

4.11 HAZARDOUS MATERIALS

Introduction

This section discusses existing conditions in the proposed Corridor Plan Area¹ and on the Bay Meadows project site, including the status of potential public health and environmental issues related to soil and groundwater contamination. The analysis contained in this section is based upon a review of information regarding soil contamination, groundwater quality, and surface water quality prepared by Erler & Kalinowski, Inc. (EKI), Engineering Consultants, in October 2002, and Lowney Associates, Geotechnical Consultants, in April 2003.² Copies of the October 2002 EKI reports and April 2003 Lowney Associates reports are available for public review at the City of San Mateo Planning Division.

Throughout this section, references to the Corridor Plan Area include the Bay Meadows project site unless otherwise noted. The setting discussion prepared for the Corridor Plan Area would also be applicable to the regional and local vicinity conditions of the Bay Meadows project site. Discussion of impacts and corresponding mitigation measures are provided separately for each project.

Existing Conditions

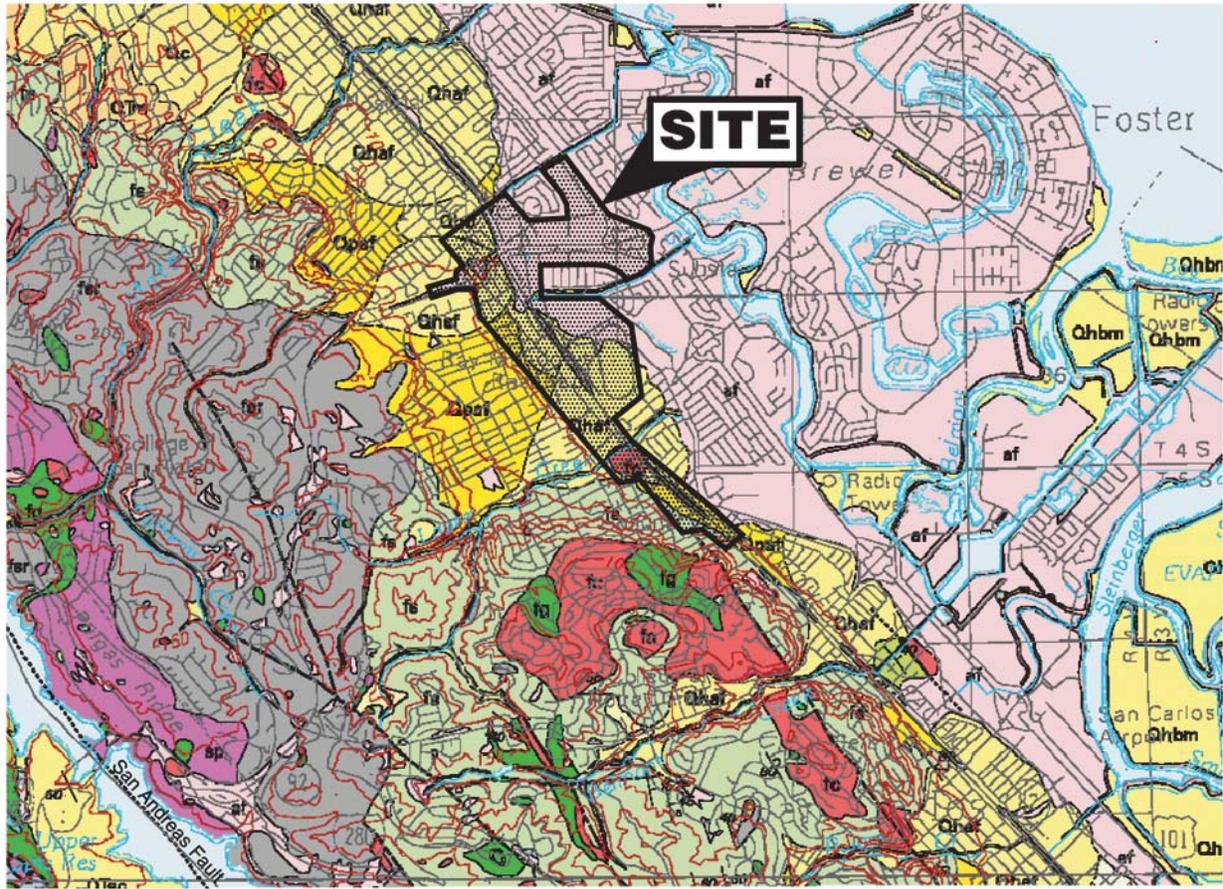
Regional Soil and Groundwater Conditions

Artificial fill occupies a large portion of the northeastern portion of the project area as shown on Figure 4.11-1. The fill was placed in the late 1800s over the marshes of San Francisco Bay to create new land, and consists of heterogeneous mixtures of loose to very well consolidated gravel, sand, silt, clay, rock fragments, organic matter, and man-made debris. The thickness varies throughout the area, from generally thin along the western fill boundary to more than 30 feet in some places. This area also includes artificial fill placed since 1965 as highway embankments (e.g., Highways 92 and 101, and portions of El Camino Real) which is generally well engineered, and therefore, more homogeneous, compacted and quite firm. Almost all fill placed before 1965 is not compacted.

The artificial fill is generally underlain by Holocene Bay Mud, which overlies Holocene and Pleistocene alluvial and fluvial deposits. Test borings on the Bay Meadows project site indicate that Bay Mud is up to 10 feet thick in that location (Lowney, 2003c). The Holocene alluvial fan and fluvial deposits consist mostly of medium dense to dense gravelly sand or sandy gravel that generally grades upward to sandy or silty clay. The Holocene basin deposits consist of silty clay and clay at the distal edges of alluvial fan deposits.

¹ Because differences in potential impacts would not occur between Corridor Plan Scenarios A and Z, no distinction between the development scenarios is made in this evaluation.

² Since this assessment is summarized from reports conducted by EKI and Lowney Associates, this section therefore incorporates by reference all of the sources from these reports.



