IV. ENVIRONMENTAL IMPACT ANALYSIS
C. GEOLOGY/SOILS

Unless otherwise noted, the following section summarizes the findings and conclusions as presented in the following:

- Final Report – Geologic Investigation of The Potrero Fault, Hollywood Park, Inglewood, California, Geomatrix Consultants, Inc., dated November 2005 ("Geomatrix 2005 Final Report"), and is included as Appendix C-1 to this Draft EIR;

- Memorandum re: Clarification of Points on Final Report – Geologic Investigation of the Portero Fault for Hollywood Park (Inglewood, CA) Project No. 10834, Geomatrix Consultants, Inc., dated July 5, 2007 ("Geomatrix 2007 Memorandum re Final Report"), and is included as Appendix C-1 to this Draft EIR;

- Geotechnical Evaluation for Environmental Impact Report, Proposed Residential and Commercial Development, Hollywood Park Redevelopment, Inglewood, California, Group Delta Consultants, dated March 29, 2007 (the "Geotechnical Report"), and is included as Appendix C-2 to this Draft EIR.

ENVIRONMENTAL SETTING

The Project Site is the Hollywood Park Racetrack and Casino property located at 1050 South Prairie Avenue in Inglewood California. The approximate 238-acre Project Site is bounded on the north by a parking lot, vacant commercial/recreational property, the recent Renaissance residential development and Darby Park. One-story and two-story residential structures are located across 90th Street, to the north. One and two-story residential uses are to the east. Century Boulevard is to the south, with one- and two-story commercial retail and restaurant uses along this frontage. One-and two-story commercial retail and restaurant uses are located immediately west of the Project Site across Prairie Avenue.

Geologic Conditions and Topography

The Project Site is located within the Rosecrans Hills physiographic region of Los Angeles County. It is located within the west Los Angeles shelf and is underlain by older alluvial deposits derived from the highlands to the north, generally consisting of interbedded layers of sands, gravels, silts and clays. To the north and to the west of the site, the subsurface soils consist of elevated terrace deposits, dominated by reddish-brown continental derived sands. The site is located north of the Baldwin Hills and on the west flanks of the Potrero Hills. These hills are the result of folding along the Newport Inglewood Fault Zone (NIFZ) during seismic and/or aseismic events, which formed domes that have trapped large accumulations of oil and gas. In general, the average surface topography of the Project Site rises across

the property from the southwest Parking Area (approximately 106 feet above mean sea level [msl]) to the northeast Stables Area (approximately 150 feet above msl). [1] (See Figure IV.C-1, U.S.G.S Quadrangle Vicinity Map).

Subsurface Soil Conditions

The Project Site is located north of the Baldwin Hills on the west flanks of the Potrero Hills. Ground surface and subsurface conditions on the site are characterized as follows. The west portion of the Project Site is currently used as asphalt paved parking lots. The surface elevation within the west portion of the Project Site ranges from 120 to 92 feet above msl (north to south). The middle portion of the Project Site is currently improved with the Grandstands and the horse racing track (i.e. "Main Track"). The surface elevation within this middle portion of the site ranges from 120 to 125 feet above msl. Previous soils reports reviewed by Group Delta Consultants revealed that the south portion of the Main Track was extended to its current limits by placing 24-foot of compacted fill (90% of relative compaction). However, the exact division of the extended track could not be delineated. The east portion of the site is currently used as stables. The Training Track is located to the east of the Main Track close to the east property line. The surface elevation of the east portion of the Project Site ranges from 137 to 152 feet above msl. A 10- to 20-foot high cut slope exists between the Main Track and the stable area, running north to south. An artificial lake exists in the middle of the Main Track. A 7-story high grandstand, a club house and a Casino are located west of the Main Track. These structures are supported on 20- to 40-foot deep reinforced concrete caisson foundations.

Subsurface conditions were evaluated by Group Delta Consultants, Inc., between September 18, 2006 and October 5, 2006 by drilling 11 borings on the Project Site to depths of 51.0 to 76.5 feet below ground surface (bgs).[2] Figure IV.C-2 on page IV.C-4 shows the locations of borings B-1 through B-11. Based on past site usage, current site grade, and soil condition encountered during field explorations, the Project Site was divided into three areas: (1) the "Parking Area" on the west; (2) the "Track Area" in the middle; and, (3) the "Barn Area" on the east side. In general, the subject site is underlain by interbedded silty clay

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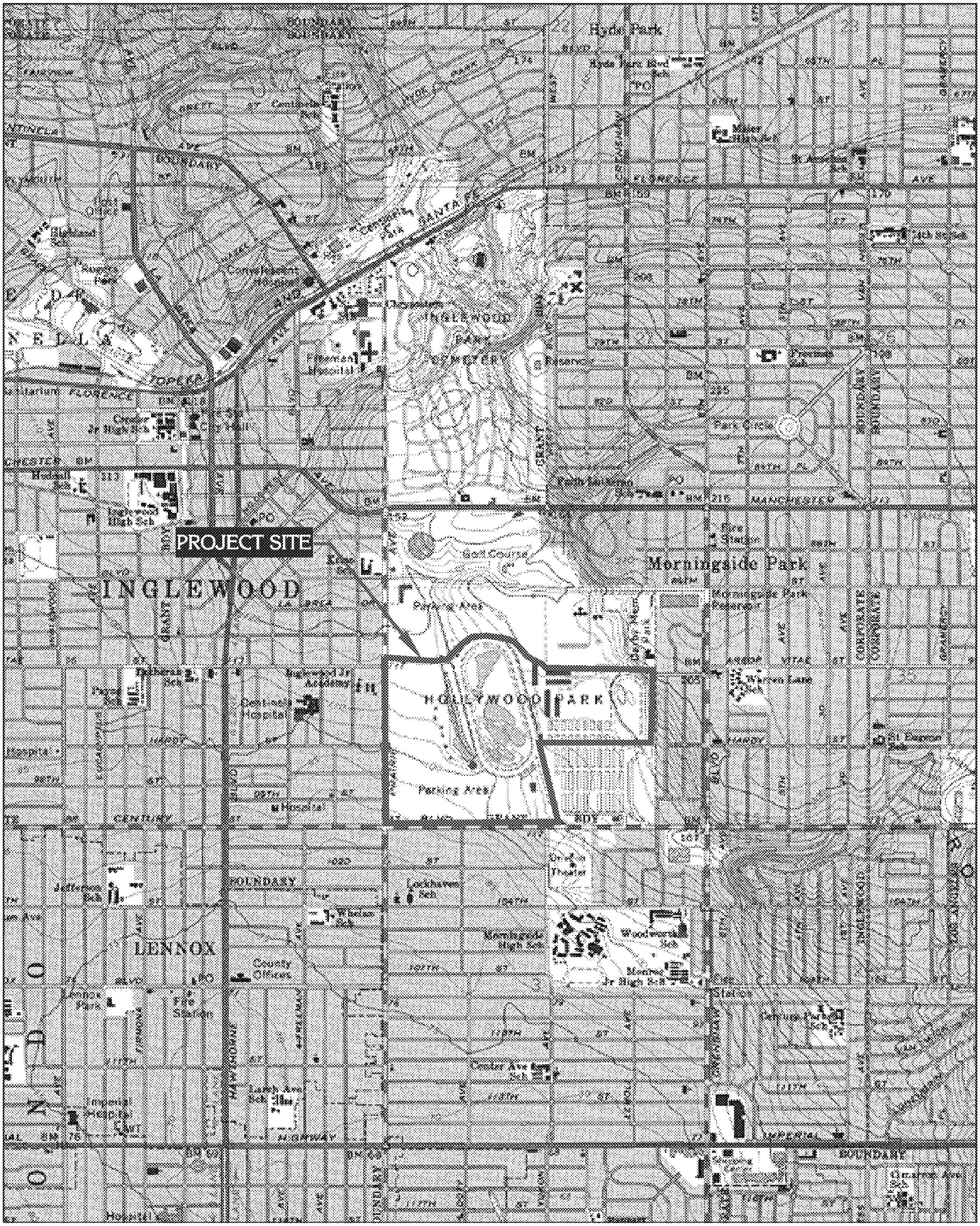
[1] *Group Delta Consultants, Geotechnical Evaluation for Environmental Impact Report, Proposed Residential and Commercial Development, Hollywood Park Redevelopment, Inglewood, California, March 29, 2007 (See Table 5).*

[2] *Borings were drilled to depths ranging from 51.0 to 76.5 feet bgs. The Cone Penetration Test (CPT) soundings were advanced to depths ranging from 22.5 to 75.5 feet bgs. A summary of field exploration data is provided in Table A-1 of Appendix A to Appendix C-1 of this EIR. Both relatively undisturbed samples and Standard Penetration Tests (SPT) samples were taken in the borings. The explorations were performed under the continuous technical supervision of Group Delta's field engineer, who also maintained detailed logs of the soil encountered, classified the materials, and assisted in obtaining soil samples. Details of the field exploration program, including copies of the boring logs and CPT interpretations, are presented in Appendix A to Appendix C-1 of this EIR.*



Source: Group Delta Consultants Inc., 11/30/06.

