MINUTE ITEM

CO5

W 24525

Gordon

GENERAL PERMIT - RIGHT-OF-WAY USE

Calendar Item CO5 was presented by Dwight Sanders, Chief, Environmental Planning and Management Division, regarding the application of U.S. Sprint Communications for a fiber optic cable. Mr. Sanders recommended that the Commission adopt the negative declaration before them as stated. He also advised that staff had received a no jeopardy opinion from the Department of Fish and Game as to consultation under the Endangered Species Act for the entirety of the project.

Commissioner Tucker questioned what portion of the route goes into the City of LaFayette? Mr. Michael Wilmar, an attorney representing Sprint, stated that of 93 miles of cable, 2.5 miles is under the City of LaFayette or somewhere between two and a half to three percent.

Commissioner Tucker also questioned if any other cities filed any complaints or raised any kinds of issues regarding the negative declaration. Mr. Sanders stated that to his knowledge the City of LaFayette was the only city.

Commissioner Manning questioned the closing of certain lanes of traffic during construction and the extent of such areas of closure. Mr. Wilmar stated that it was his understanding from construction personnel that no more than 500 feet of the trench would be open at any one point in time. However, this would require some type of lane control in order to allow construction to take place and allow traffic to continue to run in one lane only.

Commissioner Tucker asked if the City had to issue permits for the work. Mr. Wilmar advised that the City does have to issue the permits and can set any type of conditions they wish on the permit.

Councilwoman Avon Wilson from the City of LaFayette spoke on behalf of the City Council. She stated that two of the city's major concerns were traffic impact and soil stability. The city's concerned about soil stability because there were slides during the winters of 1972, '82, '83, and '86 in this area. Each slide has cost the city a quarter to a half million dollars. The City Council feels that the report received from Dames and Moore was less than exhaustive and not a full and complete study.

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Councilwoman Wilson presented a letter to the Commission from the City of LaFayette to be entered into the record.

After considerable discussion from all parties, including testimony on geologic conditions with the City by Phillip Mabry, Senior Geotechnical Engineer with Dames and Moore, the project, as amended by the applicant, was approved 2-0. The project as analyzed and authorized provides the following:

1. commitment that Sprint would have enough personnel to direct traffic if the City of Lafayette does not have enough personnel;

2. no lane closures before 9:00 a.m. or after 4:00 p.m. on weekdays or the work is to be done on weekends, on the heavily congested portion of the route which is Glenside Drive, Reliez Station to Olympic Boulevard;

3. work completed in eight weekend working days or seven regular working days, within Reliez Station Road;

4. Sprint to pay for the relocation of the fiber optic cable within the roadway as needed along Olympic Boulevard, Reliez Station Road, Glenside Drive and Saint Mary's Road upon request by the City of Lafayette;

5. groundfill will be compacted in conformance with site conditions and standard engineering practices and disturbed surfaces will be returned to the preexisting condition; and

6. committment to a penalty provision of $5,000 per day for every day that construction does not meet the agreed to timeline within the City of Lafayette.

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CITY COUNCIL
Gayle B. Uilkema, Mayor
Donald L. Tatzin, Vice Mayor
Richard F. Holmes
Scott Talan
Avon M. Wilson

LAFAYETTE

March 6, 1991

Honorable Chair and Commission
State Lands Commission
1807 13th Street
Sacramento, CA 95814

Gentlemen:

The Lafayette City Council appreciates the opportunity to provide testimony regarding a proposed issuance of a Negative Declaration of Environmental Impact. This has been prepared relative to an application for a proposed U.S. Sprint Fiber Optic cable to be placed within and adjacent to existing roadways in Alameda, Contra Costa and San Joaquin Counties. The Lafayette City Council opposes the issuance of a negative declaration. Because the proposed project is of such considerable magnitude, proposed to be located on a very fragile and heavily used commute arterial, we regard as unthinkable the notion that this project will have little or no impact on the City of Lafayette. We are here today, to convey person to person, our City's concerns; to convince your Body of the importance of upholding the intent and letter of the California Environmental Quality Act regarding this application - to protect the environment of our City's citizens.

In support of our City's position, written analysis of the proposed negative declaration and supporting documents has been provided by the Lafayette City Engineer, Mark Lander, in two reports dated February 13 and February 21, 1991. Our testimony which follows is an addendum to those reports and should be considered in conjunction with Mr. Lander's comments.

We are appalled that the Initial Study lists no potential impacts in any category. One is forced to conclude that the preparer either didn't know the territory through which the proposed cable is to be placed and didn't do the necessary homework or saw staffs' role as facilitating the project. The majority of our comments are intended to correct the misinformation contained in the Initial Study.

A. EARTH

1. Neither the initial study nor the subsequent January 15, 1991 letter from Dames and Moore adequately addresses the extensive slope failure which St. Mary's road has experienced. In addition to those two locations which Dames and Moore list as having failed in 1982, severe ongoing slope failure has

251 LAFAYETTE CIRCLE, LAFAYETTE, CA 94549
TELEPHONE: (415) 284-1000

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occurred at other locations on Las Trampas Creek adjacent to St. Mary's Road: Driftwood Drive and Rohrer Drive on the west side of the road with undercutting on the east side of St. Mary's Road north of the Las Trampas Creek Bridge, at 490 St. Mary's Road and at the southern driveway area of 500 St. Mary's Road. This undercutting is a progressive process which is exacerbated by storms such as those in 1972, 1982, 1983 and 1986. The cost to the city when undercutting begins to threaten the road or a massive slide closes the road is between 1/4 to 1/2 million dollars per repair. Dames and Moore's very superficial analysis plans to relocate the cable to the west side for 100 feet north of the Las Trampas Bridge. Relocation should be for a much greater distance northward but considered in the context of a more thorough environmental study that researches the slope stability for this corridor and offers some appropriate alternatives.

We challenge the rationale for the trench location and distance from edge of pavement which varies from segment to segment and which is discussed in the Initial Study Narrative. In the Lafayette and Moraga segments trenching distance from the edge of pavement is the widest of any of the other segments, which, if implemented, would traverse unstable or nonexistent slopes and remove valuable domestic landscaping and specimen native oaks; the latter of which it is City policy to protect through stringent construction guidelines and heavy fines. A focussed Environmental Impact Report (EIR) is needed to analyze the implications of this questionable standard.

2. The Initial Study project description which relates to this item indicates that the cable trench would be backfilled with "removed material or imported clean fill, if necessary, compacted and the area returned, as much as possible, to its original condition. This is contrary to acceptable engineering practices, on a corridor with known slope failure. New, thoroughly compacted soil must be assured, the standards of which should be articulated in the environmental study.

5. This section fails to discuss potential washout of the corridor by a breached water main or any other public utility facility. The East Bay Municipal Utility District's (EBMUD) forty year old, sixteen inch water main is located on the east side of the corridor, the location where the applicant proposes to locate the fiber optic cable. Properly

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surveyed engineering drawings and environmental studies need to be prepared to assure the City as well as the various public utilities that proper precautions to avoid such possible impacts will be in place.

7. This section does not address potential for mud-slides and flooding should the EBMUD water main be breached. The water main failure of February 1990 severely damaged two downslope residences, the financial settlement of which is still in negotiation.

C. WATER

5. There needs to be discussion of potential for discharge of construction materials into Las Trampas Creek during the trenching process. The environmental document needs to discuss what level of disturbance of riparian habitat will occur and how the placement of the cable on the bridges will affect the ability of Las Trampas Creek channel to transport 100 year floods.

J. RISK OF UPSET

2. This section fails to discuss the impact on this corridor as the major emergency access corridor to Burton Valley, Rheem Valley and St. Mary's College. There is no hospital in Moraga, and access to the nearest hospitals in central County are over this route.

M. TRANSPORTATION/CIRCULATION

3, 4, 6. This closure of this corridor in February 1990 caused diversion and significant delays on other commute and neighborhood and school oriented pedestrian and bicycle safety. Along with the danger of slope failure this is the greatest and most dangerous potential impact. The failure of the Initial Study to address this issue is an affront to the CEQA process.

N. PUBLIC SERVICES

2, 5, 6. We disagree. The recent closure of Reliez Station Road put increased demand on police services throughout south Lafayette to provide necessary traffic control and enforcement. Two police officers per shift and four public works employees are insufficient staff to channel and control the conflicts which did and will occur with road closure. Mitigations must consider the cost of additional police services necessary to staff the required diversions.

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P. UTILITIES

3. There is great potential for conflict with the existing major water main. Premature trenching by U.S. Sprint in advance of the City construction project and water main replacement may impede later replacement and cause problems with separating the different utility lines. A focussed EIR should address these impacts in the context of an existing road alignment with near vertical slopes on sections of both St. Mary's Road and Reliez Station Road. The document should discuss the cost of replacing the recently installed and very expensive open graded non-skid asphaltic surface on Reliez Station Road.

OTHER CONCERNS

0 The alleged engineering cross sections which have been provided by the project's engineers are nothing more than horizontal bar sections. They do not show any of the corridor's geometrics, contours, landscaping, trees, location of driveways, walls, fences, etc. They are not prepared in conformance with an appropriately conducted survey. This is not acceptable engineering practice. Given the unwillingness of the applicant to provide complete and acceptable engineering drawings of the project, one has no credible basis upon which to assess the intended placement of the proposed cable project and its impacts as discussed above. Therefore, any assertions by the applicant or staff that this project has no impact on the environment are without merit and highly suspect.

0 The alleged slope stability survey conducted by Dames and Moore is too superficial and incomplete to assure confidence in its conclusions. Had their staff done a proper study and talked to City staff as the letter attests, the firm would have been able to provide a more representative discussion of the corridor's condition. Discussion of the slope failure history was inadequate. The report would have the reader believe that only two slides occurred, they were repaired and there are no problems. Dames and Moore examination of the entire St. Mary's Road-Glenside Drive-Reliez Station Road-Olympic Blvd. corridor revealed one minor horizontal 30 foot crack in the vicinity of the Las Trampas Creek Bridge. On site inspection of the area on March 4, well into our most recent rain storm, revealed that in addition to the horizontal crack adjacent to the northeast guardrail stanchions, there are also several 1/4 to 1/2 inch cracks, running perpendicular to the pavement in the location of the northeast guardrail and

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ominous sloughing and crevassing of the eastern embankment. In addition, the eastern vertical slope between the City limits and Wallaby Court is beginning to slough and slide onto St. Mary's Road. Such a circumstance is prevalent along this road, particularly after a rainstorm of any significance. Dames and Moore's cursory slope stability analysis is less than exhaustive and should not be considered to be an adequate replacement for a focussed EIR.

In summary, the Lafayette City Council reiterates its position that the proposal to issue a negative declaration of environmental impact is a travesty of the environmental process. Regardless of the need or worth of the project, or whether the applicant is from the private or public sector, the application must be considered within the framework of and in conformance with existing law. Given the significant potential impacts of traffic, soil stability, financial impact and the consequent imperative to consider mitigations and alternatives to the project, a focussed EIR is mandated. The City of Lafayette requests that you authorize its preparation.

Sincerely,

Gayle B. Uilkema

Gayle B. Uilkema
Mayor

GBU:sj

cc: Robert Adams
Carlos Anglin
Mark Lander
Charles Williams
City Council
Traffic Commission

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STATE CAPITOL
SACRAMENTO, CALIFORNIA
95814
(916) 445-9577

LEGISLATIVE OFFICE
1000 HARRISON STREET
SUITE 800
OAKLAND, CALIFORNIA
94607
(415) 464-1933

NICHOLAS C. PETRIS
NINTH SENATORIAL DISTRICT
ALAMEDA AND CONTRA COSTA COUNTIES

CALIFORNIA LEGISLATURE

Senate

March 6, 1991

Charles Warren, Executive Officer
State Lands Commission
1807 13th Street
Sacramento, CA 95814

Dear Mr. Warren and Members of the Commission:

The Lafayette City Council will be presenting testimony at the State Lands Commission meeting March 6, 1991 regarding the proposed issuance of a Negative Declaration of Environmental Impact. The Council opposes the issuance of a negative declaration. The Council is prepared to present to detailed information in support of their position. I have reviewed the information and strongly support their reasons for challenging the report.

I hope that you will support the city of Lafayette and reject the EIR. There is strong physical and environmental evidence to support their claims. IT is my understanding that the city suggested alternate routes to US Sprint. I feel certain th[illegible] there is a workable solution for the project.

Your favorable consideration well be very much appreciated.

Sincerely,

Nicholas C. Petris

NICHOLAS C. PETRIS

NCP:AAb

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CALENDAR ITEM

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03/06/91
W 24525 PRC 7499
Gordon

GENERAL PERMIT - RIGHT-OF-WAY USE

APPLICANT:
US Sprint Communications Company
Limited Partnership
Attn: Lynn R. Morphew
700 Airport Boulevard, Suite 2B
Burlingame, California 94010

AREA, TYPE LAND AND LOCATION:
A 0.092-acre parcel, a 0.114-acre parcel, and a 0.069-acre parcel, all tide and submerged lands located in the Old, Middle, and San Joaquin rivers, respectively, in Contra Costa and San Joaquin counties.

LAND USE:
Construction, operation, and maintenance of a four-inch-diameter steel pipe conduit encasing fiber optic cable utilized for telecommunication purposes.

TERMS OF PROPOSED PERMIT:
Initial period:
Indefinite term beginning April 1, 1991.

CONSIDERATION:
Exempt by law, Section 7901, Public Utilities Code.

APPLICANT STATUS:
Applicant is permittee of upland.

PREREQUISITE CONDITIONS, FEES AND EXPENSES:
Filing fee and processing costs have been received.

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STATUTORY AND OTHER REFERENCES:

A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13.

B. Cal. Code Regs.: Title 3, Div. 3; Title 14, Div. 6.

AB 884:

05/14/91

OTHER PERTINENT INFORMATION:

1. The total annual rental value of the sites is estimated to be $300; or $100 minimum rental as to each parcel.

2. The Applicant proposes to construct a 45-mile, 3/4-inch fiber optic cable between Oakland and Stockton to provide for its existing telecommunications system an alternate route service capacity in the event of disruption of service.

3. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Cal. Code Regs. 15025), the staff has prepared a Proposed Negative Declaration identified as EIR ND 540, State Clearinghouse No. 91013088. Such Proposed Negative Declaration was prepared and circulated for public review pursuant to the provisions of CEQA.

   Based upon the Initial Study, the Proposed Negative Declaration, and the comments received in response thereto, there is no substantial evidence that the project will have a significant effect on the environment. (14 Cal. Code Regs. 15074[b])

4. This activity involves lands identified as possessing significant environmental values pursuant to P.R.C. 6370, et seq. Based upon the staff's consultation with the persons nominating such lands and through the CEQA review process, it is the staff's opinion that the project, as proposed, is consistent with its use classification.

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APPROVALS OBTAINED:

United States Army Corps of Engineers, California Department of Fish and Game, California Central Valley Regional Water Quality Control Board, California Reclamation Board, and the counties of Contra Costa and San Joaquin.

FURTHER APPROVALS REQUIRED:

None.

EXHIBITS:

A. Land Description
B. Location Map
C. Local Government Comments
D. Proposed Negative Declaration

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY THAT A NEGATIVE DECLARATION, EIR ND 540, STATE CLEARINGHOUSE NO. 91013088, WAS PREPARED FOR THIS PROJECT PURSUANT TO THE PROVISIONS OF THE CEQA AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.

2. DETERMINE THAT THE PROJECT, AS APPROVED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.

3. AUTHORIZE ISSUANCE TO US SPRINT COMMUNICATIONS COMPANY LIMITED PARTNERSHIP OF A GENERAL PERMIT - RIGHT-OF-WAY USE, AS CONDITIONED, FOR AN INDEFINITE TERM BEGINNING APRIL 1, 1991, PURSUANT TO THE PROVISIONS OF THE PUBLIC UTILITIES CODE, SECTION 7901 FOR CONSTRUCTION, OPERATION, AND MAINTENANCE OF A FOUR-INCH-DIAMETER STEEL PIPE CONDUIT ENCASING FIBER OPTIC CABLE UTILIZED FOR TELECOMMUNICATION PURPOSES ON THE LAND DESCRIBED ON EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF.

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EXHIBIT "A"

W 24525

LAND DESCRIPTION

Three parcels of tide and submerged land in the beds of Old River, Middle River and San Joaquin River in San Joaquin and Contra Costa Counties, California, lying within strips of land 10 feet wide and lying 5 feet on each side of the following described centerlines:

PARCEL 1 - Old River

Said centerline situated within that portion of Section 31, T1N, R4E, MDM, San Joaquin and Contra Costa Counties, lying approximately 100 feet westerly of and running parallel with the centerline of State Highway 4. Said strip terminates northerly on the right bank and southerly on the left bank of said river.

PARCEL 2 - Middle River

Said centerline situated within that portion of Section 36, T1N, R4E, MDM, San Joaquin County, lying approximately 65 feet southerly of and running parallel with the centerline of State Highway 4. Said strip of land terminates westerly on the right bank and easterly on the left bank of said river.

PARCEL 3 - San Joaquin River

Said centerline situated within that portion of Section 16, T1N, R6E, MDM, San Joaquin County, lying approximately 60 feet southerly of and running parallel with the centerline of State Highway 4. Said strip of land terminates westerly on the right bank and easterly on the left bank of said river.

EXCEPTING THEREFROM any portion lying landward of the ordinary high water marks of the abovementioned rivers.

END OF DESCRIPTION

REVIEWED NOVEMBER, 1990 BY LLB.

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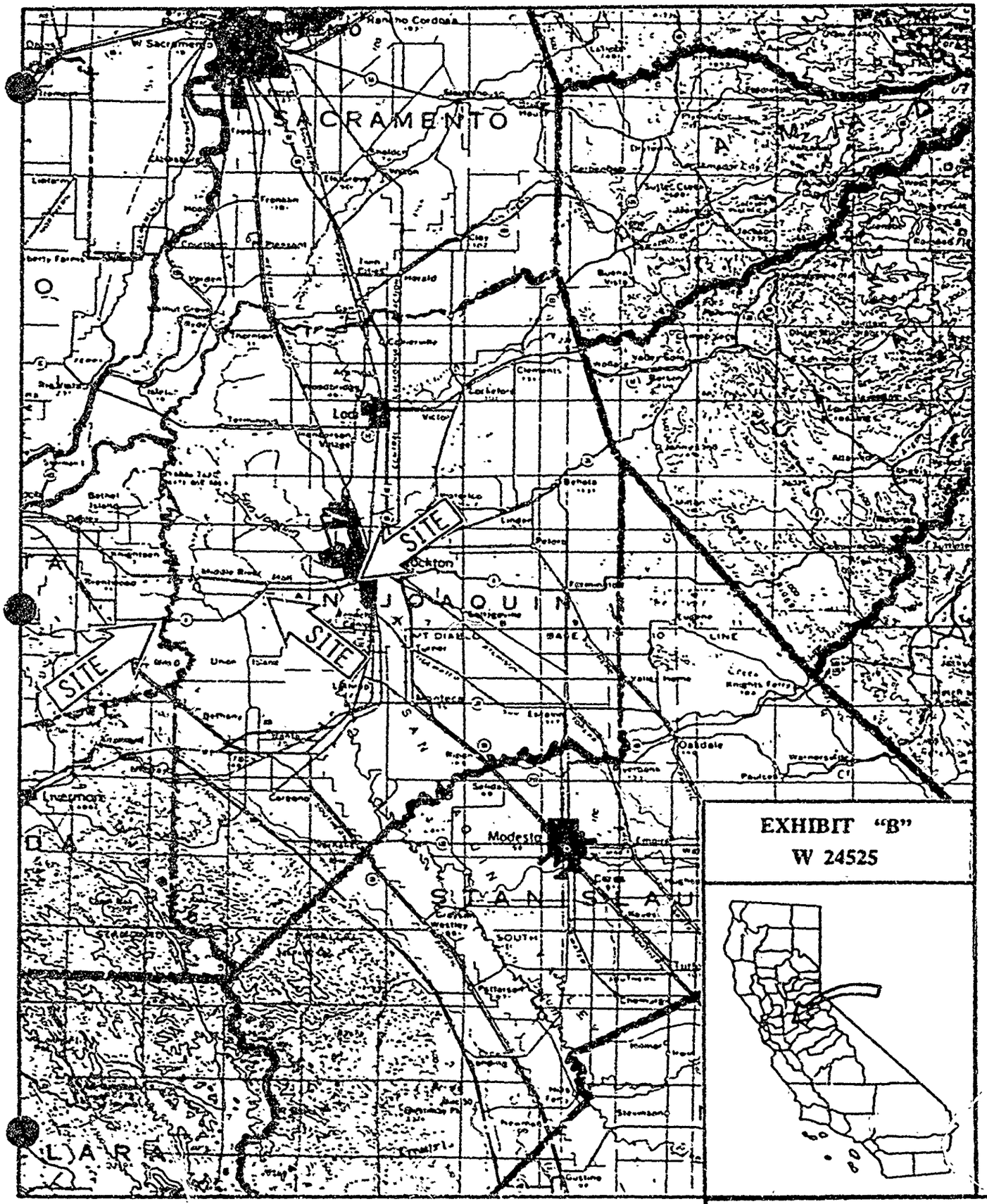

EXHIBIT "B"
W 24525

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EXHIBIT "C"

Date: 10-31-90

File Ref: W 24525

State Lands Commission
Attn: Gerald D. Gordon
1807 - 13th Street
Sacramento, California 95814

Greetings:

Subject: Proposed Construction of a Fiber Optic Telecommunication System Across and Under the Old River in Contra Costa County

Name: U. S. Sprint

Address: Attn: Lynn R. Morphew
700 Airport Boulevard, 2nd Floor, B Wing
Burlingame, California 94010

Assessor's Parcel Nos. 008-340-12

The County of Contra Costa has received notice of the above-referenced activity across Old River and has no objection to said facilities/project or to the issuance of a permit or lease by the State Lands Commission for such use of sovereign lands.

If you have any questions, you may reach me at (415) 646-2035.

County of Contra Costa
Public Works Department

J. MICHAEL WALFORD
Director

1741L

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EXHIBIT "C"

Date: 10/22/90

File Ref: W 24525

State Lands Commission
Attn: Gerald D. Gordon
1807 - 13th Street
Sacramento, California 95814

Greetings:

Subject: Proposed Construction of a Fiber Optic Telecommunication System Across the Old, Middle, and San Joaquin Rivers in San Joaquin County

Name: U. S. Sprint

Address: Attn: Lynn R. Morphew
700 Airport Boulevard, 2nd Floor, B Wing
Burlingame, California 94010

Assessor's Parcel Nos. 129-190-30, 131-120-04, 131-130-06
161-150-01, 163-020-10

The County of San Joaquin has received notice of the above-referenced activity across the subject rivers and has no objection to said facilities/project or to the issuance of a permit or lease by the State Lands Commission for such use of sovereign lands.