EXPLANATION

- | | | | |
|--|---|---|---|
|  af | Artificial Fill (Historic) |  fs | Franciscan Sandstone with Siltstone and Shale (Cretaceous and Jurassic) |
|  Qhbm | Bay Mud (Holocene) |  fg | Franciscan Greenstone |
|  Qhb | Basin Deposits (Holocene) |  fc | Franciscan Chert |
|  Qhaf | Alluvial Fan and Fluvial Deposits (Holocene) |  sp | Serpentinite |
|  Qpaf | Alluvial Fan and Fluvial Deposits (Pleistocene) |  far | Sheared Rock (Melange) |
-  Fault; dashed where approximately located, dotted where concealed
 \swarrow_{35} Strike and dip of bedding

Source: Lowney Associates



FIGURE 4.11-1
Vicinity Soils Map - San Mateo, California

The Pleistocene alluvial fan and fluvial deposits are similar, and can be distinguished from the younger deposits because they are generally at higher elevations, are more dissected by erosion, and have stronger soil development. Bedrock, most likely of the Franciscan assemblage, underlies the historic, Holocene, and Pleistocene deposits.

Two general soil map units have been mapped by the Soil Conservation Service (SCS), currently known as the Natural Resource Conservation Service (NRCS), within the project area. These include the Urban Land-Orthents-Reclaimed and the Urban Land-Orthents units (Lowney, 2003b). The Urban Land Orthents-Reclaimed consist of urban land and very deep, nearly level, poorly drained and somewhat poorly drained soils on reclaimed tidal flats. This unit coincides mostly with the geologic unit of artificial fill overlying Bay Mud west of Highway 101. The Urban Land-Orthent soils consist mostly of urban land and deep and very deep, nearly level and gently sloping, poorly drained to well drained soils on alluvial fans and similar deposits west of the previous unit (Lowney, 2003c).

Groundwater

The groundwater in the Corridor Plan Area is generally encountered at depths ranging from approximately 4 feet on the eastern boundary of the project area, to approximately 20 feet along the western boundary of the area. Groundwater beneath the project area and the vicinity may be influenced by tidal fluctuations due to its proximity to San Francisco Bay, however the controlled water levels of the Marina Lagoon likely minimize this effect.

On the Bay Meadows project site, groundwater depth in July 2002 varied from approximately 7.5 to 10 feet below the existing ground surface. The groundwater contours are irregular but indicate a general northeasterly groundwater flow direction, generally towards Seal Slough (also called Marina Lagoon) and San Francisco Bay (Lowney, 2003a). Groundwater recharge occurs mainly through infiltration of precipitation in open fields, yards, and parks and along open drainage channels, and through underflow from bedrock and alluvial and fluvial units west of the area.

The project area is intensely developed and residential, industrial, and commercial facilities are connected to a municipal water supply. There are no known private domestic water supply wells in the project area. A well search performed by the Groundwater Protection Program of the San Mateo County Health Services Agency identified a total of five irrigation wells. Three irrigation wells are located on Pacific Boulevard immediately south of Highway 92, one well is located on Pacific Boulevard near Hillsdale Avenue, and one well is located on West 28th Avenue at Edison Street (Lowney, 2003c). Except for one of the three wells on Pacific Boulevard near Highway 92, which was measured at a depth of 192.5 feet in 1991, the depths of the wells are unknown.

On-site Sources of Contamination

Information on existing soil and groundwater contamination in the project area is primarily based upon a Phase One Environmental Site Assessment and a Soil and Groundwater Investigation conducted for the Bay Meadows Racetrack by EKI and the Limited Environmental Assessment (EA) conducted by Lowney Associates for the Corridor Plan Area. The Lowney report included a site reconnaissance of the Corridor Plan Area, a regulatory agency list review of known or suspected contaminated properties, known handlers or generators of hazardous waste, known waste disposal facilities, and permitted underground storage tanks within a half-mile radius of the Corridor Plan Area, as well as a historic property review of the Corridor Plan Area and adjacent properties. The agency lists consulted during the Limited EA included the following: U.S. Environmental Protection Agency (USEPA) National Priorities List (NPL); USEPA Comprehensive Environmental Response, Cleanup and Liability Information System (CERCLIS); USEPA Resource Conservation and Recovery Act (RCRA) Large and Small Facilities Which Report Generation, Storage, Transportation, Treatment or Disposal of Hazardous Waste; Emergency Response Notification System (ERNS) Report of Reported Releases of Oil and Hazardous Substances; California Environmental Protection Agency (Cal-EPA) CalSites List of Active Annual Workplan Sites; California Waste Management Board (CWMB) Solid Waste Information System (SWIS), Active Landfills, Closed and Inactive Landfills, and Transfer Station Lists; Cal-EPA Leaking Underground Storage Tank Information List; and Cal-EPA, Department of Toxic Substances Control-Report of Facilities with Likely or Threatened Releases of Hazardous Substances, Medium/Low Priority and No Further Action Sites.

Groundwater

Groundwater testing was conducted at the Bay Meadows Racetrack on September 30 and October 1, 2002 by EKI. A well identified on the Bay Meadow project site on Pacific Boulevard near Hillsdale Avenue was reported as contaminated with 1,2-dichloroethane and trichloroethane (Lowney, 2003c). Sampling of the existing well was not performed by EKI because thick silt deposits were encountered in the well casing which prevented collection of a groundwater sample. No additional information is available for this well. There is no information available on the other four irrigation wells identified by the Groundwater Protection Program of the San Mateo County Health Services Agency.

Numerous monitoring and some extraction wells have been installed at various locations in conjunction with soil and groundwater investigations, mainly along the El Camino Real corridor and also on both sides of Highway 92. Many of these have been destroyed or are no longer in use. EKI's Phase One Report and Lowney's Limited Environmental Assessment identified several hazardous materials release sites (e.g., the C&P Services Car Wash at 28th Avenue and El Camino Real) located within the Corridor Plan Area. EKI reports groundwater concentrations of total extractable petroleum hydrocarbons expressed as diesel (TPH-d), TPH-g, benzene, and MTBE as high as 120,000 ug/l, 2,000,000 ug/l, 9,690 ug/l, and 16,000 ug/l, respectively, at some of these sites.

