SAN FRANCISCO DISTRICT

US Army Corps of Engineers

PUBLIC NOTICE

NUMBER: 24309S DATE: June 30, 2000.
RESPONSE REQUIRED BY: July 30, 2000.

Regulatory Branch
333 Market Street
San Francisco, CA 94105-2197 PROJECT MANAGER: Gordon Liu TELEPHONE: (415) 977-8463 Email: gliu@spd.usace.army.mil

1. Introduction: The City of Hayward, Public Works Department, 777 B Street, Hayward, California 94542 (contact: Robert Bauman, telephone: (510)-583-4740) has applied for a Department of the Army permit to fill approximately 0.37 acre of "waters of the United States" in Sulphur Creek that is within the City of Hayward, east of Interstate Highway 880, north of West Street, south of A Street, and adjacent to the Hayward Airport, Alameda County, California. This application is being processed pursuant to the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. Project Description: The Project Purpose, as stated by the City of Hayward, is to maximize the financial return of the Hayward Airport property, in order to meet the FAA directive of being financially self-sufficient. The project on the Hayward Airport portion of the site includes the future expansion of an existing airport taxiway for anticipated increased flights. To that end, the only alternative sites that could be considered would be other lands owned by the Airport. Prior to considering the current proposed site, Home Depot also investigated other construction sites for Home Depot's location requirements along a major transportation route with good visibility. The only other properties owned by the Airport and available for commercial development lie along the Hesperian Boulevard. None of these properties are of sufficient size to accommodate the Home Depot project.

According to the City of Hayward, all the city-owned hangars at the Hayward Airport are currently occupied and there is a waiting list in excess of 350. Due to the present growth within the General Aviation Industry, and the reduction of General Aviation accommodations at other East Bay airports, the Hayward Airport's *Strategic Business Plan* and draft *Airport Master Plan* predict an ever increasing demand for hangars. The City has identified the most suitable area for a hangar expansion complex as the area between the FAA Control Tower, Skywest Drive, and one of the aviation businesses. The existing taxiway that provides access to this area must be widened to meet FAA design standards. All other access options to this proposed hangar area require crossing the creek channel. Therefore, the widening of the existing access point would result in the least amount of additional fill into jurisdictional waters. The proposed hangars cannot be built unless the required access is provided.

As shown in the attached drawings, for the Home Depot project, the applicant plans to realign a 780-linear-foot Sulphur Creek channel along Sueirro Street to the south and Skywest Drive to the west which currently cuts across from the Hesperian Boulevard directly to Skywest Drive. The purpose of this work is to fill approximatley 730 linear feet of Sulphur Creek (0.3 acre of Corps' jurisdictional area).

The proposed construction of this realigned char[illegible] will be earthen and remain open between Hesperi[illegible] Boulevard and Skywest Drive, except for approximately 32 feet that will be placed in a culvert to accommodate a road crossing and access onto the Home Depot site from Sueirro Street. The new channel will have a bottom width of 21 feet and an average width of 32 feet at the projected ordinary high water mark (2 – 3-year storm event). The channel banks will have a 2.5:1 slope and the average depth of the channel will be slightly over 6 feet.

Native trees and shrubs will be planted along the realigned channel banks and a 5-year monitoring plan will be implemented.

For the Hayward Air Terminal project, the applicant is proposing to cover the Sulphur Creek with four 48-inch diameter culverts for a total length of 150 linear feet to extend the existing taxiway. As a result, 150 linear feet of Sulphur Creek will be culverted (0.07 acre of Corps' jurisdiction area).

The applicant also provided alternative analysis for this proposed project at the Hayward Airport as Home Depot construction sit, three alternatives development scenarios have been provided:

Alternative 1 – Avoidance of Fill, Maintain Sulphur Creek in its Existing Alignment: This alternative would maintain Sulphur Creek in its natural alignment and would require no fill to be placed within the creek channel. Because the current location of the channel, leaving it in place essentially reduces the development size of the parcel. The reduction in development size would render the site unsuitable for Home Depot or any other similar mass merchandiser because of the parking and siting requirements. Under this alternative, construction of the project will not require the fill of jurisdictional waters. The existing Sulphur Creek channel would remain as is and no additional plantings would be proposed because those plantings could affect the ability of the channel to carry peak flows. Therefore, current habitat values in the creek would remain the same.

With respect to Home Depot requirements, the prototypical Home Depot building is approximately 570 feet, side to side, including the garden center, and 245 feet deep. The Home Depot retailing formula allows no deviation in the placement of essential building features, such as loading dock, customer pick-up area, main entrance, garden center, lumber drop-off, etc. Only minor adjustments to overall store dimensions are allowed. A minimum of 500 parking stalls are required in the main field directly in front of the building and none of the stalls are to be more than 350 feet away from the building. There can be no physical barriers in the parking area such as a fence, road, pedestrain walkway, landscape belt, or open drainage, separating the stalls from the building.

The City of Hayward and Home Depot have considered several alternative site designs that would accommodate the existing Sulphur Creek channel through the site. Leaving the channel as is would result in the loss of 50 parking stalls and would place more than half of the remaining parking field south of the creek, isolated from the store. Use of the 3.24-acre vacant airport parcel just north of the site and west of the existing hotel would not improve the situation for Home Depot. According to the project Architects (Bill Boyl, Greenberg Farrow), even with the additional 3 acres, it is not possible to achieve the necessary parking requirements and align the 131,000 ft^2 Home Depot footprint, in its entirety, within the area north of Sulphur Creek. The parcel south of the creek would still be required and if the channel were left in its existing configuration, several of the required parking spaces would be isolated from the store area.

The City of Hayward has been marketing the subject property for development for approximately 20 years and has been unable to find a lessee, particularly due to Sulphur Creek running through the site. A different type of retail activity, such as local serving shops might be able to use the site "as-is" but these shops would not deliver the same revenues to the City as Home Depot or a similar mass merchandiser. Also, there has been no real interest in the site until the City was approached by Home Depot. Without the prospect of Home Depot, the City will not be able to maximize the financial return from the Airport property and the overall project purpose will not be met.

Alternative 2 – Limited Fill, Maintain Sulphur Creek in its Existing Alignment but Construct New Road Crossing: The minimization alternative

considered is similar to the avoidance alternative in that the existing reach of Sulphur Creek would remain in its current location on the project site. However, in order to connect the two parcels that would be separated by the Creek, a culverted road crossing would be constructed in the channel. Although the road crossing would provide a more direct link between the parcels, it would not render the site suitable for Home Depot or a similar mass merchandiser, for the reasons stated previously. Under this alternative, Sulphur Creek would continue to be a physical barrier in the parking area, separating the stalls from the building. As discussed under the avoidance alternative, without development of Home Depot or a similar mass merchandiser on this site, the City of Hayward will not be able to maximize the financial return from the airport property and the overall project purpose will not be met.

Assuming that the road crossing would be approximately 32 feet in width to accommodate a two-lane road, the extent of fill in jurisdictional waters under this alternative would be approximately 0.01 acre (32' x 21'). Plantings of trees and shrubs could occur along the top of bank in order to mitigate for channel impacts. However, no in-channel plantings would be proposed because of the impact these plantings could have on channel capacity.

Alternative 3 – Increased Fill, Culverting of Sulphur Creek Through the Project Site: Culverting of Sulphur Creek through the project site would allow for one contiguous parcel of sufficient size to accommodate the Home Depot or similar mass merchandiser. Additionally, placing Sulphur Creek in a culvert could open the area to further development because more contiguous and accessible land would be available. Placing Sulphur Creek in a culvert would likely be less costly than realigning it as proposed. Under this alternative, the City would maximize the financial return from the Airport property and the overall project purpose would be met.

Impacts on jurisdictional waters under this alternative would be the same as the proposed project, however, different mitigation measures would be implemented. Approximately 730 linear feet of channel would be filled resulting in the loss of 0.3 acre of jurisdictional area. Mitigation for this loss would be achieved by creating a seasonal wetland on the surplus parcel located immediately north of the site. In order to provide 1:1 replacement for jurisdictional area lost, the seasonal wetland would be approximately 375 feet long and have a bottom width of 35 feet. Streamflow from Sulphur Creek would be diverted to the mitigation area through a pipe installed near the connection to the Hesperian Boulevard reinforced concrete box culvert. The bottom of the basin would be vegetated with emergent wetland and wetland fringe plant species and the slopes would be planted with typical riparian tree and shrub species.

3. State Approvals: The applicant states that he has notified the Regional Water Quality Control Board, San Francisco Bay Region, to determine the need for State water quality certification. If the State Water Resources Control Board determines that this project is consistent with the California Water Quality Control Plan Requirements adopted by the Regional Board and Sections 301, 302, 303, 306 and 307 of the Clean Water Act, the State will issue a Certificate of Conformance with Water Quality Standards to the project proponent. Those parties concerned with any water quality problems that may be associated with this project should write to the Executive Officer, California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612.

4. Preliminary Environmental Assessment: The Corps of Engineers has assessed the environmental impacts of the action proposed in accordance with the requirements of the National Environmental Policy Act of 1969 (Public Law 91-190), and pursuant to Council on Environmental Quality's Regulations, 40 CFR 1500-1508, and Corps of Engineers' Regulations, 33 CFR 230 and 325, Appendix B.

Unless otherwise stated, the Preliminary Environmental Assessment describes only the impacts (direct, indirect, and cumulative) resulting from activities within the jurisdiction of the Corps of Engineers. The Environmental Matrix and other worksheets and supporting data used in the preparation of this Preliminary Environmental Assessment are on file in the South Section, Regulatory Branch, Corps of Engineers, 333 Market Street, San Francisco, California.

The Preliminary Environmental Assessment resulted in the following findings:

a. IMPACTS ON THE AQUATIC ECOSYSTEM

(1) Physical/Chemical Characteristics and Anticipated Changes

Substrate: The proposed project will permanently alter portions of the existing substrate by raising existing ground elevations by about 4 feet and by relocating the current channel for Sulphur Creek on the project site. The existing topography of the site is relatively flat and the proposed topography will also be flat but the ground adjacent to the creek will be raised 4 feet for flood control purposes. The majority of the site supports non-native annual grassland that is consistently mowed although there are a few eucalyptus trees that may be removed. The existing reach of Sulphur Creek across the Home Depot portion of the project site has a trapezoidal configuration with a bottom width ranging from 5 to 10 feet, and side ranging from 2:1 to 3:1 slope. The existing channel is approximately 730 feet long, 5 feet deep and vegetated with emergent wetland species in the channel bottom. There are no trees or other woody riparian vegetation associated with the channel.

The realigned channel will be 780 linear feet and will be constructed just south of the existing Sulphur Creek alignment. The channel will have a bottom width of 21 feet and an average width of 32 feet at the projected ordinary high water mark (2 – 3-year storm event). The channel banks will have a 2.5:1 slope and the average depth of the channel will be a little over 6 feet. The projected velocities in the new channel are expected to range between 4.0 to 5.3 feet per second for 2 – 3-year to 100-year events, respectively. Under these flow conditions, no armoring of the channel will be required.