If you have any questions, you may reach me at (209) 468-3160.

County of San Joaquin
Department of Planning and Building Inspection
Chet Davisson, Director

LARRY MATTHEWS
Senior Development Technician

1741L

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EXHIBIT D

STATE OF CALIFORNIA — PETE WILSON, Governor

STATE LANDS COMMISSION

LEO T. McCARTHY, *Lieutenant Governor*
GRAY DAVIS, *Controller*
THOMAS W. HAYES, *Director of Finance*

EXECUTIVE OFFICE
1807 - 13th Street
Sacramento, CA 95814

CHARLES WARREN
Executive Officer

PROPOSED NEGATIVE DECLARATION

EIR ND: 540

File Ref.: W 24525

SCH. NO.:

Project Title:	U. S. Sprint Fiber Optic Cable
Project Proponent:	U. S. Sprint
Project Location:	Between Oakland and Stockton within and adjacent to existing roadways and highways, Alameda, Contra Costa, and San Joaquin Counties.
Project Description:	Proposed placement of approximately 45 miles of 3/4" fiber optic cable, buried at a minimum depth of 42" within existing roadways and private property easements except for bridge attachments, specified bore locations, and the regenerator sites.

Contact Person: Judy Brown Telephone: (916) 324-4715

This document is prepared pursuant to the requirements of the California Environmental Quality Act (Section 21000 et seq., Public Resources Code), the State CEQA Guidelines (Section 15000 et seq., Title 14, California Code Regulations), and the State Lands Commission regulations (Section 2901 et seq., Title 2, California Code Regulations).

Based upon the attached Initial Study, it has been found that:

/ / that project will not have a significant effect on the environment.

/X/ mitigation measures included in the project will avoid potentially significant effects.

FORM 13.17 (4/90)

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STATE LANDS COMMISSION

ENVIRONMENTAL IMPACT ASSESSMENT CHECKLIST – PART II

Form 13.20 (7/82)

File Ref.: W 24525

I. BACKGROUND INFORMATION

A. Applicant: U. S. Sprint
700 Airport Blvd.
2nd Floor, B Wing
Burlingame, CA 94010

B. Checklist Date: 12 / 06 /90

C. Contact Person: Judy Brown

Telephone: (916) 324-4715

D. Purpose: To provide alternate route service capacity in the event of disruption to an existing telecommunications system.

E Location: Oakland to Stockton; Alameda, Contra Costa and San Joaquin Counties.

F. Description. Please refer to attached Project Description.

II. ENVIRONMENTAL IMPACTS. *(Explain all "yes" and "maybe" answers)*

A. *Earth.* Will the proposal result in:	Yes	Maybe	No
1. Unstable earth conditions or changes in geologic substructures?	☐	☐	☒
2. Disruptions, displacements, compaction, or overcovering of the soil?	☐	☐	☒
3. Change in topography or ground surface relief features?	☐	☐	☒
4 The destruction, covering, or modification of any unique geologic or physical features?	☐	☐	☒
5. Any increase in wind or water erosion of soils, either on or off the site?	☐	☐	☒
6. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet, or lake?	☐	☐	☒
7. Exposure of all people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	☐	☐	☒

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	Yes	Maybe	No
B. *Air.* Will the proposal result in:	☐	☐	☒
1. Substantial air emissions or deterioration of ambient air quality?	☐	☐	☒
2. The creation of objectionable odors?	☐	☐	☒
3. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?	☐	☐	☒
C. *Water.* Will the proposal result in:	☐	☐	☒
1. Changes in the currents, or the course or direction of water movements, in either marine or fresh waters?	☐	☐	☒
2. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?	☐	☐	☒
3. Alterations to the course or flow of flood waters?	☐	☐	☒
4. Change in the amount of surface water in any water body?	☐	☐	☒
5. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?	☐	☐	☒
6. Alteration of the direction or rate of flow of ground waters?	☐	☐	☒
7. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	☐	☐	☒
8. Substantial reduction in the amount of water otherwise available for public water supplies?	☐	☐	☒
9. Exposure of people or property to water-related hazards such as flooding or tidal waves?	☐	☐	☒
10. Significant changes in the temperature, flow or chemical content of surface thermal springs?	☐	☐	☒
D. *Plant Life* Will the proposal result in:	☐	☐	☒
1. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?	☐	☐	☒
2. Reduction of the numbers of any unique, rare or endangered species of plants?	☐	☐	☒
3. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	☐	☐	☒
4. Reduction in acreage of any agricultural crop?	☐	☐	☒
E. *Animal Life* Will the proposal result in:	☐	☐	☒
1. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, or insects)?	☐	☐	☒
2. Reduction of the numbers of any unique, rare or endangered species of animals?	☐	☐	☒
3. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	☐	☐	☒
4. Deterioration to existing fish or wildlife habitat?	☐	☐	☒
F. *Noise.* Will the proposal result in:	☐	☐	☒
1. Increase in existing noise levels?	☐	☐	☒
2. Exposure of people to severe noise levels?	☐	☐	☒
G. *Light and Glare.* Will the proposal result in:	☐	☐	☒
1. The production of new light or glare?	☐	☐	☒
H. *Land Use.* Will the proposal result in:	☐	☐	☒
1. A substantial alteration of the present or planned land use of an area?	☐	☐	☒
I. *Natural Resources.* Will the proposal result in:	☐	☐	☒
1. Increase in the rate of use of any natural resources?	☐	☐	☒
2. Substantial depletion of any nonrenewable resources?	☐	☐	☒

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	Yes	Maybe	No
J. *Risk of Upset.* Does the proposal result in:			
1. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals, or radiation) in the event of an accident or upset conditions?	☐	☐	☒
2. Possible interference with emergency response plan or an emergency evacuation plan?	☐	☐	☒
K. *Population.* Will the proposal result in:			
1. The alteration, distribution, density, or growth rate of the human population of the area?	☐	☐	☒
L. *Housing.* Will the proposal result in:			
1 Affecting existing housing, or create a demand for additional housing?	☐	☐	☒
M. *Transportation/Circulation.* Will the proposal result in:			
1. Generation of substantial additional vehicular movement?	☐	☐	☒
2. Affecting existing parking facilities, or create a demand for new parking?	☐	☐	☒
3. Substantial impact upon existing transportation systems?	☐	☐	☒
4. Alterations to present patterns of circulation or movement of people and/or goods?	☐	☐	☒
5. Alterations to waterborne, rail, or air traffic?	☐	☐	☒
6. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians?	☐	☐	☒
N. *Public Services.* Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
1. Fire protection?	☐	☐	☒
2. Police protection?	☐	☐	☒
3. Schools?	☐	☐	☒
4. Parks and other recreational facilities?	☐	☐	☒
5. Maintenance of public facilities, including roads?	☐	☐	☒
6. Other governmental services?	☐	☐	☒
O. *Energy.* Will the proposal result in:			
1. Use of substantial amounts of fuel or energy?	☐	☐	☒
2. Substantial increase in demand upon existing sources of energy, or require the development of new sources?	☐	☐	☒
P. *Utilities.* Will the proposal result in a need for new systems, or substantial alterations to the following utilities:			
1. Power or natural gas?	☐	☐	☒
2. Communication systems?	☐	☐	☒
3. Water?	☐	☐	☒
4. Sewer or septic tanks?	☐	☐	☒
5. Storm water drainage?	☐	☐	☒
6. Solid waste and disposal?	☐	☐	☒
Q. *Human Health.* Will the proposal result in:			
1. Creation of any health hazard or potential health hazard (excluding mental health)?	☐	☐	☒
2. Exposure of people to potential health hazards?	☐	☐	☒
R. *Aesthetics.* Will the proposal result in:			
1. The obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?	☐	☐	☒
S. *Recreation.* Will the proposal result in:			
1. An impact upon the quality or quantity of existing recreational opportunities?	☐	☐	☒

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	Yes	Maybe	No
T. *Cultural Resources.*			
1. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archeological site?	☐	☐	X
2. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?	☐	☐	X
3. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?	☐	☐	X
4. Will the proposal restrict existing religious or sacred uses within the potential impact area?	☐	☐	X
U. *Mandatory Findings of Significance.*			
1. Does the project have the potential to degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	X
2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	X
3. Does the project have impacts which are individually limited, but cumulatively considerable?	☐	☐	X
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	X

III. DISCUSSION OF ENVIRONMENTAL EVALUATION *(See Comments Attached)*

IV. PRELIMINARY DETERMINATION

On the basis of this initial evaluation:

☐ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared.

☐ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Date: 01 / 16 /91

JUDY BROWN
For the State Lands Commission

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U.S. SPRINT
FIBER OPTICS TELECOMMUNICATIONS CABLE
OAKLAND TO STOCKTON

Purpose and Need: U.S. Sprint proposes to bury and place approximately 45 miles of 3/4" fiber optic telecommunications cable within existing roadways and private property easements between Oakland and Stockton. The fiber optics cable system is part of the applicant's long-distance telephone network which provides service to and between the Oakland, Walnut Creek and Stockton areas, within the Counties of Alameda, Contra Costa and San Joaquin.

Project Location: The cable route runs easterly from Oakland through Piedmont to Moraga, northerly to Lafayette and Walnut Creek; then southeasterly through Danville to the north side of Livermore; then northerly to Byron and easterly to Stockton.

The majority of the route is located on City, County and State property. Private property areas involved are located between the Old River an Trapper Road, off State Highway 4.

Project Description:

U.S. Sprint proposes to construct approximately 45 miles of 3/4" fiber optics cable to be buried at a minimum depth of 42" within existing roadways and private property easements except for bridge attachments, specified bore locations, and the regenerator sites.

Two above-ground regenerator sites will be constructed along State Highway 4 which will involve a 40' x 40' area for each site. Each regenerator site will contain two prefabricated concrete buildings: one measuring 8' x 12', housing the generator equipment; and another measuring 8' x 11', housing a diesel-fueled generator and 50 gallon fuel tank. The generator will power the equipment during periods of local power service interruption. Each regenerator site will be enclosed by a 40' x 40' chain link fence.

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One regeneration site will be located south of Highway 4 near Holt, which area is characterized by agricultural fields and contain no natural vegetation. The other regeneration site is located approximately three miles west of the community of Byron. The site consists of a graded, disturbed area adjacent to a sand quarry.

Three methods for placement of the cable will be used: trenching, plowing and boring. Trenching will be the primary method of construction. A backhoe or trenching machine will excavate a trench approximately 12" wide and at least 42" deep. Protection for the cable in urban areas will be placement in plastic conduits with concrete encasement. In rural areas, a protective plowable conduit is placed over the cable prior to placement in the trenth. The trench is backfilled with removed material or imported clean fill, if necessary, compacted and the area returned, as nearly as possible, to its original condition.

Plowing is accomplished by use of a tractor-mounted plowing device. This machine creates an opening in the soil, places the cable with its protective duct at the appropriate depth, and closes the soil in one continuous action. The opening created by the plow disturbs an area approximately 6" to 12" in width and 42" deep which is compacted immediately behind the plow.

Boring will be used where the cable must be placed under obstacles in areas where no disturbance of the ground surface is allowed by the permitting agency. All railroad crossings and certain river crossings will be bored.

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Directional boring will be used at three major river crossings along this route: Old River, Middle River, and the San Joaquin River. Prior to commencement of boring operations, the river bottom is surveyed and core samples taken. A route is plotted at least 15' below the river bed. Approximately 475 barrels of water from the river site is used to facilitate the bore by softening the soil ahead of the auger. The water backwashes through the bore case to the entry location where it is then pumped into trucks and removed to an approved site.

A staging area approximately 200' x 200' in size is needed to locate the equipment to accomplish this work. The area will be used during boring operations and will be restored, as nearly as possible, to its original condition upon completion of the bore.

Bridge attachments and the construction of two regenerator sites are the only above-ground construction employed on this project.

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U.S. SPRINT FIBER OPTICS TELECOMMUNICATIONS CABLE
OAKLAND TO STOCKTON W24525
DISCUSSION OF ENVIRONMENTAL EVALUATION

A. Earth

1. No. The surface will be disturbed and returned, as nearly as possible, to pre-existing conditions. Also refer to the attached Slope Stability Assessment prepared by Dames and Moore, dated January 15, 1991.

2. No. There will be no grading or extensive fill required.

3. No. See #2 above.

4. No.

5. No. Upon conclusion of cable placement, the trench is backfilled with the removed material or with imported fill. It is then compacted and returned as nearly as possible to its original condition. To prevent erosion of soil during precipitation, hay will be dispersed in areas where dirt is disturbed by construction activity.

6. No. All water area crossings will be avoided through the use of bridge attachments or boring under the waterway.

7. No. The placement of this cable will not pose a threat of geologic hazard to people or property. The cable will be placed within existing, disturbed roadways, specifically designated rights of way on private land, and bored under three major rivers.

B. Air

1. No. There will not be substantial air emissions or deterioration of ambient air quality as a result of the telecommunications cable placement. There will be a few construction vehicles operating during the placement of the cable. The only permanent structures involved with this project are two regenerator sites, which will be enclosed in small prefabricated cement units. One unit will contain an electrical impulse regenerator and the other unit will contain a backup diesel-fueled generator and diesel fuel drum. Emissions from these sources will be minimal.

2. No.

3. This project will not alter the air movement resulting in any change to moisture, temperature, or change in climate. The project involves the burial of a telecommunications cable.

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C. Water

1. No

2. No.

3. No.

4. For each of the three river crossings where the bore method is used, approximately 475 barrels (approximately 42 gallons per barrel) of water will be used from each river to facilitate the bore by softening the soil for the auger drilling the hole. The water will be backwashed through the bore case and pumped into trucks and removed to the Valley Rock Disposal site in Orland, Ca.

5. See #4 above.

6. No.

7. No.

8. No. See #4 above.

9. No.

10. No surface thermal springs will be impacted as none have been identified within the project route.

D. Plant Life

1. A biological resources report has been prepared which discusses the plant population within the area of the proposed route. No sensitive, threatened or endangered species plants will be affected. Please refer to the Biological and Cultural Resources Report prepared by Dames and Moore, dated August 1, 1990.

   There is an existing, disturbed wetland and canal, located immediately west of the Middle River between an agricultural dirt road and the River. This area will be avoided by starting the bore at a point just west of the existing agricultural dirt road.

2. See #1 above.

3. No new plants will be introduced as a result of this project. Surface disturbance will be returned, as nearly as possible, to its original condition. Landscaping is not proposed at the regenerator sites.

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4. No. The construction route through private property easements within San Joaquin County are located adjacent to Highway 4, from Old River to Trapper Road, which are cultivated agricultural lands and agricultural drainage ditches, the proposed cable will be placed below the ditch either by trenching (if no water is present) or by boring (if water is present). A 10' right-of-way will be used within the agricultural area, with the exception of the bore staging areas. All private rights-of-way have been granted by the property owners.

E. Animal

1. No. The areas of disturbance are adjacent or closely located to existing, disturbed streets, roadways, and highways. The placement of this cable will not displace wildlife beyond the extent they are presently displaced.

2. No. The construction route will avoid sensitive habitat by boring under existing waterways and water areas. The cable route was surveyed for the existence of unique, rare or endangered species of animals' habitat. Please refer to the attached biological surveys prepared by Dames and Moore, dated August 1, 1990 and October 3, 1990.

3. No. This project does not involve residential construction and will not alter the existing animal migration routes, as the surface areas have been previously disturbed and are adjacent to existing roadways and highways.

4. No. Waterways will be avoided by the bridge attachment or boring construction method. The cable route is located in and adjacent to existing traveled streets and roadways with the exception of the private property easements at the edge of agricultural fields.

F. Noise

1. No. Construction noise is temporary and will not exceed the limits existing on the traveled streets, roadways and adjacent to the highway and agricultural fields where the cable route is located. Construction will be limited to daytime hours.

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G. Light and Glare

1. No. The only facilities proposed above ground are the two regenerator sites comprised of two, prefabricated concrete buildings approximately 8'x12' in size, located on a 40'x40' site. The structures will be painted beige and brown tones to blend with the surrounding environment. The ground surface will be gravel coated. A chain link fence will surround each site.

H. Land Use

1. No. The cable will be buried to a minimum depth of 42" adjacent to existing traveled streets, roads, and a minimum of 60" at the edge of agricultural fields. Once constructed, the disturbed surface will be returned, as nearly as possible, to pre-existing conditions.

I. Natural Resources

1. No. The construction activities will only temporarily disturb soils as described in (A) above.

2. No. There will be an insignificant, temporary local increase in fossil fuel use from the operation of the construction equipment (2 bulldozers, 3 support vehicles, and 1 rubber-tired trencher).

   Two diesel-fueled generators, one located at each regenerator location, will operate intermittently when electrical power is interrupted.

J. Risk of Upset

1. The telecommunications cables will be powered by electricity produced at the regenerator sites. A backup diesel generator is available when local power is interrupted.

   To prevent interference with the cable, the cable will be marked 12" below the ground surface. In urban areas, three plastic conduits with concrete encasement will be placed in the trench to contain and protect the cable. In rural areas, a protective plowable conduit is placed over the cable prior to placement in the trench.

   A full-time safety inspector will be on site during the construction activities. Construction hours at specified locations are listed in Item H4 below. All construction activities will be secured, including no open trenches, at the end of each work day.

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The occurrence of fire at the regenerator sites is remote. The buildings are constructed of prefabricated concrete, surrounded by a graveled yard and chain link fence. Sprint staff will perform routine maintenance inspections to the regenerator sites.

2. No. The cable will be buried underground and will avoid all other underground utilities.

K. Population

1. No. This project is being constructed in order to insure continuation of existing service capacity in the event of disruption to an existing cable. This route will not create additional service area not already served.

L. Housing

1. The placement of the telecommunications cable will not affect existing housing or create a demand for new housing. This route will not service additional facilities, but will provide a backup system for continuation of service between the Bay Area and Stockton in the event of a cable disruption.

M. Transportation/Circulation

1. While the cable is being placed, construction vehicles will be operating within the proposed route. This will not cause a substantial interference with vehicular movement.

2. The proposed construction will require equipment storage yards. They will be leased by the construction contractor at an improved, offsite location. In addition, the river crossings will require a staging area for the bore crossings in an area approximately 200' x 200' in size. This staging area will facilitate the boring equipment which consists of a bore, pump, pipe trailer, tank truck, and surveying trailer.

3. Placement of the cable will be primarily on existing public rights-of-way in the shoulder of the roadway parallel to the pavement or traveled portion at varying distances from the centerline.

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4. No road closures will be required to construct this project. Temporary lane closures may be necessary with the following restrictions applying:

City of Walnut Creek	No lane closures before 9:00 a.m. or after 4:00 p.m.
City of Stockton	Main Street, 9:00 a.m. to 3:30 p.m. only; West Lane, " Charter Way, ". All Others, 8:00 a.m. to 4:00 p.m., only.
Contra Costa	Danville Blvd, 8:30 a.m. to 4:00 p.m. only. Olympic Blvd., 8:00 a.m. to 4:00 p.m. only. Byron Highway, Camino Diablo Rd., Vasco Road, Highland Rd., Camino Tassajara, Canyon Rd., and Pinehurst Rd., 8:00 a.m. to 4:30 p.m. only.
Caltrans, Dist 4	I-680 crosing @S. Main St., Walnut Creek, 9:00 a.m. to 3:00 p.m. only.

5. No waterborne or air traffic will be affected. The proposed cable route will cross under nine railroad crossings using the bore method previously discussed in the Project Description. There will be no interruption of rail service. The following are the bore locations of the railroad crossings:

Union Pacific	Oakland, Bush St. @3rd St.
So. Pacific	Contra Costa County, Holiday Rd. @Byron Hwy.
Santa Fe, A.T.,	Stockton, Anderson St. @Stockton St.
Santa Fe, A.T.,	Stockton, Aurora St near Anderson St.
So. Pacific	Stockton, Main St. near Aurora St.
Union Pacific	Stockton, Main St. near Aurora St.
So. Pacific	Stockton, Sierra Nevada St. @WeberAve.
Stockton Terminal and Eastern	Stockton, Sierra Nevada St. @Roosevelt St.
So. Pacific	Stockton, West Lane near El Pinal

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6. Lane closures will be used as necessary, within the time restrictions mentioned in #4 above. Cable placement affecting sections of bike lanes will be as follows:

Town of Moraga	1500 block to 2000 block, Canyon Road 1200 block to 1500 block, Moraga Road
City of Lafayette	3100 block to 3200 block, Olympic Blvd.
City of Walnut Creek	1300 block to 1600 block, California Blvd.
Town of Danville	1100 block to 1800 block, Camino Tassajara Rd.
Contra Costa County	900 block to 1900 block, Danville Blvd.

N. Public Services

1. No new fire protection will be needed. The above-ground regenerator stations will be located within the Byron Fire Protection District and the other regenerator station will be located in an area which would be dispatched by the Contra Costa County Fire Warden.

2. The regenerator stations and the fibre maintenance boxes will be under the police protection of the Contra Costa and San Joaquin County Sheriff Departments.

3. No. This project involves the burial of a fiber optic telecommunications cable and will not have an affect on existing schools.

4. No. The cable route is located within and adjacent to existing traveled streets and roads with the exception of borings under three rivers and various bridge attachments crossing creeks. The cable will be placed in or under an agricultural drainage ditch located between Old River and Trapper Road. The depth of cable placement (minimum of 42") will not interfere with existing or future uses of the lands involved.

5. No. The cable will be buried at a minimum depth of 42" below the ground surface, with the exception of bridge attachments and borings. These construction methods have been previously discussed in the Project Description.

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O. Energy

1. No. Please refer to response in Section I.

2. No. Please refer to response in Section I.

P. Utilities

1. No. The two regenerator sites will require 100v minimum or 220v. maximum to facilitate the signal relay stations. The regenerator sites have been located in areas presently served by electrical utilities.

2. No. This project is necessary to insure continuation of service between the Bay Area and Stockton in the event of a cable cut.

3. No. Water areas will be avoided by using the bore method of placement.

4. This project does not propose nor will it affect sewer facilities or septic tanks. All existing underground utilities will be avoided.

5. No. All existing facilities identified under the roadways will be avoided.

6. No. Solid waste disposal will not be necessary for this project as it will not create habitable structures, public use facilities, or office space.

Q. Human Health

1. No. The fiber optic cable will be placed underground within protecting will not create a health hazard.

2. No. The cable will be buried within a protective covering as described in Section J.

R. Aesthetics

1. No. The only above-ground facilities to be constructed are two regenerator sites approximately 40' x 40' which will be constructed as previously mentioned in G(1) above.

S. Recreation

1. No. The cable route will not affect existing recreational opportunities as it will be placed underground within existing roadways and designated private property easements.

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T. Cultural Resources

1. A cultural resources records search at the Northwest Information Center and Stanislaus State University was conducted for a 1/2 mile radius around the cable route. The record search indicated that no previous archaeological survey had been conducted in the project area and no previously recorded resources occur within the project area.