Groundwater samples taken from six locations on the Bay Meadows Racetrack site, near the railroad tracks, were tested for total purgeable petroleum hydrocarbons expressed as gasoline (TPH-g) and related constituents. These samples were collected to assess potential impacts to the Bay Meadows project site from upgradient hazardous material release sites located in the Corridor Plan Area. Concentrations of TPH-g and Methyl Tertiary Butyl Ether (MTBE) that exceed potentially relevant screening levels were detected in the groundwater at one sample site. The California Maximum Contaminant Levels (MCLs) for MTBE are 13 micrograms per liter (ug/l). An MCL for TPH-g has not been promulgated, but the Regional Water Quality Control Board (RWQCB) has established an environmental screening level of 100 ug/l. The TPH-g (1,000 ug/l) and MTBE (450 ug/l) found in the groundwater at this location likely originates from one or more upgradient petroleum release sites, most likely the former C&P Services Car Wash identified in EKI's Phase One Report. Chloroform levels (in the range of 10 to 20 ug/l) were also found in the groundwater, although not exceeding potentially relevant screening levels. The MCL for chloroform is 80 ug/l. The chloroform likely originates from a leaking water line (there is a water line adjacent to the sampling location from which the chloroform was found) (EKI, 2002b).

Hazardous Materials Use

Based on the survey of the Corridor Plan Area, Lowney Associates observed residential, commercial, retail, office, public service, and light industrial uses. Users of substantial quantities of hazardous materials appeared to include service stations, auto repair and maintenance facilities, machine shops, dry cleaners, and other light industrial and commercial uses. A complete list of readily observable hazardous materials users and potential hazardous materials concerns relevant to the project area can be found in Tables 1 and 2, respectively, of the April 2003 Lowney Associates report prepared for the Corridor Plan Area.

The Bay Meadows project site was observed in 1996 by Lowney to have an above-ground storage tank used to store diesel and gasoline and small quantities of hazardous materials used on-site, including transformers, pesticides, fertilizers, and herbicides (Lowney, 2003a). In 2002, EKI observed 16 in-service pad-mounted transformer locations and an aboveground storage tank (AST) used to store diesel and gasoline. Evidence of substantial spills or releases of these materials was not found (EKI, 2002a).

Hazardous Materials

Underground Storage Tanks

According to a regulatory database search performed by Lowney Associates, 56 facilities within the Corridor Plan Area currently contain or are suspected to contain one or more registered Underground Storage Tanks (USTs) and therefore are likely to use, store, and/or generate hazardous materials. Many of these facilities have publicly reported releases which could have potentially affected groundwater (Lowney, 2003b). Some of these releases are known to have impacted groundwater (EKI, 2002a).

Bay Meadows Racetrack and Bay Meadows Operating Company, both listed at 2600 South Delaware Street, are listed in the regulatory agency database as having an AST and being generators of hazardous wastes,

including Polychlorinated Biphenyls (PCBs), organic aqueous solutions, empty chemical containers, and waste oil. Three former USTs in the historical practice area removed in 1999 were also listed; however this area is no longer a part of the Bay Meadows project site. Furthermore, this area is downgradient of the project site. Soil and groundwater sampling were performed at each UST and soil removal location. Based on the results of sampling, the San Mateo County Human Services Agency issued a letter, dated 15 April 1999, stating that no further action was required concerning the USTs and contaminated soil.

Lead-based Paint

Lead oxide and lead chromate were commonly used in paints until 1978 when the Consumer Product Safety Commission banned the use of lead as an additive in paint. Currently, the U.S. EPA and U.S. Department of Housing and Urban Development are proposing additional lead-based paint regulations.

Since many of the structures within the Corridor Plan Area were constructed prior to 1978, it is possible that many structures have lead-based paints. The existing structures at the Bay Meadows project site include both recently constructed buildings (since 1980) and older buildings dating from the period when the track first opened in the 1930s. According to the EKI Phase One Environmental Assessment, limited lead-based paint surveys were performed by Environmental Partners Inc. (EPI) on the Bay Meadows Racetrack in March 1999. Lead was detected in four out of six paint chip samples, one of which met the U.S. Department of Housing and Urban Development definition of lead-based paint.

Transformers

EKI observed 16 transformer locations on the Bay Meadows site. The transformers at one location are owned by PG&E; all other transformers are owned by PaineWebber Real Estate Fund. During the walk-through, small oil-like stains were noted at three transformer locations; however, stains were only noted on the transformers or the transformer pads, not adjacent soil. Further, according to the previous Phase One Environmental Site Assessment prepared by EPI in 1999, a soil sample collected adjacent to one of the transformers where stains were noted did not contain PCBs. Soil contaminated with oil-containing PCBs could cause serious adverse human health and environmental effects by contaminating groundwater. Based on EKI's observations and the available data, soil near transformer locations is not likely impacted by PCBs (EKI, 2002a). An equivalent level of analysis of transformers for the rest of the Corridor Plan Area has not been done, but would be required for a given specific site at such time that a project is proposed for that site. Based on site uses, it is likely that transformers are present in other portions of the Corridor Plan Area.

Water Storage Pond

The infield of the Bay Meadows project site has historically had up to three retention ponds, two of which are no longer present. The southern portion of the track infield currently contains one storm water retention pond, which was constructed in 1998. This pond receives storm water runoff from the track and infield, as well as horse wash water. The pond discharges to the Saratoga Drive storm drain, which empties into 19th

Avenue Channel. The pond and its discharge are monitored by Bay Meadows Operating Company in accordance with the Storm Water Pollution Prevention Plan (SWPPP) prepared for the Phase I project site.

The SWPPP was prepared primarily to address horse wastes and soap in surface water runoff. The SWPPP requires several best management practices (BMPs) to address these potential contaminants, such as:

- Daily collection of soiled straw;
- Storage of soiled straw under cover;
- Daily sweeping of streets;
- Basket screens in storm water catch basins and trench drains; and
- Prompt removal of manure from horse wash areas and uncovered areas.

In addition to these measures, horse wash water and runoff from the track and infield are directed to the pond. The pond contains aerators and plants and is intended to remove solids, oxygen demand, ammonia, and soaps.

The SWPPP requires “dry” inspections on a quarterly basis and “wet” (i.e., during a stormwater discharge event) inspections on a monthly basis to assess the effectiveness of the BMPs. The pond and stormwater discharge from Bay Meadows are sampled and analyzed during two stormwater discharge events each year. The pond is sampled and analyzed an additional three times in the months leading up to the rainy season. The BMPs are assessed and modified, as appropriate, on an annual basis. Annual reports are prepared and submitted to the California Regional Water Quality Control Board (RWQCB).

