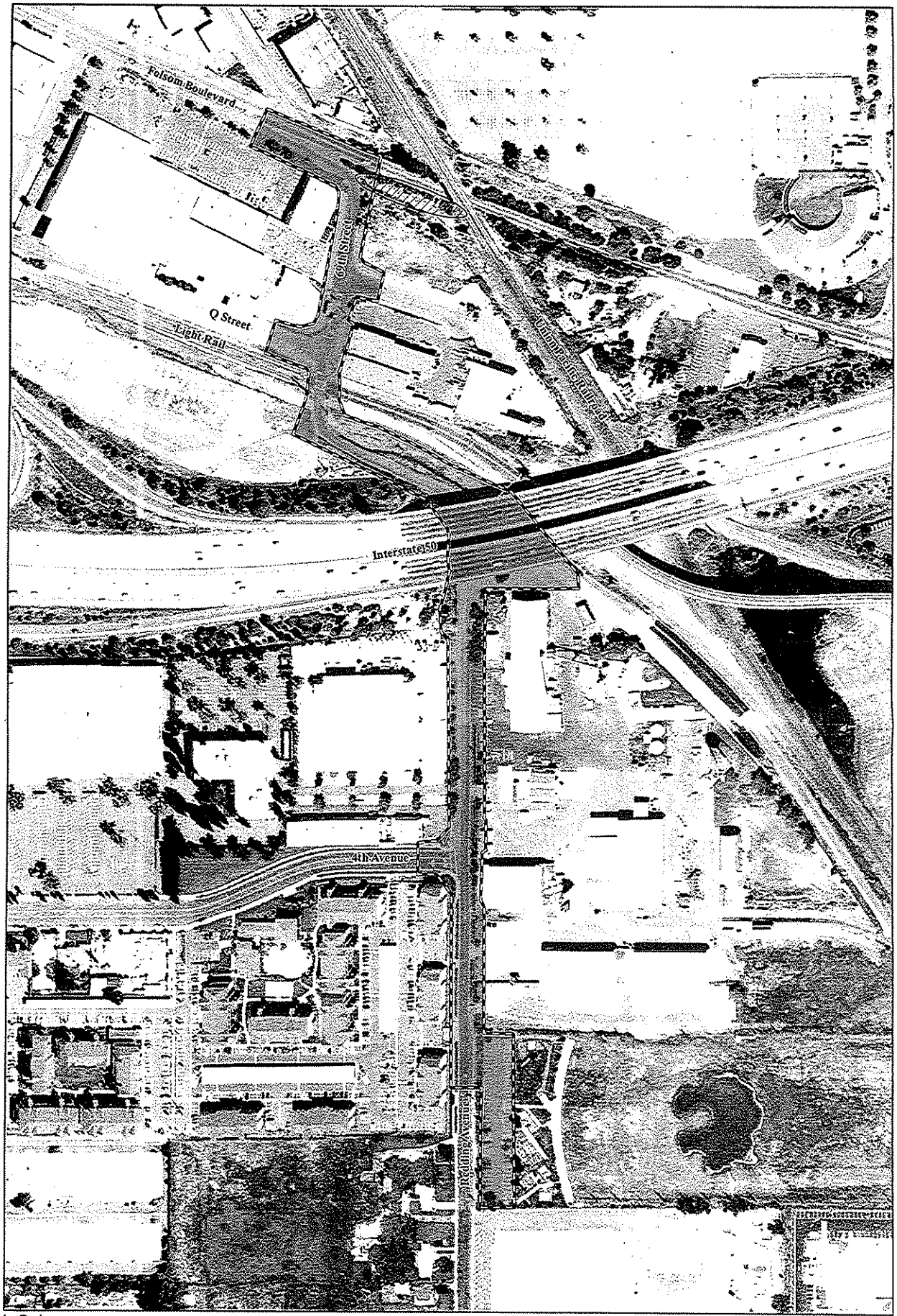


LSA

FIGURE 4

Legend

Biological Study Area
Burrow Locations

Plant Communities/Land Uses (6.76 ac)

Disturbed/Ruderal (1.14 ac)
Developed (5.62 ac)

0 200
Scale In Feet

SOURCE: BASEMAP - AIRPHOTO USA (5/2006); MAPPING - LSA ASSOCIATES, INC. (2007)
I:\Mro0702\gis\fig4-plnt_comun.mxd (1/3/08)