   Field surveys were conducted by staff of Dames and Moore to determine the presence of unrecorded cultural resources. Systematic transects were conducted over the area of potential disturbance at each river crossing bore location. No evidence of cultural resources greater than 40 years in age were identified at private property easements and at river crossing bore locations.

   If cultural resources are encountered on during construction, all construction activity in the vicinity will be stopped. The applicant will have them recorded in the field by a qualified archaeologist, and staff of the State Lands Commission will be contacted.

U. Mandatory Findings of Significance

1. No. The ground surface will be returned, as nearly as possible, to pre-existing conditions. Fish will not be affected, as the cable will be bored under river crossings or bridge attachments will be utilized. This proposal will not eliminate a plant or animal community

2. No.

3. No.

4. No. The cable will be buried underground.

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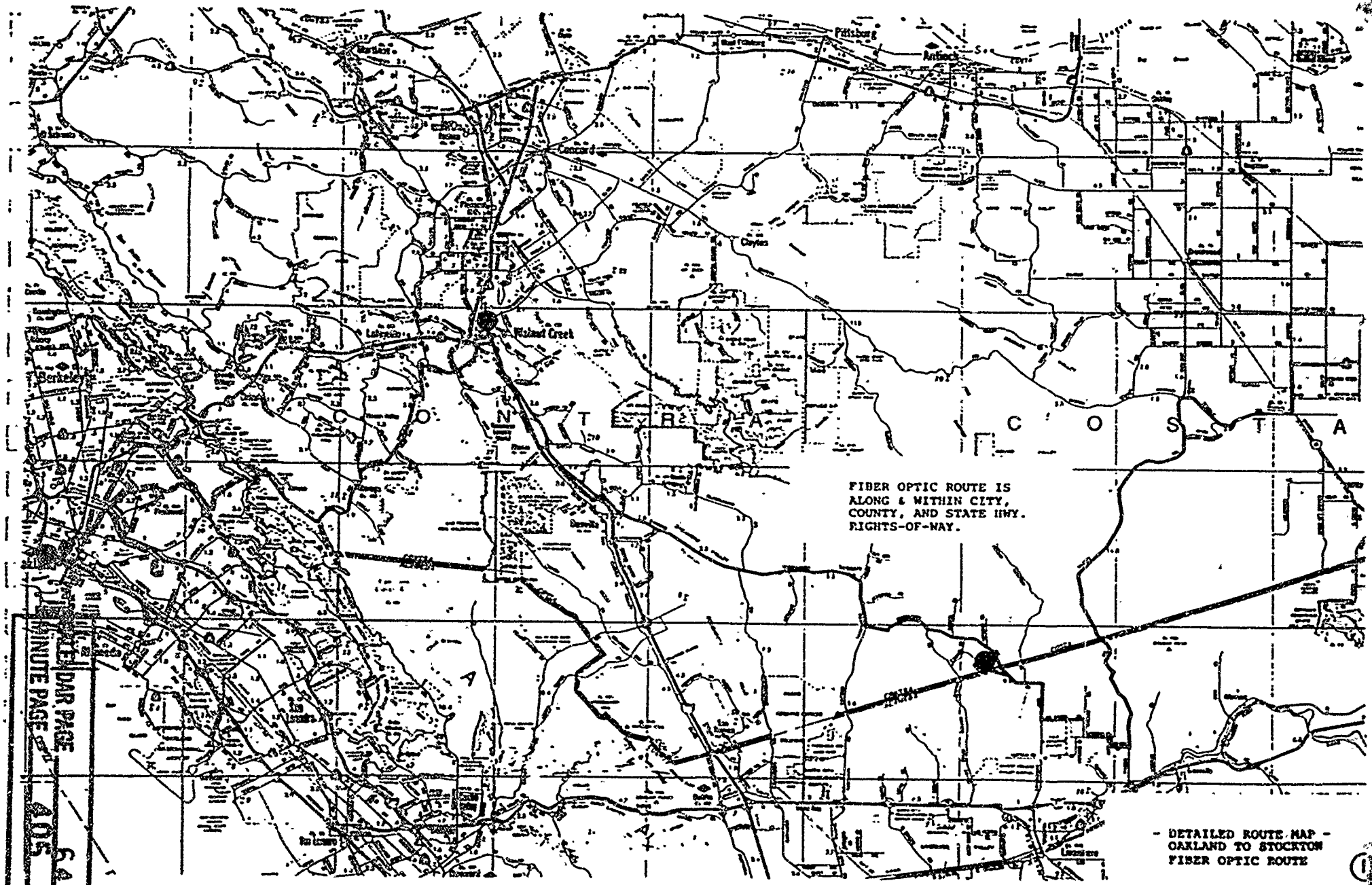

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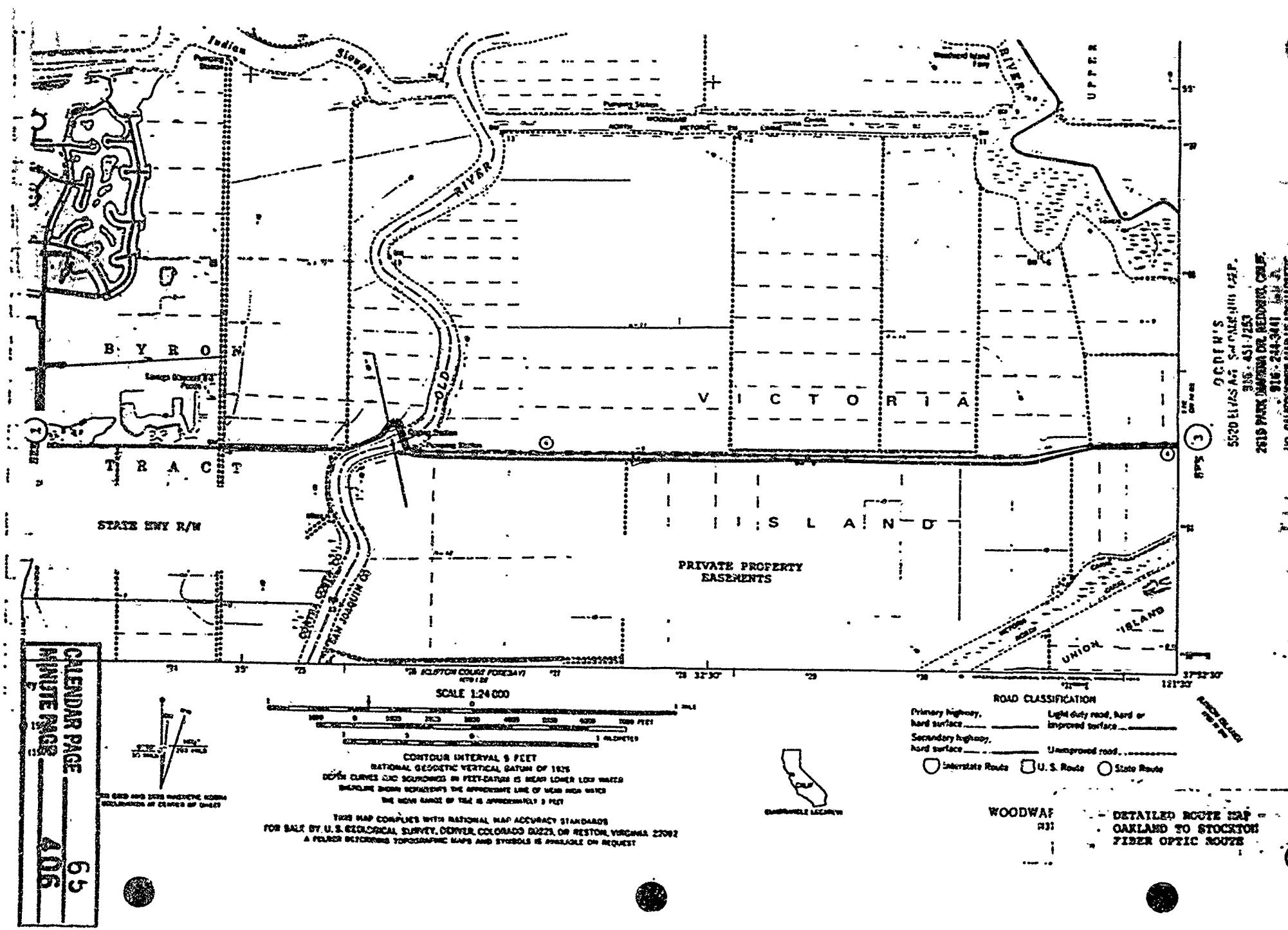
Indian Slough
RIVER
OLD
RIVER
UPPER
B Y R O N
T R A C T
V I C T O R I A
I S L A N D
STATE HWY R/W
PRIVATE PROPERTY
EASEMENTS
CONTRA COSTA CO.
SAN JOAQUIN CO.
UNION ISLAND
SCALE 1:24 000
CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ROAD CLASSIFICATION
Primary highway, hard surface
Secondary highway, hard surface
Light duty road, hard or improved surface
Unimproved road
Interstate Route
U.S. Route
State Route
WOODWARD
DETAILED ROUTE MAP
OAKLAND TO STOCKTON
FIBER OPTIC ROUTE
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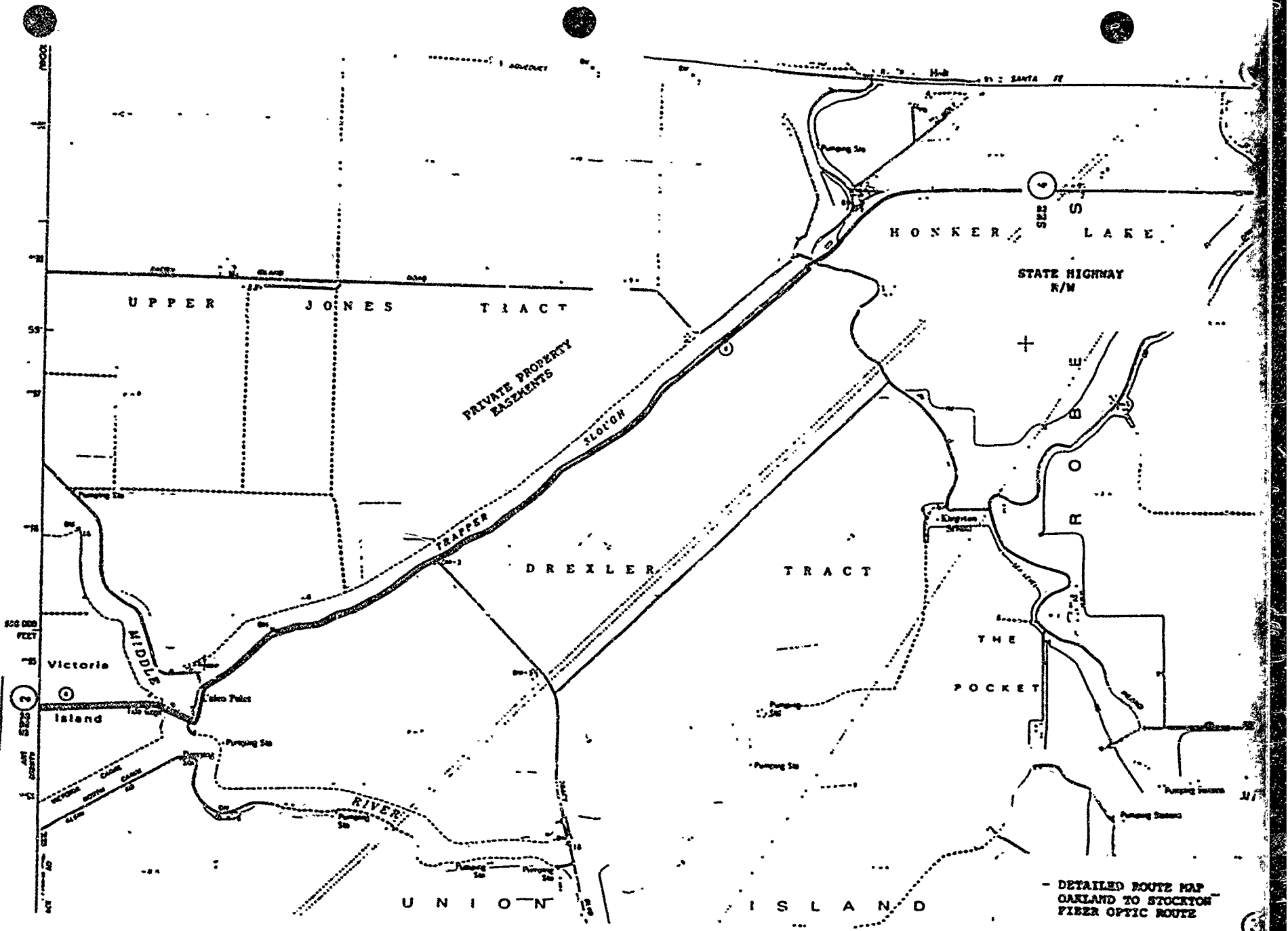

DETAILED ROUTE MAP
OAKLAND TO STOCKTON
FIBER OPTIC ROUTE

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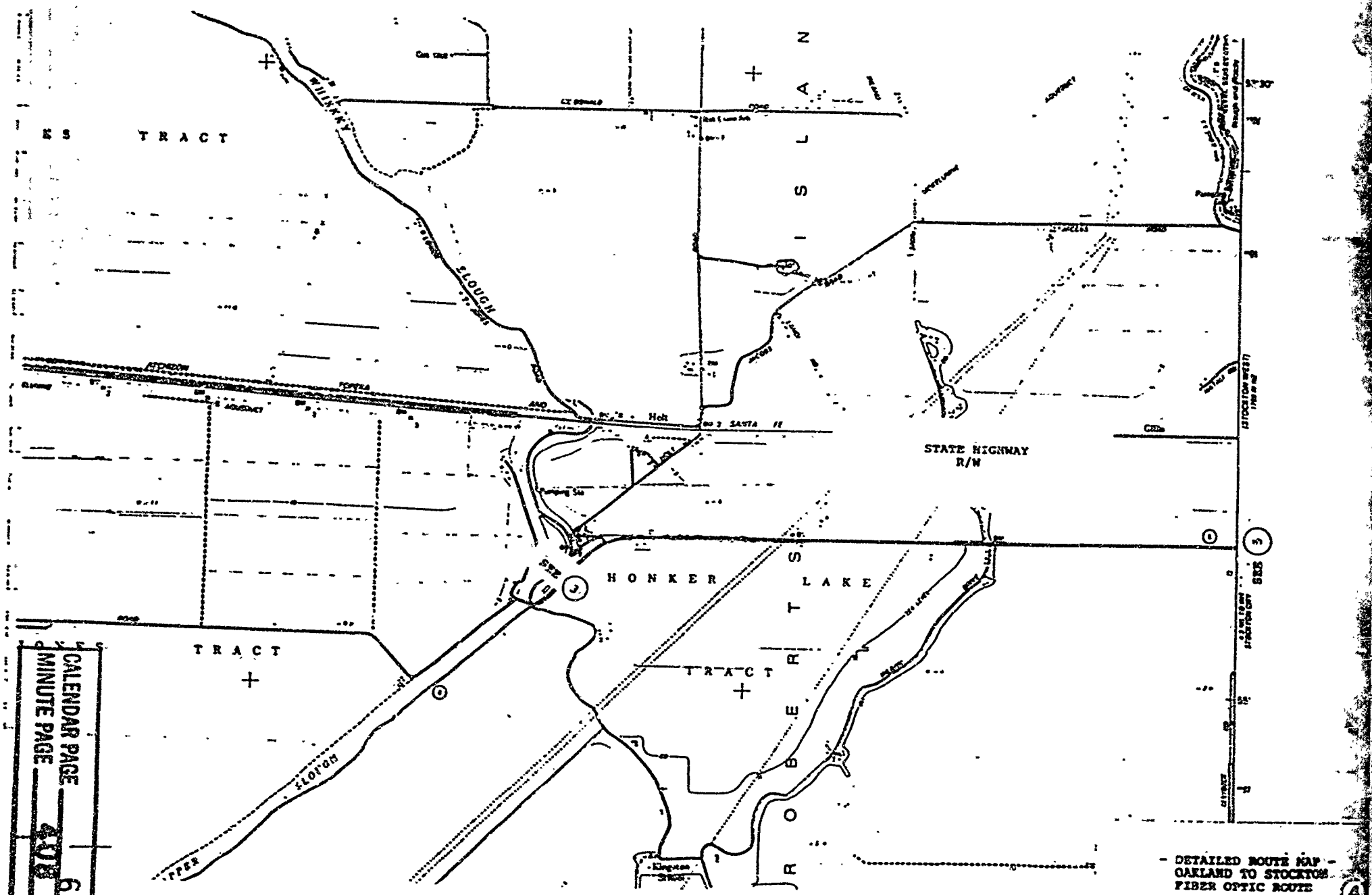

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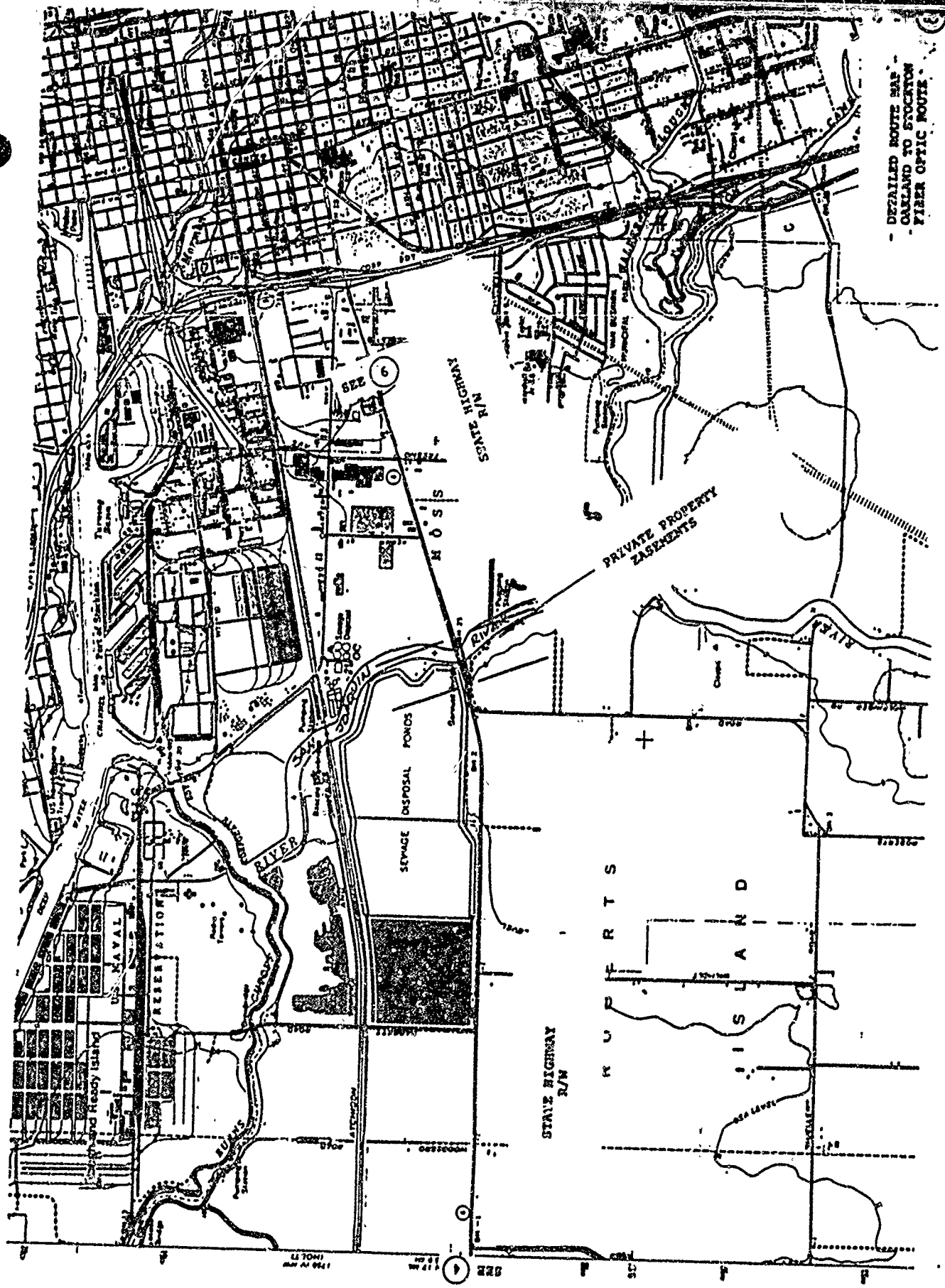

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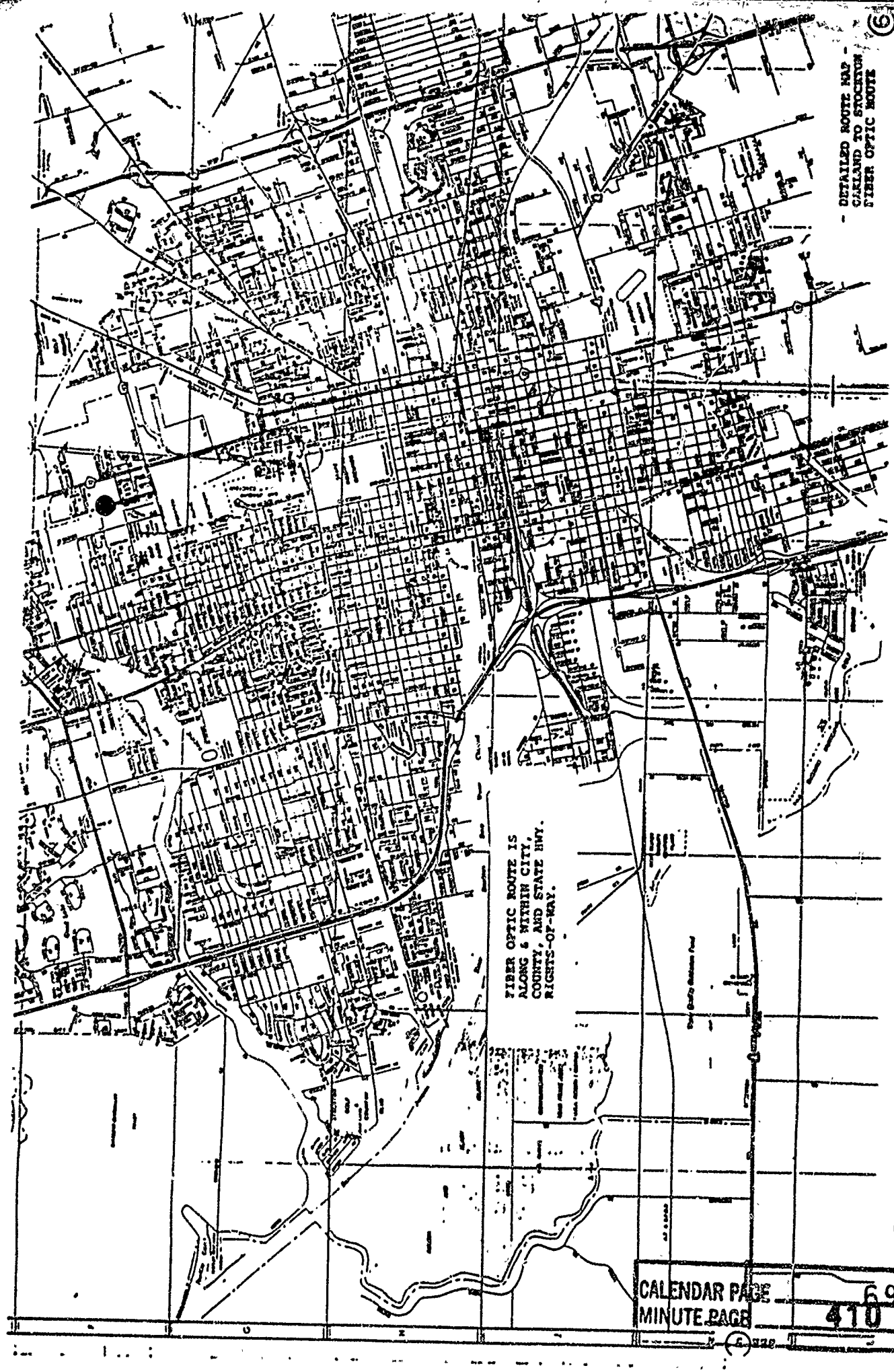

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NARRATIVE
US SPRINT COMMUNICATIONS COMPANY
OAKLAND TO STOCKTON
CALIFORNIA
UNDERGROUND FIBER OPTIC CABLE PROJECT

PURPOSE

The purpose of the following is to provide a narrative description of the US Sprint underground fiber optic cable project from Oakland to Stockton, California. This description will include the following: method of construction, type of surface to be disturbed and planned location of cable beginning at the Oakland US Sprint POP facility and culminating at the Stockton US Sprint TOC facility.