Storm Water Annual Reports prepared by EKI in 1999, 2000, 2001, and 2002 for the Bay Meadows Racetrack all concluded that the BMPs implemented on the project site are working effectively to mitigate significant impacts to receiving waters from the project site’s storm water runoff (EKI, 2002a).

Asbestos

Asbestos was commonly used in building materials until the early 1980s, when its use in the United States began to be phased out because, as a toxic substance and a carcinogen, it can cause several serious diseases in humans such as lung cancer. Symptoms of these diseases typically develop over a period of years following asbestos exposure. Asbestos-containing materials (ACMs) in buildings do not always pose a hazard to occupants and workers in those buildings. ACMs become a problem when asbestos fibers get into the air and are inhaled. Based on the age of buildings present in the Corridor Plan Area, the potential exists for ACMs to be present.

According to the EKI Phase One Environmental Assessment, limited asbestos surveys were performed by EPI on the Bay Meadows Racetrack in 1999. Reportedly, only one out of 14 samples collected from the

grandstand and analyzed for ACMs was found to contain ACMs; however based on the age of the buildings, the potential exists for ACMs to be present in materials not sampled (EKI, 2002a).

Pesticides

Soil testing was conducted at the Bay Meadows site on September 24, 2002 by EKI. Soil samples taken from five different areas on the Bay Meadows site were tested for organochlorine pesticides, chlorinated herbicides, lead and arsenic. The chemicals detected were 4,4'-dichlorodiphenyldichloroethane (4,4'-DDD), dieldrin, lead, and arsenic (EKI, 2002b), all of which are potentially harmful to humans.

EKI compared the soil data to potentially relevant screening levels, including (a) regional background concentration ranges; (b) disposal criteria (i.e., Total Threshold Limit Concentration and ten times the Soluble Threshold Limit Concentration); and (c) RWQCB, San Francisco Bay Region, Risk-Based Screening Levels (RBSLs) for groundwater protection, urban area ecotoxicity, residential direct exposure, and commercial/industrial direct exposure. According to the RWQCB guidance document entitled *Application of Risk Based Screening Levels and Decision Making at Sites with Impacted Soil and Groundwater*, the value of the detected chemicals "...are considered to be very conservative, and under most circumstances...the presence of a chemical at concentrations below the corresponding value can be assumed to not pose a significant threat to human health and the environment" (EKI, 2002b).

Lead and 4,4'-DDD concentrations detected in the soil samples were below potentially relevant screening levels. Arsenic concentrations detected in some of the soil samples were above direct exposure RBSLs, but were below other potentially relevant criteria and were within the range of typical background concentrations. Dieldrin concentrations detected in some soil samples were above groundwater protection RBSLs, but were below other potentially relevant criteria. Since the dieldrin did not appear to be widespread, EKI concluded that pesticides at the Bay Meadows site as a whole were not a threat to groundwater due to the levels of dieldrin detected. It is considered unlikely that remediation of the soil at the Bay Meadows site would be required due to the pesticide, lead, and arsenic concentrations detected (EKI, 2002b).

Due to the urban nature of the Corridor Plan Area it is unlikely that substantial amounts of pesticides have been used; however, the potential for their use exists. Although an analysis of the use of pesticides at other locations in the Corridor Plan Area has not been conducted, it is unlikely that there are other sites within the Corridor Plan Area that have used pesticides at a scale and intensity equivalent or greater than that used at the Bay Meadows Racetrack.

Regulatory Database Search

The Regulatory Database search performed by Lowney Associates listed numerous facilities within the Corridor Plan Area as well as off-site facilities one-eighth of a mile upgradient of the Corridor Plan Area, that are users of hazardous materials and/or generators of hazardous wastes and are also located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (also

known as the Cortese List) (Lowney, 2003b). The facilities listed in the Cortese databases located both within and outside of the Corridor Plan Area could potentially affect groundwater beneath the project area depending upon the volume of the release, the remedial measures taken, if any, and the gradient differential.³

Regulatory Context

Hazardous substances are extensively regulated by federal, State, regional, and local regulations, with the major objective of protecting public health and the environment. In general, these regulations: provide definitions of hazardous substances; establish reporting requirements; set guidelines for handling, storage, transport, remediation and disposal of hazardous wastes; and require health and safety provisions for both workers and the public. Regulatory agencies also maintain lists, or databases, of sites that are classified as hazardous waste generators or that store hazardous substances in USTs as well as sites where soil or groundwater quality may have been affected by hazardous substances.

Federal

The Clean Air Act (CAA) requires the U. S. Environmental Protection Agency (EPA) to develop and enforce regulations to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health. In accordance with Section 112 of the CAA, EPA established National Emissions Standards for Hazardous Air Pollutants (NESHAP) to protect the public. Asbestos was one of the first hazardous air pollutants regulated under Section 112. On March 31, 1971, EPA identified asbestos as a hazardous pollutant, and on April 6, 1973, EPA first promulgated the Asbestos NESHAP in 40 CFR Part 61.

The Asbestos NESHAP requires facility owners and/or operators involved in demolition and renovation activities to control emissions of particulate asbestos to the outside air because no safe concentration of airborne asbestos has ever been established. The primary method used to control asbestos emissions is to adequately wet the ACM with a wetting agent prior to, during and after demolition/renovation activities.

State

The California Environmental Protection Agency (Cal EPA), Department of Toxics Substances Control (DTSC), regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. In San Mateo County, remediation of contaminated sites is performed under the oversight of the Cal EPA and with the cooperation of the County Division of Environmental Health and the San Francisco Bay RWQCB. At sites where contamination is suspected or known to occur, the project sponsor is required to perform a site investigation and prepare a remediation plan, if necessary. For typical development projects, actual site remediation is done either before or during the construction phase of the project.

³ Complete information regarding the spills and releases within the Corridor Plan Area is in the April 10, 2003b Lowney Associates report which is available for public review at the City of San Mateo Planning Division.

The State of California Occupational Safety and Health Administration's (Cal/OSHA) Lead in Construction Standard (Title 8 CCR Section 1532.1) covers all construction work where an employee may be exposed to lead including metallic lead, inorganic lead compounds, and organic lead soaps, but not organic compounds.