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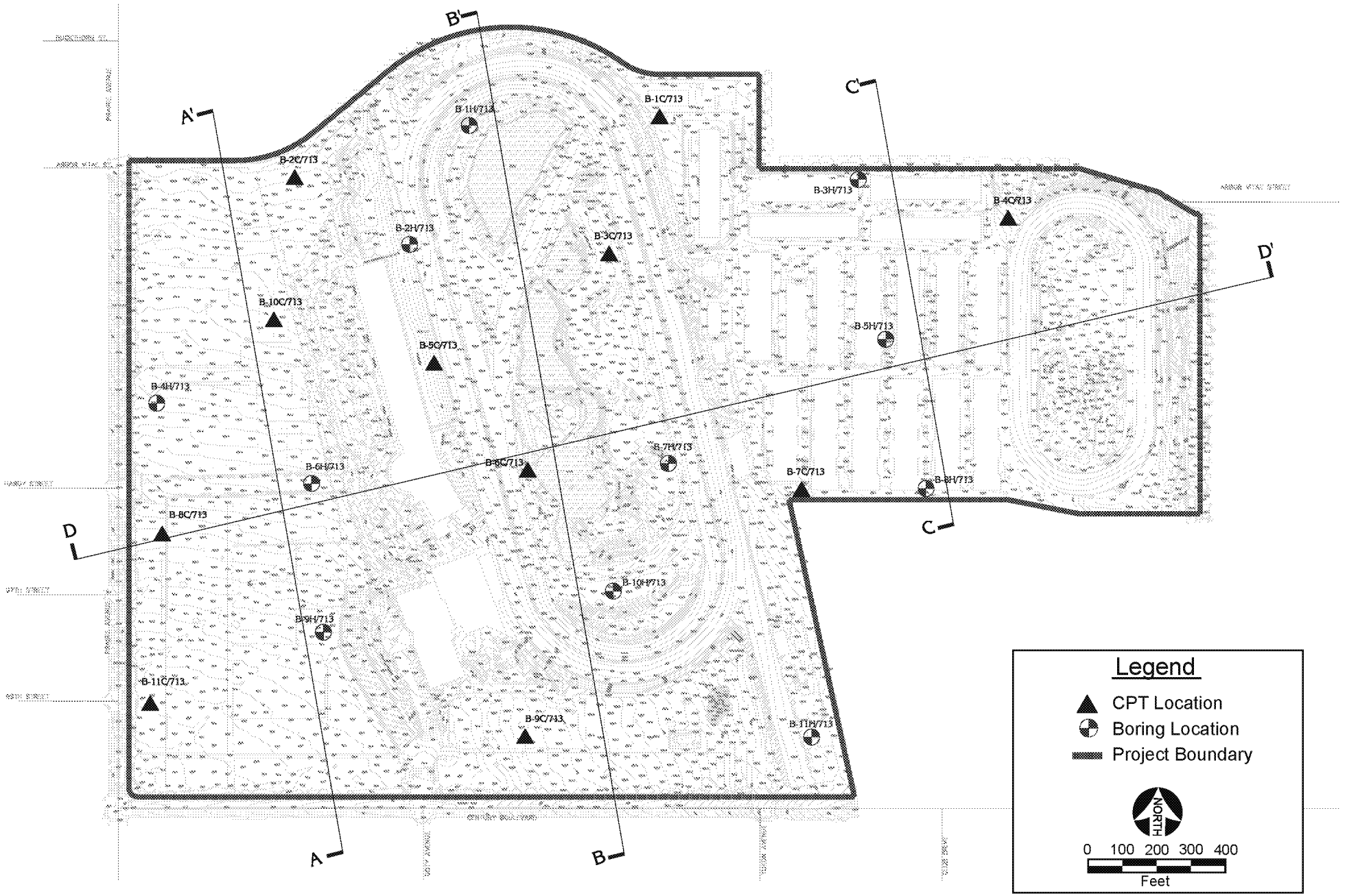
Figure IV.C-1
USGS Quadrangle Vicinity Map



Source: Group Delta Consultants, Inc., 12/11/06.

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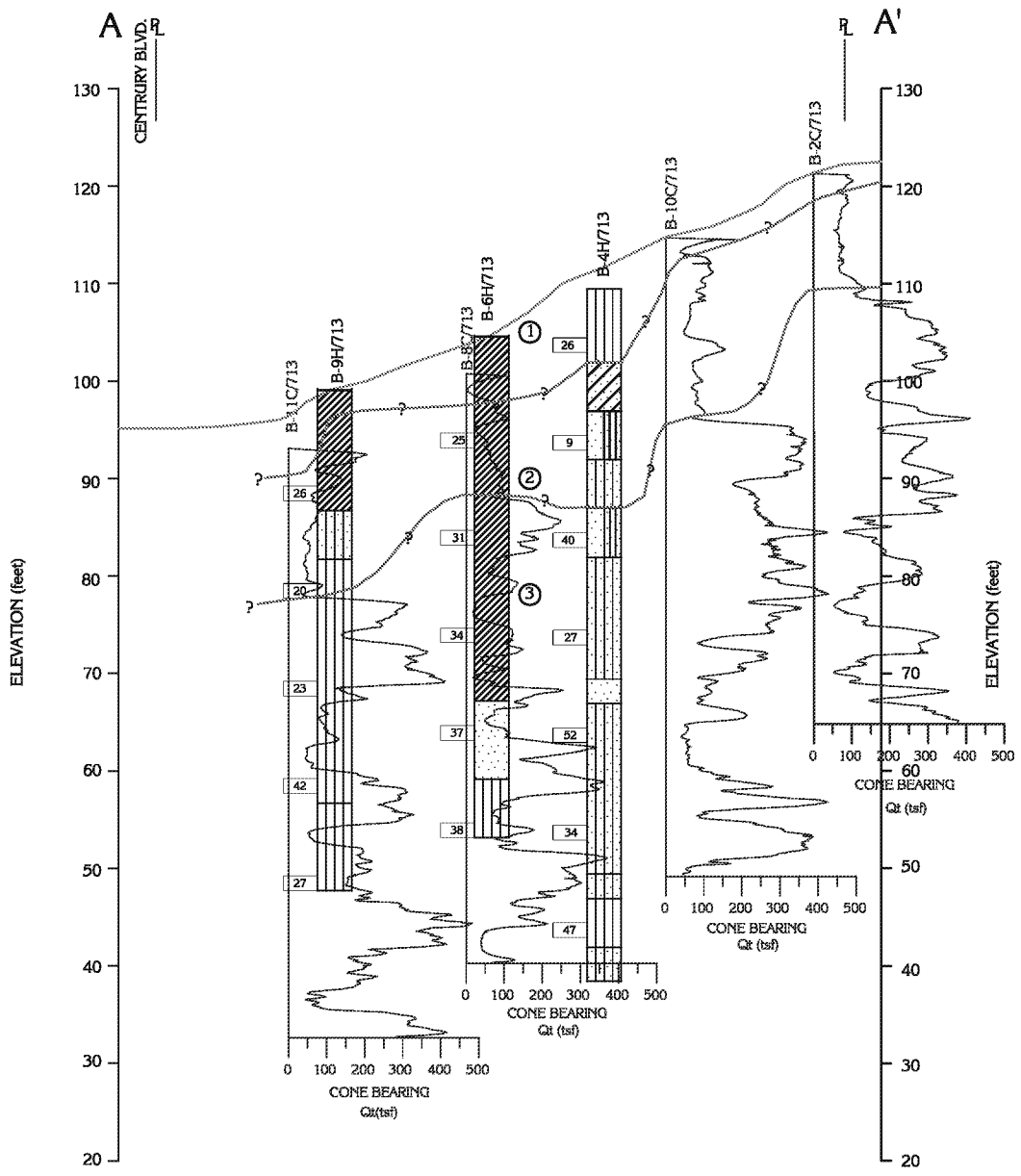
Figure IV.C-2
Locations of Geologic/Hydrologic Borings

and fine grained silty sand. Generalized geotechnical cross-sections through the existing site (Cross-Section A-A' through C-C') are presented in Figure IV.C-3 through Figure IV.C-5. Detailed soil layering for these three areas is discussed below.