NARRATIVE

1. City of Oakland
   Oakland POP-Brush Street-14th Street-West Street-Apgar Street-Lusk Street-42nd Street-Mather Street-Pleasant Valley Avenue-Piedmont Avenue-Ramona Avenue

   Right of way surface: City streets, asphalt with concrete curb, intermittent concrete with asphalt overlay

   Oakland to Walnut Creek Portion

   This is a major urban area that includes a wide variety of commercial and manufacturing facilities. Currently, detailed fiber optic route maps are not available for this portion of the project. Please note that a vicinity map has been provided illustrating the route.

   The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight. Virtually, all activity will be within the street portion of the city right of way.

   Traffic control procedures will be in accordance with city requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

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2. City of Piedmont
Moraga Avenue

Oakland to Walnut Creek Portion

Right of way surface: City streets, asphalt with concrete curb

Construction within the City of Piedmont has been completed under the terms and conditions of an existing encroachment permit. Construction was completely within the street portion of the city right of way. Early construction was due to city plans to repave Moraga Avenue.

3. City of Oakland
Moraga Avenue

Oakland to Walnut Creek Portion

Right of way surface: City streets, asphalt with concrete curb

This area is primarily suburban. Single and multi-family homes and intermittent commercial establishments exist in the area.

The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight. Virtually, all activity will be within the street portion of the city right of way.

Traffic control procedures will be in accordance with city requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

4. City of Oakland
Moraga Avenue-Thornhill Drive-Mountain Boulevard

Oakland to Walnut Creek Portion

Right of way surface: City streets, asphalt with concrete curb

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This area is primarily suburban. Single and multi-family homes and intermittent commercial establishments exist in the area. Currently, detailed fiber optic route maps are not available for this portion of the project. Please note that a vicinity map has been provided illustrating the route.

The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight. Virtually, all activity will be within the street portion of the city right of way.

Traffic control procedures will be in accordance with city requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

5. City of Oakland
Snake Road-Shepard Canyon Road

Oakland to Walnut Creek Portion

Right of way surface: City streets, asphalt with concrete curb, easterly portion is asphalt with dirt and gravel shoulder

This area is primarily suburban. Single and multi-family homes and intermittent commercial establishments exist in the area.

The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight.

It should be noted that periodically installation will be off of the road surface. In these areas, the trenching method will be exactly the same except for the cut and replacement of asphalt. The trench will be located in the

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shoulder of the road no more than 4 feet from the edge of pavement. The surface involvement will be approximately 5 feet outside of the trench line.

Traffic control procedures will be in accordance with city requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

6. Contra Costa County
Pinehurst Road-Canyon Road

Oakland to Walnut Creek Portion

Right of way surface: Asphalt with dirt and gravel shoulder

This area is primarily rural. The setting includes oak forests, rolling hills and open fields.

The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight.

It should be noted that periodically installation will be off of the road surface. In these areas, the trenching method will be exactly the same except for the cut and replacement of asphalt. The trench will be located in the shoulder of the road no more than 3 feet from the edge of pavement. The surface involvement will be approximately 5 feet outside of the trench line.

Traffic control procedures will be in accordance with county requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

7. City of Moraga
Canyon Road-Moraga Road-St. Marys Road

Right of way surface: City streets, asphalt with concrete curb, westerly portion is asphalt with dirt and gravel shoulder

Oakland to Walnut Creek Portion

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This area is primarily a residential setting. Custom designed and standard tract housing exist in the area.

The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight.

It should be noted that periodically installation will be off of the road surface. In these areas, the trenching method will be exactly the same except for the cut and replacement of asphalt. The trench will be located in the shoulder of the road no more than 6 feet from the edge of pavement. The surface involvement will be approximately 5 feet outside of the trench line.

Construction in this area will also include one bridge attachment over a dry creek bed. A bridge attachment is accomplished by installing expandable lead anchors in the structure of the bridge and bolting brackets to the anchors. Four inch galvanized steel conduit is then attached to the brackets. This conduit will house three innerducts in order to preserve the integrity of the system.

Traffic control procedures will be in accordance with city requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

8. City of Lafayette
St. Marys Road-Glenside Drive-Reliez Station Road-Olympic Boulevard

Oakland to Walnut Creek Portion

Right of way surface: City streets, asphalt with concrete curb

This area is primarily a residential setting. Custom designed and standard tract housing exist in the area. The area also accommodates small strip centers and commercial applications.

The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a

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trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight.

It should be noted that periodically installation will be off of the road surface. In these areas, the trenching method will be exactly the same except for the cut and replacement of asphalt. The trench will be located in the shoulder of the road no more than 7 feet from the edge of pavement. The surface involvement will be approximately 5 feet outside of the trench line.

Construction in this area will also include three bridge attachments. A bridge attachment is accomplished by installing expandable lead anchors in the structure of the bridge and bolting brackets to the anchors. Four inch galvanized steel conduit is then attached to the brackets. This conduit will house three innerducts in order to preserve the integrity of the system.

Traffic control procedures will be in accordance with city requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

9. Contra Costa County
Olympic Boulevard

Oakland to Walnut Creek Portion

Right of way surface: Asphalt with concrete curb

This area is primarily a residential setting. Custom designed and standard tract housing exist in the area. The area also accommodates small strip centers and commercial applications.

The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight.

It should be noted that periodically installation will be off of the road surface. In these areas, the trenching

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method will be exactly the same except for the cut and replacement of asphalt. The trench will be located in the shoulder of the road no more than 4 feet from the edge of pavement. The surface involvement will be approximately 5 feet outside of the trench line.

Construction in this area will also include one bridge attachment over Las Trampas Creek. A bridge attachment is accomplished by installing expandable lead anchors in the structure of the bridge and bolting brackets to the anchors. Four inch galvanized steel conduit is then attached to the brackets. This conduit will house three innerducts in order to preserve the integrity of the system.

Traffic control procedures will be in accordance with county requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

10. City of Walnut Creek
Olympic Boulevard-California Boulevard-Civic Drive-Locust Street-USS POP Facility-California Boulevard-Newell Avenue-Main Street

Oakland to Walnut Creek Portion
Walnut Creek to Stockton Portion
Right of way surface: City streets, asphalt with concrete curb

This is an urban and suburban area that includes a wide variety of commercial applications.

The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight. Virtually, all activity will be within the street portion of the city right of way.

Construction in this area will also include one bridge attachment over Las Trampas Creek. A bridge attachment is accomplished by installing expandable lead anchors in the structure of the bridge and bolting brackets to the anchors. Four inch galvanized steel conduit is then attached to the brackets. This conduit will house three innerducts in order to preserve the integrity of the

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system.

Traffic control procedures will be in accordance with city requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

11. Contra Costa County
Danville Boulevard

Walnut Creek to Stockton Portion

Right of way surface: Concrete with asphalt overlay, dirt and gravel shoulder

This is a major thoroughfare between Walnut Creek and Danville. The area is predominantly residential.

The trenching method will be employed in this area. Because Danville Boulevard has a concrete base, overlayed with asphalt, a 6' rock saw will be required toprepare the trench. The asphalt and concrete will be saw-cut in two locations approximately 12" apart. A backhoe will remove the concrete and asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and a concrete and asphalt cap will then be installed. No trench will remain open overnight. Virtually, all activity will be within the street portion of the county right of way.

Traffic control procedures will be in accordance with county requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

12. City of Danville
Danville Boulevard-El Portal Avenue-La Gonda Way-El Cerro Boulevard-Diablo Road-Vista Grande-Camino Tassajara

Walnut Creek to Stockton Portion

Right of way surface: City streets, asphalt with concrete curb, easterly portion is asphalt with dirt and gravel shoulder

This area is primarily a residential setting. Custom designed and standard tract housing exist in the area. The area also accommodates small strip centers and commercial applications.

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The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight.

It should be noted that periodically installation will be off of the road surface. In these areas, the trenching method will be exactly the same except for the cut and replacement of asphalt. The trench will be located in the shoulder of the road no more than 4 feet from the edge of pavement. The surface involvement will be approximately 5 feet outside of the trench line.

Construction in this area will also include two bridge attachments. A bridge attachment is accomplished by installing expandable lead anchors in the structure of the bridge and bolting brackets to the anchors. Four inch galvanized steel conduit is then attached to the brackets. This conduit will house three innerducts in order to preserve the integrity of the system.

Construction through this area will also require four bores to be performed. A bore is a necessary construction technique used to cross a roadway where it is required that the road surface not be disturbed. A bore is performed by excavating a pit on each side of the roadway to be crossed and then pushing steel casing under the roadway from pit to pit. Since the majority of the surface is undisturbed, only restoration of the pit areas is necessary.

Traffic control procedures will be in accordance with city requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

13. Contra Costa County
Camino Tassajara-Highland Road

Walnut Creek to Stockton Portion

Right of way surface: Asphalt roads, dirt and gravel shoulder

This area is residential and rural. The topography is rolling hills and fields.

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The trenching method will be employed in this area. The majority of the trenching will be in the shoulder of the road approximately 6 feet from the edge of pavement. In necessary areas, construction may be further off the pavement. A backhoe will excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material and compacted. The surface involvement will be approximately 5 feet outside of the trench line. No trench will remain open overnight.

Construction in this area will also include one bridge attachment. A bridge attachment is accomplished by installing expandable lead anchors in the structure of the bridge and bolting brackets to the anchors. Four inch galvanized steel conduit is then attached to the brackets. This conduit will house three innerducts in order to preserve the integrity of the system.

Construction through this area will also require four bores to be performed. A bore is a necessary construction technique used to cross a roadway where it is required that the road surface not be disturbed. A bore is performed by excavating a pit on each side of the roadway to be crossed and then pushing steel casing under the roadway from pit to pit. Since the majority of the surface is undisturbed, only restoration of the pit areas is necessary.

Traffic control procedures will be in accordance with county requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

14. Alameda County
Highland Road-Manning Road

Walnut Creek to Stockton Portion

Right of way surface: Asphalt roads, dirt and gravel shoulder

This area is rural. The topography is rolling hills and fields.

The trenching method will be employed in this area. The majority of the trenching will be in the shoulder of the road approximately 4 feet from the edge of pavement. A backhoe will excavate a trench approximately 12" in

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width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material and compacted. The surface involvement will be approximately 5 feet outside of the trench line. No trench will remain open overnight.

Construction in this area will also include one bridge attachment. A bridge attachment is accomplished by installing expandable lead anchors in the structure of the bridge and bolting brackets to the anchors. Four inch galvanized steel conduit is then attached to the brackets. This conduit will house three innerducts in order to preserve the integrity of the system.

Construction through this area will also require one bore to be performed. A bore is a necessary construction technique used to cross a roadway where it is required that the road surface not be disturbed. A bore is performed by excavating a pit on each side of the roadway to be crossed and then pushing steel casing under the roadway from pit to pit. Since the majority of the surface is undisturbed, only restoration of the pit areas is necessary.

Traffic control procedures will be in accordance with county requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

15. Contra Costa County
Manning Road

Walnut Creek to Stockton Portion

Right of way surface: Asphalt roads, dirt and gravel shoulder

This area is rural. The topography is rolling hills and fields.

The trenching method will be employed in this area. The majority of the trenching will be in the shoulder of the road approximately 4 feet from the edge of pavement. A backhoe will excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material and compacted. The surface involvement will be approximately 5 feet outside of the trench line. No trench will remain open

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overnight.

Construction through this area will also require one bore to be performed. A bore is a necessary construction technique used to cross a roadway where it is required that the road surface not be disturbed. A bore is performed by excavating a pit on each side of the roadway to be crossed and then pushing steel casing under the roadway from pit to pit. Since the majority of the surface is undisturbed, only restoration of the pit areas is necessary.

Traffic control procedures will be in accordance with county requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

16. Alameda County
Manning Road-North Livermore Avenue-May School Road-Dagnino Road-Raymond Road-Ames Road-Dalton Avenue-Vasco Road

Walnut Creek to Stockton Portion

Right of way surface: Asphalt roads, dirt and gravel shoulder

This area is rural. The topography is rolling hills and fields. Horse farms and fenced pasture is the predominant land use.

The trenching method will be employed in this area. The majority of the trenching will be in the shoulder of the road approximately 4 feet 6 from the edge of pavement. A backhoe will excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material and compacted. The surface involvement will be approximately 5 feet outside of the trench line.

In some areas, trenching in the surface of the roadway will be necessary. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight.

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Construction through this area will also require four bores to be performed. A bore is a necessary construction technique used to cross a roadway where it is required that the road surface not be disturbed. A bore is performed by excavating a pit on each side of the roadway to be crossed and then pushing steel casing under the roadway from pit to pit. Since the majority of the surface is undisturbed, only restoration of the pit areas is necessary.

Traffic control procedures will be in accordance with county requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

17. Contra Costa County
Vasco Road-Camino Diablo Road-Holway Road-Byron Highway-State Highway 4

Walnut Creek to Stockton Portion

Right of way surface: Asphalt roads, dirt and gravel shoulder

This area is rural. The topography is rolling hills and fields. The area is exclusively agricultural from Byron to the East.

The trenching method will be primarily employed up to State Highway 4. The majority of the trenching will be in the shoulder of the road approximately 4 feet 6 from the edge of pavement. A backhoe will excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material and compacted. The surface involvement will be approximately 5 feet outside of the trench line.

In some areas, trenching in the surface of the roadway will be necessary. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight.

Construction along Route 4 will primarily employ the

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cable plow method (direct bury). Cable plowing is accomplished by the use of a tractor mounted plowing device. This machine creates an opening in the soil, places the cable with its protective duct at the specified depth, and closes the soil in one continuous action. The opening created by the plow disturbs an area approximately 6" to 12" wide. which is compacted immediately behind the plow. The surface involvement will be approximately 5 feet outside of the running line.

Construction through this area will also require nine bores to be performed. A bore is a necessary construction technique used to cross a roadway or railway where it is required that the surface not be disturbed. A bore is performed by excavating a pit on each side of the surface to be crossed and then pushing steel casing under the roadway from pit to pit. Since the majority of the surface is undisturbed, only restoration of the pit areas is necessary.

In addition to the above mentioned bores, one directional bore to cross the Old River will be performed. Two bore pits will be excavated on either side of the river. A 4" pipe will be bored approximately 15' under the river bed. Boring equipment will include a pump, pipe trailer, tank truck and surveying trailer.

Construction in this area will also include four bridge attachments. A bridge attachment is accomplished by installing expandable lead anchors in the structure of the bridge and bolting brackets to the anchors. Four inch galvanized steel conduit is then attached to the brackets. This conduit will house three innerducts in order to preserve the integrity of the system.

Traffic control procedures will be in accordance with county requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

18. San Joaquin County
Private Lands-State Highway 4

Walnut Creek to Stockton Portion

Right of way surface: Asphalt roads, dirt and gravel shoulder
Flat, cultivated fields

This area is exclusively agricultural. The cable will be located primarily across private lands from the Old River to Trapper Road and then along State Highway 4 to

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Stockton.

Construction along the private lands and most of State Highway 4 will primarily employ the cable plow method (direct bury). Cable plowing is accomplished by the use of a tractor mounted plowing device. This machine creates an opening in the soil, places the cable with its protective duct at the specified depth, and closes the soil in one continuous action. The opening created by the plow disturbs an area approximately 6" to 12" wide. which is compacted immediately behind the plow. The surface involvement will be approximately 5 feet outside of the running line.

The trenching method will be employed along State Highway 4 near Stockton. The majority of the trenching will be in the shoulder of the road approximately 4 feet 6 from the edge of pavement. A backhoe will excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material and compacted. The surface involvement will be approximately 5 feet outside of the trench line.

In some areas, trenching in the surface of the roadway will be necessary. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight.

Construction through this area will also require fifteen bores to be performed. A bore is a necessary construction technique used to cross a roadway or railway where it is required that the surface not be disturbed. A bore is performed by excavating a pit on each side of the surface to be crossed and then pushing steel casing under the roadway from pit to pit. Since the majority of the surface is undisturbed, only restoration of the pit areas is necessary.

In addition to the above mentioned bores, two directional bore to cross the Middle River and the San Joaquin River will be performed. Two bore pits will be excavated on either side of the river. A 4" pipe will be bored approximately 15' under the river bed. Boring equipment will include a pump, pipe trailer, tank truck and

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surveying trailer.

Traffic control procedures will be in accordance with county requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

19. City of Stockton
State Highway 4-Stockton Street-Anderson Street-Aurora Street-Main Street-Sierra Nevada Street-University Avenue-West Lane-Alpine Avenue-Coronado Avenue-Stockton TOC

Walnut Creek to Stockton Portion

Right of way surface: Asphalt roads, dirt and gravel shoulder
Asphalt city streets with concrete curb

This area is primarily residential with intermittent commercial applications.

The trenching method will be employed in this area. The asphalt will be saw-cut in two locations approximately 12" apart. A backhoe will remove the asphalt and excavate a trench approximately 12" in width and 48" in depth. Three plastic conduits with a concrete encasement will be placed in the trench to contain and protect the cable. The trench will then be backfilled with the removed material, compacted and an asphalt cap will then be installed. No trench will remain open overnight.

Construction in this area will also include one bridge attachment. A bridge attachment is accomplished by installing expandable lead anchors in the structure of the bridge and bolting brackets to the anchors. Four inch galvanized steel conduit is then attached to the brackets. This conduit will house three innerducts in order to preserve the integrity of the system.

Construction through this area will also require ten bores to be performed. A bore is a necessary construction technique used to cross a roadway where it is required that the road surface not be disturbed. A bore is performed by excavating a pit on each side of the roadway to be crossed and then pushing steel casing under the roadway from pit to pit. Since the majority of the surface is undisturbed, only restoration of the pit areas is necessary.

Traffic control procedures will be in accordance with

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city requirements. Additionally, US Sprint will comply with the State of California, Manual of Traffic Controls for Construction and Maintenance Work Zones in all areas.

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DAMES & MOORE - PROFESSIONAL LIMITED PARTNERSHIP
9300 TECH CENTER DRIVE, SUITE 100, SACRAMENTO, CALIFORNIA 95826 (916) 364-8628

January 15, 1991

Job No. 14865-007-001

Mr. Brian Jordan KSOPKC031
US Sprint Communications Company
9350 Metcalf
Overland Park, KS 66212

Letter Report
Slope Stability Assessment
Fiber Optic Cable Project
Lafayette, California

Dear Mr. Jordan:

This letter presents the results of Dames & Moore's assessment of slope stability along the planned fiber optic cable route through the City of Lafayette. We understand that the State Lands Commission asked US Sprint to undertake an initial slope stability assessment of the route through Lafayette, California in response to concerns raised by the City of Lafayette.

The planned fiber optic cable will serve as a backup trunk line connecting US Sprint facilities in Oakland and Stockton California. The conduit for the line consists of three two-inch-diameter PVC conduits with widely spaced access manholes. The conduit is placed in a trench about 12 to 18 inches wide and 3 to 5 feet deep. We understand that, if needed, US Sprint conforms conduit bedding material and trench backfill placement and compaction criteria to satisfy local requirements.

From Moraga, the planned route through Lafayette is north on St. Mary's Road to Glenside Drive, to Reliez Station Road and then east on Olympic Boulevard to the eastern city limits of Lafayette. Following the route as described, the cable location is consistently just to the right of the paved portion of the roadway. The length of each segment of the route in Lafayette is approximately:

Segment	Length (miles)
St. Mary's Road	1.6
Glenside Drive	0.6
Reliez Station Road	0.6
Olympic Boulevard	0.4

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The purpose of our assessment was to provide the geologic and slope stability information requested by the State Lands Commission. Our slope stability assessment included the following:

- Reviewed the cable route maps provided by US Sprint and available published geologic maps, including interpretations of landsliding;
- Discussed a recent water main failure and road repair at approximately Station 22+00 on Reliez Station Road with East Bay Municipal Utility District (EBMUD) engineers;
- Discussed slope stability along the planned route with Mr. Mark Lander, City Engineer for the City of Lafayette;
- Made a visual assessment of the route with respect to slope stability; and
- Prepared this letter summarizing our findings and conclusions.

GEOLOGY

Based on available geologic maps, the route through Lafayette is underlain by Pliocene sedimentary rocks of the Contra Costa group, which includes the Orinda and Mulholland formations. These materials are typically sandstones, siltstones, and claystones with occasional conglomerates, which generally weather to clayey and silty soils. Some outcrops of conglomerate were visible along Reliez Station Road; however, the road cuts in most areas expose clayey and silty colluvial soils, weathered from the underlying rock.

Area of Water Main Failure on Reliez Station Road

The northbound lane at about Station 22+00 on Reliez Station Road has been repaved over a length less than about 100 feet. The new pavement is constructed on an embankment which slopes down at a inclination of about 2 horizontal to 1 vertical and is about 30 to 40 feet in total height. Mr. Lander expressed concern that this and the remainder of Reliez Station Road may be unstable and therefore subject to future landsliding.