County

Site remediation or development may be subject to regulation by other agencies. For example, if dewatering of a hazardous waste site were required during construction and the water was found to be contaminated, then the water could not be directed to the storm-drain without pretreatment and the appropriate permit. Depending on the level of contamination, the water may be able to be pumped into the sewer, which would require a permit and approval from the local sanitary district. If the sewer district would not accept the water then it would either need to be treated onsite to a level acceptable to the sewer authority or stored and trucked off. If the water is not contaminated then a permit would be needed from the San Mateo County Department of Public Works to discharge into the storm drain (Peterson, 2003).

The San Mateo County Hazardous Waste Management Program (HWMP) provides for programs to assist small-quantity generators, via educational outreach, in providing for proper storage and disposal of hazardous materials. Throughout San Mateo County, a Hazardous Materials Business Plan must be prepared for the County by businesses that use or store hazardous materials. For removal of USTs, the County Division of Environmental Health and the San Mateo Fire Department have regulatory authority. A closure plan for UST removal must be prepared by the project sponsor and submitted to the County Division of Environmental Health. Upon approval of the UST closure plan, the Division of Environmental Health would issue a permit for removal.

City Policies

As part of the Safety Element of the General Plan, the City of San Mateo has adopted the following policies regarding the use, storage, transport, and disposal of hazardous materials:

S 5.1: County Cooperation. Cooperate with the County of San Mateo in the regulation of hazardous materials and transportation of such material in San Mateo.

State legislation has designated counties as the level of government to assume the lead role in subregional planning for hazardous waste management. The San Mateo County Departments of Health, Environmental Management, Public Works, and District Attorneys Office have direct responsibilities for planning and implementing the County Hazardous Waste Management Plan on behalf of all cities in the County.

S 5.2: County Hazardous Waste Management Plan. Adopt by reference all goals, policies, implementation measures, and supporting data contained in the San Mateo County Hazardous Waste Management Plan.

The County Hazardous Waste Management Plan (HWMP) establishes a comprehensive approach to management of hazardous wastes in San Mateo County, including siting criteria for new waste management facilities, educational and enforcement efforts to minimize and control the waste stream, and maintenance of a unified data base on waste generators. Other policies adopted by the City of San Mateo will elaborate and

further define aspects of the County HWMP which reflect local conditions and objectives, but which are consistent with the overall direction of the County HWMP.

S 5.3: On-site Waste Treatment. Promote on-site treatment of hazardous wastes by waste generators to minimize the use of hazardous materials and the transfer of waste for off site treatment.

The optimal methods of hazardous waste management are either source reduction, such as substituting alternative raw materials or altering production processes to reduce the amount of wastes generated, or on-site recycling, which reuses the generated waste in the production process or as a marketable by-product. The HWMP has adopted a goal of a 40% reduction in waste generation by the year 2000 through educational efforts including preparation of informational pamphlets, the sponsoring of seminars on alternative technologies, and directly assisting firms in assessing their reduction potential, and by requiring large waste generators to submit waste reduction plans.

S 5.4: Transportation Routes. Restrict the transportation of hazardous materials and waste to truck routes designated in Circulation Policy C-1.3, and limit such transportation to non-commute hours.

Risks associated with hazardous waste spills are exacerbated during transportation since such spills would be uncontained and could affect a substantial population of motorists, pedestrians and occupants of nearby residences and businesses. Transportation during peak commute hours increases risks due to the increased surrounding population, increased accident potential during such hours, and the difficulty in obtaining emergency response through traffic congestion. Transportation through local, residential streets is unacceptable due to the risks posed to residents.

S 5.9: Shared Data. Investigate means of sharing County data on businesses which store hazardous substances with local emergency service providers, such as the Police and Fire departments, as well as the Public Works Department for the wastewater source control program.

The first emergency units which would respond to a local emergency would be the San Mateo Police and Fire departments. These units should have adequate information sources to determine the location and types of hazardous substances which are likely to be encountered at commercial and institutional locations throughout the City. The Public Works Department would need to respond to hazardous substances that may impact the City's Wastewater Treatment Plant or stormwater drainage system.

S 5.10: Contaminated Sites. Require the clean-up of contaminated sites indicated on the Hazardous Waste and Substances Sites List published by the State Office of Planning and Research in conjunction with substantial site development or redevelopment, where feasible.

Sites within San Mateo which are contaminated with hazardous substances are threats to the quality of ground water aquifers and should be cleaned through decontamination of soils and filtration of ground water. Clean-up should be required in conjunction with redevelopment of the property or major expansions of existing uses.

S 5.11: Cost Recovery. Require businesses which generate hazardous waste or applicants for hazardous waste management facilities to pay necessary costs for implementation of the HWMP programs and for application costs, and to pay for costs associated with emergency response services in the event of a hazardous material release, to the extent permitted by law.

Provisions of State law allow for cost recovery for permitting and enforcement actions for hazardous waste generators and for costs associated with applications for new hazardous waste management facilities. Application costs for hazardous waste management facilities would include regulatory fees, license fees, fees relating to the environmental review process, costs of required public notice, costs of the citizens local

advisory committee, and continuing monitoring fees. In addition, the costs associated with emergency response services, which might include spill containment, traffic control and area evacuation should be passed on to the business operator having responsibility for the hazardous material released.

Impacts and Mitigation Measures

Significance Criteria

According to Appendix G of the *CEQA Guidelines*, a substantial impact related to hazardous materials would occur if the project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; or
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

Methodology

This impact analysis focuses on potential effects of hazardous materials or waste associated with contamination within the Corridor Plan Area and on the Bay Meadows project site. The evaluation was made in light of project plans, current conditions within the plan area, applicable regulations and guidelines, and the effectiveness of any remedial measures.

With regard to potential impacts associated with the Corridor Plan,⁴ it should be noted that the Corridor Plan would involve only a change in policy and regulations governing development within the Corridor Plan Area and does not include any specific development proposals. If the Corridor Plan is not adopted, development would continue to be allowed within the Corridor Plan Area per the existing policies and regulations established by the City's General Plan and its implementation mechanism of the Zoning Code. If the Corridor Plan is adopted and implemented, individual specific proposals for development would be subject to their own environmental review process under CEQA and to implementation of project specific mitigation measures, if necessary.

⁴ Because differences in potential impacts would not occur between Corridor Plan Scenarios A and Z, no distinction between the development scenarios is made in this evaluation.



