. The surface of the railyard has been regularly bladed to remove dead and dried vegetation as fire control. As a result, four- to six-foot high piles of soil and ballast material (oriented east-west) cross the railyard (Photo1). Light industrial business and warehouse facilities are present along the west edge of the railyard along Bayside Boulevard and along Tunnel Avenue at the north and south ends of the landfill. The following sections briefly describe the natural resources at the site.

2.1 SOILS

Disturbed soils, often less than ½ foot deep, are present in the railyard and landfill. The soils in the railyard consist primarily of ballast and fill materials that lie over a shallow rocky substrate. Concrete rubble and rebar is often present on or just below the surface of the soil in the landfill.

2.2 VEGETATION

The vast majority of the Project site is covered by weedy uplands, which is consistent with the highly disturbed nature of the former railyard and landfill. The plant species include wild oat (*Avena fatua*), crown daisy (*Chrysanthemum coronarium*), corn chrysanthemum (*Chrysanthemum segitum*), ice plant (*Carpobrotus chilensis*), hottentot-fig (*Carpobrotus edulis*), American vetch (*Vicia americana*), birdsfoot trefoil (*Lotus corniculatus*), Italian thistle (*Carduus pycnocephalus*), pampas grass (*Cortaderia sellonaa*),

wild radish (*Raphanus sativa*), black mustard (*Brassica nigra*), french broom (*Genista monspessulana*), fennel (*Foeniculum vulgare*), common vetch (*Vicia sativa*), sourclover (*Melilotus indica*), white sweet clover (*Melilotus alba*), high mallow (*Malva sylvestris*), dissected geranium (*Geranium dissectum*), Italian ryegrass (*Lolium multiflorum*), gumweed (*Grindelia camporum*), Mediterranean barley (*Hordeum marinum*), foxtail and sixweeks fescue (*Vulpia myuros* and *V. octoflora*), soft cheat grass (*Bromus hodoreaceus*), and poverty brome (*Bromus sterilis*). Some of these plant species have been planted, especially at the land fill site. Trees and shrubs that were scattered over the site or along fencelines include blue gum (*Eucalyptus globulus*), arroyo willow (*Salix lasiolepis*), coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), golden wattle (*Acacia* cf. *longifolia*), everblooming acacia (*Acacia retinoides*), Monterey cypress (*Cupressus macrocarpa*), and cotoneaster (*Cotoneaster franchetti*).

The remaining vegetation types are much less common and only occur in small patches. Freshwater emergent wetlands typically occur in man-made depressions or ditches and are dominated by narrow-leaved and broad-leaved cattails (*Typha angustifolia* and *T. latifolia*), rabbit's foot grass (*Polypogon monspeliensis*), brownhead rush (*Juncus phaeocephalus*), tall flatsedge (*Cyperus eragrostis*), common spikerush (*Eleocharis macrostachya*), brass-buttons (*Cotula coronopifolia*), littleseed canary grass (*Phalaris minor*), robust bulrush (*Scirpus robustus*), soft rush (*Juncus effusus*), bent grass (*Agrostis viridis*), loosestrife (*Lythrum ciliatum*), three-bracted loosestrife (*Lythrum tribracteatum*), and common threesquare bulrush (*Scirpus pungens*). In the transitional zones of some of the wetlands, bristly oxtongue (*Picris echioides*), curly dock (*Rumex crispus*), and cutleaf (*Plantago coronopus*) were often found. Freshwater scrub-shrub wetlands are rare, occurring on Visitacion Point and adjacent to the central drainage channel. These woody wetlands are dominated by arroyo willow and a mix of the emergent species noted above.

Tidally influenced wetlands were found in the central drainage channel and along the Brisbane Lagoon. The dominant vegetation found in these locations included pickleweed (*Salicornia virginica*), *Salsola soda*, saltmarsh grass (*Distichlis spicata*), broad-leaved cattails, and European beach grass (*Ammophila arenaria*).

2.3 AQUATIC RESOURCES

National Wetland Inventory and USGS topographic maps were reviewed prior to visiting the survey area to evaluate potential wetland areas that may be suitable habitat for aquatic and semi-aquatic protected species. According to the NWI wetland map, estuarine and palustrine wetlands are located on the Project site (Figure 3 in Appendix A).

