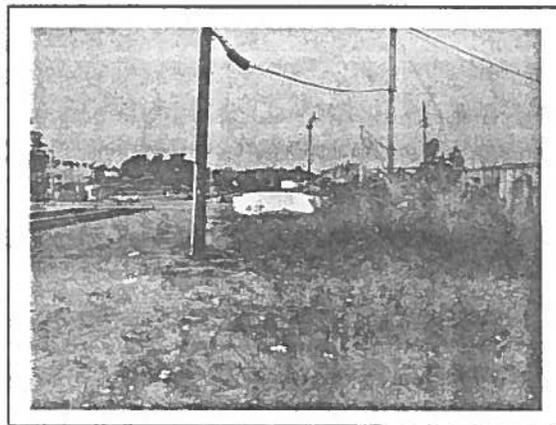


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EVALUATION OF WETLAND STATUS AND REGULATORY CONSTRAINTS

El Estero Drain at Calle Cesar Chavez

June 2000



Prepared for:

**City of Santa Barbara
Public Works Department
630 Garden Street
Santa Barbara, California 93102**

Prepared by:

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1.0 INTRODUCTION

The City of Santa Barbara (City) is considering extending Cacique Street from Quarantina Street to Calle Cesar Chavez through an industrial area. The road extension could potentially affect a small man-made drainage course east of Calle Cesar Chavez. The drain is located north of, and parallel to, the Union Pacific railroad tracks. It conveys local runoff to the west where it empties into Laguna Channel. The drain is located in the City limits, as well as within the Local Coastal Zone. The road extension would require issuance of a Coastal Development Permit from the City Community Development Department.

The City retained URS Greiner Woodward-Clyde (URS) to conduct an investigation of the wetland status of the drain and to evaluate the regulatory constraints associated with placing a road at or near the drain. Our specific scope of work involved the following tasks:

- Conduct a field investigation to confirm the wetland status of the drain using wetland definitions and field criteria from the California Coastal Act and the City's Local Coastal Plan.
- Identify policies and practices of the City Planning Division, Coastal Act, and Local Coastal Plan that may affect the siting and design of the road near the drain, particularly policies related to buffer zones next to wetlands.

2.0 SITE CONDITIONS

The drain addressed in this study represents the eastern end of a man-made drainage drain that extends about 1,600 feet from near Calle Cesar Chavez to Laguna Channel on the north side of the Union Pacific railroad tracks. The drain has been informally referred to as El Estero Drain. The portion of the drainage included in this study is east of Calle Cesar Chavez, and represents the top of the drainage course.

The drain at the project site is earthen channel with a trapezoidal shape (Figure 1). The project reach is about 130 feet long and 18 feet wide (from top of bank to top of bank). The bottom of the channel, where water and wetland plants have accumulated, has an average width of seven feet with a range of five to eight feet. The drain is about 48 to 54 inches deep.

The banks on the south side have a 1:1 (V:H) slope, while the banks on the north side of the drain are slightly steeper. The channel banks are actively eroding due to overbank flow and slumping. The channel bottom and banks are comprised of sandy loams. The upper banks appear to be fill material.

The bed of the channel and the lower one to two feet of the banks are vegetated with bulrush (*Scirpus* sp.) with scattered cattails (*Typha latifolia*). At the time of the survey (April and May 2000), the vegetation in the drain had been cut down, apparently by hand, to within two feet of the ground. Only about 10 percent of the channel bed contains open water.

The bottom of the drain contains water most of the year. At the time of the field investigations, there was about eight inches of water. The water was stagnant. The drain collects runoff from the railroad right-of-way and from the adjacent industrial yard (associated with Vulcan Materials Company). The entire drain from the project site to Laguna Channel has a reverse gradient which causes water to accumulate along most of the length of the drain. The drain flows to Laguna Channel when winter runoff raises the water level sufficient to cause the drain to empty into Laguna Channel through a steel pipe culvert.

Water in the drain during the summer and fall appears to a combination of bank seepage, shallow groundwater, and nuisance flows from the industrial yards. The channel invert elevation is estimated to be about 7 to 8 feet mean sea level.

The drain and adjacent areas contain an abundance of trash, including a grocery cart, several plastic drums, paper trash, and clothing and cardboard from a previous homeless encampment. The stagnant water in the channel contains an oily sheen and a layer of algae.

The lower banks of the drain are dominated by bulrush, as noted above. The upper banks contain a mixture of bare ground and non-native weeds, including wild oats, castor bean, rabbitsfoot grass, and Bermuda grass. A single willow tree about 5 feet tall occurs along the bank at the head of the drain.

The flats on the south side of the drain are almost completely barren. This area is within the Union Pacific right-of-way, and is purposely cleared by hand and herbicide treatment. The top of the northern bank of the drain is located outside of a chain link fence. This area is paved and used for equipment maintenance and storage. There are several storage sheds located directly adjacent to the fence, as well as parked equipment. The fence is sagging in the middle section of the project reach due to the accumulation of sediments, trash, and equipment from the industrial operations. There is no containment of runoff from the industrial area.

There are four small patches of saltgrass (*Distichlis spicata*) on the flat area south of the drain in the Union Pacific right-of-way. These patches are rooted in dry, barren areas where there has been considerable disturbance from dumping and clearing. The sizes of the patches are as follows: Patch No. 1 (50 square feet), Patch No. 2 (20 square feet), and Patch Nos. 3 and 4 (combined area of about three square feet).

3.0 PRESENCE OF WETLANDS

3.1 WETLANDS IN THE DRAIN

The Coastal Act defines wetlands broadly: as "... lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens [Section 30321]."