EBMUD personnel said that based on laboratory testing of the broken pipe they had concluded that the water main break was due to corrosion and not due to landsliding. They also said that the area disturbed by water escaping from the broken main was reconstructed using compacted 1-1/2-inch-maximum-size aggregate base material.

A Dames & Moore engineering geologist and geotechnical engineer observed the surface conditions in the vicinity of the repaired water main on January 9, 1991. At the time of our visit there, there were no signs of landslide movement in the roadway at or on either side of the repaired area. The slopes on either side of the roadway in this area appeared to be stable, except for some surface creep and shallow sloughing.

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Slope Stability Along the Route

Landsliding can occur wherever there are steep cut and fill slopes along the proposed route. However, it is our opinion that the likelihood of large landslides occurring is very low. Relatively small landslides may occur during periods of heavy rainfall along the banks of Las Trampas Creek due to undercutting by stream action. The creek is deeply incised and in some locations comes close to St. Mary's Road and Glenside Drive. During periods of high flow, some undercutting of the slope between the roadway and the creek may occur which can result in slope movement.

Two such landslides occurred on St. Mary's Road in 1982, at approximately Stations 91+50 and 103+50. In both instances only a portion of the southbound lane was affected, and the landslides were repaired so that future landslide movement at these locations is unlikely. Also, the fiber optic cable is planned to be on the east side of St. Mary's Road at a relatively large distance from the previous landslide areas.

A minor crack was observed in the soil along St. Mary's Road north of the Las Trampas Creek bridge. The crack starts a few feet from the bridge and runs adjacent to the east guard rail for about thirty feet. It is about 1/4-inch wide with no vertical offset. At this location, Las Trampas Creek is on the east side of St. Mary's Road. The roadway is about 20 feet higher than the creek bed, and there is a two horizontal to one vertical slope from the roadway down to the creek. The vertical extent and significance of this feature is unknown; however, if feasible, it would be prudent to locate the cable on the west side of St. Mary's Road for approximately 100 feet north of the bridge.

Conclusions

Based on the results of our assessment, we conclude that installation of the fiber optic cable using the planned route through the City of Lafayette is feasible from a geologic/slope stability standpoint.

As described above, the cable conduit will be installed in a narrow three-to-five-foot-deep trench along the edge of the roadway. It is also our understanding that the trench is backfilled daily so that the time it is left open is short. In our opinion, the effect of the cable on slope stability along the proposed route is negligible.

oOo

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JAMES M. MOORE

We trust that this letter provides the information needed regarding slope stability along the planned fiber optic cable route through the City of Lafayette. Please call if you have any questions.

Sincerely,

DAMES & MOORE

Raymond H. Rice, C.E.G.
Partner (Ltd.)

REGISTERED PROFESSIONAL ENGINEER
PHILLIP N. MABRY
No. 000548
Exp. 12-31-92
GEOTECHNICAL
STATE OF CALIFORNIA

Phillip N. Mabry, P.E., G.E.
Senior Geotechnical Engineer

cc: Ms. Judy Brown
State Lands Commission

Mr. Joe Guzman
Nossman, Guthner, Knox, & Elliott

Mr. John Franklin
Agent for US Sprint

Mr. Lynn Morphew
US Sprint

Ms. Lucy Bowen
Dames & Moore

GRP003.051

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DAMES & MOORE

BIOLOGICAL AND CULTURAL RESOURCES
US SPRINT FIBER OPTIC CABLE
STOCKTON, CALIFORNIA

1 AUGUST 1990
DAMES & MOORE
GOLETA, CALIFORNIA

DAMES & MOORE

14365-007/R1.T

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BIOLOGICAL AND CULTURAL RESOURCES
US SPRINT FIBER OPTIC CABLE
STOCKTON, CALIFORNIA

August 1, 1990

Prepared for:
US Sprint
Burlingame, California

Prepared by:
Dames & Moore
175 Cremona Drive, Suite A-E
Goleta, California 93117

14865-007/RFT

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1.0 INTRODUCTION

US Sprint has proposed to construct a fiber optic cable between Oakland and Stockton. The cable will be buried within existing dirt or paved road beds or shoulders for its entire length, except at stream or river crossings where it will either be attached to a bridge in a conduit, or will be placed under the watercourse using a directional boring procedure. Three rivers will be bored along the route: Old, Middle, and San Joaquin rivers (Figure 1).

The above three rivers are under the jurisdiction of the State Land Commission (SLC). US Sprint has applied for a right-of-way grant from SLC at these crossings. During the review of the application, SLC has requested additional information from US Sprint in order to conduct a CEQA review of the entire project. This report provides specific environmental information concerning biological and cultural resources along a 2-mile-long portion of the route west of Stockton. SLC has requested this information because this is the only portion of the route that traverses private property, rather than a state highway right-of-way.

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EXPLANATION:

Fiber Optic Cable Route

Private Property Easements Along Fiber Optic Cable Route

0 1/2 1

Scale in Miles

BASE MAP: USGS 7.5' Quadrangle: Stockton, CA 1952 (Photorevised 1987)

FIGURE 1

US Sprint Fiber Optic Cable Route Near Stockton

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2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The cable route traverses private property easements just west of Stockton, at two locations: (1) on either side of the San Joaquin River crossing; and (2) between Bacon Island Road and the Old River (Figure 1). The cable route is located parallel to and about 50 feet from the south side of State Route 4. The proposed fiber optic cable will be placed in existing dirt roads except where irrigation ditches cross the roads. Irrigation canals and ditches area located adjacent and parallel to the dirt roads where the cable will be placed, between the dirt roads and State Route 4. There are three river crossings: Old, Middle, and San Joaquin rivers (Figure 1).

2.2 CONSTRUCTION METHODS

For most of its length, the ½ inch diameter cable will be placed in the bed of existing dirt farm roads using a "plowing" technique described below. The cable will be buried to a minimum depth of 42 inches. The cable will be placed beneath existing culverts in the road by trenching. Where the cable traverses irrigation or drainage ditches adjacent to agricultural fields, it will be placed below the ditch either by trenching (if no water is present) or by boring (if water is present).

The principal means of burial will be "plowing" with a cable plow. The plowing operation involves two bulldozers and a number of support vehicles (typically three) such as pick up trucks and crew vans. The first bulldozer will pull a ripping bar designed to slit the soil in a trench 3- to 4 inches wide and 42-inches deep. The soil will not be removed from this trench but a small amount will be displaced as the cable is pulled through. A second bulldozer with the cable plow and cable will follow the ripper. The plow will lay the cable in the pre-ripped trench, again without removing any soil other than that which is displaced. Vertical mixing of the soil will be minimized, as neither the ripping bar nor the plow will move appreciably in a vertical direction. The cable will be installed by plowing through the all dirt roads on private property, which is the majority of the route.

A second method of burial is simple trenching. A rubber-tired trencher would be used to excavate the trench through dry drainage crossings or where the terrain is too irregular for the bulldozer and plow. A trench is dug which will provide 60 inches of cover as opposed to the normal 42 inches of cover. The cable will be installed in protective pipe which is encased in concrete. This extra protection is taken to avoid damage if the crossing is subject to clean-out operations. The trench will be excavated just prior to installation of the cable, and it will be back-filled the same day.

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Trenching will also be used where the cable must be placed underneath culverts or at other obstacles (such as pipes or other utility lines). Culverts will either remain in place or be replaced with new culverts, as per property owner's approval. A backhoe will be used to trench on either side of the culvert, then the cable will be hand pulled underneath the culvert through the trench made by the backhoe.

Roads, streets, and canals and ditches where water is present will be bored under using a conventional bore. For drainages, boring activity is planned so as to avoid disturbance of bank areas and to insure stability of canal walls. The bore is generally made at a depth of 60 inches below the bottom of the borrow ditch. Galvanized pipe is placed, and the cable is pulled through the conduit. The beginning of the bore will utilize a bore pit about 20' x 5' in size for placement of the boring equipment, and will be located within the existing roadway. The end of the bore will utilize a 4' x 4' pit for receiving the cable line. Galvanized pipe is placed, and the cable is pulled through the conduit.

A directional bore will be used at the three major river crossings. It will be placed in a conduit that will be installed about 15 feet under the river bed using a mechanical bore. Two bore holes will be established on either side of the watercourses, more than 100 feet from existing levees. The bore hole will be about 4 inches in diameter. A permanent 18" x 5' x 3' access box will be installed at each end for maintenance. The bore hole locations for the three crossings are on level, previously disturbed land. A temporary pit, with an area approximately 200 feet by 200 feet will be required at the begin bore location for the boring equipment, including a bore, pump, pipe trailer, tank truck, and surveying trailer.

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3.0 BIOLOGICAL RESOURCES

Biological resources at the river crossings and on private property easements for the fiber optic cable project are described in the following sub-sections. Data presented below are based on a review of pertinent literature, including a review of the California Natural Diversity Data Base (CNDDB, 1990), and field surveys of all areas of potential surface disturbance conducted on 30 April and 16 July 1990. Biological resources were evaluated by Ms. Melinda Trask, staff biologist for Dames & Moore. A US Sprint engineer was present to locate the river crossing impact areas during the April field survey. The objective of the field surveys was to identify any potentially sensitive biological resource that could be affected by the proposed project.

3.1 BIOLOGICAL RESOURCES ALONG PRIVATE PROPERTY EASEMENTS

Private property easements surveyed in July are shown on Figures 2a through 2c. Because the cable route is located within agricultural land, there is no native upland habitat within the project area. Upland areas contain dirt roads, agricultural fields or graded, ruderal habitats. Wetlands are restricted to the inside portions of the levees of rivers, and along the banks and bottoms of irrigation canals and ditches. Wetland habitats in the project area consist of degraded freshwater marsh in the man-made ditches and canals, and riparian woodland/freshwater marsh in the rivers.

3.1.1 Vegetation Types

There are four main vegetation types in the project area: ruderal, ornamental, freshwater marsh, and riparian. Placement of the cable will disturb only ruderal vegetation, and freshwater marsh vegetation in man-made ditches. Plant species observed along the cable route are listed on Table 1.

The ruderal vegetation type is dominated by introduced, weedy herbs and grasses which invade disturbed areas. Ruderal vegetation is commonly found along roadsides and in areas with severe human-caused disturbance. Ruderal vegetation lines both paved and dirt roadways and the upper edges of the drainage ditches in the project area, intergrading with freshwater marsh vegetation in the man-made ditches.

The ornamental vegetation type consists of landscaped plants, most of which are non-native. It includes trees located along State Route 4 and other trees and shrubs planted at some of the developments in the area. Common ornamental trees in the project area include eucalyptus, cottonwood, walnut, pine, fig, and ash.

The freshwater marsh vegetation type occurs along perennial and intermittent drainages and ponds which have soils that are permanently saturated with freshwater. It is dominated by emergent, perennial monocots and submerged aquatic plants (only in deeper water). The

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irrigation ditches in the project area are often disturbed by maintenance, therefore they contain high proportions of weedy ruderal plant species.

A 40-foot-wide continuous drainage canal is located adjacent to the cable route between Middle and Old rivers, which contained slow moving water 1 to 3 feet deep during the July field survey (Figures 2b and 2c). The channel contained a dense cover of perennial monocots such as bulrush, stinging nettle and water smartweed along the banks, as well as submerged aquatic plants such as floating seedbox, western water-milfoil and water-cress within the channel bottom. Many narrower, discontinuous, more weedy ditches are located adjacent to the cable route from about 1000 feet west of Bacon Island Road to about 2000 feet east of Middle River (Figure 2b). These ditches are generally choked with cattails, willow weed, common reed and prickly lettuce.

The riparian woodland/freshwater vegetation type occurs along the inside of levees of rivers, sloughs and canals which contain permanent water. It is dominated by an open cover of broadleaved winter-deciduous trees and herbaceous pants. Herbaceous monocots (such as bulrush) dominate the edges of the water, while the trees and shrubs dominate the upper banks.

3.1.2 Animal Habitat and Species

The quality and amount of wildlife habitat in the project area are severely disturbed due to agricultural activities. Aquatic habitat is more abundant because of the many rivers and canals; however, the water quality is poor also due to agricultural activities. The man-made ditches in the project area that are routinely maintained generally contain little or no aquatic life. The three main types of wildlife habitats in the project area include ruderal, freshwater marsh, and riparian.

Ruderal habitats include areas dominated by ruderal vegetation, agricultural fields, urbanized areas, and other developed areas. The abundance and diversity of wildlife in these areas are very low because of the lack of food and undisturbed cover. Wildlife species that inhabit ruderal areas have become acclimated to human-caused disturbance conditions. The following wildlife species were observed in ruderal habitats during the July field survey: American crow, turkey vulture, mockingbird, killdeer, barn swallow, red shouldered blackbird and ground squirrel.

Freshwater marshes often provide an abundance of food and cover for many wildlife species, especially waterfowl. Most of the marsh land in the project area has been filled and channelized for agriculture and only limited amounts of marsh habitats remain, lining the canals and sloughs in the area. The following wildlife species were observed in freshwater marsh habitats during the July field survey: killdeer, great blue heron and bullfrog.

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Riparian habitats provide food, shelter, nesting sites and refuge for even more wildlife species, including aquatic species. Sparse riparian habitat is located along the inner levees of the major rivers in the area. The following wildlife species may also occur in riparian habitats in the project area: great egret, ducks, red-tailed hawk, American kestrel, mourning dove, wrens, blackbirds, opossum, Botta's pocket gopher, muskrat, racoon, striped skunk, Pacific tree frog, western fence lizard, common kingsnake, aquatic garter snake, and gopher snake (Dames & Moore, 1989).

3.2 BIOLOGICAL RESOURCES AT RIVER CROSSINGS

All three crossings occur in agricultural areas. The rivers have major levees on either side. Adjacent land uses consist of actively cultivated agricultural fields. Man-made features also include farm roads and drainage ditches between the levees and fields.

All bore locations occur on the outer edge of an existing levee. These areas are not plowed, but are heavily disturbed by periodic weed control. The areas to be affected by the boring operations represent ruderal areas dominated by annual weeds (see Table 1).

A degraded wetland area is located near the bore entry location on the west side of Middle River (Figure 2b). This area is apparently periodically flooded by overflow during periods of irrigation in the adjacent agricultural fields. It is dominated by the above listed ruderal plant species and also contains high proportions of smartweed, (Polygonum punctatum), a hydrophytic plant species. Because of its highly degraded condition, this wetland area is not expected to support typical freshwater marsh wildlife species on a regular basis.

No wetlands are present in the remainder of the areas to be disturbed by the boring operation. Wetlands are restricted to the inner edges of the levees. In addition, no endangered or threatened plant or wildlife species are known or expected at the bore locations due to the absence of native habitat and periodic disturbance during agricultural activities.

3.3 SENSITIVE SPECIES

Sensitive plants and animals consist of federal- and state- listed species (USFWS, 1989a; CDFG, 1989,1990) federal candidates for listing (USFWS, 1989b, 1990), plant species considered rare by the California Native Plant Society (CNPS)(Smith and Berg, 1988) and state wildlife species of special concern (Remsen, 1978; Williams, 1986). No sensitive plant or animal species are known or likely to occur along the proposed cable route. This conclusion is based upon a review of the California Natural Diversity Data Base (CNDDB, 1990), the CNPS inventory of rare and endangered vascular plants of California (Smith and Berg, 1988), and previous environmental documents (Dames & Moore, 1989).

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The following sensitive plant species are known from the San Joaquin Delta region: Delta tule pea (Lathyrus jepsoni ssp. jepsoni), California hibiscus (Hibiscus californicus), Ferris' bird's-beak (Cordylanthus palmatus), caper-fruited tropidocarpum (Tropidocarpum capparideum), and Mason's lilaeopsis (Lilaeopsis masonii). Each of these is a freshwater marsh species. Marsh areas which may be disturbed by the proposed project were surveyed in July, and no evidence of any of the above listed species was observed. Furthermore, there is no suitable undisturbed freshwater marsh habitat for these species within any of the ditches adjacent to the proposed cable route.

The following sensitive animal species are known from the San Joaquin Delta region: Swainson's hawk, bald eagle, Cooper's hawk, peregrine falcon, burrowing owl, and tricolored blackbird. Swainson's hawk is the only species recorded from the project area, located along the east side of the San Joaquin River, about 2 miles south of the proposed cable route. Neither Swainson's hawk nor any of the above listed species is expected to regularly utilize the proposed cable route due to a lack of suitable habitat features.

3.4 POTENTIAL IMPACTS

Impacts to biological resources on private property easement and at the river bore locations would be minor. Impacts would be temporary in nature and include the potential removal of vegetation and wildlife habitat at ditch crossings, as well as offsite disturbance to wildlife from construction equipment noise in the project area. The latter is not considered significant because construction activities area not expected to create a higher level of disturbance than the existing agricultural activities.

Eight irrigation and drainage ditches will be traversed by the cable, as shown on Figures 2b and 2c. These ditches will only be trenched if they are dry during the construction period. If water is present in the ditches, then the cable will bored underneath the channel, not disturbing any of the wetland vegetation. Disturbance to these ditches, either by trenching or boring, would not be considered significant because: (1) the ditches are man-made, dominated by weedy species, and subject to periodic disturbance by maintenance activities; (2) the ditches are small in size and adjacent to roads and croplands, thereby limiting their wildlife habitat value; and (3) impacts will be temporary, localized, and reversible. No sensitive plants or wildlife species would be affected by the placement of the cable along the existing road and across the ditches described above.

The open water and wetlands within the Old, Middle and San Joaquin rivers will not be disturbed during construction because the cable will be bored beneath the river. No wetlands are present at the bore locations for the Old and San Joaquin Rivers. A small (60' x 100') degraded wetland is located at the west end of the bore location at the Middle River. At this time, US Sprint plans to bore beneath this low-lying area and an adjacent irrigation ditch due

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to soggy soils. If the area were completely dry at the time of construction, the cable would be placed by trenching. This would result in the temporary removal of 200 to 300 square feet of smartweed vegetation. This is not considered a significant impact because: (1) the wetland area is degraded and subject to periodic disturbance by agricultural activity; (2) the area to be disturbed is negligible and has very little habitat value; and (3) the area of disturbance is expected to recover quickly.

Installation of the fiber optic cable at the river crossings and at irrigation ditch crossings is authorized under the Corps of Engineers Nationwide Permit #12 (33 CFR 330.5a) which applies to utility lines. US Sprint has received written verification from the Corps that a Nationwide Permit would apply to this project.

3.5 RECOMMENDATIONS

The amount of disturbance to irrigation and drainage ditches with vegetation should be minimized during trenching, if possible. Encroachment or disturbance upon the ditches or canals located adjacent and parallel to the proposed cable route should be avoided. Construction vehicles should travel and park only on existing roads and disturbed land.

Impacts to the irrigation ditch and degraded wetland west of Middle River should be avoided or minimized, if possible. Avoidance can be accomplished by extending the directional bore to a point just west of the ditch, within the existing dirt road. To avoid the wetland area, the bore entrance location should be switched to the east side of Middle River.

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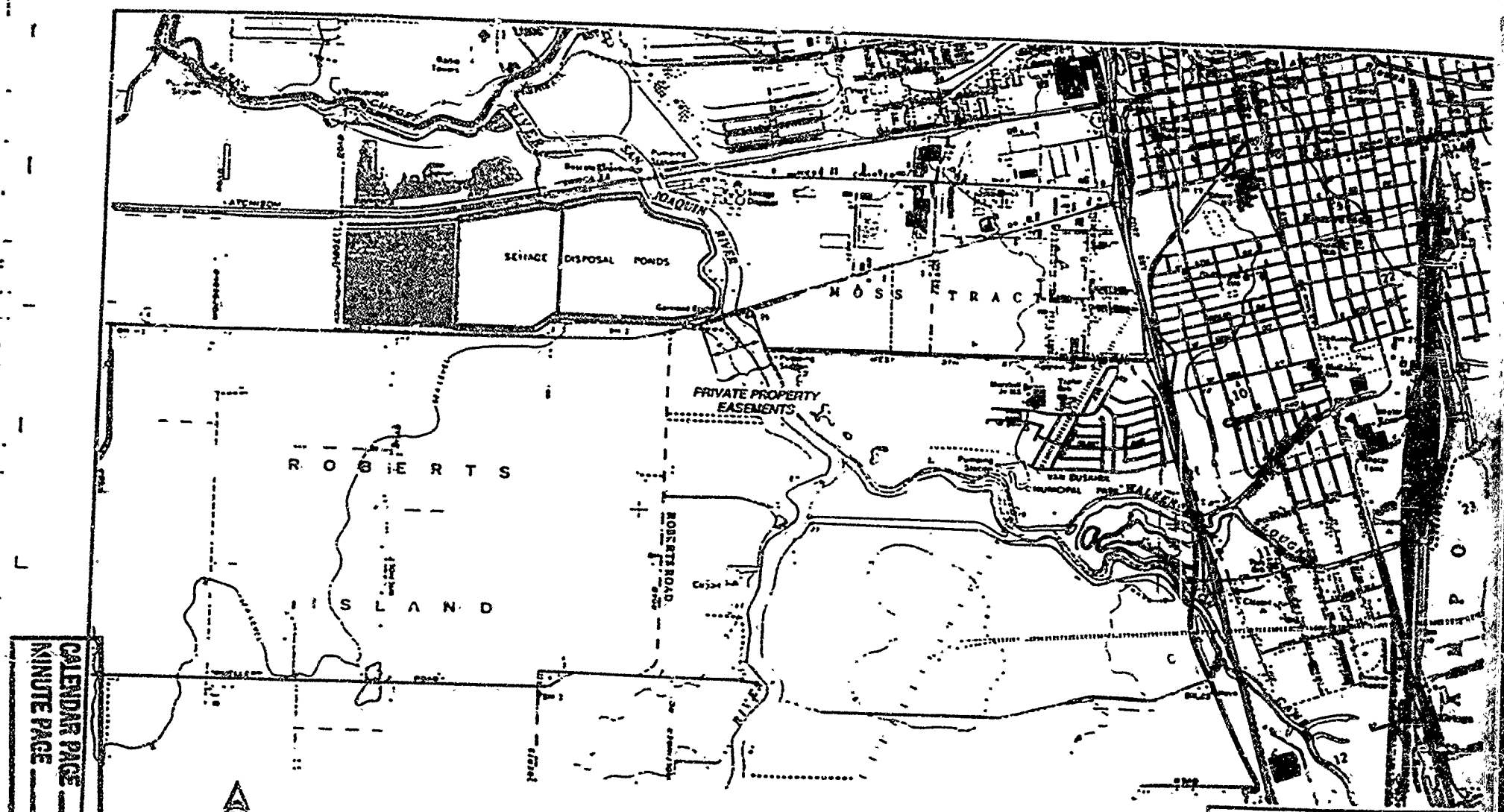