The reach of Sulphur Creek across the 0.15-acre portion of the project on the Hayward Airport is trapezoidal with a bottom width of approximately 5 feet, and a side slope of approximately 2:1. The channel is approximately 5 feet deep, has a top width of approximately 34 feet, and supports emergent aquatic vegetation except in areas where there are concrete bags placed for bank stabilization at the inlet to the four 48-inch diameter culverts beneath the existing taxiway.

Due to the large scale stream bed alteration and bank slope grading, there would be increased amount of sediment runoff if there is an unseasonal rainfall during the construction. However, the proposed stream bed alteration, bank grading and revegetatrion, this project will minimize creek bed and its bank erosion on a long term basis.

Streamflow and Drainage Patterns: The project site currently drains into existing storm drains that outfall into Sulphur Creek. The project will utilize the existing storm drain systems as much as feasible and a storm drainage plan must be approved by the City Engineer prior to issuance of any grading permits. The existing flow to Sulphur Creek will be diverted into the realigned channel once the construction is completed. It is anticipated that construction of the realigned channel will occur during the period of April 15 and October 15, when flows in Sulphur Creek are minimal, and that construction can be completed in one season. Runoff from the project is also not expected to increase flows in Sulphur Creek downstream of the site. Therefore, the streamflow in Sulphur Creek will not be altered by the project.

Since there is no alteration in size for the realigned channel, the flow volume and pattern will not be affected by this proposed project on a long term basis.

Flood Control Function of Wetland: The Federal Emergency Management Agency's (FEMA) National Flood Insurance Program, revised as of February 9, 2000, classifies the majority of the project site as being within Zone B (area between limits of the 100- and 500-year flood; or areas subject to 100-year flooding with average depths less than one foot). The new channel to be constructed for Sulphur Creek as a component of the project has been designed to meet Alameda County Flood Control District design standards and not to impact the 100-year flood plain downstream.

The project would not substantially alter the amount of water within Sulphur Creek either within the project reach or downstream. However, the establishment of bank vegetation along the realigned channel that will eventually provide cover over the watercourse could result in an increase in the duration of surface water in the channel bottom. That would increase the amount of open water and provide more diverse habitat for aquatic animal species.

Erosion/Sedimentation Rate: The construction of the Home Depot building and associated parking areas will increase the amount of impervious surface area on-site. The site will be constructed to finished grades that will be above the existing ground surface elevations and will require fill material from an approved offsite source. Due to the fact that the site is relatively flat with existing drainage and the developed nature of the surrounding environment, site soil modifications are not expected to result in potentially significant impacts.

Water Quality: The project will incorporate structure control to treat surface runoff prior to discharging into the storm drainage system. All project runoff will be directed into a California Deflection Separation (CDS^{R}) system that will filter out trash, sediment and oil and grease. Therefore, the impacts to water quality in this creek will improve substantially on a long term basis.

(2) <u>Biological Characteristics and Anticipated Changes</u>

Wetlands (Special Aquatic Site): The existing reach of Sulphur Creek across the Home Depot portion of the project site has no woody riparian vegetation associated with this reach of Sulphur Creek but the channel bottom is densely vegetated with bermuda grass (*Cynodon dactylon*). Scattered patches of cattail (*Typha latifolia*) and umbrella sedge (*Cyperus eragrostis*) also occur within the channel. The channel is concrete-lined for about 30 feet below Hesperian Boulevard and at that inlet to the reinforced concrete pipes beneath Skywest Drive. The existing channel widths at the top-of-bank is approximately 30 feet and the average width of the channel at the ordinary high water mark is 21 feet. The area of Corps jurisdiction in the channel is 0.3 acre.

The existing reach of Sulphur Creek across the 0.15-acre portion of the project on the Hayward Airport supports emergent aquatic vegetation except in areas where there are concrete bags placed for bank stabilization at the inlet to the four 48-inch diameter culverts beneath the existing taxiway. The dominant species in the channel near the existing taxiway include cattail and umbrella sedge. The width of the channel at the ordinary high water mark is 20 feet and the extent of Corps jurisdictional area in this reach is 0.07 acre.

A 780-linear-foot earthen channel will be constructed to replace the current trapezoidal channel on the project site. The realigned channel will average 31 feet in width at the project ordinary high water mark (the 2 to 3 years storm event) creating approximately 0.5 acre of jurisdictional area. The channel will be planted with a variety of emergent aquatic vegetation and riparian trees and shrubs native to the area. The proposed planting and

monitoring programs are summarized in Project Description. The details of the programs are provided in the Revised Mitigation and Monitoring Plan for the Home Depot and Hayward Airport Projects prepared by Zander Associates.

The total area of the proposed fill of the existing creek channel is approximately 0.3 acre as shown in Figure 5 of 18, and the culverted portion for the taxiway expansion is approximately 0.07 acre as shown in Figure 4 of 18. Sulpher Creek will be realigned through the Home Depot project site and will be kept as an open earthern channel that will be planted with wetland and riparian species. The realigned channel is expected to provide approximately 0.5 acre of newly created Corps jurisdictional area to replace the 0.37 acre lost for both the Home Depot and the Airport Taxiway projects. With the mitigation, the impact to wetlands is considered to be marginal or insignificant.

Endangered Species: No endangered species occur in the project area. Zander Associates conducted protocol surveys for the California red-legged frog, *Rana aurora draytonii*, in the reaches of Sulphur Creek on the Home Depot and Hayward Airport project sites on June 5, June 25, July 8 and July 23, 1998. Two daytime surveys and two nighttime surveys were conducted in accordance with the U.S. Fish and Wildlife Service's Guidance on Site Assessment & Field Surveys for California red-legged frog (February 18, 1997). No red-legged frogs are reported to occur in the Sulphur Creek drainage, no frogs were observed on the project site during the 1998 surveys, and habitat conditions in the channel are not suitable to support this species.

No listed threatened or endangered plants have been observed on the project site; impacts to listed plant species are not anticipated and no mitigation measures are required.

Habitat for Fish, Other Aquatic Organisms, and Wildlife: The reach of Sulphur Creek through the project site is not perennial. Water flows through the channel during the winter months but there is no flow during the summer and fall. Some small pockets of saturated soil are present in the channel bottom for the duration of the summer and emergent wetland vegetation has established in these pockets. These conditions can support aquatic invertebrates and some amphibians such as pacific tree frog, but fish are not likely to be present in the channel. There is no riparian vegetation associated with the channel that would provide cover for small mammals and birds and the site is within a heavily urbanized environment. The initial impacts to the aquatic habitat will be eliminated once the regraded bank slopes are revegetated and established.

Initial impacts to aquatic species are inevitable, but the improvements made by the proposed project construction will undoubtedly enhance and improve habitat for a diversity of wildlife species once the bank vegetation becomes established.

b. IMPACTS ON RESOURCES OUTSIDE THE AQUATIC ECOSYSTEM

(1) Physical Characteristics and Anticipated Changes

Air Quality: Air pollutants, especially suspended particulates, would be generated intermittently during the construction period. To mitigate the impact; 1)unpaved construction areas will be watered as necessary to reduce dust off-site, 2)construction equipment will be maintained and operated in such a way as to minimize exhaust emission, 3)in the event that construction activity is postponed, graded or vacant land will be revegetated immediately. Air quality impacts from additional vehicle traffic generated by the project will be expected to be minimized through traffic signal management along the Hesperian Boulevard corridor. Based on the relative minor size of the proposed project and limited to an evaluation of air quality impacts only within Corps of Engineers' (Corps) jurisdictional areas, the Corps has determined that the total direct and non-direct project emissions would not exceed

the de minimis threshold levels of 40 CFR 93.153. Therefore, the proposed project would conform to the State Air Quality Implementation Plan (SIP) for California.

Noise Conditions: Due to the project's location on Hesperian Boulevard and in proximity in the Hayward Executive Airport, construction activities and future noise levels generated by the operation of the project are not anticipated to increase over existing noise levels.

Geologic Conditions: The project site is not located within a "California Earthquake Fault Zone". It is located approximately 1.9 miles from the Hayward fault system. However, project is in an area shown in Association of Bay Area Government's (ABAG) report *On Shaky Ground* as having an anticipated Modified Mercalli Shaking Intensity of IX (Violent) for a 7.0 magnitude earthquake on the southern segment of the Hayward fault. The potential for earthquake ground shaking is common to the San Francisco Bay region and is unavoidable; it will occur whether or not the project site is developed.

The project will be constructed to finished grades that will be above the existing ground surface elevations and will require fill material from an approved offsite source. Due to the fact that site is relatively flat with existing drainage and the developed nature of the surrounding environment, site soil modification are not expected to result in potentially significant seismic impacts.

(2) Biological Characteristics and Anticipated Changes

Other Terrestrial Habitat: The project site is located within an urbanized area of the City of Hayward, adjacent to the airport. The existing vegetation on the property consists of non-native annual grasses that are periodically mowed for maintenance purposes. Three eucalyptus trees are present on the site and would be removed for construction of the project. There are several concrete foundations and pads on the site, as well as a paved road that was a former driveway and taxiway to the property immediately north. A sewage pump station is located in the center of the site, just north of Sulphur Creek. Wildlife use of the site is limited due to the human disturbance in the area and lack of suitable habitat. Birds may forage in the grasslands and perch in the eucalyptus trees. No signs of ground squirrel activity or use of the site by small mammals have been observed.

(3) Socioeconomic Characteristics and Anticipated Changes

Aesthetic Quality: The end of the corridor where the proposed project is located serves as a secondary entrance to the City of Hayward. The City requires that the design of the property improvements comply with the City of Hayward Design Guidelines, the Landscape Beautification Plan and all other applicable performance standards.

Traffic/Transportation: The project traffic on Sueirro Street eastbound approach at Hesperian Boulevard will experience increased delay. Therefore, as part of the project, the Hesperian Boulevard/Sueirro Street intersection will be signalized. The Home Depot project will improve the ingress/egress for the Longwood-Winton Grove neighborhood by the installation of the traffic signal at Sueirro Street. The Home Depot project would not significantly impact the access and circulation in the Longwood-Winton Grove neighborhood with respect to providing other signals along Hesperian Boulevard.

This project traffic on the Sueirro Street eastbound approach at Hesperian Boulevard will experience increase delay. Therefore, as part of the project, the Hesperian Boulevard/Sueirro Street intersection will be signalized. This will reduce the minor movement delays and provide an intersection operation of LOS B. The Home Depot project would not significantly impact the traffic in the surrounding neighborhood.

Historic - Cultural Characteristics and Anticipated Changes: According to the City of Hayward, no archeological or paleontological resources are known to exist at the project site.

A Corps of Engineers' archaeologist is currently conducting a cultural resources assessment of the permit area, involving review of published and unpublished data on file with city, State, and Federal agencies. If, based upon assessment results, a field investigation of the permit area is warranted, and cultural properties listed or eligible for listing on the National Register of Historic Places are identified during the inspection, the Corps of Engineers will coordinate with the State Historic Preservation Officer to take into account any project effects on such properties.

c. SUMMARY OF INDIRECT IMPACTS

None have been identified.

d. SUMMARY OF CUMULATIVE IMPACTS

The project does not involve impacts that are individually limited by cumulatively considerable, because the project will incorporate project specific mitigation measures.

e. CONCLUSIONS AND RECOMMENDATIONS

Based on an analysis of the above identified impacts, a preliminary determination has been made that it will not be necessary to prepare an Environmental Impact Statement (EIS) for the subject permit application. The Environmental Assessment for the proposed action has, however, not yet been finalized and this preliminary determination may be reconsidered if additional information is developed.