Three drainages were found within the Project area. The main one is the central drainage channel, while the other two ditches are located in the railyard. All three drainages are man-made with steep embankments supported by riprap. Trash and oil are also present in the stream channels.

The water level in the central drainage channel, which empties into the San Francisco Bay, rises and falls with the tide. The central drainage channel consists of estuarine wetlands with regularly-flooded, excavated, intertidal, estuarine streambeds (E2SBNx). The central drainage channel has a narrow fringe of pickleweed approximately three feet wide (Photos 7 – 10 in Appendix B). The total length of the drainage is approximately 2,200 feet and the width varies depending on the section. The easternmost portion is approximately 22 to 35 feet wide, while the central and westernmost portions are 20 to 40 feet and 12 to 25 feet wide, respectively. The central drainage channel occupies approximately 1.12 acres of the Project site.

Of the two ditches located in the railyard, the east-west ditch is seven to nine feet wide and 770 feet long (Photo 11 in Appendix B). The north-south ditch and swale is 10 to 12 feet wide by 1,240 feet long (Photos 12 in Appendix B). Both the ditches are dominated by emergent wetland vegetation including tall flatsedge, robust bulrush, cattails, common spikerush, bent grass, brass-buttons, and common threesquare bulrush. The ditches were inundated with water, presumably from runoff. The east-west ditch drains into the north-south ditch, which eventually empties into the central drainage channel through a timber box culvert (Photo 13 in Appendix B). When the railyard was still in service, the north-south ditch was used to separate oil from water runoff. An oil water separator structure is still located half way up the ditch. The surface of standing water along this ditch still exhibits an oily sheen.

The Brisbane Lagoon, which has a regularly flooded, intertidal estuarine, unconsolidated shoreline (E2USN), is tidally influenced. The shore is lined with small boulders and dominated by European beach grass (Photo 14 in Appendix B). Trash is present among the boulders and the shoreline appeared to be used by local, recreational fisherman.

An open water wetland has formed in the concrete lined depression for the railyard's roundhouse turntable. The concrete lined depression has vertical walls, is encircled by a chainlink fence, and is inundated with water and colonized by broad-leaved cattails (Photo 15 in Appendix B). The surface of the water is approximately one to two feet below the top of the concrete lined depression. No wildlife was observed in the concrete lined depression.

Rain runoff accumulates in manmade depressions that are in poorly drained areas at the south end of the railyard. These seasonally flooded, diked or impounded, palustrine emergent wetlands (PEMCh) at the south end of the railyard exhibited an oily sheen where water had collected in tire ruts (Photo 16 in Appendix B). These wetlands also appear to be the result of pooling water in an area that was excavated

and used for borrow. The borrow material was likely used to construct the berms that surround the tank farm or for constructing Tunnel Avenue.

Several small, man-made depressions that are seasonally flooded (PUBFh) are located in the northern portion of the landfill. These depressions are likely the result of trash subsidence in the landfill. They are isolated and were dry at the time of the survey.

2.4 WILDLIFE

Species that were present in all areas of the Project site included killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), and gulls (*Larus spp.*). Red-winged blackbirds (*Agelaius phoeniceus*), mallards (*Anas platyrhynchos*), Canada goose (*Branta canadensis*) were present in and along the central drainage channel and Brisbane Lagoon. American gold finch (*Carduelis tristis*) and house finch (*Carpodacus mexicanus*) were observed in the shrubs and trees that were present along Tunnel Avenue and at the south end of the rail yard. Northwestern fence lizards (*Sceloporus occidentalis occidentalis*) were found among the small boulders along the shore of Brisbane Lagoon and the concrete rubble that was piled in the railyard and landfill. Black-tailed jackrabbits (*Lepus californicus*) were present in the open weedy areas of the railyard and landfill. Pacific gopher snakes (*Pituophis melanoleucus catenifer*) were observed along the central drainage channel and among the boulders along Brisbane Lagoon. A long-tailed weasel (*Mustela frenata*) was also seen hunting among the boulders along Brisbane Lagoon. At the southern edge of the railyard and adjacent to the tank farm, California toad tadpoles (*Bufo boreas halophilus*) were found in a small depressional wetland that contained a few inches of stagnant water (Photo 17 in Appendix B). An Anna's hummingbird (*Calypte anna*) was observed on the south facing slope of Visitacion Point at the southwestern most corner of the property, adjacent to Bayshore Boulevard. A medium sized (approximately 150 mm total length) almost black colored small mammal was briefly seen in the pickleweed along the central drainage in the center of the landfill. This small mammal did not appear to be distinctly bicolored and had a tail that was approximately one-quarter to one-half of the body length and, therefore, was assumed to be a California meadow vole (*Microtus californicus*).