The drain contains year-round ponded water. In addition, the bottom of the channel and the lower portions of the banks are dominated by a common native wetland plant, bulrush. Due to the presence of water and hydrophytic plant species, the channel contains a wetland as defined above in the Coastal Act. The average width of the wetlands in the project reach is 10 feet, comprised of the channel bottom and about 1.5 feet on the lower portions of both banks. The total area of wetlands in the channel along the project reach using the Coastal Act definition is about 1,300 square feet.

The wetlands in the bottom of the channel are also likely to represent wetlands under the jurisdiction of the Corps of Engineers under Section 404 of the Clean Water Act because it appears that the three requisite characteristics for federal jurisdictional wetlands are present (i.e., hydrophytic plants, hydric soils, and wetland hydrology).

3.2 WETLANDS OUTSIDE THE DRAIN

Saltgrass is considered a wetland plant – that is, it is found more often in wet areas with seasonally saturated soils than in dry upland areas. However, this species, like many California wetland species, can occur and thrive in non-wetland areas, particularly areas with adverse soil conditions such as high salinity. Saltgrass has been rated a “facultative wetland” plant by the federal government, meaning that it is typically found in wetland situations but is highly adaptable and can occur in non-wetland situations. The frequency in which saltgrass occurs in non-wetland areas could be as much as 33 percent.

The CCC staff and City Planning Division staff typically identify wetlands in the Coastal Zone based solely on the presence of wetland plant species. The presence of hydric soils (i.e., soils with evidence of extended anaerobic conditions) and/or wetland hydrology (i.e., periodic inundation or soil saturation) is often not considered in the identification process. Relying solely on the presence of wetland plant species (i.e., hydrophytes) to identify a wetland under the Coastal Act can result in inaccurate determinations because many wetland species can occur in dry areas without wetland conditions.

Wetlands are defined in Section 30121 of the Coastal Act as follows: “*Wetlands means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens.*” The only operative criterion in the above definition is the presence of shallow water on land. The definition does not reference hydric soils or vegetation types, nor does it state or imply the required duration of inundation. In 1981, the CCC adopted the Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Areas. It states that the CCC relies upon the definition of wetlands in the Coastal Act, but also indicates that wetlands may include a wide variety of different habitat types, and therefore:

“...some wetlands may not be readily identifiable by simple means. In such cases, the Commission also will rely on the presence of hydrophytes and/or the presence of hydric soils as evidence that an area may be periodically or

permanently covered with shallow water. These are useful indicators of wetland conditions, but the presence or absence of hydric soils and/or hydrophytes alone are not necessarily determinative when the Commission identifies wetlands under the Coastal Act."

Based on the above guidance from the CCC, the presence of wetland hydrology at the saltgrass patches is a relevant and important consideration in determining if these areas represent wetlands. These patches occur in a upland situation where there is no evidence of ponding water or prolonged saturation of the upper soil. The tops of the banks drain freely into the drain and are located about four to five feet above the invert of the drain.

In the absence of wetland hydrology, it is not reasonable to conclude that the saltgrass patches are wetlands as defined in the Coastal Act. These areas are not "... covered periodically or permanently with shallow water..."

4.0 PRESENCE OF ENVIRONMENTALLY SENSITIVE HABITAT AREA

Section 30107.5 of the Coastal Act defines "Environmentally sensitive area" as "... any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." In the Coastal Act, "environmentally sensitive area" is synonymous with "environmentally sensitive habitat area" (ESHA).

The Coastal Commission's 1981 Statewide Interpretive Guidelines for Wetlands and Other Wet Environmental Sensitive Habitat Area state that the "*Commission generally considers wetlands, ... streams, riparian habitats... to be environmentally sensitive habitat areas because of the valuable role of these habitat areas in maintaining the natural ecological functioning of many coastal habitat areas...*" The important term to note in this section of the guidelines is "generally," which clearly indicates that designation of an ESHA involves interpretation.

Although the project site has wetlands, it does not meet the definition of an ESHA, which supports "rare and valuable habitats." For example, the wetlands along the project reach are dominated by a single common plant species. The wetlands are isolated from other wetlands by the Calle Cesar Chavez box culvert and road. Finally, the wetlands are highly disturbed by homeless encampments, trash dumping, uncontrolled runoff from an industrial yard, and noise and vibration from the adjacent railroad tracks and road. It should also be noted that native upland habitat is not adjacent to the wetlands to provide cover and food for wildlife using the wetlands, as well as to buffer the wetlands from humans, noise, dust, and light.

ESHAs are also commonly recognized because they support sensitive species. However, the project drain does not support any sensitive aquatic, wetland, or riparian species. The entire El Estero Drain does not support fish because there is no continuous connection with Laguna Channel, and because the water in the channel is stagnant, of poor quality, and clogged with vegetation. Hence, the endangered southern steelhead and tidewater goby, which are present along the South

Coast, are not expected to occur in the project reach. Habitat in the drain is also not suitable for the endangered California red-legged frog because of the reasons noted above for native fish.

In contrast, portions of El Estero Drain west of Calle Cesar Chavez support a population of the locally sensitive southwestern pond turtle. These areas contain patches of open water with overhanging vegetation. This type of habitat is not present in the project reach which has very little open water habitat. Hence, this species is not expected to be present in the project reach. Finally, the narrow and small bulrush thicket in the project reach is not suitable for riparian breeding birds, shorebirds, or waterfowl.

Based on the above considerations, the drain at the project site does not exhibit the characteristics of an ESHA as defined in the Coastal Act and clarified in the Coastal Commission's 1981 Statewide Interpretive Guidelines for Wetlands and Other Wet Environmental Sensitive Habitat Area.

5.0 APPLICABLE COASTAL ACT AND LCP POLICIES

5.1 APPLICABILITY OF THE COASTAL ACT

As noted earlier, the drain is located in the Coastal Zone. The Coastal Act and Santa Barbara Municipal Code consider grading and the construction of facilities such as a road to be "development" that is subject to the permitting requirements of the Coastal Act, the City's Local Coastal Plan (LCP), and the Santa Barbara Municipal Code. As such, a Coastal Development Permit (CDP) is required for the proposed road extension.