Corridor Plan Impacts and Mitigation Measures

This section provides an environmental evaluation of the potential impacts that could result with implementation of the Corridor Plan. The potential for impacts associated with hazardous materials would be the same for both Corridor Plan development scenarios (Scenarios A and Z) and therefore, no distinction between the scenarios is made in this evaluation.

Soil Contamination

Impact Hazards-CPI: Development associated with the Corridor Plan (Scenarios A and Z) would result in ground-disturbing activities during construction and operation of future uses in the Corridor Plan Area that could potentially expose construction workers and future occupants of the site to contaminated soil conditions. This would be a potentially significant impact.

Development within the proposed Corridor Plan Area could result in the exposure of construction workers and future residents to potentially contaminated soils due to improper removal of existing hazardous materials on site; deposition of lead-based paint chips during demolition of structures; leakage from the USTs found in the area; other historic releases of hazardous materials to soil or groundwater in the area; or contamination from transformers in the Corridor Plan Area. Therefore, this is considered to be a potentially significant impact as a public health hazard to construction personnel and future site occupants.

Hazardous Materials

Users of substantial quantities of hazardous materials observed within the Corridor Plan Area include service stations, auto repair and maintenance facilities, machine shops, dry cleaners, and other light industrial and commercial hazardous materials users. Many of these facilities have publicly reported releases. The contamination could impact the project area, depending upon the effectiveness of cleanup efforts. In addition, improper removal or disposal of any existing hazardous materials on site, prior to construction of a specific project, could result in an accidental spill or release of such materials, which could result in localized soil contamination or other hazardous conditions.

Underground Storage Tanks

Since previously mentioned, 56 facilities within the Corridor Plan Area currently contain or are suspected to contain one or more registered USTs and therefore are likely to use, store, and/or generate hazardous materials. Many of these facilities have publicly reported releases that could have potentially affected groundwater (Lowney, 2003b). Some of these releases are known to have impacted groundwater (EKI, 2002a). Depending on (a) the location and concentration of contaminants and (b) the progress of remediation efforts, construction workers and future site occupants could be exposed to hazardous materials present in soil and groundwater as a result of hazardous materials releases.

Lead-Based Paints

Since many of the structures within the Corridor Plan Area were constructed prior to 1978, it is possible that lead-based paints may have historically been used. Deterioration of the lead-based paints could result in lead contamination of soil adjacent to these structures. Demolition of existing structures with painted surfaces containing lead-based materials would potentially affect soil quality, if lead-based paint chips from these structures are deposited in the soil during demolition. Lead-contaminated soils, in turn, could expose construction workers and/or occupants of structures within the Corridor Plan Area to contaminated soil conditions.

Transformers

EKI observed 16 transformer locations on the Bay Meadows site. Since no detailed level of analysis of transformers has been done for the rest of the Corridor Plan Area, none were noted elsewhere in the Corridor Plan Area. However, the site reconnaissance was not intended to locate transformers. Based on site uses, it is likely that transformers are present in other portions of the Corridor Plan Area.

During the EKI walk-through, small oil-like stains were noted at three transformer locations; however, stains were only noted on the transformers or the transformer pads, not on adjacent soil. Further, according to a previous Phase One Environmental Site Assessment prepared by EPI in 1999, a soil sample collected adjacent to one of the transformers where stains were noted did not contain PCBs. Thus, based on EKI's observations and the available data, soil near transformer locations at the Bay Meadows site is not likely impacted by PCBs.

Pesticides

Soil testing conducted at the Bay Meadows site found pesticides, lead, and arsenic; however, the data indicate they would not exceed their respective Soluble Threshold Limit Concentrations. Therefore, if soil from the Bay Meadows site is removed and disposed, it would not be classified as a hazardous waste. Further, the detected chemical values were found to be less than the RWQCB's RBSLs, within the range of background concentrations, or otherwise determined not to be a concern.

Although an analysis of the use of pesticides at other locations in the Corridor Plan Area has not been conducted, it is unlikely that there are other sites within the Corridor Plan Area that have used pesticides at a scale and intensity equivalent or greater than that used at the Bay Meadows Racetrack. Therefore, if soil from other locations in the Corridor Plan Area is removed and disposed, it would similarly not be classified as a hazardous waste.

Mitigation Measure Hazards-CP1: The City shall require of applicants for projects within the Corridor Plan Area to implement the following specific actions:

Hazards-CP1a: Prior to the onset of construction, any remaining hazardous materials that are found, including fuels, pesticides, fertilizers, and herbicides, shall be transported from the site by an

appropriately licensed hauler and disposed off-site at a licensed facility in accordance with applicable regulatory agency guidelines.

Hazards-CP1b: Where determined appropriate by the City, particularly for sites with facilities that used to or currently use substantial quantities of hazardous materials, a project applicant shall be required to perform a Phase I Environmental Assessment and follow its recommendations for additional assessments of contamination (e.g., sampling, risk assessments) prior to approval of the project.

Hazards-CP1c: For projects involving demolition of buildings constructed prior to 1978 and determined to have the potential for lead paint, the City shall require project applicants to follow the requirements outlined by Cal/OSHA Lead in Construction Standard, Title 8, CCR 1532.1 during demolition activities; these requirements shall include employing training, employee air monitoring, and dust control. If the lead based paint is peeling, flaking or blistered, it should be removed prior to demolition. It is assumed that such paint would become separated from the building components during demolition activities, thus, it must be managed and disposed as a separate waste stream. Any debris or soil containing lead paint or coating must be disposed at landfills that are permitted to accept the waste being disposed.

Hazards-CP1d: Prior to site redevelopment, if soil staining is observed during future removal of transformers or other demolition activities, appropriate sampling should be performed and health hazards assessed. Once removed from the site, the transformers shall be disposed of in accordance with the provisions of Mitigation Measure Hazards-CP1a, above.

Significance After Mitigation: Less than significant.

Groundwater Contamination

Impact Hazards-CP2: Development associated with the Corridor Plan (Scenarios A and Z) would result in construction that could result in the disturbance of contaminated groundwater, posing a threat to construction workers and future occupants. This would be a potentially significant impact.

There are 56 facilities within the project area that currently contain or are suspected to contain one or more registered USTs. The reported UST leaks throughout the project area may have contaminated groundwater, depending upon the volume leaked and the specific depth of groundwater at the location of the UST. Some of the reported UST leaks are known to have contaminated groundwater.