2.5 PROTECTED SPECIES

The California Department of Fish and Game (CDFG) Natural Diversity Database was searched to determine the presence of documented occurrences of protected species on or adjacent to the Project site. The results of the database search indicated that no state or federally protected species were known to occur on the Project site; however, several protected species are known from the area (Table 2-1).

Table 2-1 Protected Species Known Occur Within Project Area

Common Name	Scientific Name	Federal Status	State Status
California red-legged frog	<i>Rana aurora draytonii</i>	T	-
California black rail	<i>Laterallus jamaicensis coturniculus</i>	SOC	T
California clapper rail	<i>Rallus longirostris obsoletus</i>	E	E
Bank swallow	<i>Riparia riparia</i>	SOC	T
Tidewater goby	<i>Eicyclogobius newberryi</i>	E	-
San Francisco garter snake	<i>Thamnophis sirtalis tetrataenia</i>	E	E
San Bruno elfin butterfly	<i>Incisalia mossii bayensis</i>	E	-
Mission blue butterfly	<i>Icaricia icarioides missionensis</i>	E	-
Callippe silverspot butterfly	<i>Speyeria callippe callippe</i>	E	-
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	T	-
Myrtle's silverspot butterfly	<i>Speyeria zerene myrtleae</i>	E	-
Beach layia	<i>Layia carnosa</i>	E	E
San Francisco lessingia	<i>Lessingia germanorum</i>	E	E
White-rayed pentachaeta	<i>Pentachaeta bellidiflora</i>	E	E
Presidio manzanita	<i>Arctostaphylos hookeri ssp.ravenii</i>	E	E
San Bruno mountain manzanita	<i>Arctostaphylos imbricata</i>	-	E
Robust spine flower	<i>Chorizanthe robusta var. robusta</i>	E	-
E = Endangered T = Threatened SOC = Species of Concern			

3.0 DISCUSSION

The Project site is characterized by severe habitat degradation from past uses as a landfill and railyard as well as current activities of vegetation clearing in the railyard and capping and grading of the landfill. Both sites are subject to regular disturbances from trucks, bulldozers, and mowing. No native aquatic habitats or plant communities were found on the Project site. The two ditches in the railyard and the central drainage channel are man-made with steep embankments supported by riprap. Trash and oil contamination are present in all of the stream channels. The wetlands at the southern end of the railyard appear to be the result of pooling water in an area that was used for borrow. The borrow material was likely used to construct the berms that surround the tank farm or for constructing Tunnel Avenue. Water that collected in small shallow depressions and tire ruts in these wetlands also exhibited an oily sheen. The sites currently support weedy plant communities and common wildlife species that are tolerant of urban developments, activities involving humans, and regular disturbances. Protected specie are unlikely to exist in the Project area (landfill an railyard).

In September of 2001, Sunquest contracted Wetlands Research Associates, Inc. (WRA) to conduct a habitat assessment for the California red-legged frog and San Francisco garter snake on the railyard (areas west of the remaining commuter rail line). California red-legged frogs occur in slow moving, shallow riffle zones in freshwater creeks or along the margins of freshwater ponds that have dense growths of woody riparian vegetation, esecially willows (USFWS, 1997). These frogs cannot survive in saline water. The San Francisco garter snakes' preferred habitat is densely vegetated freshwater ponds near an open hillside where they can sun themselves and find their preferred prey, California red-legged frogs (USFWS, 2003).