5.2 ALLOWABLE USES IN WETLANDS

The Coastal Act only allows certain types of development in a wetland. There are eight allowable uses of wetlands specified in Section 30233, including the following two uses: *(5) Incidental public service purposes, including but not limited to, burying cable and pipes or inspection of piers and maintenance of existing intake and outfall lines.... (7) Restoration purposes.* None of the eight uses in the Coastal Act specifically include clearing or filling for flood control, public facilities such as trails or roads, or amelioration of a public safety hazard or nuisance.

Based on this policy, construction of the road extension within the wetlands along the project reach, or modification of the drain associated with the construction of the road, would only be permitted if the proposed project could be interpreted by the Planning Commission to be one or both of the following allowable uses.

Incidental Public Service

The Coastal Act allows impacts to wetlands that are associated with a minor public service purpose. The term "public service" is not clearly defined in the Coastal Act or in the Interpretive Guidelines, and as such, is interpreted on a case by case basis by the certified LCP authority (e.g.,

the City). The 1981 Statewide Interpretive Guidelines place severe restrictions on the application of this allowable use in wetlands. For example, it can only apply to a project with temporary impacts to wetlands. In addition, the allowable use does not typically apply to roads, unless there is no other alternative, and only if the project represents a limited expansion of an existing roadway.

The City Planning Commission may consider the proposed road extension an incidental public service under the following circumstances:

- The design and construction of the road extension will cause temporary impacts to the wetlands during construction, but the nature and boundary of the existing wetlands in the drain would not be adversely affected. The wetlands can be expanded in area or enhanced, but cannot be relocated. The extent of temporary impacts to El Estero Drain that would be acceptable to the Planning Commission is unknown at this time.
- There is no other feasible, less environmentally damaging alternative that avoids impacts to wetlands. All feasible mitigation measures to reduce impacts to wetlands must be incorporated in the project.
- The Commission must make a determination that the project represents a “limited expansion” of an existing road, rather than construction of a new road.

Restoration Purposes

The Coastal Act allows for the disturbance of wetlands, if restoration is the primary purpose of the project. The CCC’s 1981 Interpretive Guidelines state: *“Restoration projects which are a permitted development in Section 30233 (a)(7) are publicly or privately financed projects in which restoration is the sole purpose of the project.... projects which provide mitigation for non-permitted development may not be broadly construed to be restoration projects in order to avoid the strict limitations of permitted uses in Section 30233....”*

The Planning Commission may consider the road extension a “restoration project” under the following highly restrictive circumstances:

- The primary purpose of the project is to restore or enhance the habitat values and functions of the drain. In general, this purpose can be accomplished by removing the weedy species from the drain and adjacent area, and replacing them with native species. The wetlands can be expanded or enhanced, but cannot be relocated.
- Portions of the drain that would be filled for the road must be clearly incidental to the primary restoration purpose. It must be determined that the drain is a small, extremely isolated wetland that is incapable of being restored to a biological productive system without major efforts. It must also be shown that the incidental fill will help accomplish the restoration goals. In addition, the area to be filled must not support sensitive species, and the area to be restored must occur adjacent to a larger, more valuable wetland.

- There is no other feasible, less environmentally damaging alternative that avoids impacts to wetlands. All feasible mitigation measures to reduce impacts to wetlands must be incorporated in the project.

To meet the above requirements, a wetland restoration plan would need to be developed for the drain that incorporates the road extension, and which relies upon elements of the road to accomplish restoration goals. This would be a very difficult approach to adopt for the proposed road extension, and may not be feasible.

5.3 ALLOWABLE USES IN AN ESHA

Section 30240(a) of the Coastal Act states that *“Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.”* If it is determined that the drain represents an ESHA, this policy would only allow development in the drain that is dependent on the habitat functions at the drain. In essence, this policy restricts allowable uses in an ESHA to habitat protection, enhancement, or restoration. This restriction is more stringent than that applied to wetlands, as described above.

6.0 CONSIDERATION OF BUFFER ZONES

6.1 POLICIES RELATING TO BUFFER ZONES

There are several policies and guidelines that require the establishment of buffer zones adjacent to wetlands and EHSAs to protect their functions, as listed below. A buffer zone is not considered part of a wetland or ESHA, but instead, is considered open space that “screens” or otherwise lessens impacts from adjacent human uses. Applicable policies are listed below in the chronological order of their origin:

- Section 30240(b) of the Coastal Act states that *“Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitats and recreation areas.”*
- The 1981 Interpretive Guidelines state *“A buffer area should be established for each development adjacent to environmentally sensitive habitat areas based on the standards enumerated below. The width of the buffer area will vary depending upon the analysis. The buffer area should be a minimum of 100 feet for small projects on existing lots (such as one single family home or one commercial office building) unless the applicant can demonstrate that 100 feet is unnecessary to protect the resources of the habitat area.”*
- Policy 6.10 of the City’s LCP states that *“The City shall require a setback buffer for native vegetation between the top of the bank and any proposed project. This setback will vary*

depending upon the conditions of the site and the environmental impact of the proposed project."

6.2 APPLICABILITY TO THE PROPOSED ROAD EXTENSION

It should be noted that the origin of the buffer zone concept was in the Coastal Act and applied to ESHAs only. However, with the 1981 guidance document, the buffer zone concept was applied to wetlands. This point is important in so far as the drain does not exhibit characteristics of an ESHA, although it does currently exhibit wetland properties. To the extent that the drain is not considered an ESHA, then the need for a buffer zone is reduced, and a narrower buffer zone may be considered appropriate compared to that needed for a fully developed and functioning ESHA.