The subsurface soils at the Parking Area consist of materials that are presumed to be fill, as well as stiff clay and dense sand. As depicted in Figure IV.C-3, Cross-Section of Geologic/Hydrologic Boring A-A', soils encountered during borings drilled within the Parking Area are characterized in three distinct layers. The first of the three layers is presumed to be fill, and was encountered during the field exploration at depths of 3 to 7 feet bgs. The fill consists predominantly of clay and silt with sand. Based on the spacing distance between exploration locations (approximately 600 feet), Group Delta Consultants concluded that old fill could exist anywhere on the site, and could be locally deeper. The second of the three soil layers encountered at the Parking Area is stiff clay and silt with sand. This layer is about 10- to 15-feet thick, extending from the bottom of the fill layer to depths between approximately 78 and 108 feet above msl (south to north across Parking Area). The third of the three soil layers is dense sand, stiff clay and silt. This layer extends to the maximum depth of 75 feet bgs explored. The soils in this layer consist predominantly of interbedded layers of sand, silty clay and silts. The sand is in general described as dense and very dense.

The subsurface soils at the Main Track and adjacent areas consist of materials that are presumed to be fill, soft clay, underlain by stiff clay and dense sand. As depicted in Figure IV.C-4, Cross-Section of Geologic/Hydrologic Boring B-B', soils encountered during borings drilled within the Main Track are also characterized in three distinct layers. The first of the three layers is presumed to be fill, and was encountered during the field exploration at depths up to 7.5 feet bgs. The fill consists predominantly of clay, silt and clayey sand. The south portion of the Main Track was extended to its present limit in the early 1980's. At that time, 24 feet of fill was placed for the track extension. Based on research, fill materials were also noted by Group Delta Consultants to have been encountered during the 1983 field exploration completed for the Grandstand and Casino to a maximum depth of 28 feet bgs. As such, Group Delta Consultants noted the possibility of old fill to exist anywhere on the site, and that it could be locally deeper. The second of the three soil layers encountered at the Main Track is soft clay and silt with sand. This layer is about 15- to 20-foot thick, extending from the bottom of uncertified fill, to depths between approximately 98 and 105 feet above msl (south to north). This layer is in general described as soft and firm. The third of the three soil layers is dense sand, stiff clay and silt. This layer extends from the bottom of the second layer to the maximum explored depth of 75 feet bgs. The soils in this third layer consist predominantly of interbedded layers of sand, silty clay and silts. The sand is in general described as dense and very dense. The silty clay and silts are in general described as stiff and very stiff.

The subsurface soils at the Barn Area consist predominantly of material presumed to be fill, as well as stiff clay and dense sand. As depicted in Figure IV.C-5, Cross-Section of Geologic/Hydrologic Boring C-C', soils encountered during borings drilled within the Barn Area are characterized in two distinct layers. The first is presumed to be fill, and was encountered during the field exploration at depths of up to 4.5 feet bgs. The fill consists predominantly of silty clay and clayey silt with sand. Based on research, fill materials



Legend

18 Standard Penetration Test (SPT) N-Value

Interpreted Layer Boundary

NOTES:

1. Refer to Figure 2 for location of cross sections.

2. The discussion in the text of the report is necessary for a proper understanding of the nature of subsurface conditions.

3. The cross section is based on geologic interpretation of conditions encountered at exploration locations. Actual conditions my vary between explorations.

SOIL LAYERS

① Likely Fill

② Stiff Clay with Sand

③ Interbedded dense Sand with stiff Clay

SCALE (feet)

V: 1" = 20'

H: 1" = Approx. 760'

Source: Group Delta Consultants Inc., 12/04/06.

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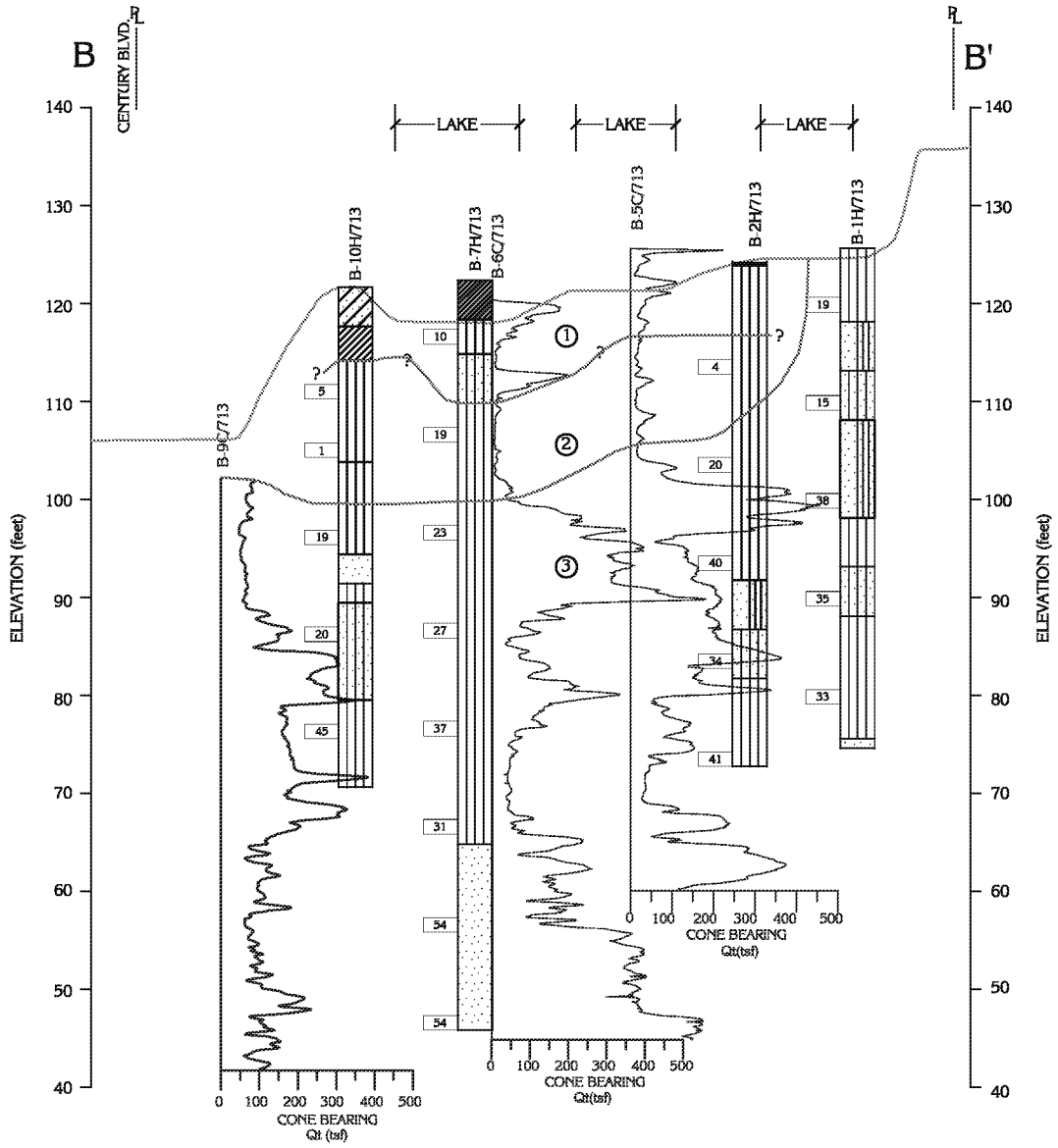
Figure IV.C-3
Cross-Section of Geologic/Hydrologic Boring A-A'



Legend

18 Standard Penetration Test (SPT) N-Value

NOTES:

1. Refer to Fig. 2 for location of cross sections.

2. The discussion in the text of the report is necessary for a proper understanding of the nature of subsurface conditions.

3. The cross section is based on geologic interpretation of conditions encountered at exploration locations. Actual conditions may vary between explorations.

SOIL LAYERS

(1) Likely Fill

(2) Soft Clay

(3) Interbedded dense Sand with Clay

SCALE (feet)

V: 1" = 20'

H: 1" = Approx. 760'

Source: Group Delta Consultants Inc., 12/04/06.