WRA concluded that the California red-legged frog is unlikely to occur on the railyard because the available aquatic habitat is contaminated with oil and the ditches on the railyard, which are dry throughout much of the year, do not have a sufficient duration of inundation. Wetlands Research Associates, Inc. assessed San Francisco garter snake habitat using a procedure developed by Dr. Sam McGinnis, a recognized expert on the San Francisco garter snake. The procedure determines a level of probable occurrence of the snake based on habitat characteristics. The approach, as outlined in the WRA habitat assessment, ranks habitat quality based on four characteristics: availability of impounded fresh water (marshes, farm ponds, vernal pools), vegetation cover, available food, and the presence of competitive garter snake species. Ideal San Francisco garter snake habitat, according to the McGinnis approach used by WRA, has impounded fresh water with a large shallow inshore zone present all year; dense reed-shrub cover throughout a marsh or in a wide band around entire pond edge; small fish and pacific treefrog and red-legged frog adults and larvae; and no other garter snake species present.

The aquatic habitat encountered by WRA during their survey of the railyard in 2001 and by Burns & McDonnell biologists during the May 2003 survey of the railyard and landfill had almost none of the characteristics ideal for the San Francisco garter snake. The available aquatic habitat was contaminated with oil, appeared to be only shallow winter-spring surface water, had dense reed-shrub cover in only small clumps along one-half or less of the shoreline, and western toad tadpoles were the only species found in the aquatic environments. As for the last requirement, the presence of competitive garter snake species, the presence of other garter snake species is unlikely because no prey species were found in the ditches and central drainage channel and the ditches are only seasonally inundated with water.

The majority of the known locations of protected species listed in Table 2-1 are associated with undeveloped areas and parks that support native habitats or plant communities. The San Bruno elfin butterfly, Mission blue butterfly, callippe silverspot butterfly, bay checkerspot butterfly, San Francisco lessingira, white-rayed pentachaeta, and San Bruno mountain manzanita are known to occur in the San Bruno Mountains, southwest of the Project site (CDFG 2003). The grass covered steep slopes and ridges of the San Bruno Mountains, which are part of the San Bruno Mountain State Park have remained undeveloped despite encroachment by the communities of Bayshore, Guadalupe Valley, and Brisbane, west and south of the mountains. The communities of Bayshore, Guadalupe Valley, and Brisbane as well as Bayshore Highway, light industrial facilities, and warehouses along the west side of the railyard separate the Project site from the undeveloped areas of the San Bruno Mountains. The protected species known to occur in the San Bruno Mountain State Park would not likely disperse to the Project site because of the urban development surrounding the railyard and landfill creates a significant barrier.

Also found in San Francisco metropolitan area parks, are the California red-legged frog, California black rail, bank swallow, and tide water goby, which are known to occur in Harding Park approximately five miles west of the Project site; the California clapper rail, which was observed at the Point San Bruno National Guard facility approximately three miles south of the Project site; Presidio manzanita was documented in Mount Davidson Park, three miles northwest of the Project site; and robust spine flower, which was found approximately three miles west of the Project site in Ocean View Park and Colma (CDFG 2003). San Francisco garter snakes have been found in Sharp Park and in the vicinity of San Francisco International Airport, which are both approximately five miles from the Project site (CDFG 2003). That any of these protected species would disperse to the Project site is also unlikely because of the disturbed nature of the railyard and landfill and the urban development between these parks and the Project site creates a significant barrier.

No known locations of Beach layia and Myrtle's silverspot butterfly were reported; however, beach layia inhabits coastal dunes and is presumed extirpated (CDFG 2003) and Myrtle's silverspot butterfly inhabits salt spray meadows and coastal dunes and is considered extinct in San Mateo County (Scott 1986).

Other protected species not listed by CDFG as being in the area but considered during the survey of the Project site included the state and federally listed as endangered salt-marsh harvest mouse (*Reithrodontomys raviventris*). Presently, the salt-marsh harvest mouse is found only around small portions of San Francisco Bay and the southern subspecies (*R. r. raviventris*) current range extends from San Mateo County and Alameda County south along both sides of San Francisco Bay to Santa Clara County (CDFG 2003 CDPR 2003). The California Department of Fish and Game indicated that the nearest known population of the salt marsh harvest mouse was in the southern reaches of the San Francisco Bay, approximately 13 miles south of the Project site (California Natural Diversity Database, personal comm.).