5. **Public Interest Evaluation:** The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so the conditions under which it will be allowed to occur, are therefore determined by the outcome of the general balancing process. That decision will reflect the national concern for both protection and utilization of important resources. All factors which may be relevant to the proposal must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

6. **Consideration of Comments:** The Corps of Engineers is soliciting comments from the public, Federal, State and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

7. **Submission of Comments:** Interested parties may submit in writing any comments concerning this activity. Comments should include the applicant's name, the number, and the date of this Notice and should be forwarded so as to reach this office within the comment period specified on page one of this Notice. Comments should be sent to the Regulatory Branch. It is Corps policy to forward any such comments which include objections to the applicant for resolution or rebuttal. Any person may also request, in writing, within the comment period of this Notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Additional details may be obtained by contacting the applicant whose address is indicated in the first paragraph of this Notice, or by contacting Gordon Liu of our office at telephone (415)-977-8463. Details on any changes of a minor nature which are made in the final permit action will be provided on request.

GRAPHICS PACKAGE
Home Depot and Hayward Airport Projects

(Note: The graphics included in this package are referenced in the Corps and RWQCB Permit Applications as well as the Revised Mitigation Plan and the Alternatives Analysis for the Home Depot and Hayward Airport Projects)

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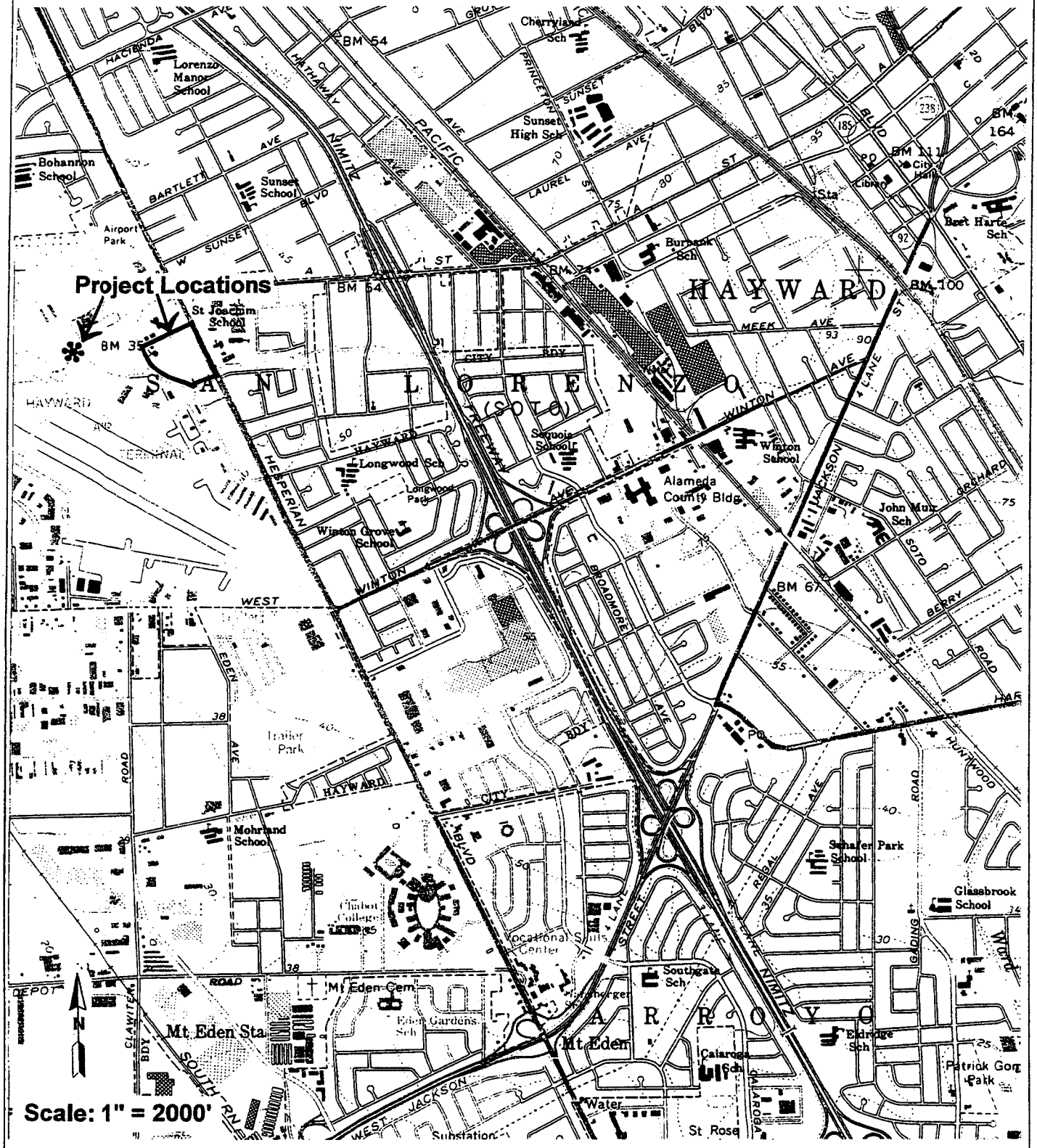
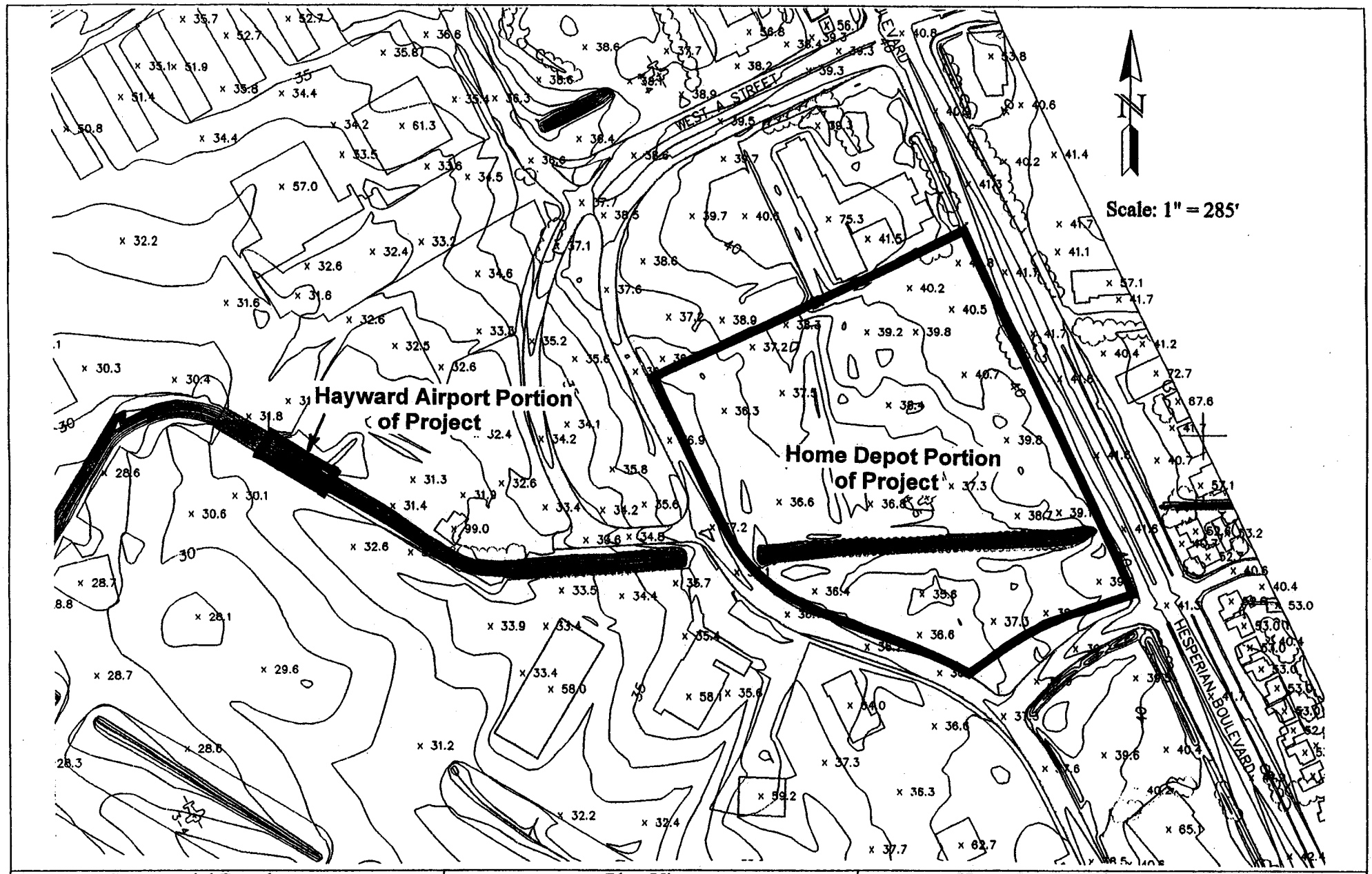
Plates

Plate 1	Extent of Corps Jurisdiction – Home Depot and Hayward Airport Sites
Plate 2	Home Depot Site Plan



Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Mr. Bob Bauman, Ph.D., PE City of Hayward 777 B Street Hayward, California 94541	Vicinity Map In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 1 of 18 Date: 2/4/00