The full extent of groundwater contamination is not known. However, contaminated groundwater would not likely pose a significant threat to either construction workers during the development of the site, because construction worker exposure to groundwater is likely to be minimal and of short duration. Future site occupants are unlikely to directly contact groundwater. However, depending on the volatility and concentration of groundwater contaminants, future site occupants may be exposed to vapors volatilizing from groundwater. Risks to construction workers and future site occupants would need to be assessed on a project-specific basis.

If dewatering is necessary during construction, the cost of discharging to the sanitary sewer without treatment would need to be assessed relative to the cost of discharging to the storm drain with treatment. The total cost of each option will depend on discharge fees, the volume discharged, and treatment costs (based on anticipated volume and concentrations).

According to Lowney Associates (2003b), there are several sites located within the Corridor Plan Area and in the broader vicinity that may have the potential to contaminate groundwater quality in the project area. However, these sources do not appear likely to pose a significant threat to either construction workers or future occupants because the extent of contaminated groundwater appears to be limited and construction worker exposure is likely to be limited and of short duration. Additionally, the project area is over one-eighth of a mile away from the potential off-site sources of contamination, which is too great a distance for hydrocarbons to migrate.

Mitigation Measure Hazards-CP2: Where determined appropriate by the City, particularly for sites with facilities that used to or currently use substantial quantities of hazardous materials, a project applicant shall be required to perform a Phase I Environmental Assessment and follow its recommendations for additional assessments of contamination (e.g., sampling, risk assessments) prior to approval of the project.

Significance After Mitigation: Less than significant.

Asbestos Contamination

Impact Hazards-CP3: Development associated with the Corridor Plan (Scenarios A and Z) would result in demolition of existing structures that could result in the exposure of construction workers to ACMs, if not properly handled and removed. This would be a potentially significant impact.

Due to the age of many of the structures within the Corridor Plan Area, and considering that asbestos was commonly used in building materials until the early 1980s, it is possible that ACMs may be present in buildings within the project area. Demolition of these structures could expose construction workers to ACMs which have known health effects, including lung tissue scarring and lung cancer. This impact is considered to be potentially significant.

Mitigation Measure Hazards-CP3: If demolition, renovation, or re-roofing of buildings constructed prior to 1985 is under consideration, the City shall require applicants for projects within the Corridor Plan Area that an asbestos survey in compliance with the NESHAP guidelines and the removal of all potentially friable ACMs prior to building demolition or renovation that may disturb the ACM.

Significance After Mitigation: Less than significant.

Hazardous Materials Use

Impact Hazards-CP4: Development associated with the Corridor Plan (Scenarios A and Z) could result in the increased usage and disposal of chemicals, fuels, pesticides and other materials considered to be hazardous within the Corridor Plan Area. This would be a potentially significant impact.

As described above, the project area was observed to have commercial and industrial hazardous materials users such as service stations, auto repair and maintenance facilities, machine shops and dry cleaners. When considered with potential construction and operation of new residential, commercial, retail, and office facilities, the project could result in an increase in the usage and disposal of typical hazardous materials use. If not properly used, stored, and disposed, these chemicals (such as MTBE, PCBs, and TPH-g) could potentially cause health risks. As indicated in the *City of San Mateo General Plan*, Safety Element, many small quantity generators (small businesses and households which generate less than 12 tons per year) do not dispose of waste in a proper or legal manner due to lack of knowledge or adequate enforcement. To facilitate the safe handling of hazardous waste from small generators, the SHWMP provides for programs to assist small-quantity generators, via educational outreach, in providing for proper storage and disposal of hazardous materials.

In addition, improper removal or disposal of existing hazardous materials on site, prior to construction, could result in an accidental spill or release of such materials, which could result in localized soil contamination or other hazardous conditions. This would be a significant impact.

Mitigation Measures Hazards-CP4: The City shall require applicants for projects within the Corridor Plan Area to provide for the safe storage, containment, and disposal of chemicals and hazardous materials in accordance with applicable State and federal regulations and requirements and the San Mateo County Hazardous Waste Management Plan.

Significance After Mitigation: Less than significant.



Bay Meadows Impacts and Mitigation Measures

Soil Contamination

Impact Hazards-BM1: Ground-disturbing activities during construction and operation of future uses at the Bay Meadows project site could potentially expose construction workers and future occupants of the site to contaminated soil conditions. This would be a potentially significant impact.

Development on the Bay Meadows project site could result in the exposure of construction workers and future residents to potentially contaminated soils due to improper removal of existing hazardous materials on site; deposition of lead-based paint chips during demolition of structures; and contamination from the 16 transformers reported on the project site. Therefore, this is considered to be a potentially significant impact as a public health hazard to construction personnel and future site occupants.

Hazardous Materials

The Bay Meadows project site was observed to have gasoline and diesel stored in an above-ground tank and small quantities of hazardous materials used on-site including transformers, pesticides, fertilizers, and herbicides. Evidence of substantial spills or releases of these materials were not noted during the previous studies.

Lead-Based Paints

Lead-based paints are known to have been used on the Bay Meadows project site. Deterioration of the lead-based paints could result in lead contamination of soil adjacent to painted structures. Demolition of existing structures with painted surfaces containing lead-based materials would potentially affect soil quality, if lead-based paint chips from these structures are deposited in the soil during demolition. Lead-contaminated soils, in turn, could expose construction workers and/or occupants of structures within the Bay Meadows project site to contaminated soil conditions.

Transformers

EKI observed 16 transformer locations on the Bay Meadows project site. During the walk-through, small oil-like stains were noted at three transformer locations; however, stains were only noted on the transformers or the transformer pads, not adjacent soil. Further, according to a previous Phase One Environmental Site Assessment prepared by EPI, a soil sample collected adjacent to one of the transformers where stains were noted did not contain PCBs. Soil contaminated with oil-containing PCBs could cause serious adverse human health and environmental effects. Thus, based on EKI's observations and the available data, soil near transformer locations is not likely impacted by PCBs.