The preferred habitat for the salt marsh harvest mouse is salt marshes with dense growths of pickleweed (Jameson and Peeters 1988 USFWS 2003). Although pickleweed is present along the central drainage channel and the shores of the Brisbane Lagoon, the amount of available habitat that is not interrupted by barriers of open ground and roadways is small. The central drainage channel is a steeply incised bank that has been stabilized by riprap and possesses a narrow, approximately two- to three-foot, fringe of pickleweed. The bank above the pickleweed is also narrow, approximately five to six feet wide, and dominated by upland grass species. The top of the bank is open ground that is devoid of any substantial plant life because of current grading as part of the landfill capping process. The shores of Brisbane lagoon are covered with stone boulders and crisscrossed by vehicle trails and footpaths. Only small patches of pickleweed are present along the shore, which is dominated by thick patches of European beach grass. These conditions suggest that the salt marsh harvest mouse is unlikely to inhabit the central drainage channel or the shores of the Brisbane Lagoon.

4.0 SUMMARY

The Sunquest site is located on the former Southern Pacific Railroad Yard and former Brisbane Landfill sites. Burns & McDonnell was retained to provide Sunquest with remedial, engineering, wetland, and habitat assessment services for the Project site. The history of the Project site is characterized by severe habitat degradation including earthwork and the placement of fill in the landfill and regular bladeing of the vegetation in the railyard for fire control. No remnant native habitats or plant communities exist on the site. The railyard is contaminated with oil and lead and leachate from the landfill is seeping into the central drainage channel, which flows into the San Francisco Bay. Hence, Sunquest is conducting two RWQCB-requested remedial measures on this 540-acre property in the City of Brisbane. In the future, Sunquest plans on developing the site into Brisbane Baylands, a mix of commercial, office, and industrial spaces along with a River Park.

Although the railyard and landfill are within the known distributions of the protected species identified by CDFG (Table 2-1), the results of the habitat assessment conducted by Burns & McDonnell indicate that the proposed land development project should not impact any protected species within the area. The nearby, documented occurrences of the protected species identified by CDFG are within parks or relatively undisturbed areas that support native habitats or plant communities. The aquatic habitats and associated emergent vegetation present on the Project site do not provide suitable habitat for protected species because the habitats are relatively small, shallow, only seasonally inundated with water, and contaminated with oil.

The proposed preliminary development plan for the Project site (Figure 2 in Appendix A) will require the relocation of the two ditches in the railyard, filling the open water wetland in the vicinity of the roundhouse, removal of the timber box culvert, and a considerable amount of construction along the central drainage channel and north shore of Brisbane Lagoon. The development plan also includes the creation of parkland along the central drainage channel, north shore of the Brisbane Lagoon, and the proposed channel through the former railyard. In addition to providing aesthetic value to the development, these park areas will likely provide habitat for common wildlife and plant species and may also provide suitable habitat for protected species.