Purpose: Commercial Development	Plan View	Home Depot and Hayward Airport Project Locations
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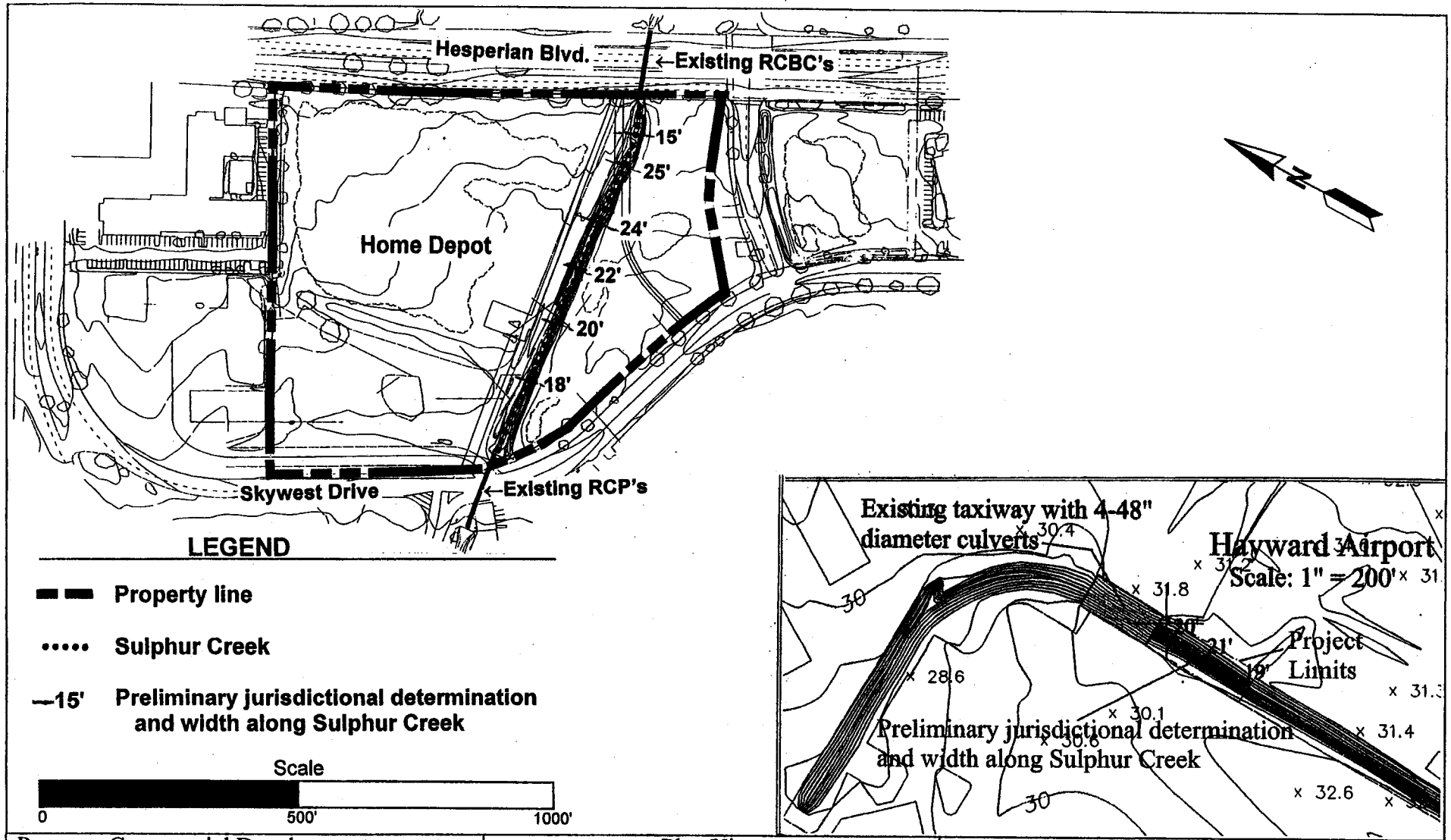
Adjacent Property Owners: See Permit Application		Sheet 2 of 18 Date: 2/4/00



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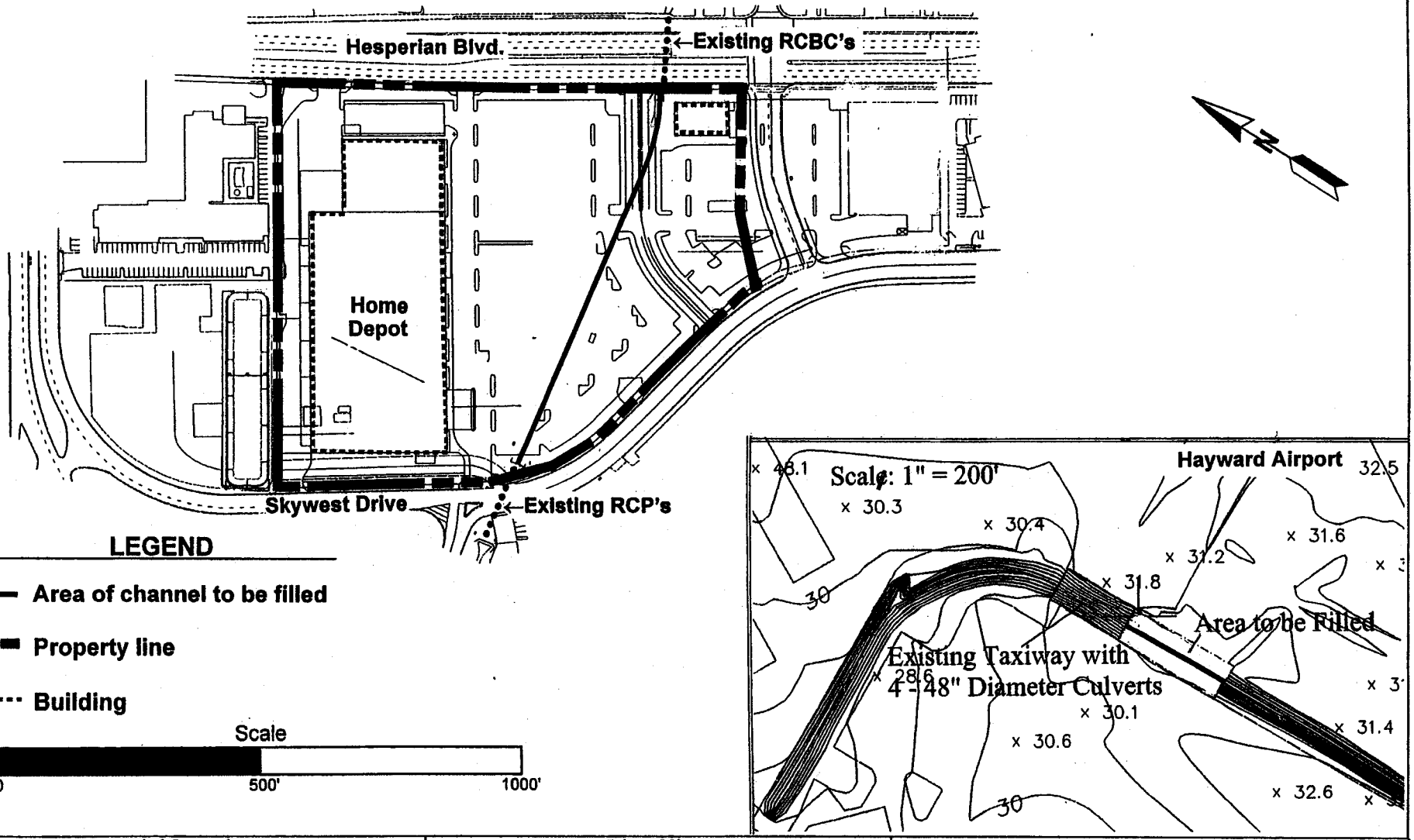

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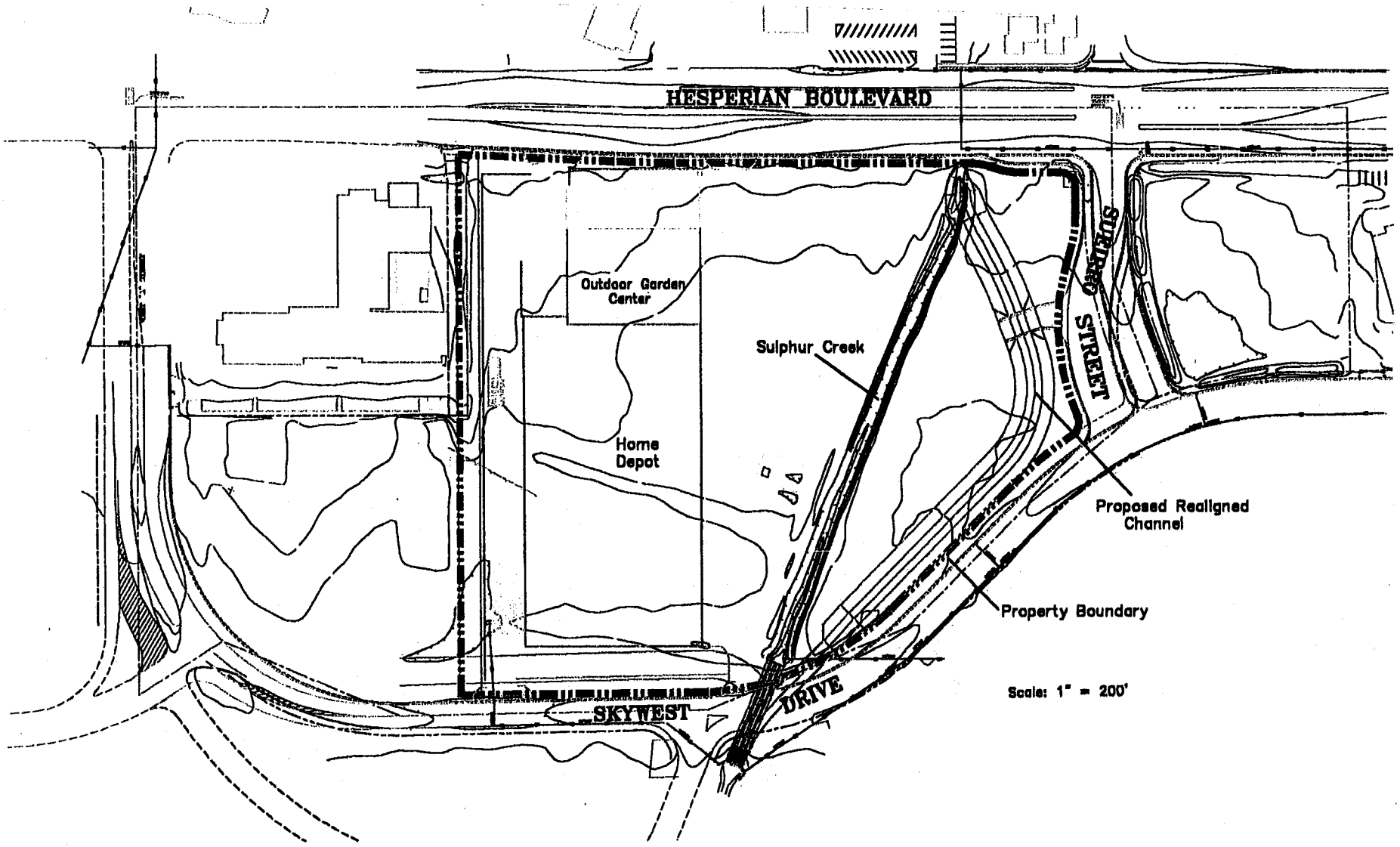
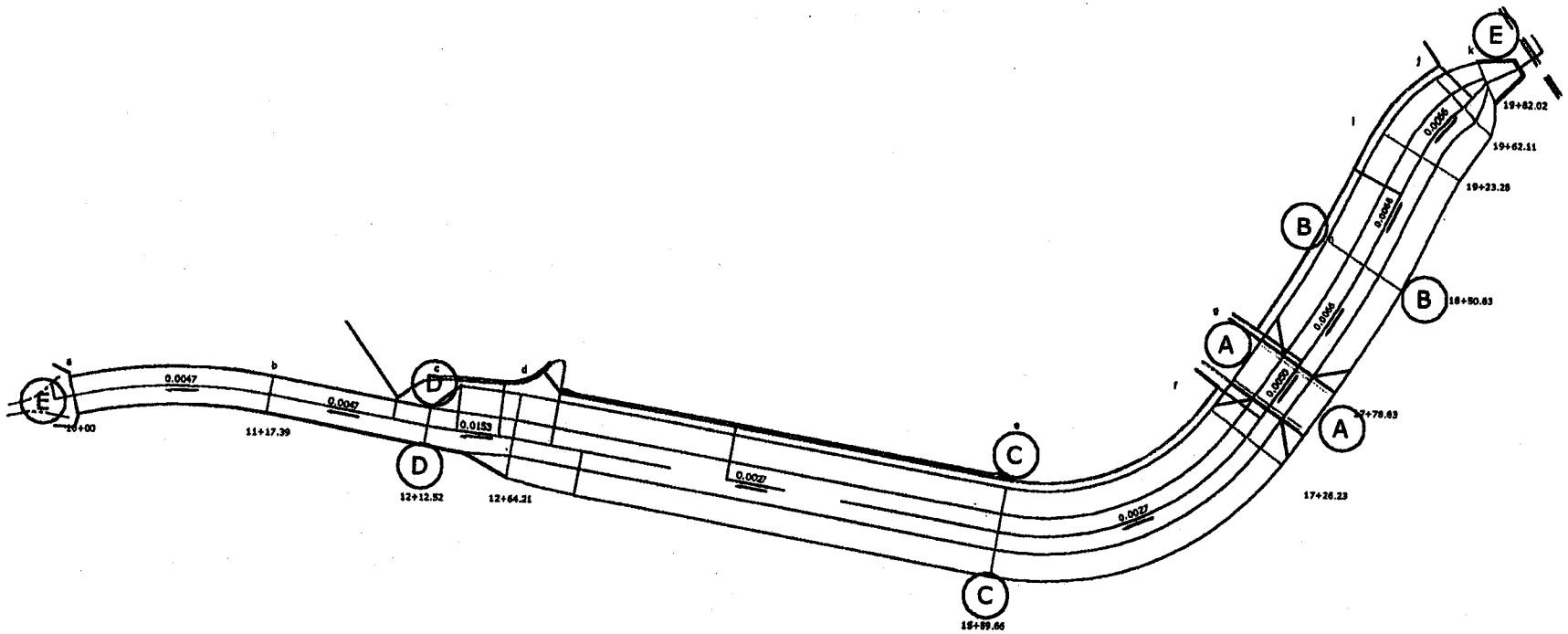
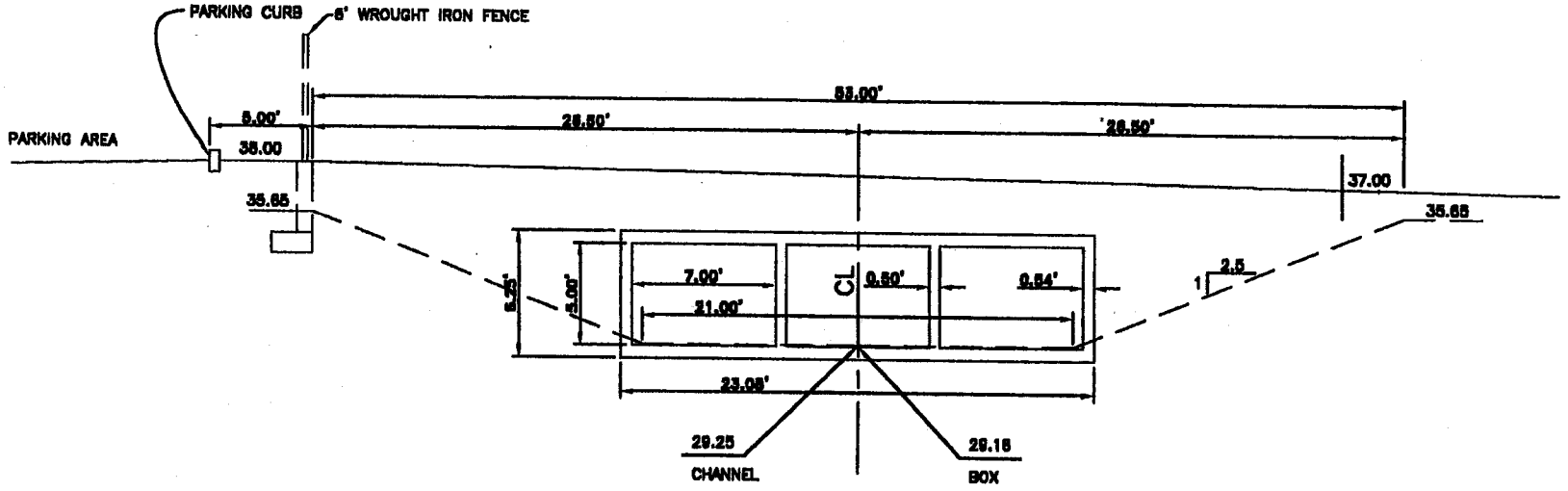


Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Plan View Mr. Bob Bauman, Ph.D., P.E. City of Hayward 777 B Street Hayward, California 94541	Plan View of Sulphur Creek and Proposed Realigned Channel In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 5 of 18 Date: 2/4/00



Scale: 1" = 90'

Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Plan View Mr. Bob Bauman, Ph.D., P.E. City of Hayward 777 B Street Hayward, California 94541	Plan View of Sulphur Creek & Cross Section Locations In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 6 of 18 Date: 2/4/00

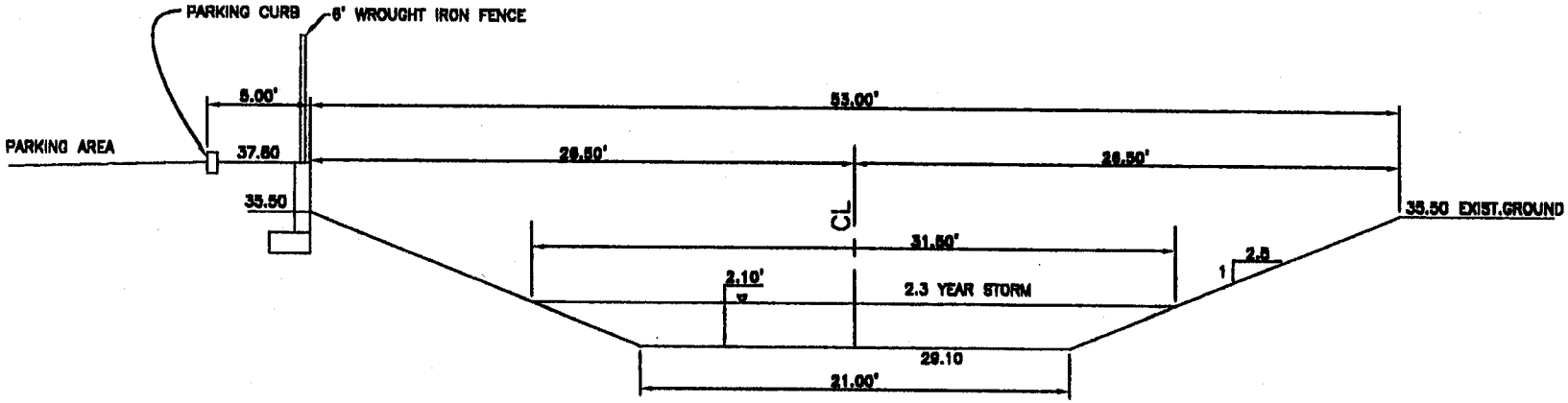


SECTION A–A

PROPOSED CULVERT UNDER DRIVEWAY
SULPHER CREEK

Scale: 1" = 9'

Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Section View Mr. Bob Bauman, Ph.D., P.E. City of Hayward 777 B Street Hayward, California 94541	Cross Section of Sulphur Creek at Location A Home Depot Portion of the Site In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 7 of 18 Date: 2/4/00



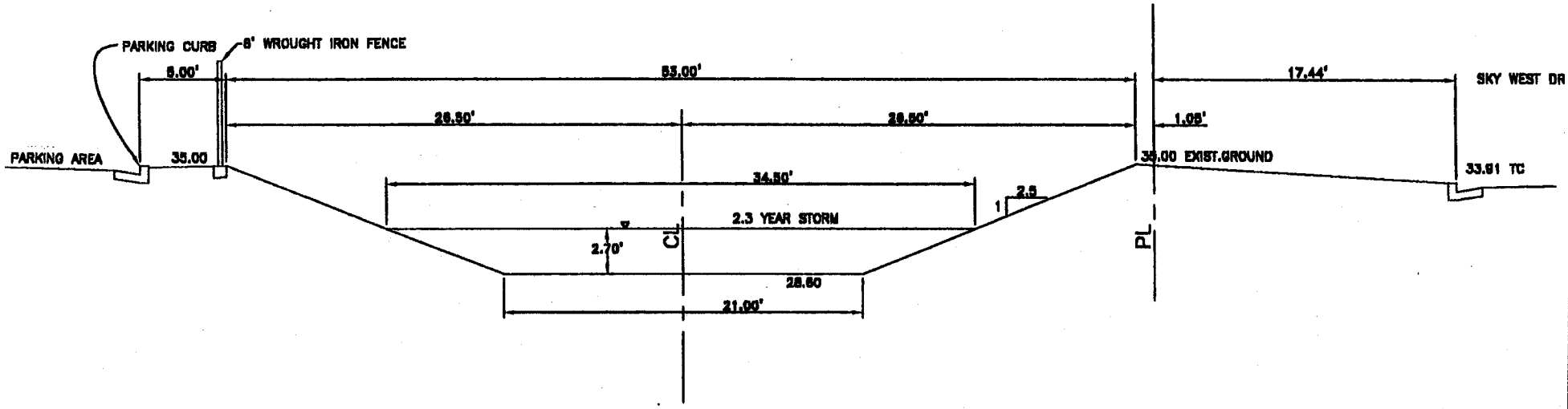
SECTION B–B

PROPOSED CHANNEL

SULPHER CREEK

SCALE: 1"=8'

Purpose: Commercial Development	Section View	Realigned Channel Cross Section at Location B Home Depot Portion of the Site
Datum: NGVD	Mr. Bob Bauman, Ph.D., P.E. City of Hayward	In: Sulphur Creek At: Hayward County: Alameda State: CA
Adjacent Property Owners: See Permit Application	777 B Street Hayward, California 94541	Application by: City of Hayward Sheet 8 of 18 Date: 2/4/00



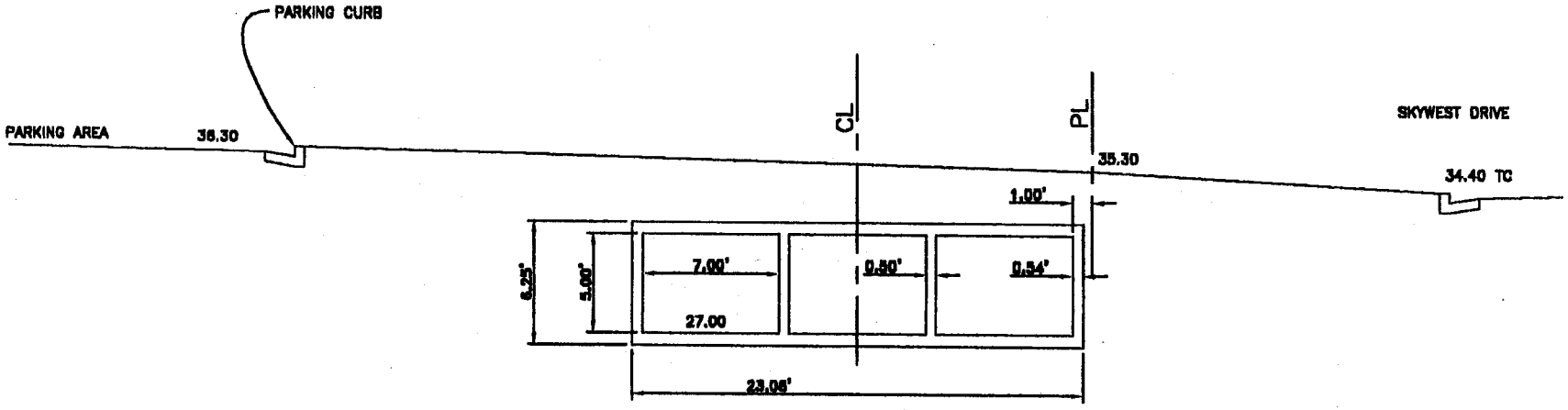
SECTION C–C

PROPOSED CHANNEL

SULPHER CREEK

SCALE: 1"=9'