The most stringent policy concerning buffer zones listed above is from the Statewide Interpretive Guidelines, which includes consideration of a 100-foot wide buffer zone. However, the guidelines provide flexibility in determining the width based on the following factors: biological significance of adjacent areas, sensitivity of species to disturbance, erosion potential, natural topography, presence of man-made features, lot configuration and existing development, and scale of development.

A strict application of the 100-foot wide buffer zone would not be necessary for the proposed road extension for the following reasons:

- Buffer zones are designed to protect the habitat values of a wetland or ESHA. The project reach has negligible habitat values and functions.
- The wetlands in the drain are isolated from other wetlands.
- The wetlands are highly disturbed by homeless encampments, trash dumping, uncontrolled runoff from an industrial yard, and noise and vibration from the adjacent railroad tracks and road.
- A native upland habitat buffer zone is not present outside the wetlands.
- The drain does not support any sensitive fish or wildlife species.

Based on these considerations, a minimal buffer zone such as 25 feet from the top of the bank would be applicable to the project reach in its current condition. It is important to note that the width of the actual wetlands in the drain is only 10 feet. The banks provide an additional four to five feet of non-wetland buffer. Hence, the application of a 25-foot wide buffer on both sides of the drain would widen the current habitat along the project reach from 18 feet to 68 feet. The negligible values of this degraded wetland would be greatly improved by this buffer zone.

If the wetlands in the project reach were enhanced or restored, a wider buffer zone may be warranted because the functions and values of the wetland would be greater than under current conditions.

7.0 CONCLUSION AND RECOMMENDATION

Key conclusions of this investigation are listed below:

1. The drain cannot be converted to a buried storm drain, nor relocated under current Coastal Act and LCP policies as part of the proposed roadway project. Hence, the drain cannot be removed, and the proposed road extension must be located outside the boundaries of the drain.
2. The Coastal Act policy on allowable uses in wetlands permits temporary, incidental impacts to wetlands for public services purposes. Hence, temporary construction-related disturbance of the wetlands incidental to construction of the road may be allowable. The interpretation of this policy must be confirmed by the City Planning Division staff and Planning Commission.
3. Development of a road adjacent to the drain will require a consideration of a buffer zone that may limit the proximity of the road to the drain. However, the wetlands in the drain exhibit negligible functions and values, and furthermore, do not exhibit characteristics of an ESHA. As a result of this condition, a relatively narrow buffer zone may be appropriate for the proposed project. The width of the buffer zone is ultimately dependent upon the City Planning Division staff and Planning Commission. However, relative to other coastal wetlands in Santa Barbara County, the wetlands in the project reach have very low quality, and a minimum width buffer zone should be applied. There are no guidelines or standards for determining a minimum width for a buffer zone. However, a common minimum width used in land planning throughout the Coastal Zone is 25 feet. This buffer zone would more than adequately protect the current wetland values and functions along the project reach.
4. There are substantial opportunities for enhancing the habitat values of the drain, particularly for increasing native plant diversity, creating open water habitat, reshaping banks to reduce erosion, planting riparian and upland plants on the banks, controlling trash dumping and homeless encampments, and improve water quality by providing bio-filtration measures.

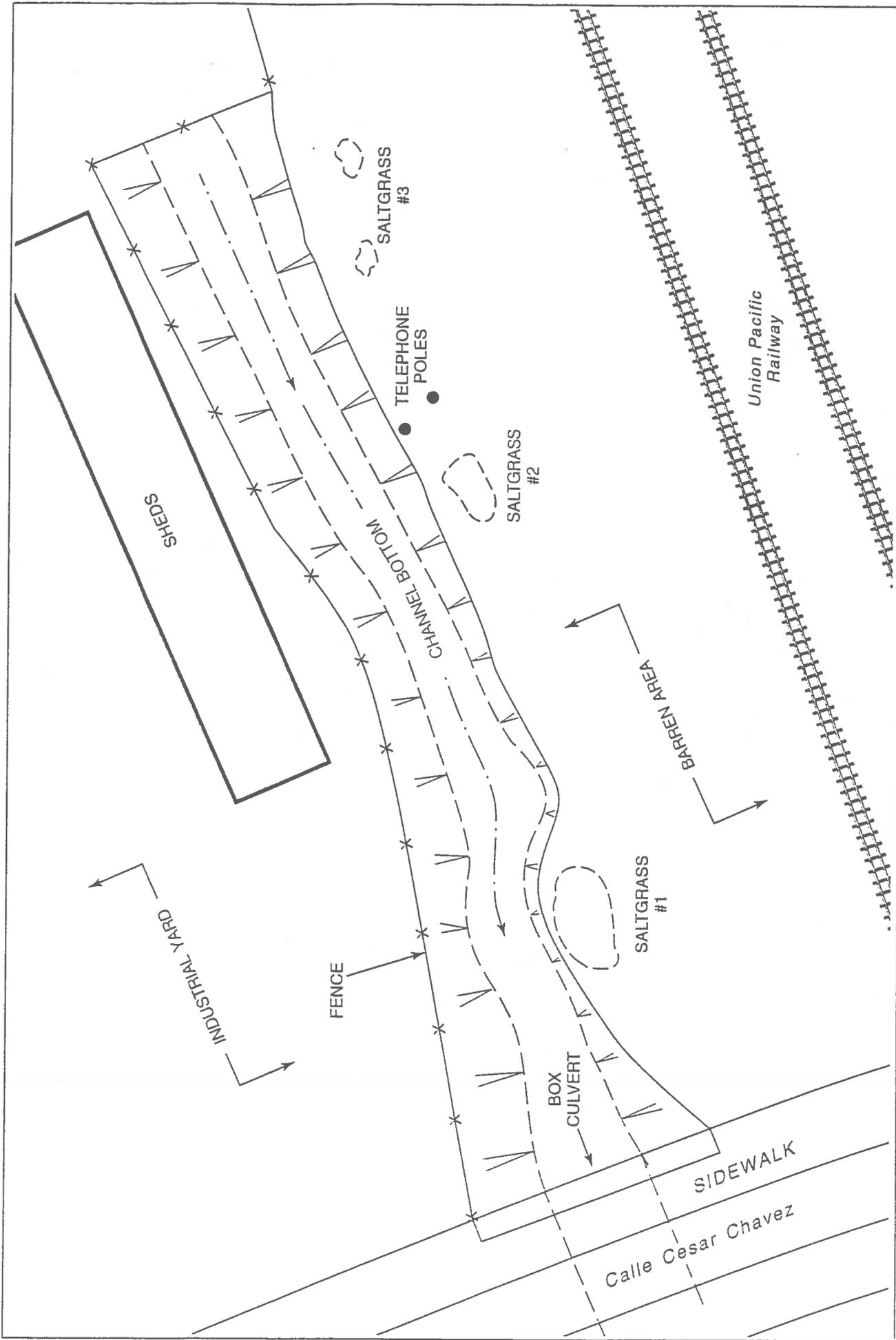
Construction of the road near the drain may provide an opportunity to improve environmental conditions in the area. The project reach is a highly degraded wetland feature that is visually unattractive. It is also a public health problem due to the trash dumping and occupation by homeless. Restoration of the wetlands in the drain as part of the road extension project is allowable under the Coastal Act, as noted above. Combining the construction of the road extension and restoration of the wetlands would provide multiple benefits. The most appropriate restoration for project reach would be to enhance the bio-filtration function of the drain rather than to restore its values for fish, aquatic habitat, and wildlife.