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FIGURE 2a

Detailed US Sprint Fiber Optic Cable Map Along Private Property Easements

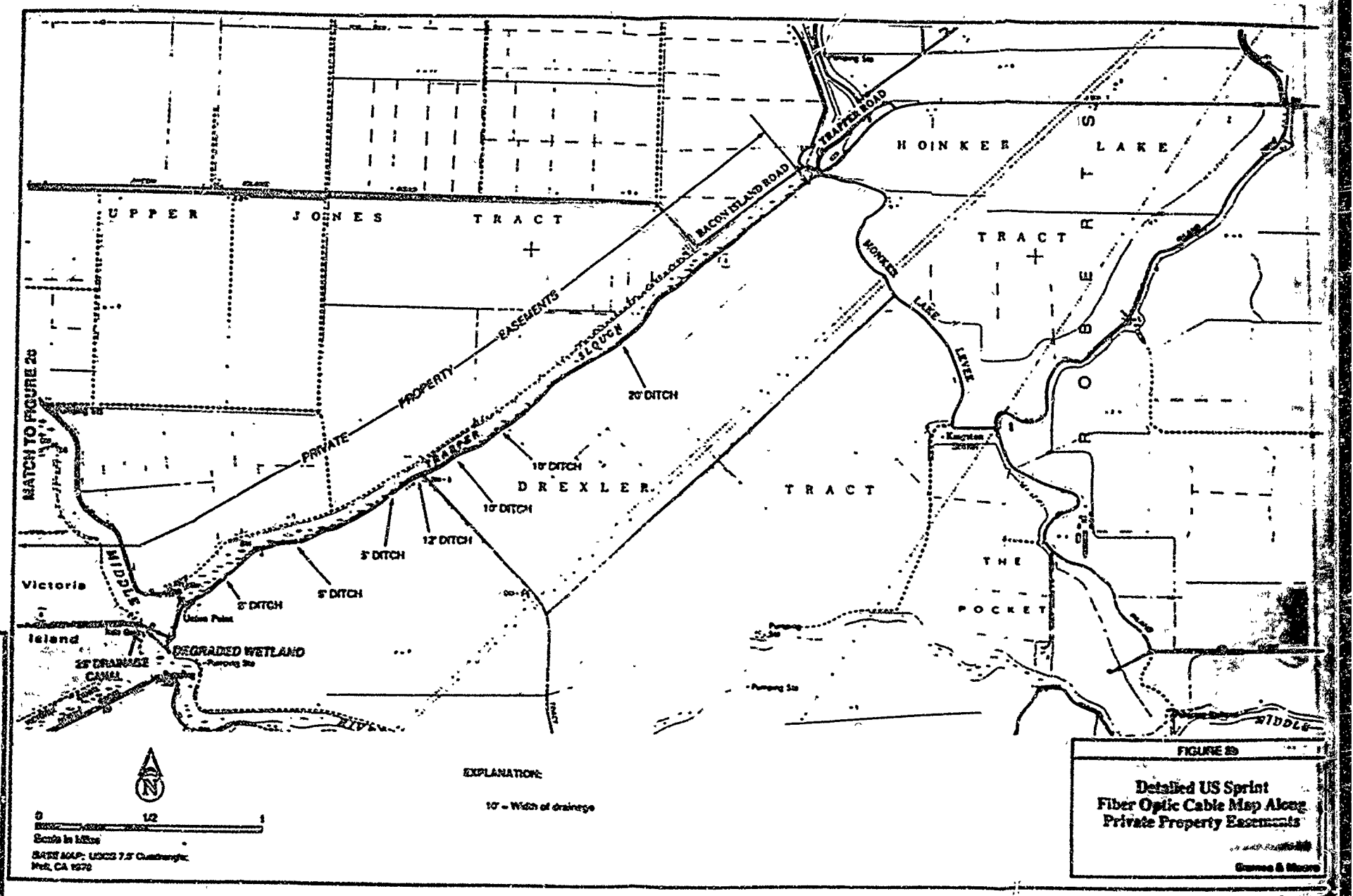

FIGURE 2b

Detailed US Sprint Fiber Optic Cable Map Along Private Property Easements

Gannett Fleming

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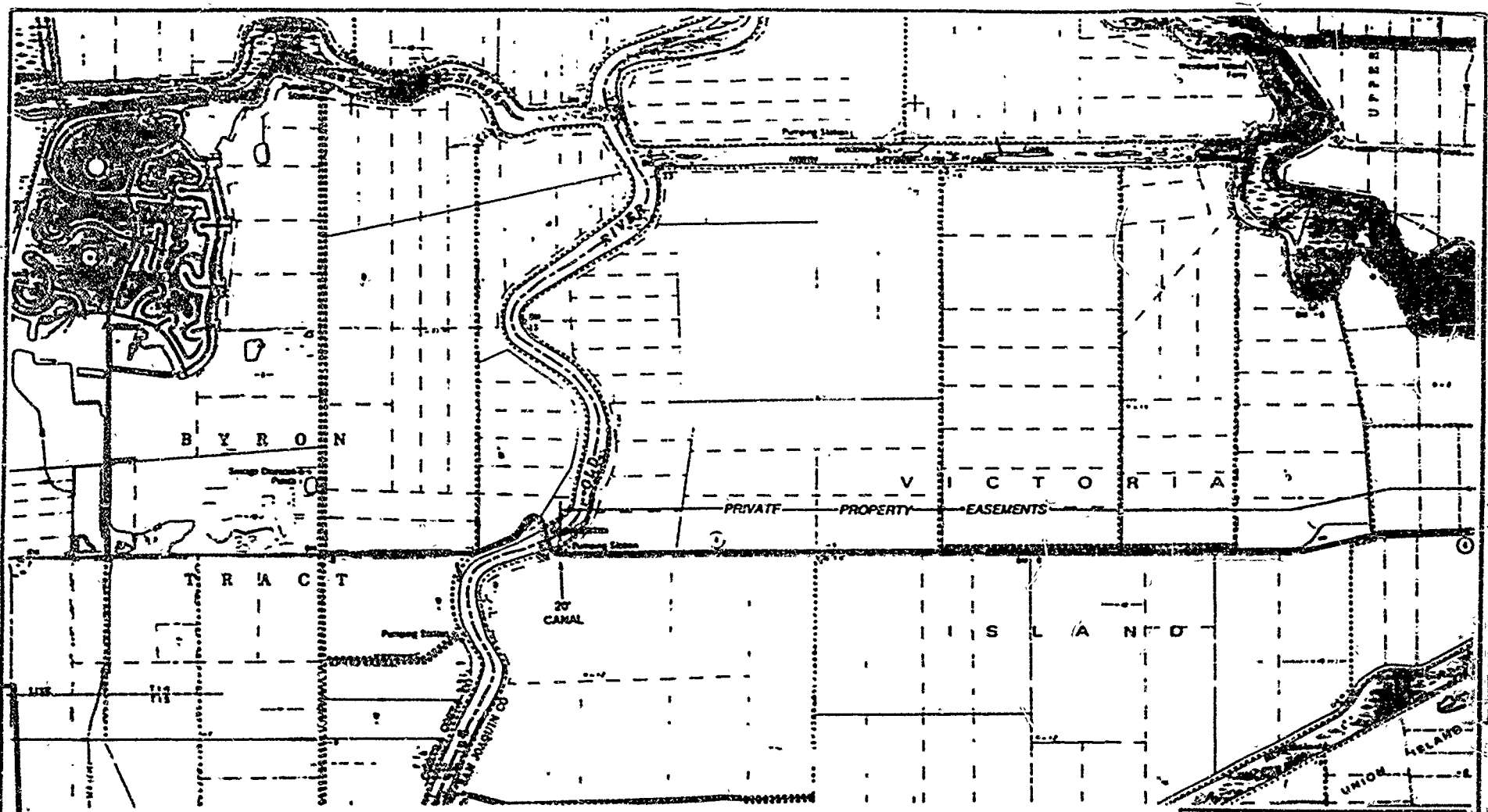

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FIGURE 2c

Detailed US Sprint Fiber Optic Cable Map Along Private Property Easements

Bowers & Kilcare

TABLE 1

VASCULAR PLANT SPECIES OBSERVED ALONG U.S. SPRINT FIBER OPTIC CABLE ROUTE[1]

Scientific Name[2]	Common Name[2]	Habit[3]	Vegetation Type[4] RV	FM
Avena barbata*	Slender oats	AG	X	
Baccharis glutinosa	Mulefat	S		X
Brassica nigra*	Black mustard	AH	X	X
Bromus diandrus*	Rip-gut brome	AG	X	X
Bromus rubens*	Red brome	AG	X	
Centaurea solstitialis*	Star thistle	AH	X	X
Cephalanthus occidentalis	Buttonbush	S	X	
Chenopodium album*	Pigweed	AH	X	X
Cirsium vulgare*	Bull thistle	AH	X	
Convolvulus arvensis*	Field bindweed	PH	X	
Cynodon dactylon*	Bermuda grass	PG		X
Cyperus sp.	Sedge	PG	X	X
Distichlis spicata	Salt grass	PG		X
Epilobium californicum	Willow-herb	PH		X
Epilobium latifolium	Willow-herb	PH		
Erodium cicutarium*	Redstem filaree	AH	X	
Foeniculum vulgare*	Sweet fennel	PH	X	X
Hordeum leporinum*	Wild barley	AG	X	
Lactuca serriola*	Prickly lettuce	AH	X	X
Lemna minor	Duckweed	PH		X
Lepidium latifolium*	Peppergrass	PH		X
Lolium perenne*	Italian ryegrass	PG	X	
Ludwigia peploides	Floating seedbox	PH		X
Lupinus sp.	Annual lupine	AH	X	
Malva parviflora*	Cheeseweed	AH	X	
Marrubium vulgare*	Horehound	AH	X	X
Melilotus albus*	White sweet clover	PH		X
Myriophyllum hippuroides	Western water-milfoil	S	X	X
Nicotiana glauca*	Tree tobacco	PG	X	
Oryzopsis miliacea*	Smilo grass			

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TABLE 1 (continued)

Scientific Name[2]	Common Name	Habit[3]	Vegetation Type RV	Vegetation Type FM
Phalaris arundinacea	Reed canary grass	PG	X	X
Phragmites communis	Common reed	PG		X
Polygonum aviculare	Prostrate knotweed	AH	X	X
Polygonum lapathifolium*	Willow weed	AH		X
Polygonum punctatum	Water smartweed	PH		X
Polypogon monspeliensis*	Rabbitfoot grass	AG		X
Potamogeton nodosus	Common American pondweed	PH		X
Raphanus sativus*	Wild radish	AH	X	X
Rorippa nasturtium-aquatica*	Water-cress	PH		X
Rubus ursinus	Blackberry	S	X	X
Rumex crispus*	Curly dock	PH		X
Salix lasiolepis	Yellow willow	T		X
Salsola kali*	Russian thistle	AH	X	X
Scirpus acutus	Bulrush	PG		X
Silybum marianum*	Milk thistle	AH	X	
Sonchus oleraceus*	Sow thistle	AH		X
Sparganium eurycarpum	Bur-reed	PH		X
Typha domengensis	Cattail	PG		X
Typha latifolia	Cattail	PG		X
Urtica holosericea	Stinging nettle	PH		X
Verbascum thapsus	Common mullein	PH	X	
Veronica americana*	Brooklime	PH		X
Veronica anagallis-aquatica*	Speedwell	PH		X
Vulpia myuros*	Fescue	AG	X	
Xanthium strumarium*	Cocklebur	AH	X	X

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TABLE 1 (concluded)

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[3] Observed during field survey conducted on 16 July 1990.

[2] Scientific and common names follow Munz & Keck (1960) and Mason (1957).

[3] Habit: AG = annual grass; AH = annual herb; PG = perennial grass; PH = perennial herb; S = shrub; T = tree.

[4] Vegetation Type: RV = ruderal vegetation; FM = freshwater marsh.

* Non-native, introduced plant species.

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4.0 CULTURAL RESOURCES

Cultural resources at the river crossings and on private property easements for fiber optic cable project are described in the following sub-sections. Data presented below are based on a review of pertinent literature, including a formal record search, and field surveys of all areas of potential surface disturbance. The river crossings were surveyed on 30 April 1990 by Ms. Lori Lilburn, archaeologist for Dames & Moore. Private property easements were surveyed on 16 July 1990 by Mr. Michael Kelly, senior archaeologist for Dames & Moore. A US Sprint engineer was present to locate the river crossing impact areas on the April field survey. The objective of the field surveys was to identify any potentially sensitive cultural resources that could be affected by the proposed project.

4.1 RECORDS SEARCH

A record search was conducted for a half-mile radius around the entire proposed cable route from Stockton to Walnut Creek. The search was conducted to identify any known archaeological, historic, or ethnographic resources at or near the project area records at the Northwest Information Center (Sonoma State University) was reviewed by Ms. Lilburn in April 1990, and records at the Central Information Center (Stanislaus State University) was reviewed also by Ms. Lilburn in May 1990. These record searches indicated that: (1) no previous archaeological survey had been conducted in the project area; and (2) no previously recorded cultural resources occur within the project area.

4.2 RESULTS OF FIELD SURVEYS

Field surveys were conducted to determine the presence of unrecorded cultural resources. Because the project area consists of reclaimed land bounded by a levee, archaeological sensitivity was determined to be low. A windshield reconnaissance, together with a series of spot checks conducted at irregular intervals, was employed to investigate private property easements. Systematic transects were conducted over the area of potential disturbance at each river crossing bore location.

Surface visibility was very good due to the disturbed nature of the project area. Rodent back dirt was examined at all sites. No evidence of cultural resources greater than 40 years in age were identified at private property easements and at river crossing bore locations.

4.3 RECOMMENDATIONS

Due to the absence of any evidence of cultural resources along the proposed route, it is apparent that cable installation will have no effect on archaeological or historic sites. No further cultural resource investigations along this portion of the route are recommended. If archaeological remains are encountered on during construction, they should be recorded in the field by a qualified archaeologist and the State Lands should be contacted.

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LITERATURE REVIEW
OF SENSITIVE BIOLOGICAL RESOURCES
US SPRINT FIBER OPTIC CABLE
OAKLAND TO STOCKTON, CALIFORNIA

3 OCTOBER 1990
DAMES & MOORE JOB NO. 14865-007-01
GOLETA, CALIFORNIA

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LITERATURE REVIEW
OF SENSITIVE BIOLOGICAL RESOURCES
US SPRINT FIBER OPTIC CABLE
OAKLAND TO STOCKTON, CALIFORNIA

October 3, 1990

Prepared for:
US Sprint
Burlingame, California

Prepared by:
Dames & Moore
175 Cremona Drive, Suite A-E
Goleta, California 93117

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1.0 INTRODUCTION

US Sprint has proposed to construct a fiber optic cable between Oakland and Stockton. The cable will be buried within existing dirt or paved road beds or shoulders for its entire length, except at stream or river crossings where it will either be attached to a bridge in a conduit, or will be placed under the watercourse using a directional boring procedure. Three rivers will be bored along the route: Old, Middle, and San Joaquin rivers (Figure 1). Two regeneration stations will be constructed along the route (see Figure 1 for the location of these stations).

The above three rivers are under the jurisdiction of the State Land Commission (SLC). US Sprint has applied for a right-of-way grant from SLC at these crossings. During the review of the application, SLC has requested additional information from US Sprint in order to conduct a CEQA review of the entire project. This report provides an overview of sensitive biological resources along the entire route from Oakland to Stockton.

Site specific information on biological resources on the above three river crossings was provided previously to SLC in the regional application by US Sprint. Additional site-specific information was provided on a 2-mile-long portion of the route west of Stockton where the cable would be installed on private property rather than in a public roadway. Results of the field investigations along that portion of the route was provided to SLC in a report dated August 1, 1990.

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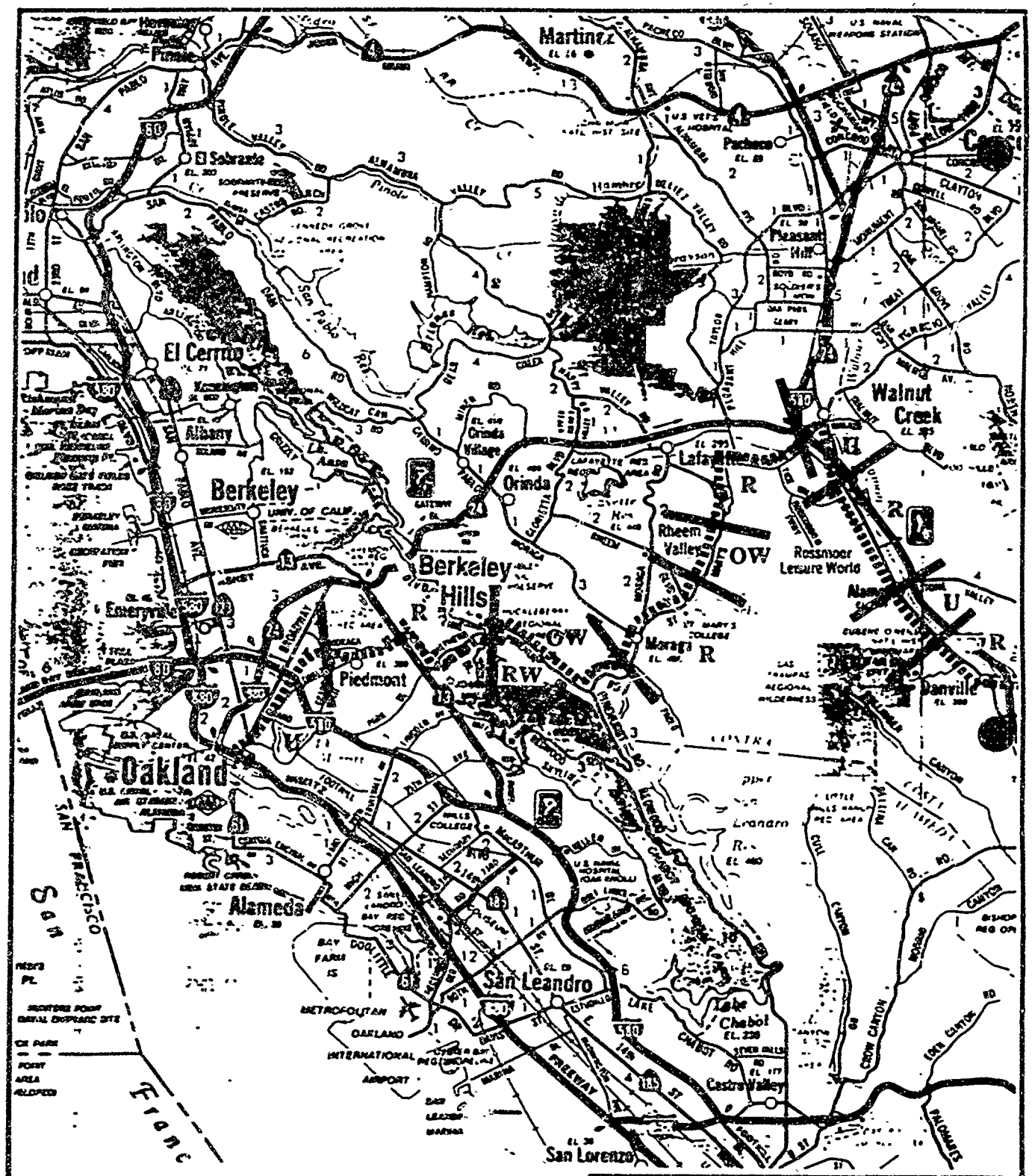

Note: The cable will be installed in the road bed or shoulder for the entire length, except at the three crossings where it will be bored.

FIGURE 1A

Location of US Sprint Oakland-to-Stockton Fiber Optic Cable Project

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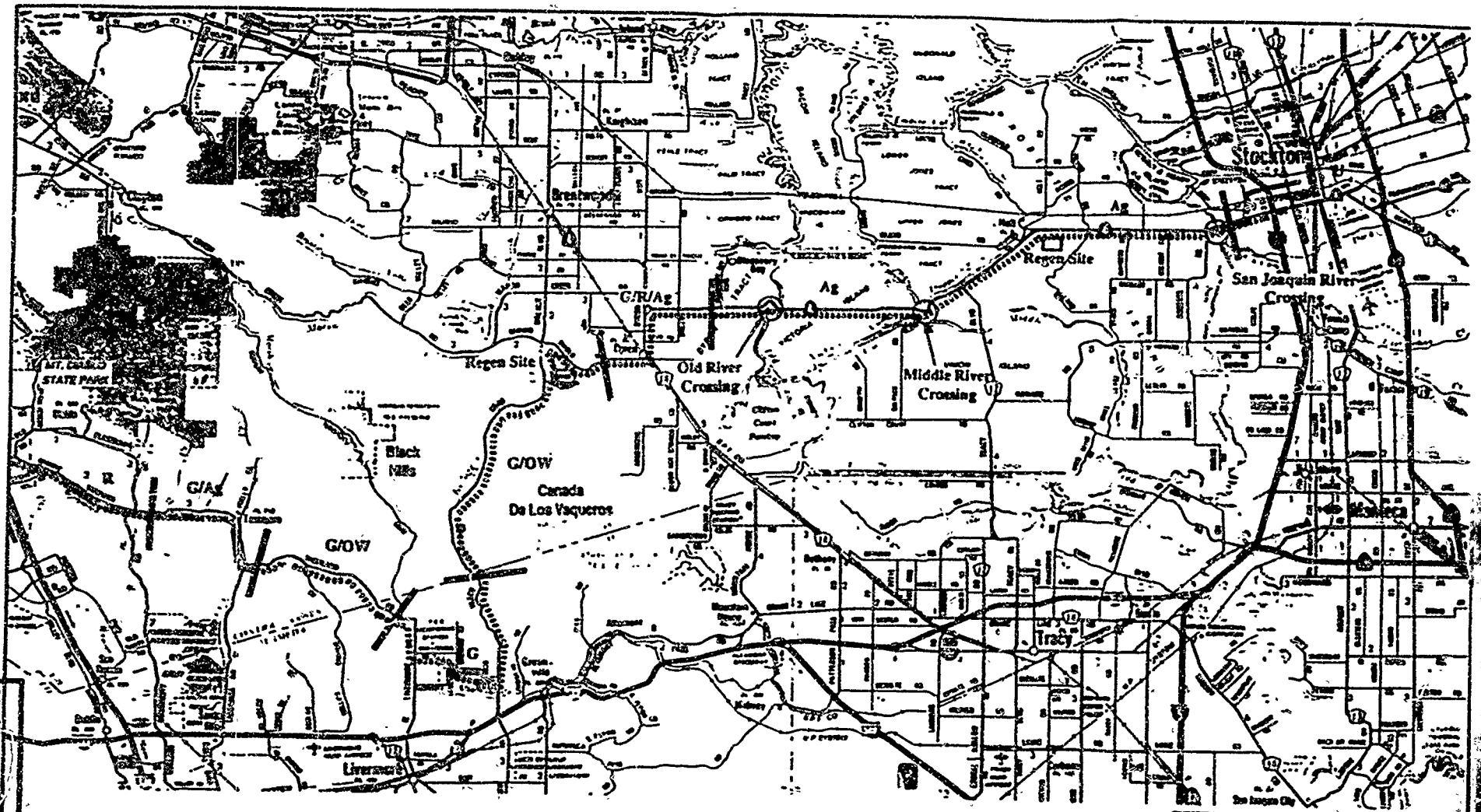

FIGURE 2.2

Location of US Sprint Oakland-to-Stockton Fiber Optic Cable Project

Bonnet & Moore

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2.0 ENVIRONMENTAL SETTING

The proposed fiber optic cable route is located along existing roads. The entire route, from Oakland to Stockton is about 45 miles long. The roads vary from urban expressways to narrow rural roads. Vehicular traffic is high, especially during commuting hours. The shoulders where the cable will be buried typically consist of gravel or dirt that is highly disturbed. These areas generally contain compacted fill.