Purpose: Commercial Development	Section View	Realigned Channel Cross Section at Location C Home Depot Portion of the Site
Datum: NGVD	Mr. Bob Bauman, Ph.D., P.E. City of Hayward	In: Sulphur Creek At: Hayward County: Alameda State: CA
Adjacent Property Owners: See Permit Application	777 B Street Hayward, California 94541	Application by: City of Hayward Sheet 9 of 18 Date: 2/4/00



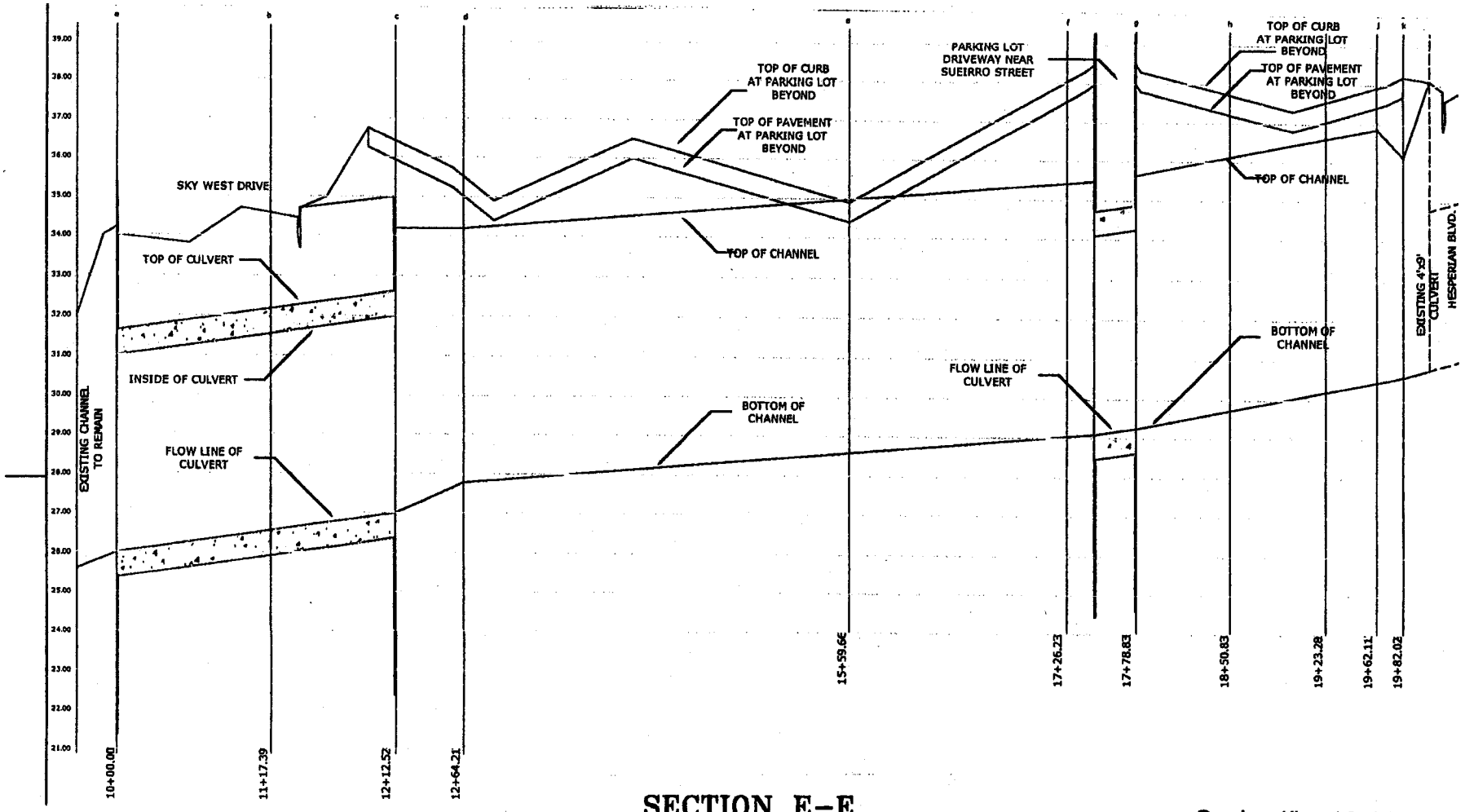
SECTION D–D

PROPOSED CULVERT

SULPHER CREEK – NEAR SKYWEST DRIVE

Scale: 1" = 9'

Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Section View Mr. Bob Bauman, Ph.D., P.E. City of Hayward 777 B Street Hayward, California 94541	Cross Section of Sulphur Creek at Location D Home Depot Portion of the Site In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 10 of 18 Date: 2/4/00