Enhancing the bio-filtration function of the project reach would involve the following actions: (1) reshape the drain to a more uniform channel to reduce erosion and maximize flat channel bottom; (2) install a variety of emergent wetland plants in the bottom to capture sediments and pollutants, and to facilitate microbial degradation of pollutants; (3) stabilize the banks with native riparian shrubs; and (4) exclude public entry and trash dumping. The project reach will function as a “bio-filter” by retaining runoff and allowing contact between the water and emergent wetland plants. In its current condition, the project reach provides some water quality benefits; however, these benefits can be increased through the above restoration actions.

Restoration of the drain as a bio-filter is preferable than restoration for wildlife habitat because of the following reasons: (1) the wetlands in the project reach will always be small and isolated, even after restoration; and (2) the project reach is located at the head of the drainage where uncontrolled industrial stormwater is collected, and as such, its highest use would be as bio-filter and forebay for sediment and floatable trash collection.

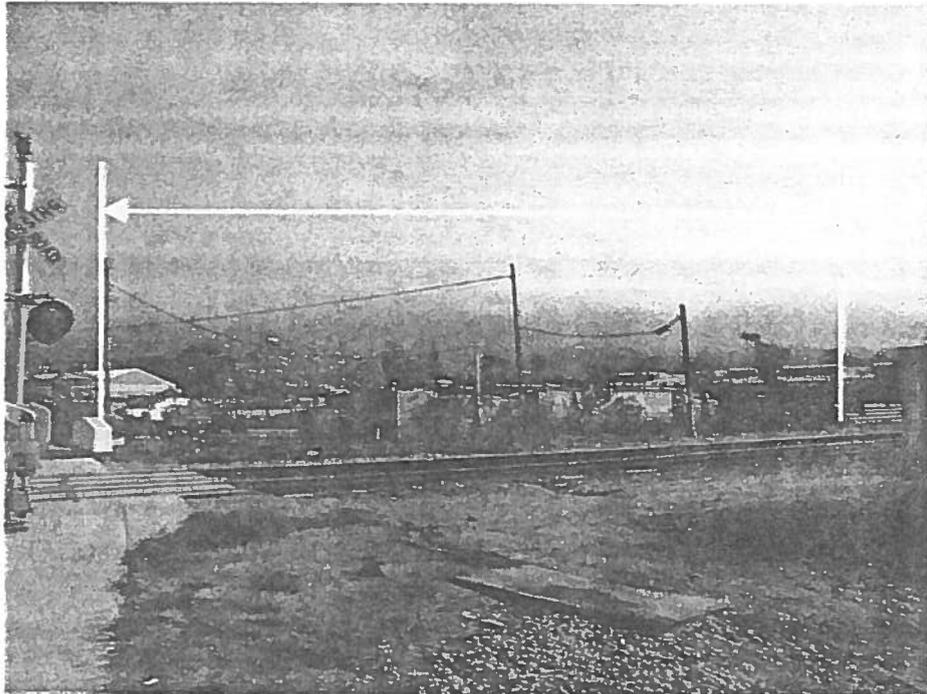
Restoration of the drain as a more effective bio-filter does not require a wide buffer zone because the primary function of a buffer zone is to protect the habitat values of a wetland from outside factors. If the primary function of the project reach is to improve water quality, then the buffer zone would only be needed to exclude human entry and to provide an aesthetic element. A 25 foot wide buffer would be sufficient to meet these objectives.

We recommend that the City consider the above restoration and buffer zone recommendations as the road extension project is developed. The above conclusions and recommendation should be reviewed with City Planning Division staff to ensure that they are compatible with the City’s current policies and practices regarding wetlands in the Coastal Zone.