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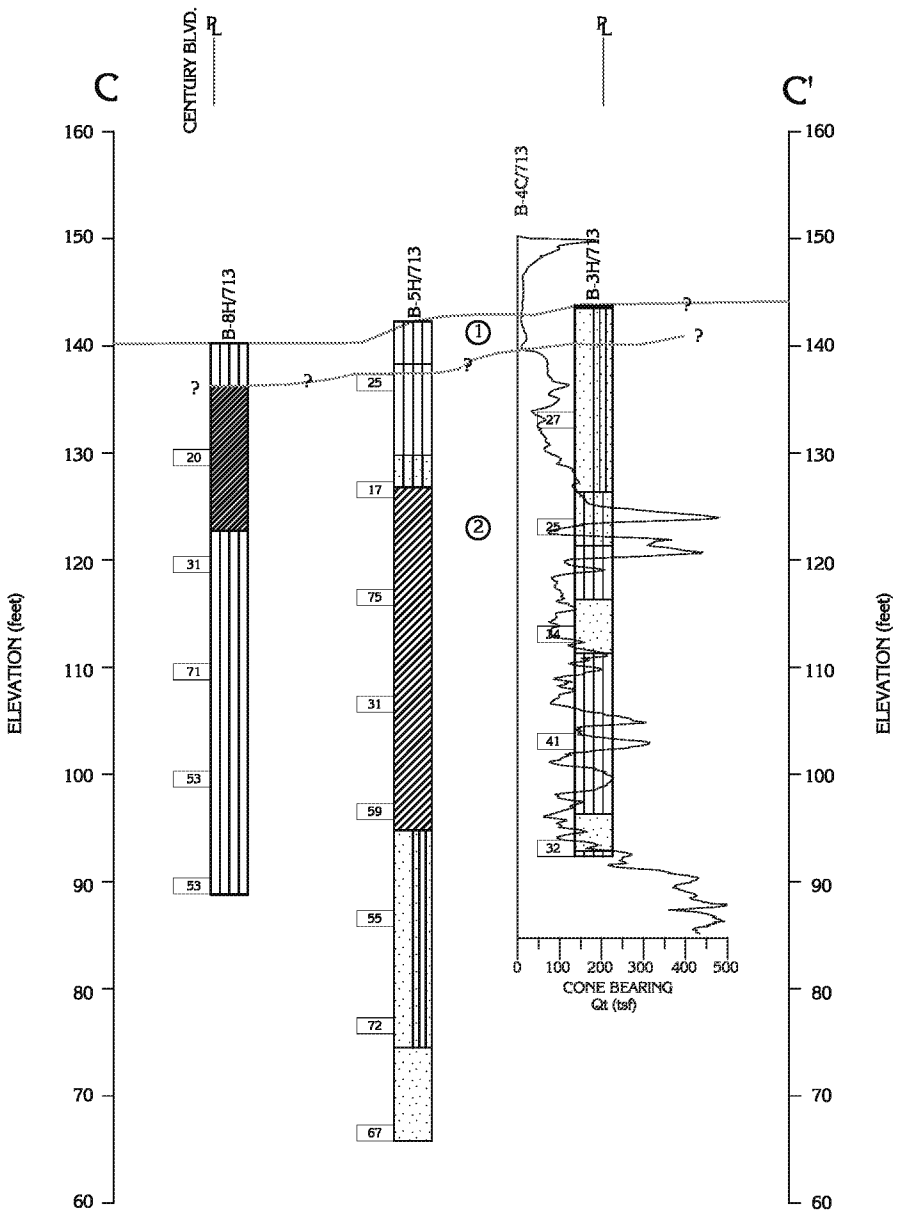
Figure IV.C-4
Cross-Section of Geologic/Hydrologic Boring B-B'



Legend

18 Standard Penetration Test (SPT) N-Value

NOTES:

1. Refer to Figure 2 for location of cross sections.

2. The discussion in the text of the report is necessary for a proper understanding of the nature of subsurface conditions.

3. The cross section is based on geologic interpretation of conditions encountered at exploration locations. Actual conditions my vary between explorations.

SOIL LAYERS

① Likely Fill

② Stiff Clay interbedded with Sand

SCALE (feet)

V: 1" = 20'

H: 1" = Approx. 760'

Source: Group Delta Consultants Inc., 12/04/06.

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Figure IV.C-5
Cross-Section of Geologic/Hydrologic Boring C-C'

were noted by Group Delta Consultants to have been encountered at depths between approximately 4 to 7 feet bgs during the 1974 and 1991 field explorations for individual stables. As such, Group Delta Consultants noted the possibility of old fill to exist anywhere on the site, and that it could be locally deeper. The second layer of soil at the Barn Area is silty clay and clayey silts with sand. This layer extends from the bottom of the second layer to the maximum explored depth of 75 feet bgs. The clay is generally described as very stiff to hard. At a depth of 50 feet bgs, a very dense sand layer was encountered in some of the exploration locations. Porous material was also encountered in Group Delta Consultants field exploration in the Barn Area. Soil samples taken at depths between 0 and 5 feet bgs showed a collapse potential of up to 5%. One sample at 9 to 10 feet bgs showed a collapse potential of 3%. Group Delta Consultants noted that a collapse potential could exist in the Barn Area soils, which would need to be evaluated in building specific site investigations.

Representative samples of the near surface soils were collected and tested to identify their expansive characteristics and soil corrosivity. The testing results indicated that the near surface soils have low to medium expansion potential. Consolidation tests at 30 and 40 feet in B-5H/713, 5 feet in B-6H/713, 40 feet in B-7H/713, and 5 feet in B-10H/713, as shown in Figure IV.C-2, show signs of expansion (0.2 to 1.4 percent). These shallow on site soils will be mixed during grading activity. On the basis of the laboratory testing, the samples are classified as having a moderate to severe corrosion potential for buried metals.

Groundwater

The Project Site is located within the West Coast Groundwater Basin. Groundwater was not encountered during Group Delta Consultants field explorations to the maximum depth of 75 feet explored. According to reports published by the State of California Division of Mines and Geology, the shallowest historic groundwater level is deeper than 50 feet below existing grade. However, it is possible that locally perched groundwater could be encountered near and beneath the existing lake in the center of the Main Track. Groundwater level information reported by Group Delta Consultants is supplemented by the EKI, Inc.'s investigations in 2006, as presented in Section IV.D. Hazardous Materials/Risk of Upset, which encountered groundwater at depths ranging from approximately 70 bgs in the southwestern corner of the Property to approximately 115 to 180 bgs in the remainder of the Property. Other averaged groundwater elevations observed during July 2005 investigations by EKI, Inc. on the Project Site ranged between 95 feet bgs in the Parking Area, to 123 feet bgs in the Main Track Area, to 170 feet bgs in the Stables Area.[3] (See also Section IV.F, Hydrology/Water Quality).

The abrupt change in groundwater elevations on the Project Site may be due to the occurrence of faults in the subsurface that influence groundwater flow. In the northeast portion of the Project Site, the calculated groundwater gradient appears to trend to the southwest, which is not consistent with the previously

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[3] *EKI, 2007. Soil Management Plan, Hollywood Park Racetrack and Casino, 1050 South Prairie Avenue, Inglewood, California, Erler & Kalinowski, Inc., July 3, 2007.*

reported predominant southeasterly groundwater gradient direction for this area. It is possible that the estimated southwesterly groundwater gradient direction is limited in extent (i.e., the gradient shifts to a more southeasterly direction south of the stables) or is not generally representative of groundwater gradient directions measured at other times of the year. (EKI, 2007).

Liquefaction

Liquefaction involves the sudden loss in strength of a saturated, cohesionless soil (predominantly sand) caused by the build-up of pore water pressure during cyclic loading, such as that produced by an earthquake. This increase in pore water pressure can temporarily transform the soil into a fluid mass, resulting in vertical settlement, and can also cause lateral ground deformations. Typically, liquefaction occurs in areas where there are loose sands and the depth to groundwater is less than 50 feet from the surface. Seismic shaking can also cause soil compaction and ground settlement without liquefaction occurring, including settlement of dry sands above the water table.

The Project Site is not located within a State of California Liquefaction Hazard Zone (CDMG 1998). As stated above, groundwater was not encountered in any of the borings, which extended to a maximum depth of 75 feet. However, groundwater was encountered at depths ranging from approximately 70 to 180 feet below ground surface (bgs) by EKI Inc., during their groundwater and soils investigations discussed in Section IV.D, Hazardous Materials/Risk of Upset. The historical shallow ground water level at the site is deeper than 50 feet. Therefore, the potential for liquefaction, lateral spreading, and seismic compaction to occur at the site is considered to be remote.

Seismic Conditions

The entire Southern California area is considered to be a seismically active region. The region has numerous active, potentially active, and inactive faults based on criteria developed by California Geological Survey. An active fault is defined as a fault that has had a surface displacement within Holocene times (about the last 11,000 years). A potentially active fault is a fault that has demonstrated surface displacement of Quaternary age deposits (within the last 1.6 million years). Potentially active faults and their associated Special Study Zones have been mapped by the state of California Department of Conservation (California Geologic Survey - formerly the California Division of Mines and Geology). Published maps indicated that the northeast portion of the Project Site is traversed by an Alquist-Priolo Special Studies Zone (See Figure IV.C-6).

The Potrero fault, a strand of the Newport-Inglewood fault zone, crosses a portion of the Project Site and is considered to be an active fault. A fault trenching program was conducted by Geomatrix (2005) to investigate the boundaries of the Potrero Fault within the Project Site. To identify the boundaries of the Potrero fault across the Project Site, Geomatrix delineated a Restricted Use Zone (RUZ) based on the conclusions of the fault trenching program. This RUZ is located across the northeastern portion of the Training Track, as shown in Figure IV.C-7. The alignment of the RUZ is located approximately 300 feet further to the northeast than the alignment of the fault zone boundary shown on the Alquist-Priolo Special Studies Zone Maps (Inglewood Quadrangle). This finding of a northeasterly shift in the alignment of the

Source: Group Delta Consultants Inc., 11/30/06.