5.0 REFERENCES

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APPENDIX A

Figures

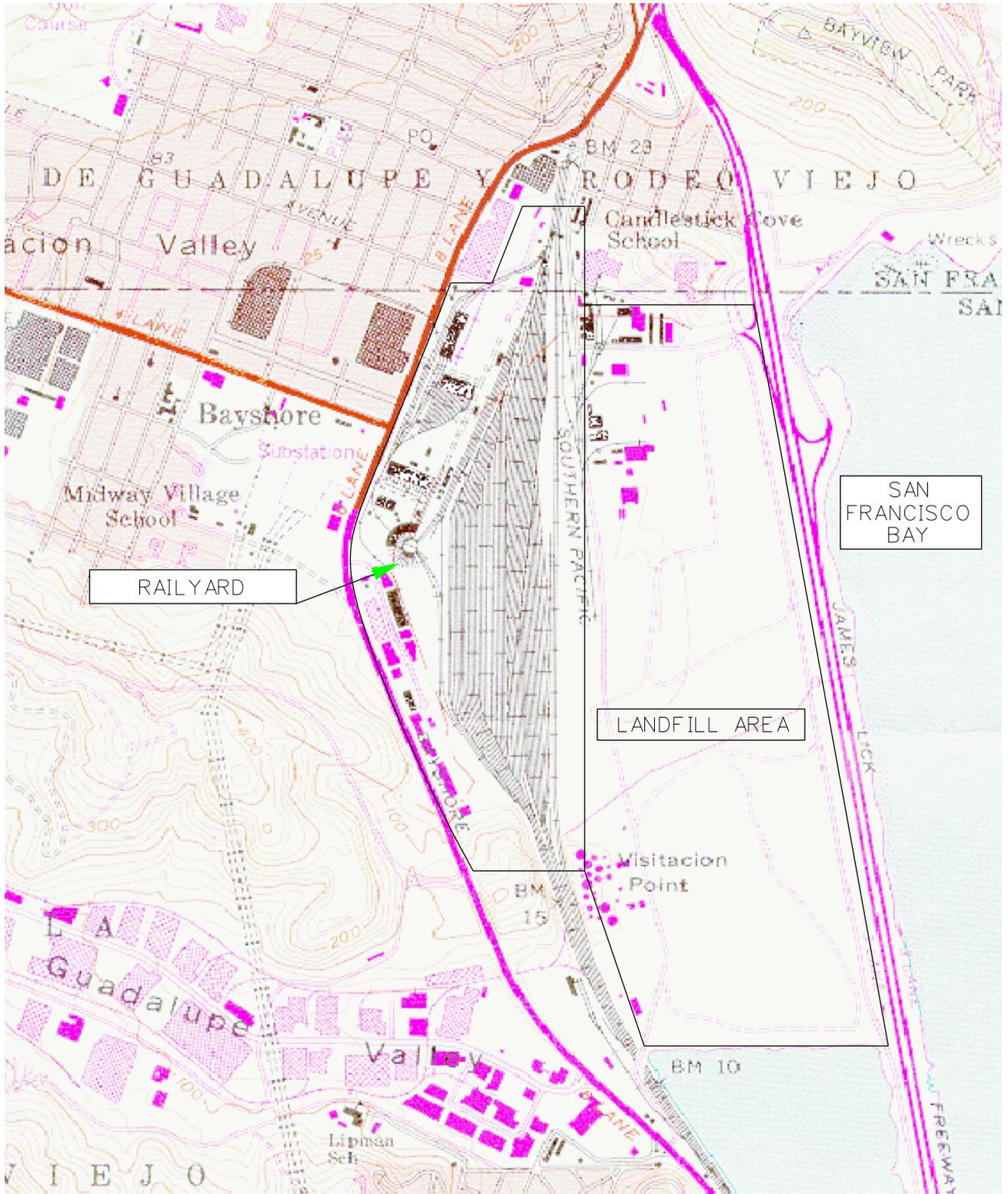


Figure 1
 LOCATION MAP
 FORMER BAYSHORE RAILYARD
 AND LANDFILL AREA
 SUNQUEST PROPERTIES, INC.



RESOURCE:
Wallace Roberts & Todd, Inc.
San Francisco, CA



Figure 2
 PRELIMINARY
 DEVELOPMENT PLAN
 SUNQUEST PROPERTIES, INC.