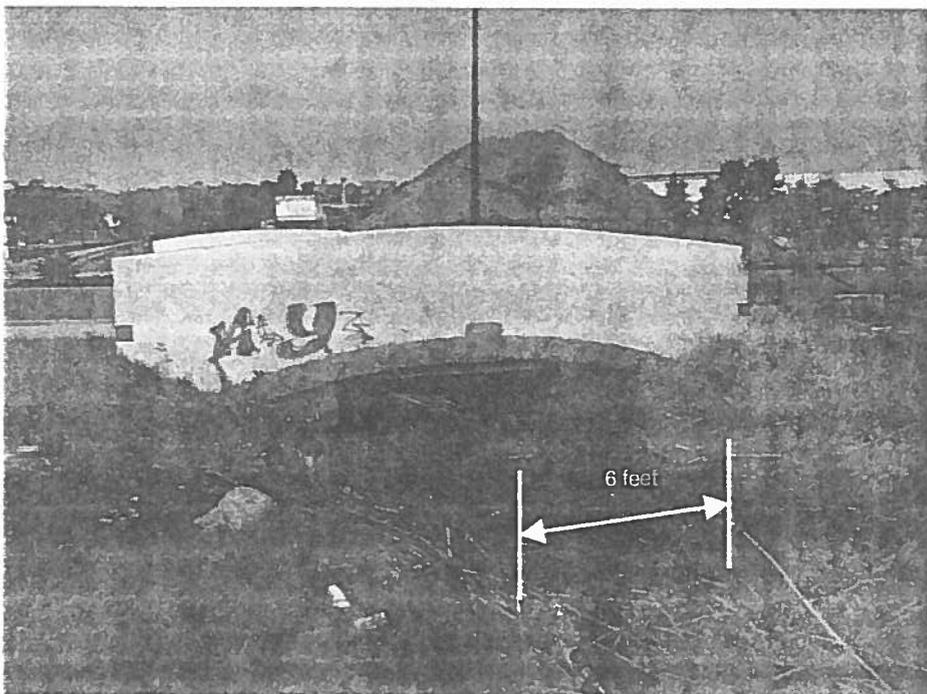


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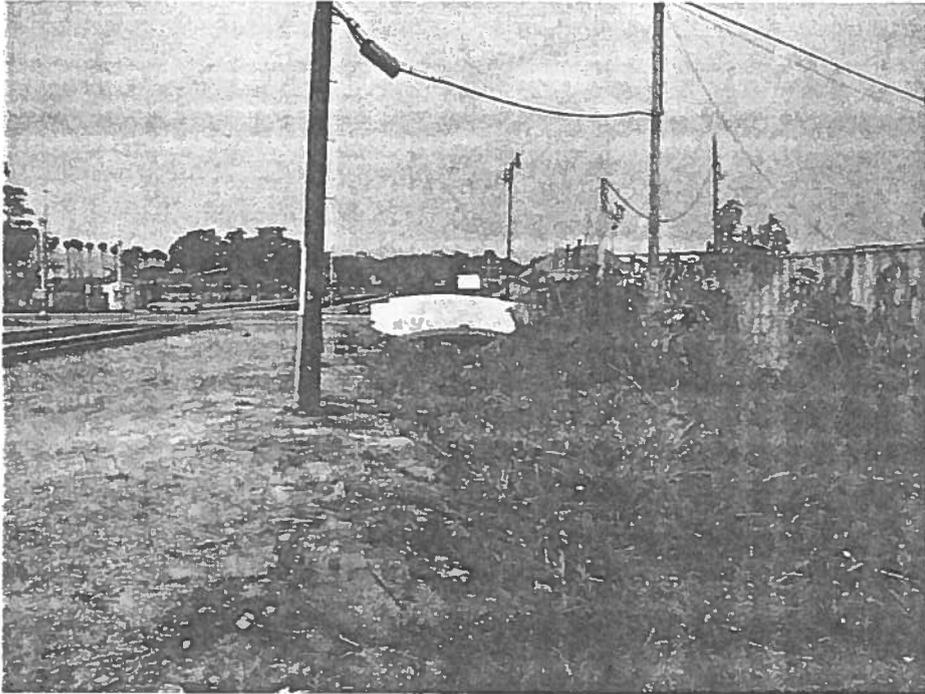
Figure 1. PROJECT SITE



Photograph No. 1. View of the drainage ditch on the other side of the Union Pacific railroad lines. View to the north.



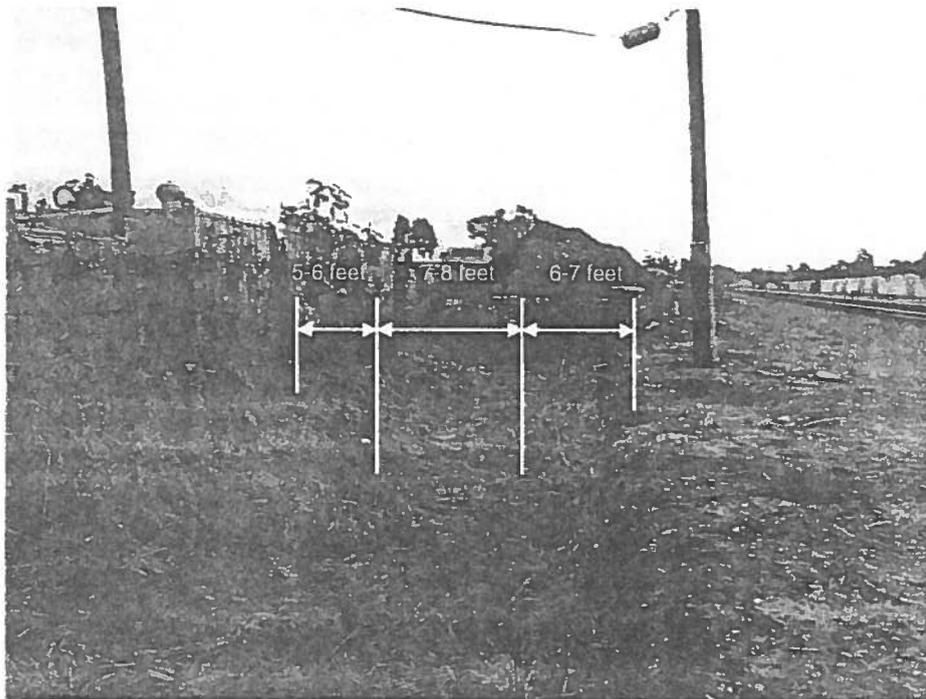
Photograph No. 2. View of the concrete box culvert over Calle Cesar Chavez. View to the west. Note that the box culvert is almost plugged with vegetation and debris.