The route traverses a wide variety of land use types, landforms and topographic features. A brief description of the environmental setting of the major segments of the route is provided below. Major land use types adjacent to the route are shown on Figure 1. Most of the route traverses privately owned land.

Oakland Segment

This portion of the route occurs along city streets and is adjacent to various urban and residential uses. There is no natural vegetation adjacent to the route between the western end and Highway 13. The topography is flat west of Piedmont, gradually ascending in elevation from sea level to about 100 feet. East of Piedmont, the route traverses the lower Berkeley Hills, which have steep winding roads with residential land uses. Oak woodland vegetation occurs between many of the lots. Elevations range from 100 feet in Piedmont to 1200 feet at the Alameda/Contra Costa County line.

Berkeley Hills Segment

The route continues from the county line, on narrow, winding roads through the Berkeley Hills on towards Moraga. The terrain is mountainous, gradually descending in elevation to 500 feet in Moraga Valley. Most of the route is undeveloped, and passes through Huckleberry Regional Preserve, where there are dense groves of redwood trees adjacent to the road. Oak woodland and riparian woodland vegetation also occur adjacent to the road.

Moraga to Lafayette Segment

The route winds down the east face of the Berkeley Hills into Moraga and Rheem Valleys, gradually descending in elevation to 200 in Lafayette. The terrain consists of gently rolling terraces, scattered with residential developments and natural land. Natural vegetation adjacent to the route includes oak woodland, grassland and riparian at a few of the stream crossings.

Walnut Creek - Danville Segment

The route occurs along heavily used city streets within highly developed residential and urban areas. Elevations range from 140 feet in Walnut Creek to 400 feet in Danville (San Ramon Valley). There is no natural land adjacent to the route in this segment.

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Tassajara Segment

From Danville to Byron, the route follows narrow rural roads over gently rolling hills. Elevations range from 800 feet near Highland Road to 300 feet along Kellogg Creek. Most of this segment contains extensive grassland/pasture with scattered agricultural fields, orchards, and suburban and rural residential developments. Planted ornamental trees and native oak trees often line the roadway. Scattered oak trees occur along the hills, becoming oak woodlands in canyons and on some north-facing slopes. Riparian vegetation occurs in some of the streams crossed by the route, and in Kellogg Creek, which is located parallel to Vasco Road.

Delta Segment

The route in this segment occurs along existing roads within an intensively developed agricultural area that is flat. The elevation at the community of Byron is 40 feet, and down to sea level along Highway 4. Scattered residences occur along the route. Freshwater marsh habitat occurs in many of the larger canals in the vicinity, particularly north of Highway 4. Riparian woodland and freshwater marsh vegetation line the banks of the three rivers, but not adjacent to the road. The banks are lined with rip-rap boulders underneath the bridges and adjacent to the road.

Stockton Segment

The route in Stockton traverses heavily used urban and residential areas, over relatively flat, near sea level terrain. There is no natural land adjacent to the route in this segment.

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3.0 METHODOLOGY

3.1 PREVIOUS STUDIES

A biological and cultural resource survey was conducted on April 30, 1990, at the three river crossings (Old, Middle, and San Joaquin rivers)(see Figure 1). Because the cable will be installed off the road at these crossings, an environmental field investigation was conducted. The objective of the survey was to identify any potentially sensitive biological or cultural resources that could be affected by the bore operations. The results of the survey were provided to SLC in the original US Sprint application. These results indicated that no wetlands, aquatic habitat, cultural resources, or endangered species would be adversely affected by installation of the cable at these crossings.

An additional biological and cultural resource survey was conducted on July 16, 1990 along a 2-mile portion of the route, west of Stockton, that traverses private property rather than a state highway right-of-way, as with the remainder of the route. This survey was conducted to identify any potentially sensitive biological and cultural resources that could be affected by the proposed project. Based on the results of this study (Dames & Moore, 1990d), there would be no significant impacts to cultural or biological resources.

Land uses and natural habitats adjacent to the route were also surveyed in July along the entire route from Oakland to Sacramento. The objectives of this survey were to characterize major land uses adjacent to the route.

3.2 CURRENT STUDY

This investigation of potential occurrences of sensitive biological resources along the route is based upon a review of pertinent literature on the biological resources of the area. Field investigations were not conducted for this study because the installation of the cable will not require vehicular travel or disturbance off of the existing roads.

The delta portion of the route was evaluated during the above referenced biological surveys. This included a review of the following resources: (1) records of sensitive biological resources in the area, compiled by the California Natural Diversity Data Base (CNDDB, 1990a); (2) the California Native Plant Society's inventory of rare and endangered vascular plants of California (Smith and Berg, 1988); and (3) previous environmental documents (Dames & Moore, 1990a,b).

Investigations along the remainder of the route included a review of: (1) records of sensitive biological resources in the area, compiled by the California Natural Diversity Data Base (CNDDB, 1990b); (2) plant sensitivity and distribution data in the California Native Plant Society's inventory of rare and endangered vascular plants of California (Smith and Berg, 1988);

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(3) plant phenology information in Munz and Keck (1968); (4) wildlife sensitivity data in Jennings (1983), Remsen (1978) Williams (1986); (5) updated plant and wildlife status information (California Department of Fish and Game [CDFG], 1989, 1990a; United States Fish and Wildlife Service [USFWS], 1989, 1990a, 1990b); and (6) miscellaneous information of sensitive biological resources in the area in previous environmental documents (Dames & Moore, 1990a,b,c; CDFG, 1987a,b, 1990b; EIP, 1989; Lenihan and DiDonato, 1987; Taylor and Davilla, 1986; Hafernick, 1990).

3.3 APPLICABLE REGULATIONS

Sensitive plant and wildlife species consist of state and federally listed species, candidates for listing, species proposed for listing, species of special concern, and special animals. Listed species include those recognized by the federal government as threatened or endangered (USFWS, 1990a), and /or by the state government as rare, threatened or endangered (CDFG, 1989, 1990a). Federal candidates include taxa which are currently under consideration for federal listing as threatened or endangered (USFWS, 1989, 1990b).

Plant species of special concern include those listed by the CNPS (Smith and Berg, 1988). Plants on the CNPS List 1B are considered rare and endangered in California. Those on the remaining CNPS lists do not have the same degree of rarity and vulnerability. These lists include: List 2 (plants rare in California, but common elsewhere), List 3 (plants about which more information is needed), and List 4 (plants of limited distribution - a watch list). Plants on List 4 that occur in Alameda, Contra Costa, and San Joaquin counties were not included in this study because they were assessed as not potentially occurring adjacent to the cable route, based upon the literature review.

Wildlife species of special concern are taxa included on lists of regionally declining wildlife. Lists of reptiles, amphibians, birds and mammals of concern in California have been developed for the CDFG by Jennings (1983), Remsen (1978) and Williams (1986).

Special animals includes all vertebrate and invertebrate taxa of concern to the CNDDB (1990c), regardless of their legal or protection status. This list includes federal and state listed and candidate species, species of special concern, and species designated at "sensitive species" by the BLM or USFWS. Also included are species not protected by the USFWS, CDFG, or BLM, but which are considered biologically rare or threatened by the CNDDB.

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4.0 SENSITIVE BIOLOGICAL RESOURCES IN THE REGION

Several sensitive wildlife, plants, and plant communities are known from the region of the cable route, from Oakland to Stockton. The study area consisted of the length of the route and all land adjacent to both sides of the road. It also included wildlife that could potentially travel to the route. Habitat types which occur adjacent to the route were determined during the land use survey. The sensitive resources in the study area are summarized on Table 1 for wildlife, Table 2 for plants and Table 3 for plant communities, and described below.

4.1 WILDLIFE HABITAT AND SPECIES

Two mammals, twelve birds, three reptiles, two amphibians, six insects and two invertebrates are considered sensitive and declining in the region (Table 1). Those species which are known to occur adjacent to the route, or could potentially travel to the study area are described below.

4.1.1 Listed Species

Eight of the sensitive wildlife species are listed by state and/or federal governments. Seven of these species have the potential to occur in the study area, and include San Joaquin kit fox, California black rail, Swainson's hawk, bald eagle, Alameda whipsnake, giant garter snake, and Valley elderberry longhorn beetle.

San Joaquin kit fox

The San Joaquin kit fox (Vulpes macrotis mutica) occurs in valley sink scrub, valley saltbush scrub, and non-native grasslands in the San Joaquin Valley. However, it can occur in highly disturbed areas including oilfields and other developments located within these vegetation types. A single kit fox was observed near the Lawrence Livermore site, about four miles west of the route (CNDDB, 1990b). There have also been reported sightings of kit fox around Fenestra Winery, in the southwestern Livermore area, many miles south of the route (EIP, 1989). The San Joaquin kit fox may den in lower slopes and hunt and range over the entire area east of the Berkeley Hills.

California black rail

The California black rail (Laterallcus jamaicensis coturniculus) is a federal candidate, Category 2 taxon and a listed threatened bird by the State of California. The nearest recorded occurrence of this bird was about 3 miles north of the route, in the freshwater marshes of Middle River (CNDDB, 1990a). It is also known many miles south of the study area, near the community of Niles (Dames & Moore, 1990c). The habitat occupied by the California black rail is pickleweed dominated saltmarsh. No suitable habitat exists for this taxon adjacent to the roads, but does exist within the study area in the southern delta area.

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TABLE 1

WILDLIFE SPECIES POTENTIALLY OCCURRING ADJACENT TO THE US SPRINT FIBER OPTIC CABLE ROUTE FROM OAKLAND TO STOCKTON

Scientific Name	Common Name	Status[1] Fed/State/Other	Habitat Affinity Information	Local Distribution[2]
MAMMALS:				
Vulpes macrotis mutica	San Joaquin kit fox	FE/ST/SA	saltbush scrub	4 miles west of route; Livermore area
Dipodomys heermanni berkeleyensis	Berkeley kangaroo rat	-/-/SA	grassland	4 miles north of route; Berkeley Hills
BIRDS:				
Haliaeetus leucocephalus	southern bald eagle	FE/SE/SA	nests in tall trees; aquatic habitats	many miles southwest of route; southwest Livermore; rare winter migrant in the region
Laterallus jamaicensis coturniculus	California black rail	C1/ST/SA	mudflats; freshwater and salt marshes	4 miles west of route; Livermore area (nesting colony)
Buteo swainsonii	Swainson's hawk	C3c/ST/SA	various; tall trees next to open grassland or fields	1-3 miles southwest of east end of route; southwestern Stockton area
Agelaius tricolor	tricolored blackbird	C2/-/SA	freshwater marsh; slow moving water	several miles south of route; San Joaquin River
Accipiter cooperi	Cooper's hawk	-/-/SSC, SA	breeds in riparian and oak forests adjacent to water	many miles south of route; occurs in the region

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TABLE 1 (continued)

Scientific Name	Common Name	Status[1] Fed/State/Other	Habitat Affinity Information	Local Distribution[2]
Accipiter gentilis	northern goshawk	-/-/SSC,SA	various	not known from the region; uncommon winter migrant
Accipiter striatus	sharp-shinned hawk	-/-/SSC,SA	grassland; open fields	several miles south of route; southern Livermore
Aquila chrysaetos	golden eagle	-/-/SSC,SA	various; rolling foothills of the Coast Range	many miles south of route; southwest Livermore; uncommon resident and migrant in the region
Buteo regalis	ferruginous hawk	-/-/SSC,SA	grassland	not known from the region; uncommon winter migrant
Circus cyaneus	northern harrier	-/-/SSC, SA	riparian woodland	migrant and winter resident in the region
Athene cunicularia	burrowing owl	-/-/SSC, SA	open fields	adjacent to route; northeast Livermore area (burrowing sites)
Falco mexicanus	prairie falcon	-/-/SSC, SA	grassland; fields	1.5 miles east of Vasco Road; Brushing Peak; uncommon resident in the region (breeding sites)

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TABLE 1 (continued)

Scientific Name	Common Name	Status[1] Fed/State/Other	Habitat Affinity Information	Local Distribution[2]
REPTILES:				
Masticophis lateralis euryxanthus	Alameda whipsnake	C2/ST/SA	various inner coast range range plant communities, especially chaparral	adjacent to route; 3 miles west of Alamo
Thamnophis couchii gigas	giant garter snake	C2/ST/SA	freshwater marsh; slow moving water; even irrigation canals	3 to 4 miles northeast of route; Stockton
Clemmys marmorata marmorata	northwestern pond turtle	C3c/-/SSC, SA	ponded water	not known from the study area; occurs in the region
AMPHIBIANS:				
Ambystoma tigrinum californiense	California tiger salamander	C2/-/SSC, SA	grassland; breeds in temporary rain pools	adjacent to route, Vasco Road area
Rana aurora draytoni	California red-legged frog	C2/-/SSC, SA	ponded water	less than 1 mile northwest of route; Berkeley Hills
INSECTS:				
Desmocerus californicus dimorphus	Valley elderberry longhorn beetle	FT/-/SA	elderberry trees	several miles south of route; Middle River
Euphydras editha bayensis	bay checkerspot butterfly	FT/-/SA	grassland	2 miles southeast of route, Berkeley Hills[3]
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	C2/-/SA	creeks; vernal pools; ponded water	occurs in San Francisco Bay area

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TABLE 1 (continued)

Scientific Name	Common Name	Status[1] Fed/State/Other	Habitat Affinity Information	Local Distribution[2]
Hygrotus curvipes	curve-footed hygrotus diving beetle	C2/-/SA	slow streams and creeks; seeps; ponded water	known only from a pond in Oakley, many miles north of route
Ischnura gemina	San Francisco forktail damselfly	C2/-/SA	freshwater marsh; open water	known from wetlands fringing the Bay Area.[3]
Lytta molesta	molestan blister beetle	C2/-/SA	grassland	3 to 4 miles northwest of route, Brentwood area
INVERTEBRATES:				
Helminthoglypta nickliniana bridgesi	none	C2/-/SA	grassland; ruderal; rock piles	east Oakland area, several miles north of route
Haplotrema duranti	Durants snail	-/-/SA	oak woodland; riparian woodland	adjacent to route; Lafayette and Moraga

1 Status:

Federal (USFWS, 1989, 1990a, 1990b)

- FE = Federally listed, endangered
- FT = Federally listed, threatened
- C1 = Enough data are on file to support federal listing
- C2 = Threat and/or distribution data are insufficient to support federal listing
- C3c = Too widespread and/or not threatened

State of California (CDFG, 1989; 1990a)

- SE = State listed, endangered
- ST = State listed, threatened

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TABLE 1 (concluded)

Other:

SSC = California Department of Fish and Game "Species of Special Concern" (Jennings, 1983; Remsen, 1978; Williams, 1986)

SA = Species not protected by USFWS, CDFG or BLM, but considered sensitive by the California Natural Diversity Data Base and on their list of "Special Animals" (CNDDB, 1990c)

[2] Based upon computer search and map overlays compiled by the California Natural Diversity Data Base (CNDDB, 1990a,b)

[3] Possibly extirpated in the region - based upon CNDDB

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Swainson's hawk

The Swainson's hawk (Buteo swainsonii) nests in the San Joaquin Valley, primarily from Merced County and north. Nesting by this species has been recorded from the southern delta area and west of Stockton. The nearest reported sighting of Swainson's hawk is in the vicinity of San Joaquin River and French Camp Slough, just south of Highway 4 (CNDDB, 1990a). In the San Joaquin Valley, Swainson's hawk nests primarily in valley oak and cottonwood trees, usually within one mile of riparian zones (Bloom, 1979). This species may nest in tall trees adjacent to Highway 4 and forage over nearby open areas.

Bald eagle

The bald eagle (Haliaeetus leucocephalus) is formally listed as endangered by the federal government (USFWS) as well as the State of California. It is a widespread, but uncommon migrant over much of California and is known to forage over large, open bodies of water. It has been observed many miles south of the study area in 1986 and 1987 (Lenihan and DiDonato, 1987). Reservoir sites in the region (such as San Leandro Reservoir) provide good foraging habitat for the bald eagle. Bald eagle use would be confined to migration over the study area to appropriate foraging habitat.

Alameda whipsnake

The Alameda whipsnake (Masticophis lateralis euryxanthus) is a federal candidate, Category 2 taxon and listed as threatened by the State of California. There are several records of the snake in the study area, particularly in the Berkeley Hills (CNDDB, 1990b). The species typically occupies chaparral habitats and has recognized affinities to foothill areas, but also occurs within the lower reaches of mountain ranges in mixed woodlands and pine forests (Stebbins, 1985).

Giant garter snake

The giant garter snake (Thamnophis couchii gigas) is primarily associated with freshwater marsh and low gradient stream habitats (CDFG, 1987a). Periodic inundation of habitat areas is necessary to provide forage fish. However, temporary water such as drainage canals and irrigation ditches also represent habitat for this aquatic snake, albeit of relatively low quality. This species was observed in 1976 in the Stockton Diverting Canal, several miles east of the study area (CNDDB, 1990b). Although it is not known from the study area, it may occur in low numbers (if at all) in some of the irrigation ditches in the area.

Bay checkerspot butterfly

The bay checkerspot (Euphydras editha bayensis) is a federally threatened species. Larvae feed on Plantago erecta in the early spring and Orthocarpus in late spring, in grassland habitats. Its historic range included the Berkeley Hills and Black Hills, but has become

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extirpated from all known sites in both Alameda and Contra Cost counties. Its current range is the West and South Bay Area, at Stanford and Morgan Hill.

Valley elderberry longhorn beetle

The valley elderberry longhorn beetle (Desmocerus californicus dimorphus) is known from the Central Valley. This beetle only occurs on elderberry (Sambucus mexicana) trees. Although it has not been recorded from the region, it may occur on elderberry plants in the study area.

4.1.2 Federal Candidate Species

Federal candidates for listing which have the potential to occur in the study area include tricolored blackbird, California tiger salamander, red-legged frog, San Francisco forktail damselfly, Ricksecker's water scavenger beetle, curve-footed hygrotus diving beetle, molestan blister beetle and Helminthoglypta nickliniana bridgesi.

Tricolored blackbird

The tricolored blackbird (Agelaius tricolor) is a candidate, Category 2 taxon. It breeds in extensive freshwater marsh habitats and/or moist habitats occupied by non-native weedy plants (such as thistles and mustards) (CNDDB, 1990a). Two documented occurrences are known from the Livermore Valley, several miles south of the study area (Dames & Moore, 1990c). It is also known from the southern delta area, several miles from the route (CNDDB, 1990a).

California tiger salamander

The California tiger salamander (Ambystoma tigrinum californiense) is a federal candidate, Category 2 taxon (USFWS), and a Species of Special Concern in California. There are several records of California tiger salamanders in the study area (CNDDB), 1990b). They have been observed in the northern Livermore area, in the vicinity of Vasco and Raymond roads in 1970. They have also been observed adjacent to the route in the Canada De Los Vaqueros area, off Vasco Road and in Kellogg Creek. The current known range of the California tiger salamander is limited to foothill habitats on the east and western sides of the Central Valley. The taxa is presumably found wherever there are vernal pools and/or slow-moving streams that dry significantly during summer months. Quiet pools are required for breeding. Adult salamanders leave underground burrows (generally ground squirrel or gopher burrows), migrate overland to ponds and streams to lay their eggs.

California red-legged frog

The California red-legged frog (Rana aurora draytoni) has been documented near the study area at the western base of the Berkeley Hills (CNDDB, 1990b) and several miles south of the study area in the vicinity of the proposed Los Vaqueros Reservoir and in southeastern Livermore (Dames & Moore, 1990c). The red-legged frog occurs in shallow ponds and sluggish streams and may occur in the study area.

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San Francisco forktail damselfly

The San Francisco forktail damselfly (Ischnura gemina) is associated with small seepages, shallow ponds and sluggish streams in the San Francisco Bay Area. Populations are distributed from northwestern portions of Marin County south to the vicinity of San Jose. Most extant populations are known from wetland sites fringing the San Francisco Bay. Some new populations have been discovered in recent years, but the extinction rate of known populations is apparently high, and many sites are threatened by pollution, development and wetland alterations (Hafernick, 1990). Potential habitat may exist in the western end of the route, near Alameda.

Ricksecker's water scavenger beetle

The historic distribution of Ricksecker's water scavenger beetle (Hyrochara ricksecker) includes five populations in Alameda, San Mateo, Marin and Sonoma counties, although no known extant populations exist today. Little is known of the specific habitat requirements of this taxon, thus it is difficult to accurately predict the occurrence of suitable habitat in the study area (Hafernick, 1990).

Curved-foot hygrotus diving beetle

The curved-footed hygrotus diving beetle (Hygrotus curvipes) is a very rare beetle, known from only two sites within Alameda and Contra Costa counties. Its current known range is between Oakley and Altamont Pass. Typically, the species occupies small mineralized ponds, alkali vernal pools, and intermittent streams, although a few adults have been collected from agricultural canals and flowing streams. All known sites supporting this invertebrate are threatened by housing and reservoir development and/or pollution and filling of its habitat (Hafernick, 1990).

Molestan blister beetle

Several species of blister beetles were once widely distributed in the southern Central Valley of California. Adult Molestan blister beetles (Lytta molesta) have been collected from lupine, stork's bill filaree and clover plants (Hafernick, 1990). The range of molestan blister beetle is now highly restricted due to conversion of most of their historical habitat to agricultural fields. It's current distribution is in the Central Valley from Contra Costa County to Kern and Tulare counties (CNDDB, 1990b). The only recorded occurrence of this beetle in the region is about three miles northwest of the route, in Brentwood.

Helminthoglypta nickliniana bridgesi

This snail is known from Perkins Canyon, on the east slope of Mt. Diablo and also from the Berkeley Hills area. Both occurrences are several miles north of the route. It occurs in rock piles, but may also be found in colonies under grass and weeds on open hillsides (CNDDB, 1990b).