Pesticides

Soil testing conducted at the Bay Meadows site found pesticides, lead, and arsenic; however, the data indicate they would not exceed their respective Soluble Threshold Limit Concentrations. Therefore, if soil from the Bay Meadows site is removed and disposed, it would not be classified as a hazardous waste. Further, the detected chemical values were found to be less than the RWQCB's RBSLs, within the range of background concentrations, or otherwise determined not to be a concern. It is considered unlikely that remediation of the soil at the project site would be required due to the pesticide, lead, and arsenic concentrations detected.

Mitigation Measure Hazards-BM1: The project sponsor shall implement the following specific actions:

Hazards-BM1a: Prior to the onset of construction, any remaining hazardous materials that are found, including fuels, pesticides, fertilizers, and herbicides, shall be transported from the site by an appropriately licensed hauler and disposed off-site at a licensed facility in accordance with applicable regulatory agency guidelines.

Hazards-BM1b: The project sponsor shall perform a lead survey of the painted surfaces and soil for structures to be demolished at the project site. If the lead-based paint is still bonded to the building materials, its removal is not required prior to demolition. It shall be necessary, however, to follow the requirements outlined by Cal/OSHA Lead in Construction Standard, Title 8, California Code of Regulations (CCR) 1532.1 during demolition activities; these requirements shall include employing training, employee air monitoring, and dust control. If the lead based paint is peeling, flaking or blistered, it should be removed prior to demolition. It is assumed that such paint will become separated from the building components during demolition activities; thus, it must be managed and disposed as a separate waste stream. Any debris or soil containing lead paint or coating must be disposed at landfills that are permitted to accept the waste being disposed.

Hazards-BM1c: Prior to site redevelopment, if soil staining is observed during future removal of the transformers or other demolition activities, appropriate sampling shall be performed and health hazards assessed. Once removed from the site, the transformers shall be disposed of in accordance with the provisions of Mitigation Measure Hazards-BM1a, above.

Significance After Mitigation: Less than significant.

Groundwater Contamination

Impact Hazards-BM2: Development of the Bay Meadows project site would not expose construction workers and future occupants to contaminated groundwater conditions. Therefore, this is considered to be a less-than-significant impact.

Groundwater samples taken from six locations on the Bay Meadows project site, near the railroad tracks, were tested for concentrations of TPHg and related constituents. These samples were collected to assess potential impacts from hazardous material release sites located upgradient of the Bay Meadows project site. Concentrations of TPH-g and MTBE that exceed potentially relevant screening levels were detected in the groundwater at one sample site. The TPH-g (1,000 ug/l) and MTBE (450 ug/l) found in the groundwater at this location likely originates from one or more upgradient petroleum release sites, most likely the former C&P Services Car Wash identified in EKI's Phase One Report. Chloroform levels (in the range of 10 to 20 ug/l) were also found in the groundwater, although not exceeding potentially relevant screening levels. The chloroform likely originates from a leaking water line (there is a water line adjacent to the sampling location from which the chloroform was found) (EKI, 2002b).

Contaminated groundwater would not likely pose a significant threat to construction workers, because the extent of contaminated groundwater appears to be limited and construction worker exposure is likely to be limited and of short duration. Future site occupants are unlikely to directly contact groundwater. The chemical concentrations detected in groundwater are less than RWQCB RBSLs for indoor air impacts (EKI, 2002b); thus vapor intrusion does not appear to be a significant exposure pathway for future site occupants.

Mitigation Measure Hazards-BM2: None required.

Asbestos Contamination

Impact Hazards-BM3: Demolition of the existing structures constructed prior to 1985 at the Bay Meadows project site could result in the exposure of construction workers to ACMs, if not properly handled and removed. This would be a potentially significant impact.

Due to the age of many of the structures at the Bay Meadows project site, and considering asbestos was commonly used in building materials until the early 1980s, it is possible that ACMs may be present in buildings on the project site. Therefore, demolition of these structures could expose construction workers to ACMs which have known health effects. This impact is considered to be potentially significant.

Mitigation Measure Hazards-BM3: An asbestos survey shall be conducted under NESHAP guidelines for all buildings proposed for demolition. In addition, NESHAP guidelines require that all potentially friable ACM's be removed prior to building demolition that may disturb the ACMs.

Significance After Mitigation: Less than significant.

Hazardous Materials Use

Impact Hazards-BM4: The construction of the Bay Meadows project and residential and commercial operations on the site would result in the continued use and disposal of chemicals, fuels, pesticides and other materials considered to be hazardous. This would be a potentially significant impact.

The Bay Meadows project site was observed to have gasoline and diesel in an AST and small quantities of hazardous materials used on-site including transformers, pesticides, fertilizers, and herbicides. It is expected that upon construction of the proposed project, chemical use would change drastically. This chemical use would be consistent with typical hazardous materials use by residential, commercial, and retail developments, including associated landscaping and open space.

The quantities of materials used and stored on the site would be potentially less than that which occurs at the existing barns and stables. Therefore, smaller quantities of chemicals and other materials would be expected. However, if not properly used, stored, and disposed, these chemicals may potentially cause health risks. As indicated in the Safety Element of the *General Plan*, many small quantity generators (small businesses and households which generate less than 12 tons per year) do not dispose of waste in a proper or legal manner due to lack of knowledge or adequate enforcement. To facilitate the safe handling of hazardous waste from small generators, the San Mateo County HWMP provides for programs to assist small-quantity generators, via educational outreach, in providing for proper storage and disposal of hazardous materials. In addition, improper removal or disposal of existing, on-site hazardous materials, prior to construction, could result in an accidental spill or release of such materials, which could result in localized soil contamination or other hazardous conditions.

Mitigation Measures Hazards-BM4:

Hazards-BM4a: The project applicant shall provide for the safe storage, containment, and disposal of chemicals and hazardous materials in accordance with applicable State and federal regulations and requirements and the San Mateo County HWMP.

Hazards-BM4b: The applicant shall obtain a Hazardous Materials Storage Permit from the San Mateo Fire Marshall prior to the issuance of a building permit for any structure that would house hazardous materials. In accordance with the Hazardous Materials Storage Permit Ordinance, the applicant shall submit appropriate development plans and provide evidence of suitable facility design and construction for the storage of hazardous materials.

Significance After Mitigation: Less than significant.

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EDAW, *Bay Meadows Specific Plan and Route 101/Hillsdale Boulevard Interchange Modifications Project, Draft Environmental Impact Report*, October 1996.

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