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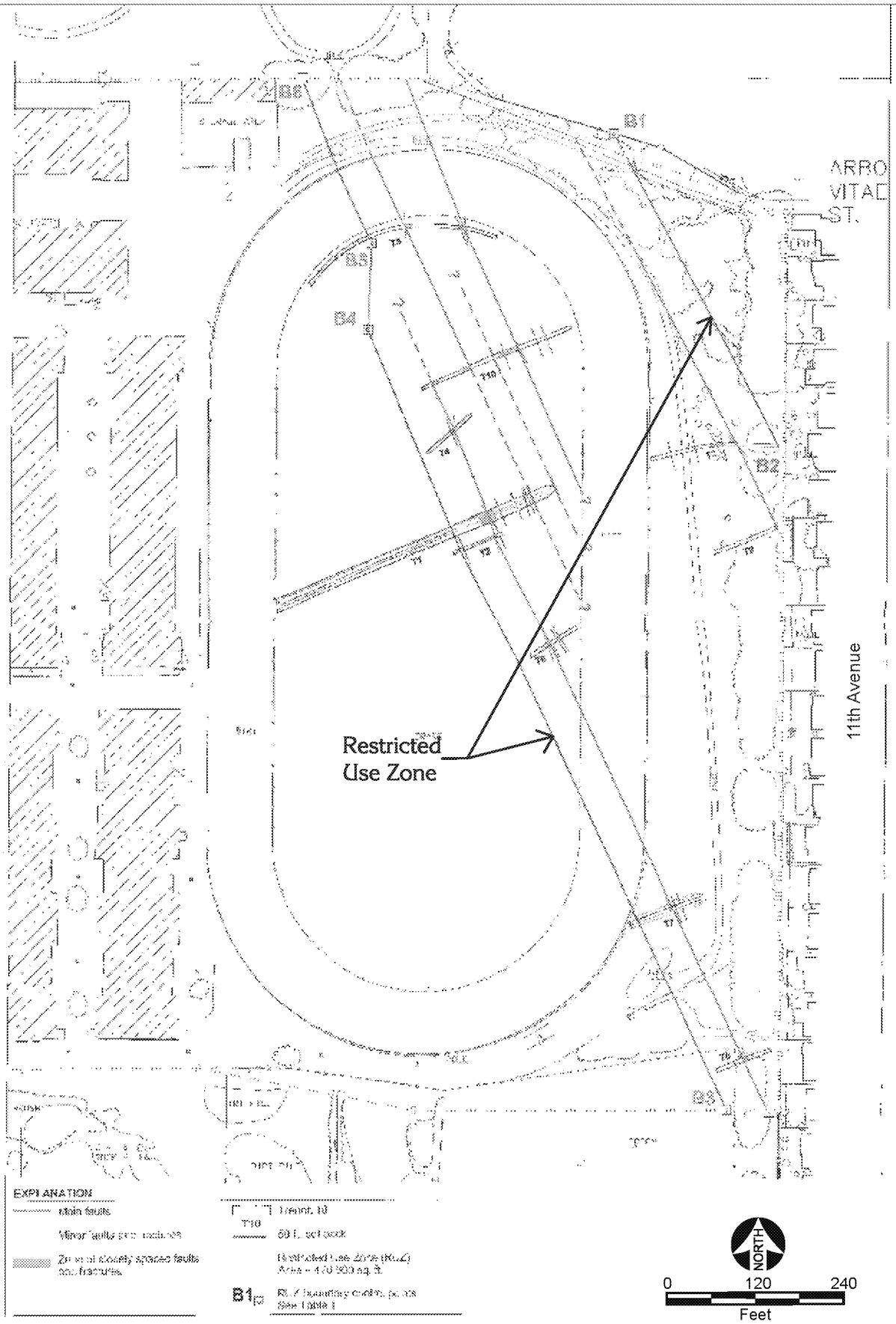
Figure IV.C-6
Alquist Priolo Special Fault Studies Zone Map



Source: Group Delta Consultants Inc., 12/20/06.

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Figure IV.C-7
RUZ Zone Across Training Track

fault zone boundary was also concluded by Kenneth Osborne and Associates in their 1989 geotechnical report prepared for the Renaissance residential project (located immediately to the north of the Training Track). Specifically, Osborne concluded on page 9 of this report that "(t)he fault zone…occurs about 120 feet northeast of previously mapped traces (Poland and others, 1959; and Bryant, 1988)."[4]

Published historical records suggested that a second unnamed fault, the inferred Inglewood (Townsite) trace, crossed the southwest portion of the Project Site. The Inglewood (Townsite) trace near the Hollywood Park property was identified as a fault requiring investigation in the original zoning map in 1976 (as mapped by the California Geological Survey).[5] In 1985, the California Geological Survey reevaluated published and unpublished data on the trace. The Fault Evaluation Report 173 (FER 173) concluded that the most current available geological and geophysical evidence did not support the designation of the Inglewood (Townsite) trace as "sufficiently active" to be included on the zoning map. Therefore, the Townsite trace is not included on the current Alquist-Priolo Earthquake Fault Zone Map (Official Revised Map; CGS, 1986), and is not the subject of a Restricted Use Zone. For further discussion see the Geomatrix 2007 Memorandum re Final Report, included in Appendix C-1 to this Draft EIR.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G to the State CEQA Guidelines, a significant impact to geology and soils may occur if the Proposed Project would result in any of the following conditions:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or based on other substantial evidence of a known fault?

   ii) Strong seismic ground shaking?

   iii) Seismic-related ground failure, including liquefaction?

   iv) Landslides?

b) Result in substantial soil erosion or the loss of topsoil?

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[4] *Kenneth G. Osborne & Associates, Fault Location Investigation 37.5 Acre Site South of 90th Street and west of Darby Park, Inglewood, California, March 13, 1989.*

[5] *Formerly known as the "California Division of Mines and Geology."*

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Impacts Determined to be Less Than Significant

As discussed in the Initial Study (see Appendix A), the Proposed Project would have no impact with respect to Threshold (e) listed above. As such, no further analysis of this topic is required.

Project Impacts

Based on a review of available information, results of on-site explorations, and laboratory testing and analyses, the Geotechnical Report concluded that the Proposed Project is feasible from a geotechnical perspective. At this stage, architectural and structural details of the proposed construction are not known. When detailed building plans have been developed, additional explorations, testing, and analyses will be required in order to develop building-specific foundation recommendations. Following is a discussion of the Proposed Project's impacts during construction and operation with respect to Geology/Soils. Specific areas that are discussed include seismic hazards, erosion and topsoil, geologic hazards, and groundwater.

Seismic Hazards

Fault Rupture

The Project Site is located in the seismically active region of Southern California. Numerous active and potentially active faults with surface expressions (fault traces) have been mapped adjacent to, within, and beneath the City of Inglewood. The Potrero Fault is an active surface fault trace that crosses a portion of the Proposed Project Site. It has been identified by the State and delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map. The fault trenching program conducted by Geomatrix included mapping a RUZ for the Potrero Fault, which crosses the northeastern most portion of the Proposed Project. Therefore, the possibility of surface fault rupture affecting the proposed development exists. However, the Proposed Project would include development of open space and recreational areas within the RUZ, consistent with the recommendations of the Geomatrix report which identify the RUZ area as unsuitable for the construction of most structures for human occupancy, but useable for construction of recreational type development (e.g., storage facilities, recreational facilities, greenbelts, parking areas and roads). Structures intended for human occupancy, as further explained in the Geomatrix 2007 Memorandum re Final Report included in Appendix C-1 to this Draft EIR, are not proposed within the

mapped RUZ area. In the Geomatrix 2007 Memorandum re Final Report, Geomatrix stated that the following uses/facilities/structures are suitable in the RUZ:

- Swimming pool and Jacuzzi
- Tot lots
- Picnic facilities
- Meditation gardens
- Children's playground
- Fireplace and lounge areas
- Dog parks
- Exercise stations (parcourse)
- Parking spaces at ground level (including covered parking)
- Utility routes, both above and below ground
- Tennis courts, basketball courts, soccer fields and other open sports fields (volleyball courts, football play areas, etc.)
- Game tables and seating areas in the open
- Restrooms, locker rooms, changing rooms (e.g., pool cabana)
- Pool equipment rooms
- Storage lockers
- Covered walkways (e.g. pergola and trellis)
- Fences
- Retaining walls

Any suitable structures placed within the RUZ would be required to incorporate appropriate engineering design to mitigate movement resulting from potential future displacement related to the Potrero Fault. In addition, the Geomatrix 2005 Final Report concluded that the western part of the RUZ is outside the zone of deformation associated with the Potrero Fault Zone, and that the potential for surface fault rupture to the west of the RUZ is considered to be negligible. No land use restrictions were identified for the Proposed Project Site outside of the RUZ. Thus, impacts on the Proposed Project Site from any surface fault rupture would be less than significant.