APPENDIX B

Site Photos

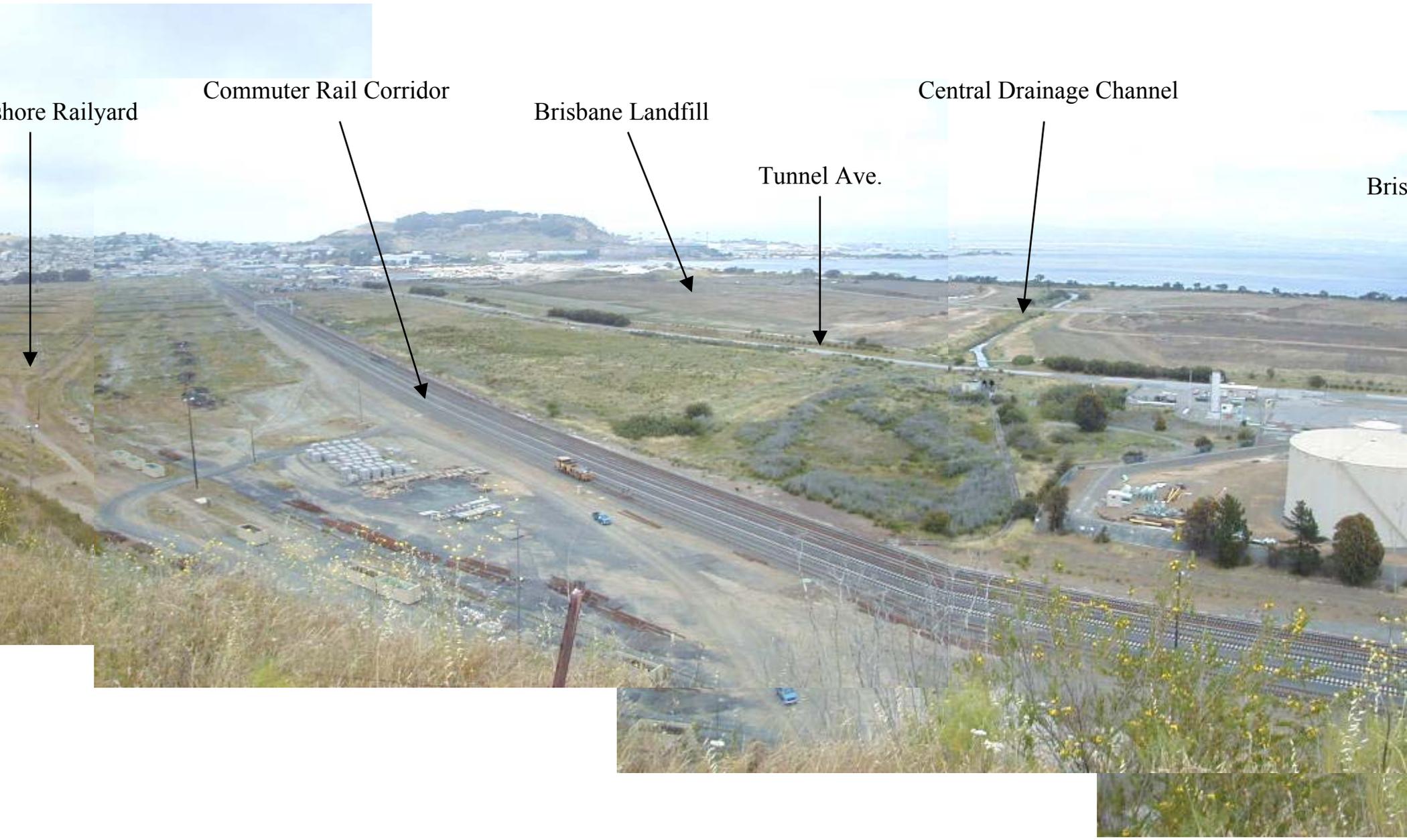


Photo 1: North and east view of Sunquest Site. Photo taken from Visitacion Point.



Photo 2: East and southeast view of Sunquest Site. Photo taken from Visitation Point



Photo 3: East and southeast view of Brisbane Landfill. Photo taken from the middle of the Brisbane Landfill.



Photo 4: West and northwest view of Brisbane Landfill. Photo taken from the north end of the Brisbane Landfill.



Photo5: Looking northwest across the former Bayshore Railyard. Photo taken west of the remaining railroad tracks that are still used for commuter rail traffic.



Photo 6: Looking north across the former Bayshore Railyard. Photo taken east of the remaining railroad tracks that are still used for commuter rail traffic.



Photo 7: Looking west along the Central Drainage Channel. Photo taken from the east edge of the landfill.



Photo 8: Looking west along the Central Drainage Channel. Photo taken from the middle of the landfill at a haul road crossing.



Photo 9: Looking east along the Central Drainage Channel. Photo taken from the Tunnel Avenue road crossing.



Photo 10: Looking west along the Central Drainage Channel. Photo taken from the Tunnel Avenue road crossing.



Photo 11: Looking northeast along the east-west drainage ditch in the railyard.



Photo 12: Looking north along the north-south drainage ditch on the western edge of the railyard.



Photo 13: Looking west along the timber box culvert that is west of the Central Drainage Channel west of the Tunnel Avenue road crossing.



Photo 14: Looking east along the shore of the Brisbane Lagoon at the south end of the project area.



Photo 15: The open water wetland that formed in the concrete lined depression for the turntable at the railyard's roundhouse.



Photo 16: Looking west at a cattail wetland north of the wooden box culvert that covers the Central Drainage Channel and west of the Tunnel Avenue road crossing.



Photo 17: Small pool of water in a wetland at the southern end of the railyard that contained California toad tadpoles (*Bufo boreas halophilus*).