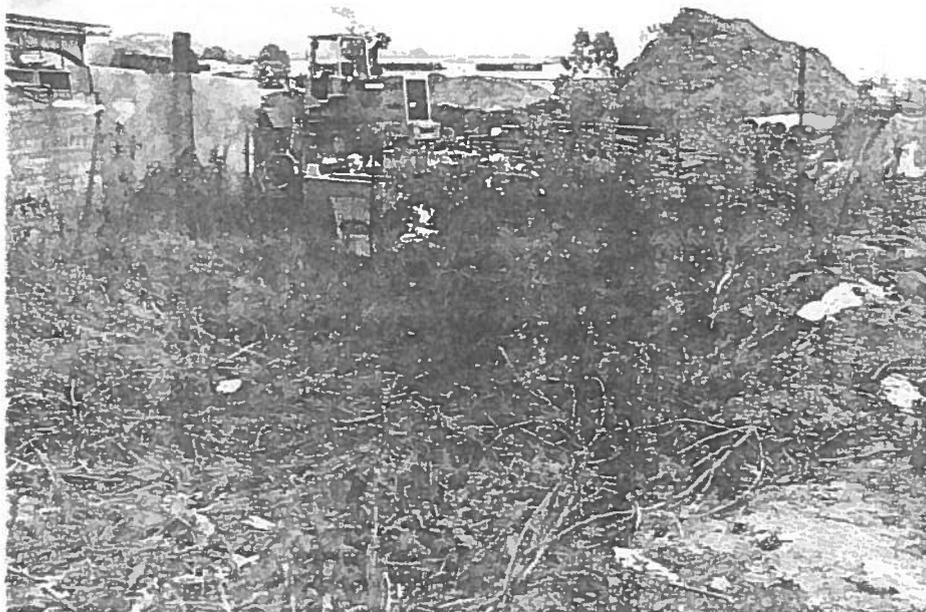
Photograph No. 3. View of the drainage ditch to the west. Industrial facility on the right with a sagging fence. Note trash in the foreground.



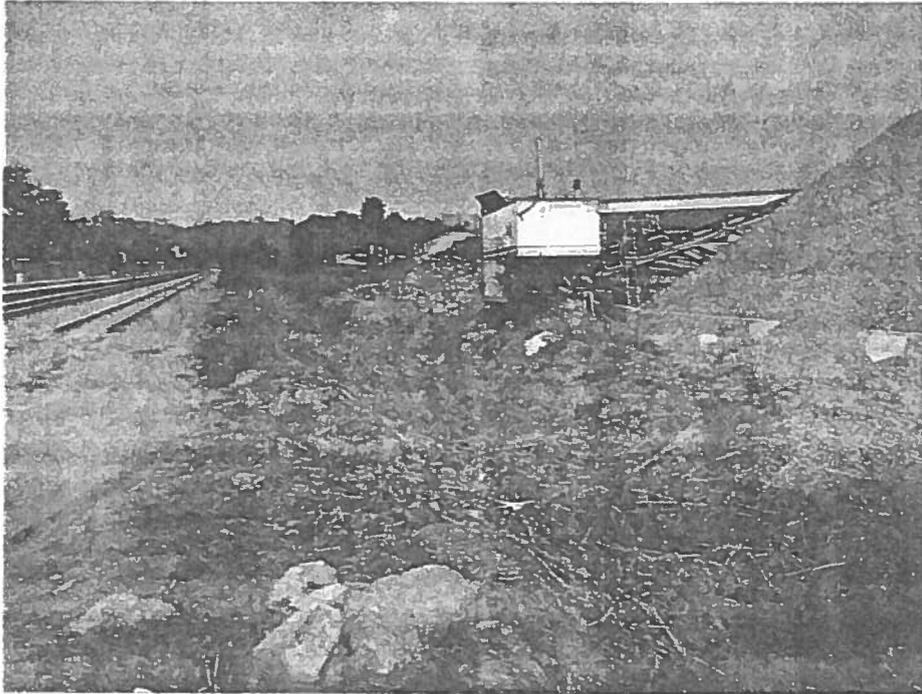
Photograph No. 4. View of the drainage ditch to the east. Vegetation in the ditch, consisting of bulrush, was recently cut. Note standing water in the ditch.



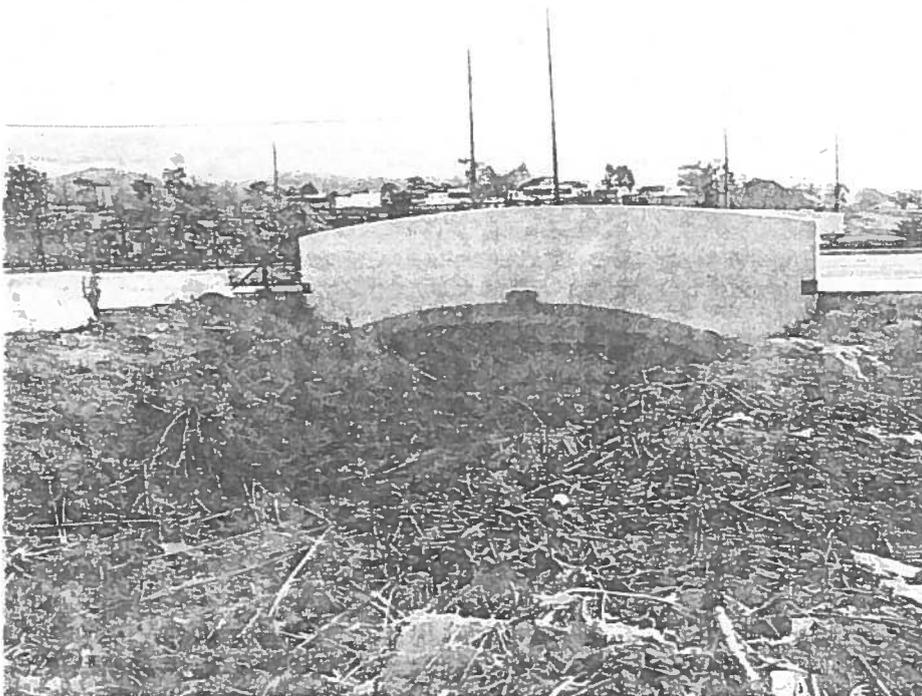
Photograph No. 5. View of the drainage ditch to the east. Note bare and eroding banks on the right. Average dimensions shown.