Seismic-Induced Ground Shaking

The Project Site is located in a seismically active region and could be subjected to strong ground shaking in the event of an earthquake. In this respect, development of the Proposed Project would expose new residents, employees and visitors to the proposed dwelling units and commercial establishments, and could result in potentially significant adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. However, such hazards are inherent to the region and the effects of ground shaking can be mitigated to a less-than-significant level by incorporating proper design and construction methods in conformance with current building codes and engineering practices.

Modern, well-constructed buildings are designed to resist ground shaking through the use of shear walls and reinforcements. The proposed construction would be consistent with all applicable provisions of the City of Inglewood Building Code, as well as the seismic design criteria contained within the Uniform Building Code. Although the Project Site is located within the Special Studies Zone for the Potrero Fault, and close to many other faults within the region, the potential for seismic hazards would not be higher than in other areas of the City of Inglewood or elsewhere in the region. Such risks have also been incorporated into the project specific seismic design and engineering plans for the Proposed Project and impacts would be less than significant.

Seismic-Induced Settlement and Liquefaction

The Proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-induced ground failure associated with settlement and/or liquefaction. Based on the information presented previously in this Section, soils on the Project Site would not be susceptible to liquefaction. The site is not located within a State of California Liquefaction Hazard Zone (CDMG 1998). Groundwater was not encountered in any of the borings, which extended to a maximum depth of 75 feet. The historical shallow ground water level at the site is deeper than 50 feet. Below the depths of proposed soil excavation, the soils consist predominantly of dense sand and stiff clay. Therefore, the potential for liquefaction, lateral spreading, and seismic compaction to occur at the site is considered to be remote and impacts are less than significant.

Landslides

The Proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. As discussed above, the Project Site ranges from an average elevation of approximately 150 feet above msl to 106 feet above msl (from north to south). The Project site is not located within a City-designated landslide area or an area identified as subject to seismic slope instability. Due to the relatively flat topography of the Project Site and surrounding area, potential impacts associated with landslides would be less than significant.

Erosion and Topsoil

The Proposed Project would not result in substantial soil erosion or the loss of topsoil. Although construction of the Proposed Project has the potential to result in the erosion of soil during site preparation and construction activities, erosion would be reduced by implementation of appropriate erosion controls during grading. Minor amounts of erosion and siltation could occur during project grading, which would be minimized through adherence to construction Best Management Practices (BMPs) identified in Section IV.F, Hydrology and Water Quality. The potential for soil erosion during the ongoing operation of the Proposed Project is relatively low due to the generally level topography of the area to be developed within the Project Site. Operational erosion would be reduced through adherence to the mitigation measures prescribed in Section IV.F, Hydrology and Water Quality. All grading activities require grading permits from the Department of Building and Safety, which include requirements and standards designed to limit potential impacts to acceptable levels. In addition, all onsite grading and site preparation would comply with applicable provisions of Chapter 11 (Building Regulations), Article 2 (Building Code) of the Inglewood Municipal Code which addresses grading, excavations, and fills. With implementation of the applicable grading and building permit requirements and the application of construction BMPs, a less than significant impact would occur with respect to erosion or loss of topsoil.

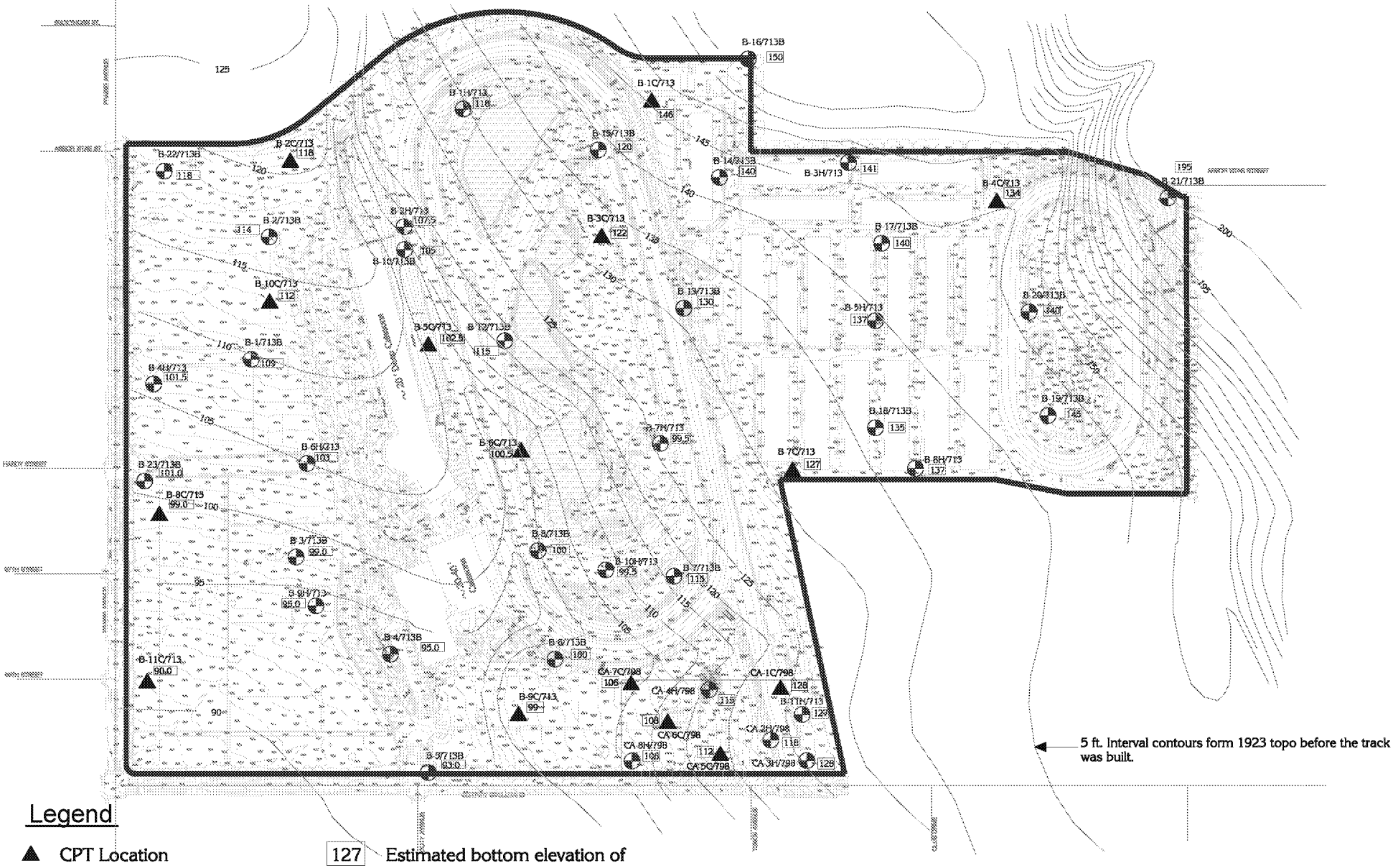
Expansive Soils

The upper clayey soils on the Project Site are expansive and should not be used within two feet of the bottom of pavement or other flatwork. Nonetheless, with adherence to the geotechnical engineering recommendations provided in the Geotechnical Report and the mitigation measures identified in this Section, impacts with respect to expansive soils would be less than significant.

Site Preparation/Grading/Earth Removal

The proposed maximum limit of soils removal across the Project site is shown in Figure IV.C-8, Estimated Bottom Elevation of Removal. This Figure identifies the estimated bottom elevation of soils removal at the exploration locations (soil boring sites), as overlaid on the preliminary rough grading plan (subject to change). It is anticipated that the amount of cut and fill will balance on-site and no export or import of soils will be required.

Prior to the start of grading, demolition will be required to remove any existing improvements, including pavement and structures. The Grandstand and Club house are supported by 22 to 40 feet deep reinforced caisson foundations. There are 6 known oil wells on the subject site. Discussion of abandonment of existing oil wells is presented in Section IV.D, Hazardous Materials/Risk of Upset. It should be anticipated that the buried remnants of previous construction could be encountered anywhere on the site, including foundations, walls, slabs, basements, mud pits, cesspools, tanks and utilities. As shown in Table IV.C-1, the estimated soil removals will involve excavating 3 to 7.5 feet bgs of on-site soils within the Parking Area, 3 to 22.5 feet bgs of on-site soils within the Main Track area, and 3 to 16



Reference: Plans obtained from Cooper, Robertson, and Partners, titled Existing Site Plan, dated 7-06.
Source: Group Delta Consultants Inc., 07/28/08.