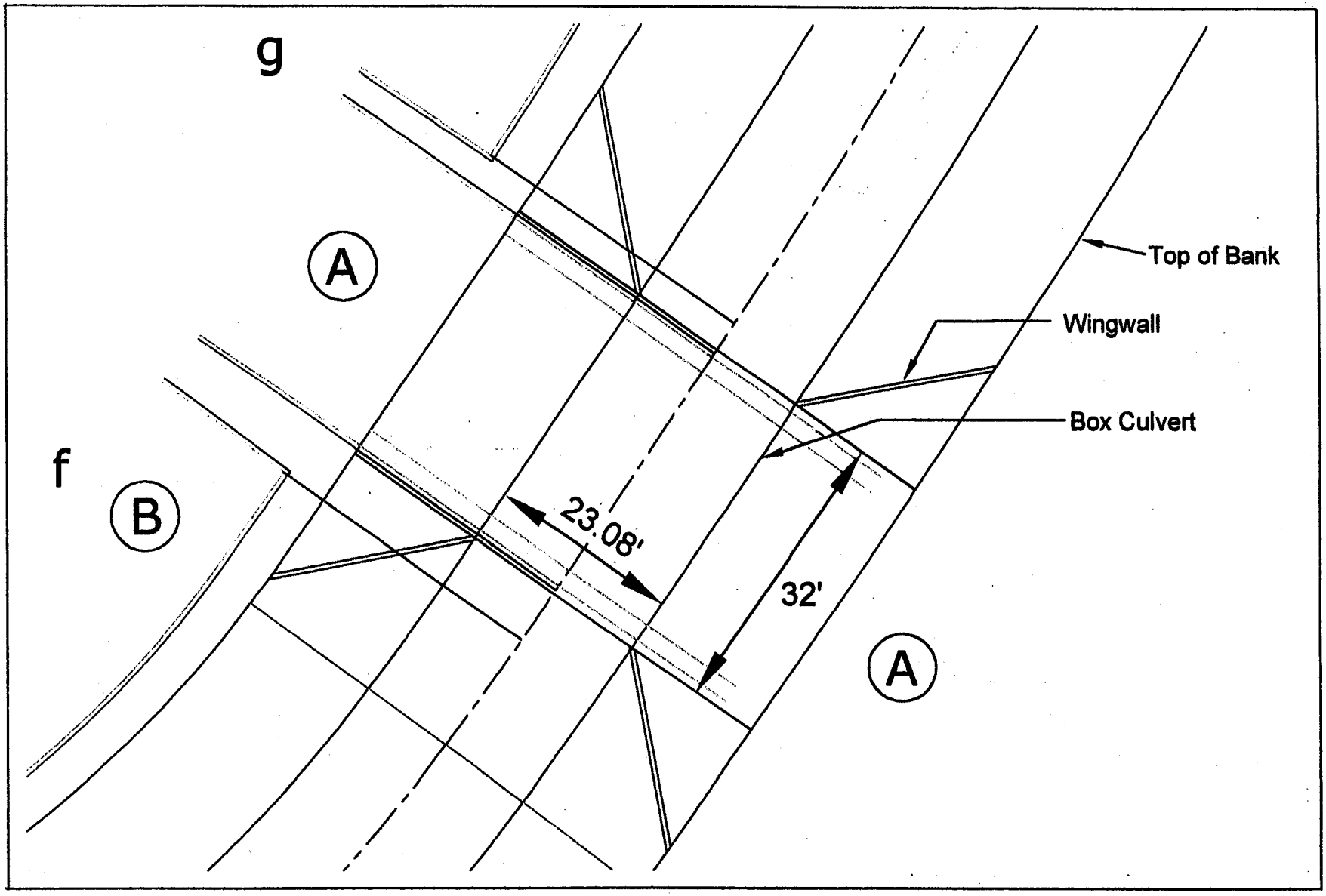


SECTION E–E

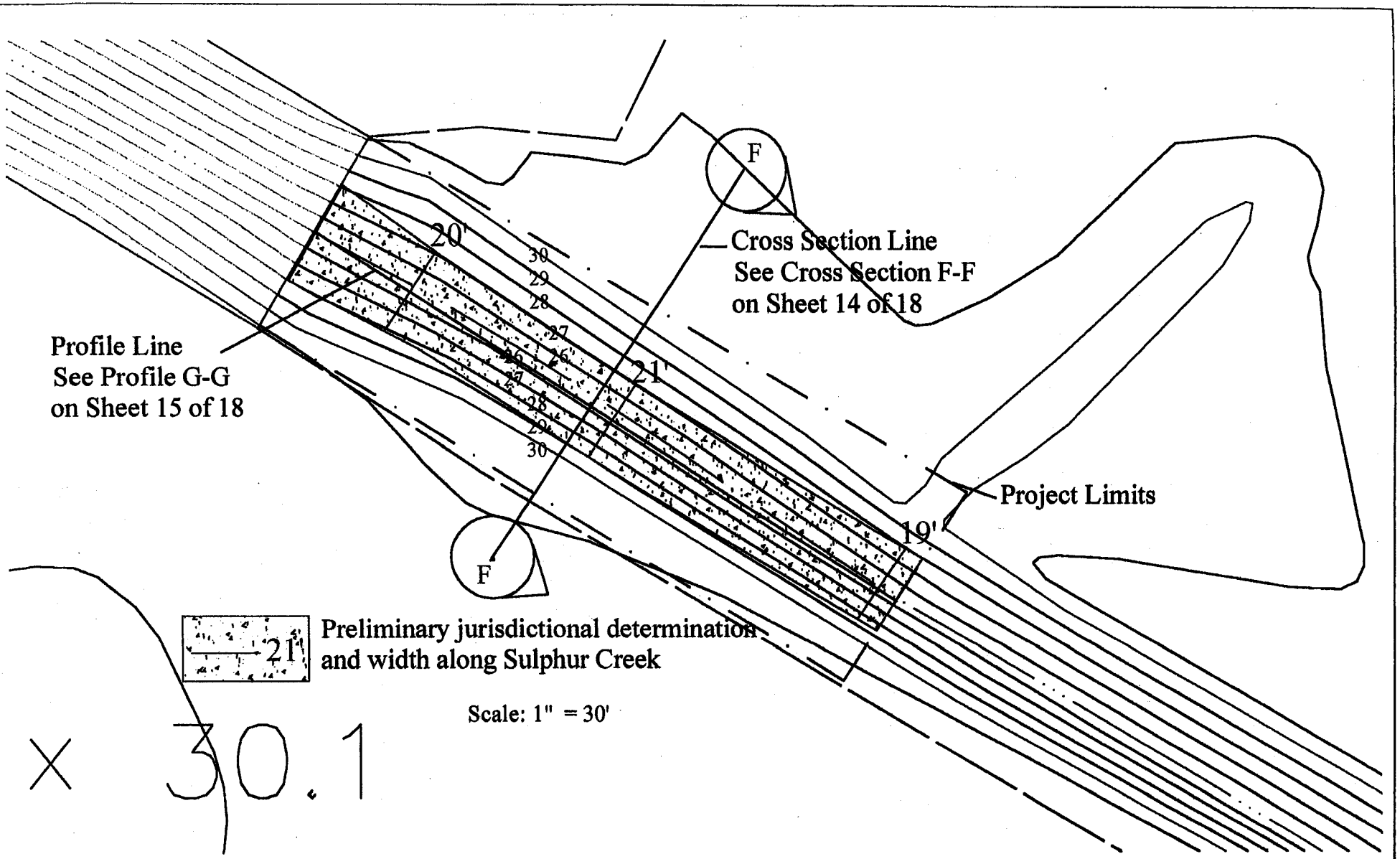
PROPOSED CHANNEL SULPHER CREEK

Scale: 1" = 120' Horizontal
1" = 4' Vertical

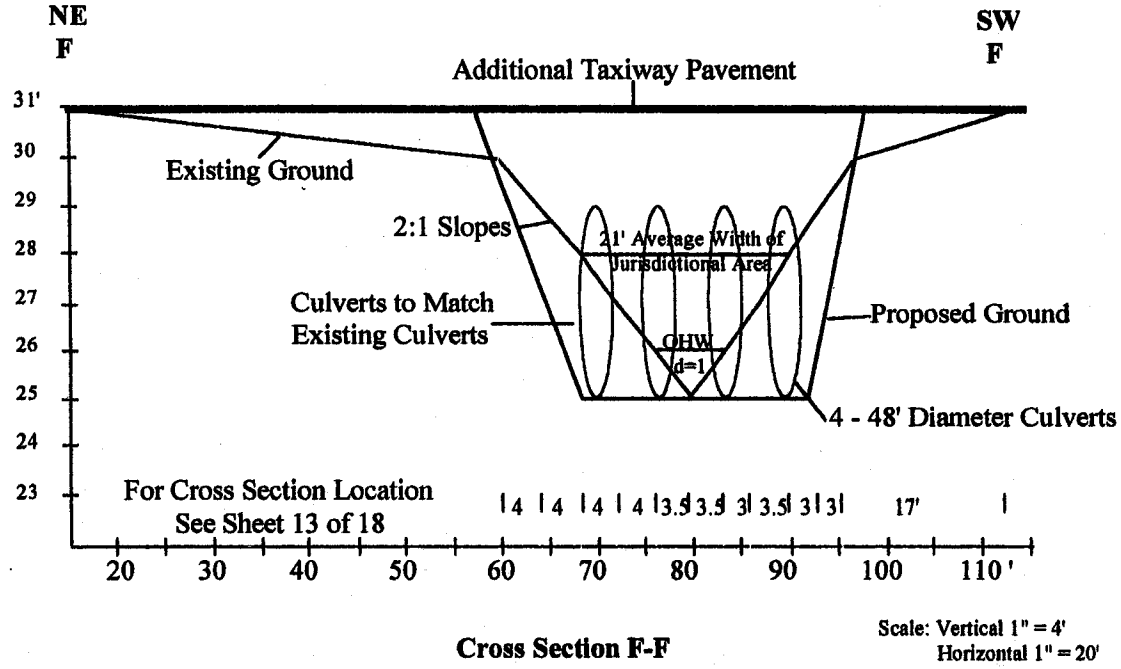
Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Profile View Mr. Bob Bauman, Ph.D., P.E. City of Hayward 777 B Street Hayward, California 94541	Profile of Realigned Channel Home Depot Portion of the Site In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 11 of 18 Date: 2/4/00



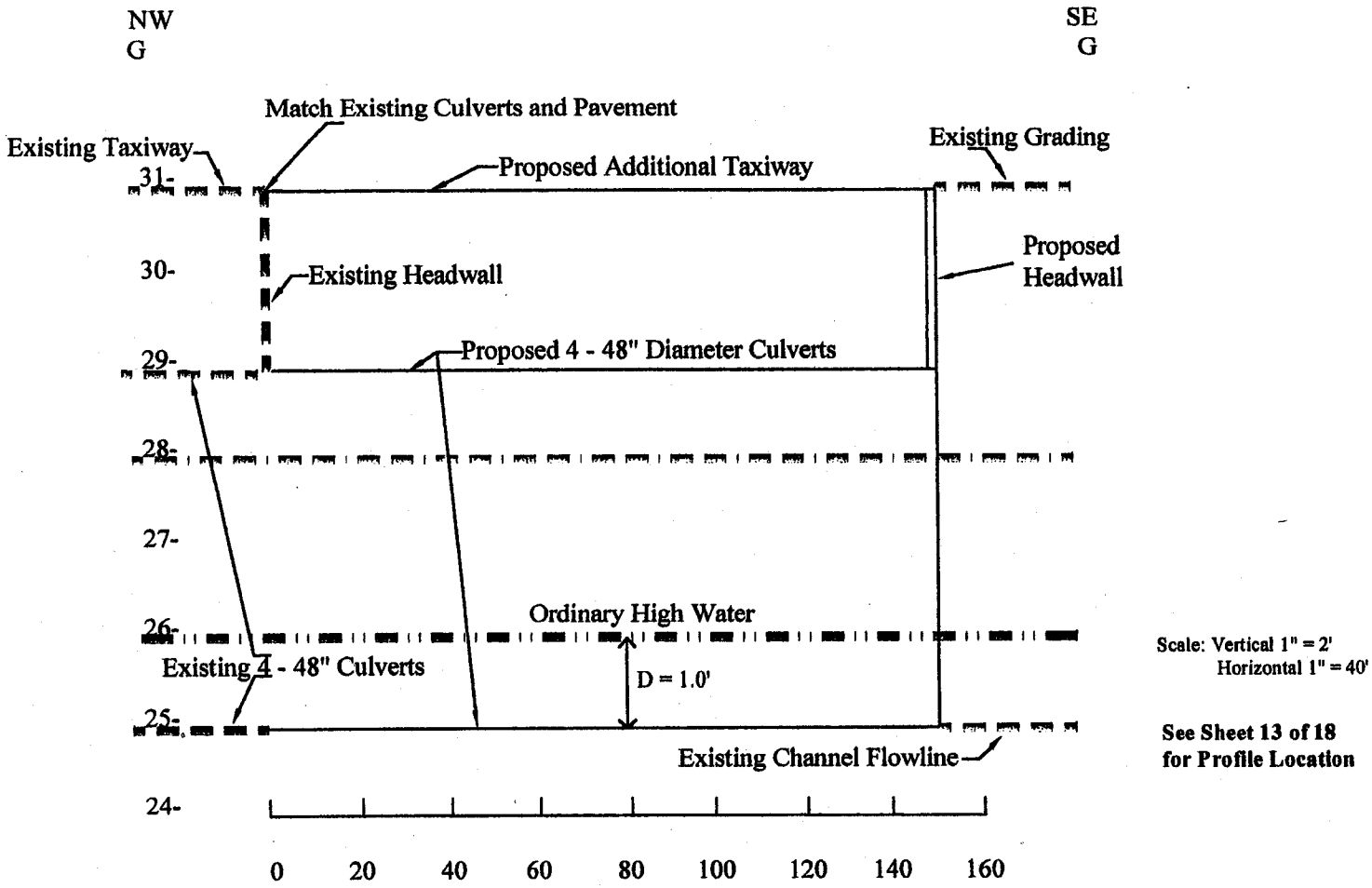
Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Plan View Mr. Bob Bauman, Ph.D., P.E. City of Hayward 777 B Street Hayward, California 94541	Plan View of Road Crossing of Realigned Channel Home Depot Portion of the Site In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 12 of 18 Date: 2/4/00



Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Plan View Mr. Bob Bauman, Ph.D., P.E. City of Hayward 777 B Street Hayward, California 94541	Plan View of Sulphur Creek with Cross Section Locations-Hayward Airport Portion of the Site In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 13 of 18 Date: 2/4/00