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4.1.3 Other Sensitive Species

The remaining sensitive wildlife in the region are considered species of special concern and/or are included on the CNDDB's list of special animals. Those species with the potential to occur in the study area are described below.

Berkeley kangaroo rat

The Berkeley kangaroo rat (Dipodomys heermanni berkeleyensis) has been recorded from the Berkeley Hills area, about four miles north of the route (CNDDB, 1990b). It is also known from Mt. Diablo and the Livermore Valley and its range is throughout the mountain ranges east of San Francisco to west of the San Joaquin Valley (Williams, 1986). Its habitat consists of grassland and open spaces in chaparral and even backdune scrub vegetation.

Golden eagle

Golden eagles (Aquila chrysaetos) were observed in the southwestern Livermore area in 1990, many miles away from the study area (Dames & Moore,1990c). The golden eagle is a known resident raptor of the Livermore vicinity. Nest sites have been monitored in recent years and confirmed breeding success has been documented (Lenihan and Didonato, 1987). Areas within the study area may provide important foraging and roosting habitat.

Northern harrier

Northern harrier (Circus cyaneus) has not been recorded from the study area. It is considered a likely migrant through the lands along the route, however it is not considered a resident in the vicinity (Lenihan and Didonato, 1987). The northern harrier nests on the ground and may utilize adjacent lands as foraging habitats during migration.

Sharp-shinned hawk and Cooper's hawk

Both raptors (Accipiter cooperi and A. striatus) are scattered throughout much of California, and both are considered residents of the Livermore vicinity (Dames & Moore, 1990c; EIP, 1989; Lenihan and Didonato, 1987). These birds nest in tall trees adjacent to wetlands. Foraging usually occurs over open woodlands, grasslands, and riparian corridors.

Prairie falcon

The prairie falcon (Falco mexicanus) has been documented as an uncommon resident many miles south of the route (Lenihan and Didonato, 1987). A successful breeding pair of prairie falcons has been documented about 1.5 miles east of Vasco Road, at Brushing Peak (CNDDB, 1990b). These falcons forage over open grassland areas, and may use lands within the study area to obtain prey. Although an uncommon bird, this falcon is considered a likely resident of the vicinity.

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Burrowing owl

There are many records of burrowing owls (Athene cuniculara) adjacent to the route (CNDDB, 1990b). Several sightings of owls or their burrows have been recorded along Diagnino Road (at Raymond Road) and south of Byron Hot Springs. The burrowing owl typically occurs in grassland habitats and commonly nests in man made banks and rodent burrows. California ground squirrel colonies provide high quality nesting habitats.

Durants snail

Durants snail (Haplotrema duranti) has been observed in drainages adjacent to the route, in Moraga and Lafayette (CNDDB, 1990b). Its habitat is dense oak and riparian woodlands, under moist leaves and in rock piles.

4.2 PLANT SPECIES

Eighteen plant species are considered sensitive and declining in the region (Table 2). Those species which are known to occur adjacent to the route, or for which habitat may occur within the study area, are described below.

4.2.1 Listed Species

Five of the sensitive plant species are listed by state and/or federal governments. Four of these species have the potential to occur in the study area, and include: Ferris' bird's-beak, large-flowered fiddleneck, Alameda manzanita, and Mason's lilaeopsis.

Ferris' bird's-beak

This bird's-beak (Cordylanthus palmatus) is listed as an endangered species by the state and federal government. In addition, it is recognized as a rare and endangered taxon in California and elsewhere (CNPS 1B). This plant occupies alkaline grassland, valley sink scrub and vernal pool. An extant population occurs less than 0.25 miles south of the route, at the junction of Vasco and Raymond roads (CNDDB, 1990b).

Large-flowered fiddleneck

This fiddleneck (Amsinkia grandiflora) is listed as an endangered species by the federal and state government. In addition it is recognized by the CNPS as a species that is rare or endangered in California and elsewhere (CNPS 1B). The historic range of this taxon included populations scattered through three counties, Alameda, Contra Costa and San Joaquin. The single remaining known extant population occurs on properties owned by the Lawrence Livermore Nuclear Laboratory. Its habitat is grassland and oak savannah vegetation below 1200 feet, and could potentially occur in the vicinity of Canada de los Vaqueros in the study area.

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TABLE 2

SENSITIVE PLANT SPECIES KNOWN FROM THE REGION OF TO THE US SPRINT FIBER OPTIC CABLE ROUTE FROM OAKLAND TO STOCKTON

Scientific Name	Comon Name	Status[1] Fed/State/CNPS	Habitat	Local Distribution[2]
Cordylanthus palmatus	Ferris' bird's-beak	FE/SE/1B	alkali grassland; vernal pool	less than ¼ mile south of route; north of Livermore
Amsinkia grandiflora	large-flowered fiddleneck	FE/SE/1B	grassland; oak savannah; below 1200 ft.	only known from 2 extant occurrances, at Lawrence Livermore Lab, several miles south of route
Arctostaphylos pallida	Alameda manzanita	C1/SE/1B	chaparral; dry, sandy and stony ridges; below 2200 ft.	adjacent to route; Berkeley Hills
Clarkia franciscana	Presidio clarkia	C1/SE/1B	coastal sage scrub; grassland; on serpentine	1 to 2 miles south of route; Berkeley Hills
Lilaeopsis masonii	Mason's lilaeopsis	C2/SR/1B	freshwater marsh; mudflats; brackish marsh	1 to 5 miles north and south of route; west of Stockton
Cordylanthus mollis ssp. hispidus	hispid bird's-beak	C2/-/1B	alkali grassland; vernal pool	less than ¼ mile south of route; north of Livermore

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TABLE 2 (continued)

Scientific Name	Common Name	Status[1] Fed/State/CNPS	Habitat	Local Distribution[2]
Eschscholzia rhombipetala	diamond-petaled California poppy	C2/-/1B	grassland	3 to 4 miles southeast of route; Byron Hills[3,4]
Helianthella castanea	Diablo rock-rose	C2/-/1B	chaparral; oak savannah; 500-4000 ft.	1.5 to 4 miles north of route; Lafayette and Mt. Diablo area
Hesperolinon breweri	Brewer's dwarf flax	C2/-/1B	grassland; chaparral; 400-3300 ft.	3 to 4 miles north of route; Mt. Diablo
Hibiscus californicus	California hibiscus	C2/-/1B	freshwater marsh	adjacent to and in the vicinity of route; Delta area
Lasthenia conjugens	Contra Costa goldfields	C2/-/1B	grassland; vernal pool; up to 700 ft.	2 to 4 miles southeast of route; Byron area[3]
Lathyrus jepsonii ssp. jepsonii	delta tule pea	C2/-/1B	freshwater marsh; brackish marsh	2 to 4 miles north of route; Delta area
Trifolium amoenum	showy Indian clover	C2/-/1A	grassland; swales	several miles southeast of the route; thought to be extinct[3]
Tropidocarpum capparideum	caper-fruited tropidocarpum	C2/-/1A	alkali grassland; below 500 ft.	adjacent to 4 miles southeast of route; Byron area[3,4]

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TABLE 2 (continued)

Scientific Name	Common Name	Status[1] Fed/State/CNPS	Habitat	Local Distribution[2]
Arctostaphylos auriculata	Mt. Diablo manzanita	C3c/-/1B	chaparral	2 to 4 miles north of route; Mt. Diablo
Delphinium recurvatum	recurved larkspur	-/-/1B	grassland; alkali grassland; salt-bush scrub	1.5 to 3 miles southeast of route; Byron area
Balsamorhiza macrolepis var. macrolepis	balsamroot	-/-/3	grassland; oak woodland; up to 2000 ft	several miles south of route; Livermore

[1] Status:

Federal (USFWS, 1989, 1990a; 1990b)

- FE = Federally listed, endangered
- C1 = Enough data are on file to support federal listing
- C2 = Threat and/or distribution data are insufficient to support federal listing
- C3c = Too widespread and/or not threatened

State of California (CDFG, 1989, 1990)

- SE = State listed, endangered
- SR = State listed, rare

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TABLE 2 (concluded)

California Native Plant Society (CNPS)(Smith & Berg, 1988):

1A	=	Plants presumed extinct in California
1B	=	Plants rare, threatened or endangered in California and elsewhere
3	=	Plants about which we need more information - a review list

[2] Based upon computer search and map overlap compiled by the California Natural Diversity Data Base (CNDDB, 1990a,b)

[3] Possibly extirpated in the region - based upon CNPS

[4] Possibly extirpated in the region - based upon CNDDB

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Alameda manzanita

Alameda manzanita (Arctostaphylos pallida) is a state listed endangered species and is also a Category 2 candidate for listing by the federal government. Historically, this taxa was known to occur in the Berkeley Hills, and in other hills of Alameda and Contra Costa counties. However, it is now restricted to only a few sites in Huckleberry Regional Preserved and adjacent hills (CDFG, 1987b, 1990b). Alameda manzanita grows on bare, sterile mineral soils in the chaparral plant community, on dry sandy and stony ridges, below 2200 feet in elevation (CDFG, 1987b; Munz and Keck, 1968). There have been several recorded sightings from the vicinity of the route in the Huckleberry Regional Preserve (CNDDB, 1990b), and could potentially occur immediately adjacent to the route in this area.

Mason's lilaeopsis

Mason's lilaeopsis (Lilaeopsis masonii) is considered rare in the state of California and is also a Category 2 candidate for listing by the federal government. Its distribution extends from Napa County to San Joaquin County and there are less than fifty recorded occurrences (CDFG, 1990b). This semi-aquatic species is found on saturated clay soils along the channels and sloughs of the Sacramento-San Joaquin Delta. It may occur adjacent to the route in freshwater marsh habitat.

4.2.2 Federal Candidate Species

Federal candidates for listing which may occur in the study area include hispid bird's-beak, Diablo rock-rose, Brewer's dwarf flax, California hibiscus, Contra Costa goldfields, delta tule pea, caper-fruited tropidocarpum and Mt. Diablo manzanita.

Hispid bird's-beak

Hispid bird's-beak (Cordylanthus mollis ssp. hispidus) is listed by the CNPS as rare and endangered in California and elsewhere (CNPS 1B). The distribution includes five California coastal as well as inland counties. Along the coast, it occupies saltmarsh habitats, while inland it occupies alkaline grassland sites. It is known from the study area, near the junction of Vasco and Raymond roads, in the alkali grassland and vernal pool plant communities. Potential habitat for this taxon occurs within the northern Livermore and Canada de los Vaqueros vicinity in the study area and along the coast in Alameda and adjacent counties.

Diablo rock-rose

Diablo rock-rose (Helianthella castanea) occupies grasslands as well as openings within foothill woodland and chamise chaparral plant communities. Within the study area, Diablo rock-rose has been recorded from the Black Hills range and in the Rheem Valley. The occurrence in Rheem Valley is about 1.5 miles northwest of the route, associated with black sage, chamise and coast live oak (CNDDB, 1990b). Observations of recent population decline have spurred

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propagation and reintroduction of this species within Mt. Diablo State Park (Dames & Moore, 1990c).

Brewer's dwarf flax

Brewer's dwarf flax (Hesperolinon breweri) is an annual species which occupies grasslands and grassy openings within the chaparral plant community, on serpentine soils (Munz and Keck, 1968). It has been recorded from the Black Hills range and Canada de los Vaqueros in the study area (CNDDB, 1990b). The nearest occurrence to the route is at the head of Marsh Creek near Mt. Diablo, about three miles north of the route.

California hibiscus

California hibiscus (Hibiscus californicus) is a showy annual species that occurs on moist banks in the freshwater marsh plant community in the Sacramento-San Joaquin Delta area. It has been recorded immediately adjacent to the route, along the Old River at the Highway 4 bridge (CNDDB, 1990a). It was searched for in the vicinity of the cable boring activities during biological field surveys conducted in April and July 1990, but was not found.

Delta tule pea

Delta tule pea (Lathyrus jepsonii ssp. jepsonii) occur in brackish mashes, within dense stands of tules and rushes. It has been recorded from the Sacramento-San Joaquin Delta area in freshwater marsh vegetation. The nearest record from the study area is about 2 miles north of the route, in the Middle River (CNDDB, 1990a).

Caper-fruited tropidocarpum

Caper-fruited tropidocarpum (Tropidocarpum capparideum) is a federal candidate, Category 2 taxon, and listed by the CNPS as a species likely extinct within California (CNPS 1A). It has been recorded from the Byron area adjacent to the route, but was not found again during 1978 and 1979 field surveys (CNDDB, 1990b). It occupied alkaline grassland habitats. All known populations of this species are believed extirpated. Recent investigations in the field have failed to locate extant populations, although in some cases, native habitat is still present (Taylor and Davilla, 1986).

Mt. Diablo manzanita

Mt. Diablo manzanita (Arctostaphylos auriculata) is considered too widespread and/or not threatened enough to become listed by the federal government, but is considered rare enough by the CNPS to be included on List 1B. It occurs on sandy soils in the chaparral plant community in the Black Hills, associated with buck brush, scrub oak and chamise. The nearest record of Mt. Diablo manzanita is two miles north of the route (CNDDB, 1990b).

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4.2.3 Other Sensitive Species

The remaining sensitive plant species in the region are considered rare by the CNPS. Balsamroot is on the CNPS's review list because it has been poorly surveyed and its distribution and abundance is uncertain.

Balsamroot

The balsamroot (Balsamorhiza macrolepis var. macrolepis) is known from six counties in northern California extending from Santa Clara County on the south, north to Tehama County. This plant is a perennial herb that occupies grassy slopes and open woodland communities. The only known occurrence in the region is several miles south, in the Livermore area, within Arroyo Mocho. It was last observed at this location during the in 1930's and has not been relocated since (Dames & Moore, 1990c). One extant occurrence of this taxon within Alameda County (within the vicinity of Hayward) has been documented in the recent past. This population occurs on serpentine rock with grassland associates.

Recurved larkspur

Recurved larkspur (Delphinium recurvatum) is listed by the CNPS as a taxon rare and endangered in California and elsewhere (CNPS 1B). It occurs in alkali grassland and saltbush scrub vegetation in throughout the Central Valley. The nearest record to the route is about 1.5 miles to the southeast, near Byron Hot Springs (CNDDB, 1990b).

4.3 PLANT COMMUNITIES

Six natural plant communities are considered sensitive and declining in the region by the CNDDB. Many of these communities also contain sensitive or regionally rare plant species. The local distribution and associated plant species for each of these communities are described on Table 3.

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TABLE 3

SENSITIVE PLANT COMMUNITIES KNOWN FROM THE REGION OF THE US SPRINT FIBER OPTIC CABLE ROUTE FORM OAKLAND TO STOCKTON

Community Name	Other Community Names	Associated Plant Species	Local Distribution[1]
Alkali Meadow	Alkali Grassland; Alkali Seep	Distichlis spicata, Sporobolus airoides, Lasthenia chrysomata, Vulpia megalura, Spergularia macrotheca	adjacent to and up to 2 miles southeast of route; Byron area and Canada de Los Vaqueros
Cismontane Alkali Marsh	Alkali Marsh	Anemopsis californica, Carex spp., Elymus triticoides, Distichlis spicata, Juncus spp., Salicornia virginica, Typha spp.	adjacent to route, Byron area and Canada de Los Vaqueros
Northern Claypan Vernal Pool	Vernal Pool	Allocarya spp., Downingia spp., Eryngium spp., Lasthenia spp., Myosurus minimus, Veronica sp.	¼ mile north of route; Canada de Los Vaqueros
Valley Needlegrass Grassland	Native Grassland; Native Bunchgrass Prairie	Stipa cernua, Stipa pulchra, Avena barbata, Achillea sp., Bromus spp., Chlorogalum pommeridianum, Orthocarpus spp.	½ to 3 miles west and east of route; Canada de Los Vaqueros and Byron area
Valley Sink Scrub	Great Valley Chenopod Scrub	Frankenia grandiflora, Lasthenia sp., Hordeum geniculata, Cordylanthus mollis var. hispidus, Cordylanthus palmatus	¼ to ½ miles south of route; Byron area

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TABLE 3 (concluded)

Community Name	Other Community Names	Associated Plant Species	Local Distribution[1]
Coastal and Valley Freshwater Marsh	Freshwater Marsh	Eleocharis spp., Hydrocotle verticillata, Scirpus spp., Sparganium eurycarpum, Typha spp.	1+ mile north of route; Middle River; delta area

[1] Based upon computer search and map overlays compiled by the California Natural Diversity Data Base (CNDDB, 1990a,b).

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5.0 SENSITIVE AREAS NEAR THE CABLE ROUTE

Sensitive elements occur in the study area along the entire route, however, certain areas contain higher concentrations of many different sensitive elements. This is usually because these areas contain undeveloped, natural land and area often geographically isolated. The sensitive areas along the route are described below.

5.1 BERKELEY HILLS

The Berkeley Hills are a northwest-southeast trending range, located between the cities of Alameda, Oakland and Berkeley and the cities of Moraga, Orinda and Walnut Creek. Most of the upper portions of the mountains are owned by various state parks and reserved, and are relatively undeveloped. The rugged, steeply sloping hills contain dense groves of redwood forests, mixed oak woodland and riparian woodland vegetation. The following sensitive wildlife and plants occur along the mountain range, and may occur adjacent to the cable route: Berkeley kangaroo rat, Alameda whipsnake, California red-legged frog, Durants snail, and Alameda manzanita.

5.2 RHEEM VALLEY

The Rheem Valley is located along the east face of the Berkeley Hills and includes the cities of Moraga and Lafayette. While there are many residential developments adjacent to the route, the surrounding rolling hills within the valley are somewhat undeveloped. Natural, undeveloped areas are dominated by oak woodland vegetation, but also contain chaparral, grassland and riparian woodland. Sensitive species in the area include Alameda whipsnake, Durants snail, and Diablo rock-rose.

5.3 MT. DIABLO

The Mt. Diablo sensitive area is actually over two miles north of the route, near Danville. Mt. Diablo is actually part of the Black Hills range, and contains many of the same sensitive elements. However, since the Mt. Diablo area is protected as a state park it is relatively pristine, it contains many sensitive species. The rugged mountains contain mostly chaparral vegetation. The following sensitive species occur at the lower elevations of the park, and may potentially occur adjacent to the route: California tiger salamander, Alameda whipsnake, Diablo rock-rose, Mt. Diablo manzanita and Brewer's dwarf flax.

5.4 BLACK HILLS

The Black Hills are a northwest-southeast trending mountain range, separating the Bay Area from the Central Valley. The gently rolling hills near the route are heavily grazed and contain mostly grassland vegetation. Relicts of oak woodlands occur adjacent the route and in some of the steeper canyons. Sensitive elements in this area which may occur adjacent to the route include Alameda whipsnake, Brewer's dwarf flax, and Valley needlegrass grassland.

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5.5 NORTHERN LIVERMORE

The northern Livermore area is located within a relatively flat valley (Livermore Valley), and is surrounded by gently sloping hills. This area is mostly new residential and commercial developments mixed with older rural farm houses and pastures. Undeveloped areas and pastures contains grassland and oak savannah vegetation. Valley sink scrub, a sensitive plant community, covers a parcel about 300 acres in size just south of the route (CNDDB, 1990b). Sensitive species associated with the valley sink scrub plant community include burrowing owl, hispid bird's-beak, and Ferris' bird's-beak. San Joaquin kit fox, California tiger salamander and burrowing owl occur throughout the northern Livermore area any may also occur in the study area.

5.6 CANADA DE LOS VAQUEROS

The northern end of Canada de los Vaqueros is located in the study area, along Vasco Road. It is a small mountain range comprised of gently to moderately rolling hills, covered primarily with grassland and oak savannah vegetation. Canada de los Vaqueros contains a future reservior site, known as the Vaqueros Site and the Lawrence Livermore Lab site, both located several miles south of the route. There have been many biological surveys conducted in this area resulting in the documentation of the only known population of large-flowered fiddleneck. Other sensitive elements which may occur in the study area include California tiger salamander, molestan blister beetle, caper-fruited tropidocarpum, recurved larkspur, valley needlegrass grassland, valley sink scrub, northern claypan vernal pool, and alkali meadow.

5.7 SOUTHERN DELTA AREA

The southern delta area extends from the community of Byron to Stockton. The southwestern portion of this area gradually ascends into the Canada de los Vaqueros are, and includes Byron Hot Springs. The southern delta area consists of a broad, flat valley, interlaced with many rivers and sloughs, at the southern end of the Sacramento-San Joaquin Delta area. Most of this area has been channelized and filled for agriculture. Remnants of freshwater marsh and other wetland vegetation types are scattered throughout the area. Many of the islands within Middle River contain sensitive species that occur within the sensitive coastal and valley freshwater marsh plant community. Sensitive species in the area include California black rail, tricolored blackbird, Swainson's hawk, valley elderberry longhorn beetle, Mason's lilaeopsis, California hibiscus, and delta tule pea. Most of these species are not expected to occur directly adjacent to the route due to agricultural disturbances.

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6.0 POTENTIAL IMPACTS

The proposed fiber optic cable route will be located along existing roads between Oakland and Stockton, California. The roads vary from urban expressways to narrow rural roads. Vehicular traffic is high, especially during commuting hours, resulting in an existing threat to wildlife which use the area, including sensitive species. Consequently, the route would generally be avoided by wildlife. The shoulders where the cable will be buried typically consist of gravel or dirt that is highly disturbed. These areas generally contain compacted fill. As such, the exact disturbance zone for the cable has no biological resource value.

With the exception of the three river crossings, the cable will be restricted to paved road beds or shoulders devoid of native habitat. All installation equipment will remain on paved surfaces. Hence, there will be no removal of natural vegetation, no wildlife habitat loss, and no loss of sensitive wildlife, plants or plant communities. Construction activities will cause an increase in noise that could displace sensitive and other wildlife from adjacent habitats. However, this would be a temporary and localized impact.

The two regeneration stations will be constructed above-ground. They will include two unmanned concrete structures (about 8' x 11', and 8'6" high), each located on a site about 40' x 40' in size. The structures will be painted in beige and brown tones to blend with the surrounding environment and the ground surface will be gravel coated. A chain link fence will surround each site. No landscaping is planned. The regeneration sites will be designed to blend in with the existing land use and visual settings at their respective sites.

The eastern regeneration site is located along the south side of Highway 4, near the community of Holt. This site is characterized by agricultural fields and contain no natural vegetation. It is located within the southern delta area of the route, but is not located near any drainages which could support any of the sensitive elements described in this report.

The western regeneration site is located about three miles west of the community of Byron. This site consists of a graded, disturbed area adjacent to a sand quarry. It does not support any of the sensitive elements described in this report.

No significant impacts will occur to biological resources at the crossings because only ruderal habitats will be disturbed, not aquatic or wetland habitats.

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7.0 RECOMMENDATIONS

In order to reduce disturbances to nocturnal wildlife adjacent to the route, construction activities should be restricted to daylight hours. Encroachment by vehicles, equipment, or personnel into natural habitats along the route should be avoided.

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