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Figure IV.C-8
Estimated Bottom Elevation of Removal

Table IV.C-1
Parameters for Grading, Pavement and Infiltration Structure Design

Area	BH No.	Existing Grade (ft)	Depth of Removal (ft)	Bottom Elevation Removal (ft)	Average Insitu Dry Density (pcf)	Maximum Dry Density (pcf)	Shrinkage Factor (%) (0.92 RC)	R-Value (0-5 ft)	Hydraulic Soil Grouping
Parking Area	B-4H/713	109	7.5	101.5	112.9	132.5	7	15	D
	B-8C/713	102	3	99					
	B-11C/713	93	3	90					
	B-2C/713	121	3	118					
	B-10C/713	115	3	112					
	B-6H/713	106	3	103					
	B-9H/713	98	3	95					
	B-9C/713	102	3	99					
Track Area	B-1H/713	125	7	118	104.6	126	10	5 or less	
	B-2H/713	125	17.5	107.5					
	B-5C/713	124	21.5	102.5					
	B-6C/713	120	19.5	100.5					
	B-10H/713	122	22.5	99.5					
	B-3C/713	125	3	122					
	B-7H/713	122	22.5	99.5					
Barn Area	B-1C/713	149	3	146	108.9	133.5	11	26	
	B-7C/713	137	10	127					
	B-11H/713	130	3	127					
	B-3H/713	144	3	141					
	B-5H/713	141	4	137					
	B-8H/713	140	3	137					
	B-4C/713	150	16	134					

Note: Insitu dry density is averaged over the depth range of proposed removal. Maximum dry density in the Table has 95 percent of relative compaction (ASTM D-1557). Shrinkage factor SF = 1-(rd)E/(rd)C, where (rd)E is the insitu dry density of excavated material; (rd)C is taken as 92% of the maximum dry density of specified relative compaction. Field exploration and laboratory test results indicated that the near surface on site soils consist predominantly of silty clay and clayey silt, which have low permeability. Table Source: Geotechnical Evaluation For Environmental Impact Report, Proposed Residential And Commercial Development, Hollywood Park Redevelopment, Inglewood, California (Table 5),Group Delta Consultants, Inc., March 29, 2007.

feet bgs of on-site soils within the Barn Area. It should be recognized that removals could be locally deeper depending on the actual conditions encountered in grading and the actual finished grade. Based upon soil conditions, grading conditions could go deeper without any significant impacts.

All temporary excavations and grading will be conducted in accordance with the requirements of the City of Inglewood and the grading recommendations outlined in the Geotechnical Report. Any void created from the demolition would be properly backfilled to the limits determined by the project geotechnical engineer, and as specified in the geotechnical reports for site specific detailed building plans required as mitigation at the end of this section. In general, temporary excavations up to 3 feet may strand in vertical cuts. However, Project area soils with sandier layers are prone to sloughing as they dry out and therefore should be sloped. Any soils loosened or disturbed during the demolition would also be removed. Any existing old wells would require re-abandoning or venting, in accordance with applicable regulations. With adherence to the geotechnical engineering recommendations in the Geotechnical Report, and the mitigation measures identified in this Section, impacts with respect to site preparation, grading and earth removals would be less than significant.

Geologic Hazards

A potentially significant adverse impact could occur with respect to causing or accelerating geologic hazards associated with the accidental discovery of undocumented and/or abandoned oil wells which could result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury. Potentially adverse impacts associated with this hazard could be reduced to a less-than-significant level by abandoning accidentally encountered wells according to the current requirements of the California Division of Oil and Gas.

Groundwater

Groundwater was not encountered during GDC's field exploration, to the maximum of 75 feet explored. However, groundwater was encountered by EKI, Inc. during subsurface investigations on the Project site between 70 to 170 feet below ground surface (bgs). Specifically, averaged recorded data by EKI Inc. suggest that groundwater on the Project site ranges between 95 feet bgs in the Parking Area, to 123 feet bgs in the Main Track Area, to 180 feet bgs in the Stables Area. As shown in Table IV.C-1, the proposed soils removal in the Parking Area ranges between 3 and 7.5 feet bgs. In the Track Area, proposed soils removal ranges between 3 and 22.5 feet bgs, and in the Barn Area, proposed soils removal ranges between 3 and 16 feet bgs. Thus, the maximum proposed depth of soils removal is 22.5 feet bgs, well above the shallowest recorded depth to groundwater of 72.45 feet bgs[6] encountered by EKI Inc. during groundwater investigations conducted on the Project site. Therefore, groundwater is not likely to be encountered within the depth of proposed excavation.

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[6] *Erler and Kalinowski, (Grab Groundwater Sampling Location PS-GW-4, Figure 5), October 2006.*

While the recorded groundwater depth is well below the proposed maximum depth of soils removal, it is possible that locally perched groundwater could be encountered near and beneath the existing lake in the center of the Main Track and has the potential to impact the proposed development during construction. During construction, it may be necessary to provide temporary groundwater control provisions in order to allow for the proposed excavation. In addition, there is the potential for shallow perched water to exist anywhere on the property where the water perches in sandy layers underlain by clay. Should groundwater be encountered, it is anticipated that it can be controlled in several ways. One method which is typically practical for the type of conditions encountered at this site would include the installation of perimeter well points that are connected to collector pipes, which convey water to a suitable holding area. Another method is using shallow trenches, sumps and pumps. Compliance with the geotechnical recommendations provided by the project engineer would effectively mitigate any adverse impacts associated with groundwater to less than significant levels.

Land Use Equivalency Program

The preceding analysis addressed impacts associated with construction and operation of the Proposed Project relative to the following issues: (1) seismic hazards, including fault rupture, (2) landslides, (3) erosion and topsoil, (4) expansive soils, (5) site preparation/grading/earth removal, (6) geologic hazards, and (7) groundwater. The proposed Equivalency Program allows for specific limited exchanges in types of land uses occurring on the Project Site.

The exchange of retail, office/commercial and hotel development for residential, retail, office/commercial and hotel development would be accomplished within the same building parameters, and would occur at relatively limited locations within the Project Site. Under the Equivalency Program, there would be no substantial variation in the Project's street configurations, building pad elevations, or the depth of excavation. Potential changes in land use under the Equivalency Program would therefore have no substantial effect on the proposed earth moving activities, including impacts from seismic hazards, landslides, erosion and topsoil, expansive soils, site preparation, grading and earth removal and their associated impacts because only the use of the land is changing. Specifically, the grading, dewatering, and slope stabilization required for the Proposed Project would be the same under the Equivalency Program, as well as the on-site exposure to seismic hazards. Very minor variations regarding foundation types or in the preparation of landscaping areas could occur, however, such variation would be within the range of construction procedures anticipated to occur with the Proposed Project. In addition, development under the Equivalency Program would not cause or exacerbate any impacts that would occur under the Proposed Project.

The Project Design Feature, discussed below, and recommended Mitigation Measures to minimize impacts to geology and soils under the Proposed Project would be implemented, as appropriate, under the Equivalency Program. Therefore, with implementation of the applicable mitigation measures, geologic and soil impacts attributable to the Equivalency Program, as is the case with the Proposed Project, would be less than significant.

CUMULATIVE IMPACTS

Geotechnical impacts related to future development in the City of Inglewood would involve hazards related to site-specific soil conditions, erosion, and ground-shaking during earthquakes. These impacts would be site-specific and would not be common to (nor shared with, in an additive sense) the impacts on other sites. Cumulative development in the area would increase the overall population for exposure to seismic hazards by increasing the number of people potentially exposed. However, with adherence to applicable State and Federal regulations, building codes and sound engineering practices, geologic hazards could be reduced to less-than-significant levels. Furthermore, development of each of the related projects and the Proposed Project, including the proposed Land Use Equivalency Program, would be subject to uniform site development and construction review standards that are designed to protect public safety. Therefore, cumulative geotechnical impacts would be less than significant.

PROJECT DESIGN FEATURES

The following PDFs are incorporated in to the Proposed Project, including the Land Use Equivalency Program and were used in the basis for formulating portions of the environmental analysis with respect to geotechnical hazards. As such, it is recommended that the lead agency incorporate the following project design features as conditions of project approval.

PDF C-1. Development of open space and recreational areas within the RUZ, as delineated in the Geomatrix 2007 Memorandum re Final Report (included in Appendix C-1 to this Draft EIR), shall be consistent with the recommendations of the Geomatrix report which identify the RUZ area as unsuitable for the construction of most structures for human occupancy, but useable for construction of recreational type development (e.g., storage facilities, recreational facilities, greenbelts, parking areas and roads). Structures intended for human occupancy shall not be constructed within the mapped RUZ area. The following uses/facilities/structures are suitable in the RUZ: swimming pool and jacuzzi, tot lots, picnic facilities, meditation gardens, children's playground, fireplace and lounge areas, dog parks, exercise stations (parcourse), parking spaces at ground level (including covered parking), utility routes, both above and below ground, tennis courts, basketball courts, soccer fields and other open sports fields (volleyball courts, football play areas, etc.), game tables and seating areas in the open, restrooms, locker rooms, changing rooms (e.g., pool cabana), pool equipment rooms, storage lockers, entry pavilions, covered walkways (e.g. pergola and trellis), fences, and retaining walls.