Photograph No. 6. View of the head of the drainage ditch at the east end. Runoff from the industrial yard and railroad right of way enters the ditch at this point. A single willow shrub is located along the fence.



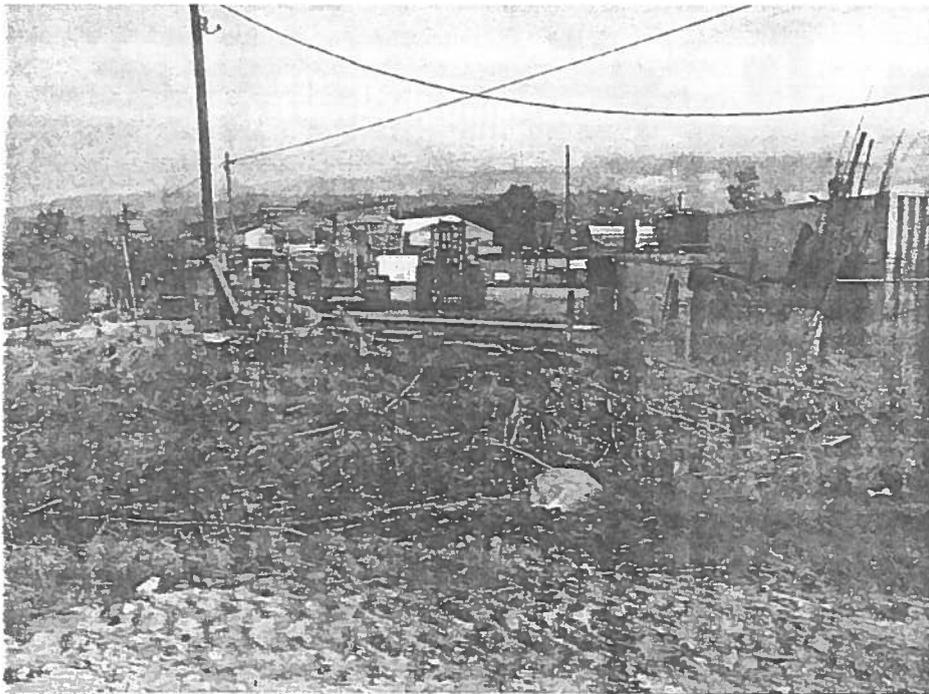
Photograph No. 7. View of the drainage ditch downstream of the project site, on the other side of Calle Cesar Chavez. Note aggregate processing facility on the right.



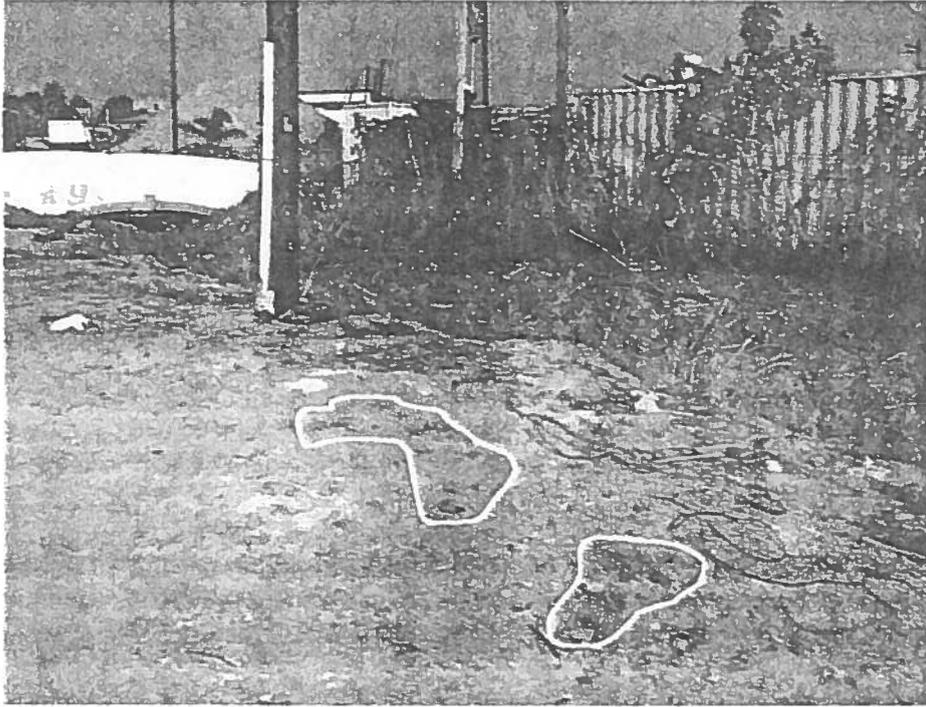
Photograph No. 8. View of the drainage ditch and box culvert on the other side of Calle Cesar Chavez.



Photograph No. 9. Close up view of trash in the ditch.



Photograph No. 10. View of the industrial facility on the north side of the ditch where there is unrestricted runoff from the yard and adjacent storage sheds.



Photograph No. 13. View of saltgrass patches No. 3 and 4.