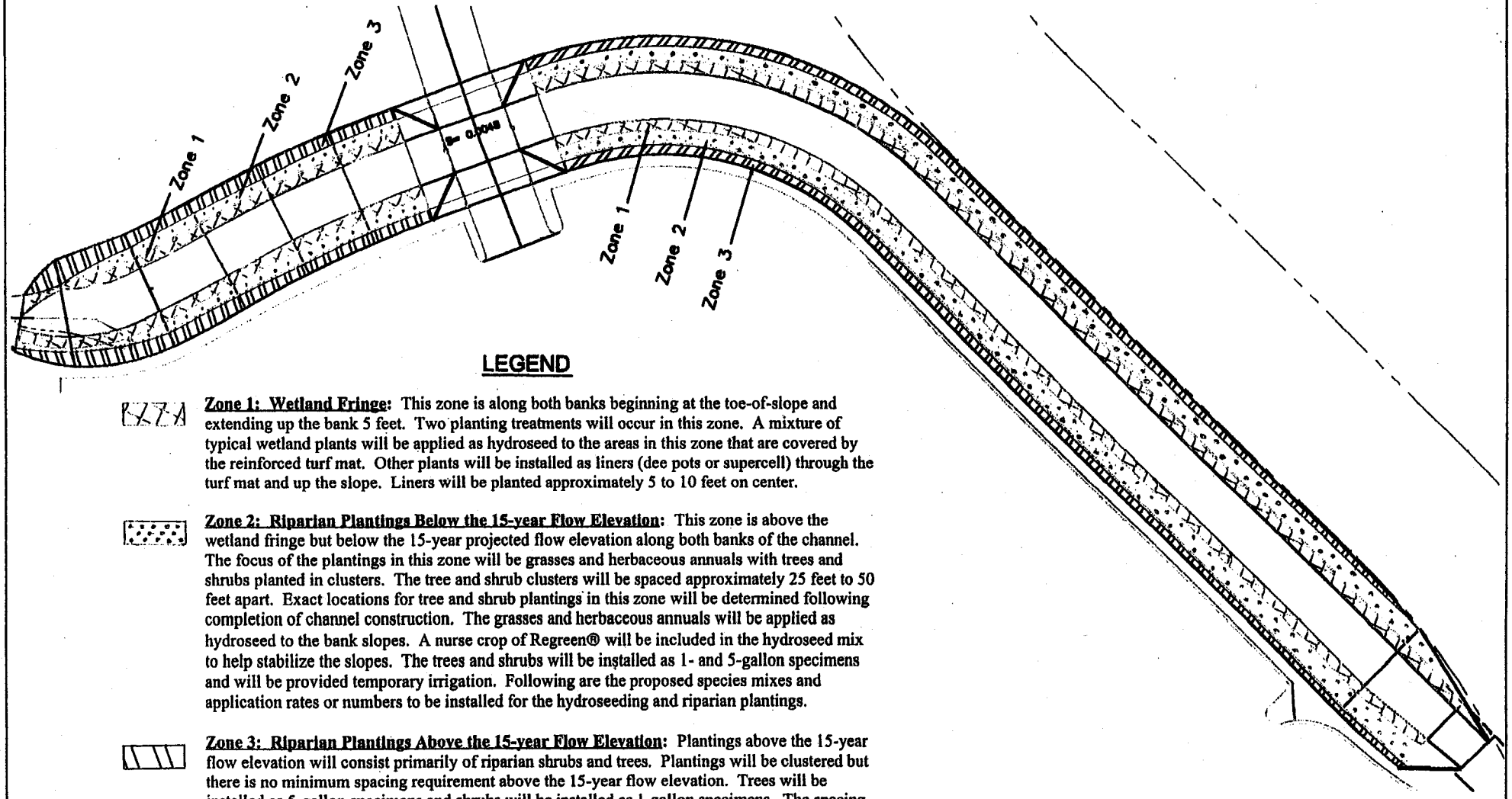


Purpose: Commercial Development	Section View	Cross Section F-F Hayward Airport Portion of the Site
Datum: NGVD	Mr. Bob Bauman, Ph.D., P.E. City of Hayward	In: Sulphur Creek At: Hayward County: Alameda State: CA
Adjacent Property Owners: See Permit Application	777 B Street Hayward, California 94541	Application by: City of Hayward Sheet 14 of 18 Date: 2/4/00



Profile G - G

Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Profile View Mr. Bob Bauman, Ph.D., P.E. City of Hayward 777 B Street Hayward, California 94541	Profile G-G Hayward Airport Portion of the Site In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 15 of 18 Date: 2/4/00



LEGEND

Zone 1: Wetland Fringe: This zone is along both banks beginning at the toe-of-slope and extending up the bank 5 feet. Two planting treatments will occur in this zone. A mixture of typical wetland plants will be applied as hydroseed to the areas in this zone that are covered by the reinforced turf mat. Other plants will be installed as liners (dee pots or supercell) through the turf mat and up the slope. Liners will be planted approximately 5 to 10 feet on center.

Zone 2: Riparian Plantings Below the 15-year Flow Elevation: This zone is above the wetland fringe but below the 15-year projected flow elevation along both banks of the channel. The focus of the plantings in this zone will be grasses and herbaceous annuals with trees and shrubs planted in clusters. The tree and shrub clusters will be spaced approximately 25 feet to 50 feet apart. Exact locations for tree and shrub plantings in this zone will be determined following completion of channel construction. The grasses and herbaceous annuals will be applied as hydroseed to the bank slopes. A nurse crop of Regreen® will be included in the hydroseed mix to help stabilize the slopes. The trees and shrubs will be installed as 1- and 5-gallon specimens and will be provided temporary irrigation. Following are the proposed species mixes and application rates or numbers to be installed for the hydroseeding and riparian plantings.

Zone 3: Riparian Plantings Above the 15-year Flow Elevation: Plantings above the 15-year flow elevation will consist primarily of riparian shrubs and trees. Plantings will be clustered but there is no minimum spacing requirement above the 15-year flow elevation. Trees will be installed as 5-gallon specimens and shrubs will be installed as 1-gallon specimens. The spacing between trees should be between 5 feet and 10 feet on center and for shrubs, 3 feet to 5 feet on center. Exact locations for tree and shrub plantings in this zone will be determined following completion of channel construction. Prior to installation of the tree and shrub plantings, the area will be hydroseeded with the same mixture applied to Zone 2, at the same rate specified.

For Mitigation Area Plant Palette
see Sheet 17 of 18

Purpose: Commercial Development	Plan View	Mitigation Area Planting Plan Home Depot Portion of the Site
Datum: NGVD	Mr. Bob Bauman, Ph.D., P.E. City of Hayward	In: Sulphur Creek At: Hayward County: Alameda State: CA
Adjacent Property Owners: See Permit Application	777 B Street Hayward, California 94541	Application by: City of Hayward Sheet 16 of 18 Date: 2/4/00

Zone 1

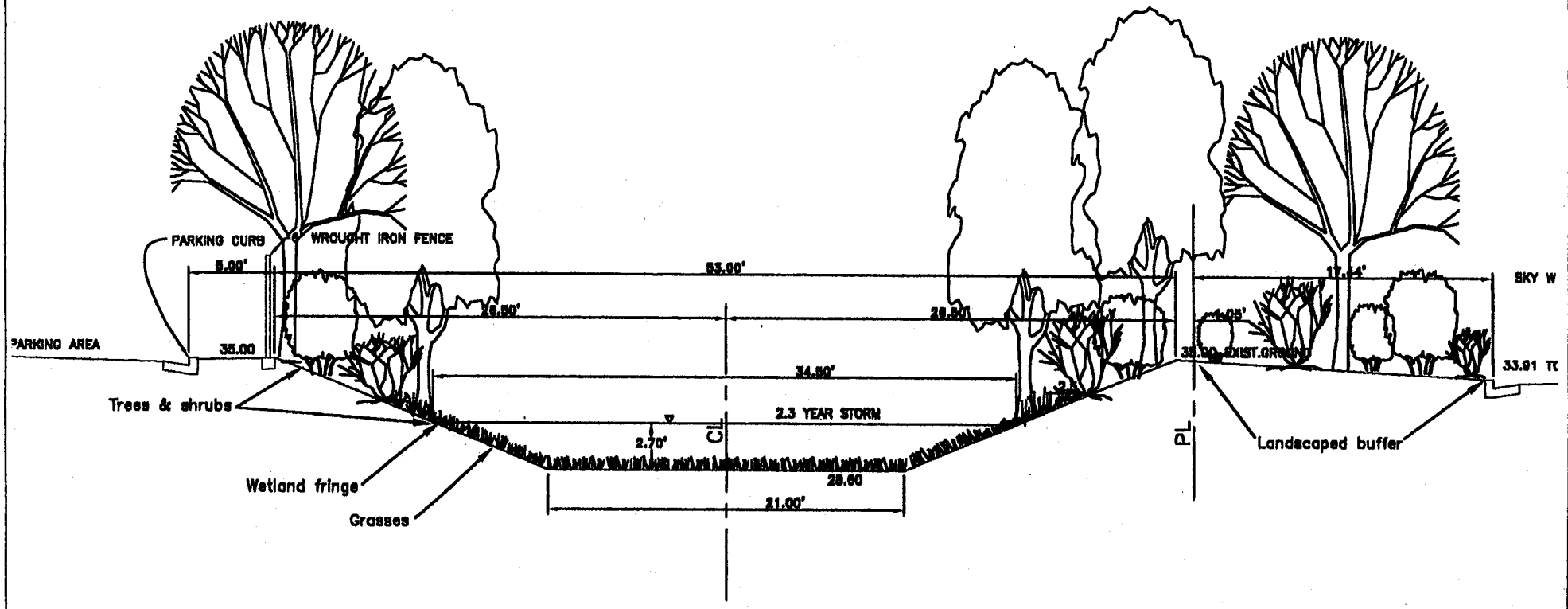
To be applied as hydroseed:		
Scientific Name	***Common Name***	***Application Rate***
Lythrum californicum	California loosestrife	10 lbs/acre
Polygonum hydropiperoides	water-pepper	10 lbs/acre
Veronica americana	American brooklime	15 lbs/acre
Rorippa nasturtium aquatica	water cress	10 lbs/acre
Polypogon monspeliensis	rabbitfoot grass	15 lbs/acre
Heliotropium curassavicum	wild heliotrope	10 lbs/acre
	mulch	500 lbs/acre
	fertilizer (6-20-20)	500 lbs/acre
	tackifier	100 lbs/acre
To be installed as liners:		
Scientific Name	***Common Name***	***Number to be Installed***
Juncus balticus	baltic rush	400 liners
Juncus phaeocephalus var. *paniculatus*	inland brown headed rush	400 liners
Mimulus guttatus	seep spring monkey flower	700 liners

Zone 2 and Zone 3

To be applied as hydroseed:		
Scientific Name	***Common Name***	***Application Rate***
Regreen®		15 lbs/acre
Bromus carinatus	California brome	6 lbs/acre
Deschampsia caespitosa ssp. *caespitosa*	tufted hair grass	8 lbs/acre
Hordeum brachyantherum	meadow barley	8 lbs/acre
Leymus triticoides	beardless ryegrass	5 lbs/acre
Eschscholtzia californica	California poppy	6 lbs/acre
Lasthenia californica	goldfields	7 lbs/acre
Lupinus nanus	sky lupine	4 lbs/acre
Sisyrinchium californicum	yellow-eyed grass	4 lbs/acre
Trifolium gracilentum	pinpoint clover	6 lbs/acre
Trifolium willdenovii	tomcat clover	6 lbs/acre
	mulch	500 lbs/acre
	fertilizer (6-20-20)	500 lbs/acre
	tackifier	100 lbs/acre
To be installed as 5-gallon specimens		
Scientific Name	***Common Name***	***Number to be Installed***
Platanus racemosa	sycamore	20
Acer negundo	box elder	20
Aesculus californica	buckeye	20
Quercus agrifolia	coast live oak	30
Quercus lobata	valley oak	16
Umbellularia californica	California bay	25
Juglans californica var. *hindsii*	California black walnut	20
Salix lasiolepis	arroyo willow	25
To be installed as 1-gallon specimens		
Rhamnus californica	California coffeeberry	30
Ribes sanguineum	flowering currant	50
Baccharis pilularis var. *consanguinea*	coyote brush	50
Rosa californica	California rose	100
Sambucus mexicana	blue elderberry	50

For Mitigation Area Planting Plan see Sheet 16 of 18

Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Mr. Bob Bauman, Ph.D., PE City of Hayward 777 B Street Hayward, California 94541	Mitigation Area Plant Palette Home Depot Portion of the Site In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 17 of 18 Date: 2/4/00



SCALE: 1"=9'

Purpose: Commercial Development Datum: NGVD Adjacent Property Owners: See Permit Application	Section View Mr. Bob Bauman, Ph.D., P.E. City of Hayward 777 B Street Hayward, California 94541	Realigned Channel Cross Section with Proposed Planting-Home Depot Portion of the Site In: Sulphur Creek At: Hayward County: Alameda State: CA Application by: City of Hayward Sheet 18 of 18 Date: 2/4/00