MITIGATION MEASURES

Code-Required Measure

MM C-1. All buildings and structures shall be designed and constructed in conformance with the applicable regulations and standards of the latest edition of the Inglewood Building Division pursuant to the latest edition of the California Building Code, Los Angeles County Fire Code,

seismic design standards, and applicable state requirements which are in effect at the time of building permit issuance.

Project-Specific Mitigation Measures

In accordance with the Geotechnical Evaluation for Environmental Impact Report, Proposed Residential and Commercial Development, Hollywood Park Redevelopment, Inglewood, California (the "Geotechnical Report") prepared by Group Delta Consultants, dated March 29, 2007, specific mitigation measures are enumerated as follows, and shall be completed to the satisfaction of the City of Inglewood Department of Building and Safety:

MM C-2. Prior to the start of grading, demolition will be required to remove any existing improvements, including pavement and structures. Any void created from the demolition should be properly backfilled to the limits determined by the project geotechnical engineer. Any soils loosened or disturbed during the demolition should also be removed. The existing old wells may also need to be re-abandoned or vented in accordance with applicable regulations. The presence and location of all existing utilities on the property should be identified. Precautions should be taken to remove, relocate or protect existing utilities, as appropriate.

MM C-3. Prior to the start of grading, all vegetation and topsoil should be stripped. The vegetation should be removed from the site. The topsoil may be stockpiled and reused in planned landscape areas. In addition, any trees and shrubs should be cleared, so that no roots larger than 1-inch in diameter remain. Any soils loosened during removal of tree/shrubs should also be removed.

MM C-4. Uncertified fill and soft native clayey soils cannot be used for foundation support, and therefore, need to be removed and replaced with structural fill, consistent with the findings of site-specific geotechnical evaluation.

MM C-5. Prior to construction, field infiltration testing shall be conducted at locations where infiltration structures are planned.

MM C-6. All grading should conform to the requirements of the City of Inglewood. The grading contractor is responsible for notifying the project Geotechnical Engineer of a pre-grading meeting prior to the start of grading operations and anytime that the operations are resumed after an interruption.

MM C-7. Prior to site grading, uncertified fill and soft native soils should be removed and replaced with structural fill. It should be anticipated that unsuitable oversized debris may be present in the existing fill on-site. The actual limits for removals should be determined by the project Geotechnical Engineer depending on the actual conditions encountered, consistent with the findings of a site-specific geotechnical evaluation.

MM C-8. During earthwork activities, the bottoms of completed excavations shall be observed by the project Geotechnical Engineer, while it is proof-rolled with loaded equipment. Any loose or yielding soils shall be over-excavated and recompacted to the limits determined by the project Geotechnical Engineer.

MM C-9. Structural fill should consist of predominantly sandy soils, and should be free of expansive clay, rock greater than 3 inches in maximum size, debris and other deleterious materials. All structural fill should be compacted to at least 95 percent of the maximum dry density determined by ASTM D 1557-91. Fill placed in nonstructural and landscape areas should be compacted to at least 90 percent.

MM C-10. All earthwork and grading shall be performed under the observation of the project Geotechnical Engineer. Compaction testing of the fill soils shall be performed at the discretion of the project Geotechnical Engineer. Testing shall be performed for approximately every 2 feet in fill thickness or 500 cubic yards of fill placed, whichever occurs first. If specified compaction is not achieved, additional compactive effort, moisture conditioning, and/or removal and recompaction of the fill soils will be required.

MM C-11. All materials used for asphalt, concrete and base shall conform to the 2000 "Green Book" or the equivalent, and shall be compacted to at least 95 percent relative compaction.

MM C-12. If, in the opinion of the Geotechnical Engineer, Contractor, or Owner, an unsafe condition is created or encountered during grading, all work in the area shall be stopped until measures can be taken to mitigate the unsafe condition. An unsafe condition shall be considered any condition that creates a danger to workers, on-site structures, on-site construction, or any off-site properties or persons.

MM C-13. Groundwater encountered during temporary excavations shall be controlled using shallow trenches, sumps and pumps. In general, temporary excavations up to 3 feet deep may stand in vertical cuts; sandier layers should be sloped. Construction slopes in the parking Area and Barn Area should be made with an inclination of 1(H) to 1(V). Construction slopes in the Track Area should be made with an inclination of 1.5(H) to 1(V). If the above-recommended slopes are not feasible due to site restrictions, or if surcharge loads other than a nominal value of 240 psf due to traffic loads exist adjacent to the excavation, a flatter slope or temporary shoring may be needed. Earth pressure can be provided if temporary shoring is to be used.

MM C-14. Surcharge loads, such as vehicular traffic, heavy construction equipment, and stockpiled materials should be kept away from the top of temporary excavations of a horizontal distance at least equal to the depth of excavation. Surface drainage should be controlled and prevented from running down the slope face. Ponded water should not be allowed within the excavation. Workmen should be adequately protected within temporary excavations. Construction equipment and foot traffic should be kept off excavation slopes to minimize sloughing.

MM C-15. All excavation slopes and shoring systems should meet the minimum requirements of the Occupational Safety and Health Association (OSHA) Standards. Maintaining safe and stable slopes on excavations is the responsibility of the contractor and will depend on the nature of the soils and groundwater conditions encountered and his method of excavation. Excavations during construction should be carried out in such a manner that failure or ground movement will not occur. The contractor should perform any additional studies deemed necessary to supplement the information contained in this report for the purpose of planning and executing his excavation plan.

MM C-16. It should be anticipated that a site-specific design-level geotechnical report for each new project within the tract will be required. Specifically, after detailed building plans have been developed for each area of the Project Site, additional geotechnical explorations, testing, and analyses shall be performed, as warranted, in order to develop building-specific foundation recommendations. The Project shall be designed and constructed in accordance with the recommendations provided in these additional site specific geotechnical reports.

MM C-17. The expansion potential of subgrade soils within foundation depth under building pads should be tested in building specific site investigations, and recommendations regarding expansive soils should be presented in site-specific geotechnical reports.

MM C-18. Soil corrosivity should be tested in building specific site investigations. This potential should be considered in the design and protection of underground metal utilities.

MM C-19. Assuming R-values of 15 after grading, the following pavement sections for Traffic Index (TI) values of 5, 6, and 7 are recommended:

Traffic Index (TI)	Section Thickness (Feet) AC Over AB
5	0.25 AC/0.65 AB
6	0.30 AC/0.85 AB
7	0.35 AC/1.05 AB

Traffic Index value 5 is recommended for car parking and non-truck driveways. Traffic index of 6 or higher may be used for truck areas or for the streets. The upper 24 inches of subgrade supporting pavements should be compacted to at least 95 percent relative compaction (ASTM D1557-1990). For PCC pavements in areas of some truck traffic, a pavement section of 6 in PCC over 12 inch of aggregate base is recommended. Actual pavement section thickness is subject to verification based on the "R" values of on-site soils, which are expected to be tested after grading.

MM C-20. Proper quality control of grading is required. The Project Applicant shall ensure geotechnical testing and observation be conducted on-site by a state certified geotechnical engineer during any excavation and earthwork activities to ensure that recommendations provided in the Project Geotechnical Report are implemented where applicable.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the mitigation measures recommended above, the Proposed Project's and the Land Use Equivalency Program's potential adverse impacts associated with geology and soils would be reduced to less than significant levels.

With respect to threshold question (a)(i), the Proposed Project and the proposed Land Use Equivalency Program has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of the Potrero Fault. Implementation of the Project Design Feature above (see PDF C-1), would restrict development in the delineated RUZ area to non-habitable structures and thus would mitigate this hazard to a less than significant level.

With respect to threshold question (a)(ii), the Proposed Project and the Land Use Equivalency Program has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. However, implementation of mitigation measures MM C-1 through MM C-20, above, would mitigate such hazards to a less than significant level.

With respect to threshold questions (a)(iii) and (iv), the Proposed Project Site is not prone to liquefiable soils or landslides and thus would not expose people or structures to potential substantial adverse effects associated with such features.

With respect to threshold question (b), construction of the Proposed Project and the Land Use Equivalency Program has the potential to result in the erosion of soil during site preparation and construction activities. Implementation of the applicable grading and building permit requirements and the application of construction BMPs would mitigate the effects of erosion or the loss of topsoil to a less than significant level.

With respect to threshold question (c), with implementation of the mitigation measures, development of the Proposed Project would mitigate the risk of on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse to less than significant levels.

With respect to threshold question (d), with adherence to the geotechnical engineering recommendations provided in the Geotechnical Report and the mitigation measures identified in this Section, impacts with respect to expansive soils would be less than significant.