Redding Avenue Bikeway
Plant Communities/Land Uses

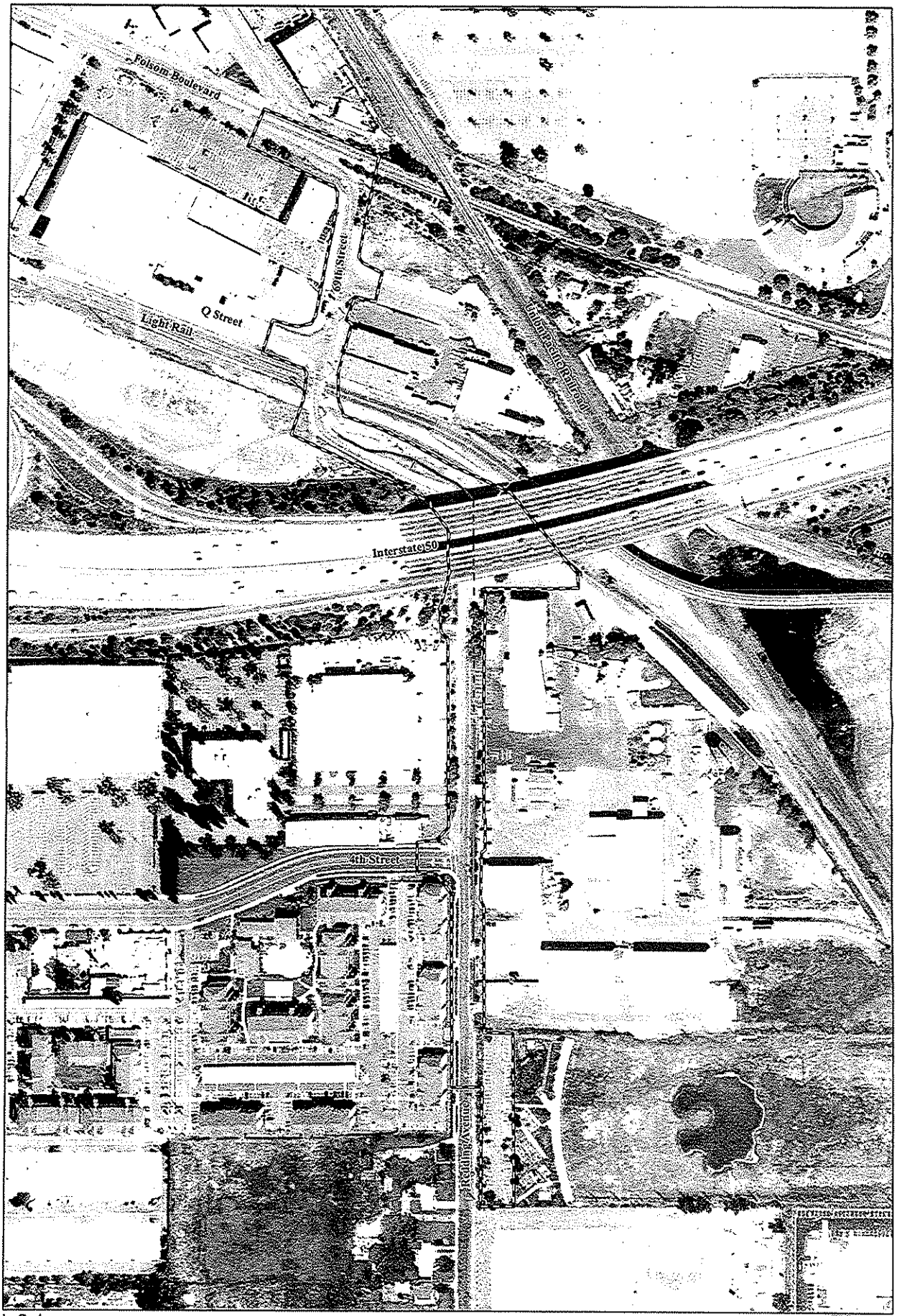
Potential jurisdictional waters in the BSA consist of the roadside ditch along the east shoulder of Redding Avenue[1]. The ditch extends south from the Light Rail crossing at 69th Street to the 4th Street intersection. A section of this ditch, beginning near the I-50 overpass and extending south for about 300 feet, flows through an underground culvert. The ditch collects surface runoff from Redding Avenue and adjacent developed areas. The roadside ditch appears to be an isolated system that essentially serves as a retention basin.

A potential wetland area in the ditch, totaling 0.42 acre, supports obligate and facultative hydrophytes including water plantain, and nutgrass. Indicators for wetland soils and hydrology were also observed. Consequently, this section of the ditch was determined to meet USACE criteria for wetlands (see Figure 5 and data sheets in Appendix E). The remainder of the ditch, totaling 0.49 acre, is dominated by upland annual grasses and forbs and does not meet USACE criteria for wetlands. However these areas did exhibit an ordinary high water mark and, as a result were determined to be nonwetland waters.

Since this ditch has no connectivity to navigable waters, the USACE is not likely to assert jurisdiction. However, this feature may be regulated by the RWQCB as waters of the State under the PCWQCA.

Pursuant to Sections 1600-1616 of the State Fish and Game Code (CDFG), the roadside ditch is not likely to be a regulated since it is not a lake or streambed.

[1] The extent of jurisdictional waters in the BSA, as discussed in this document, should be considered preliminary until verified by the USACE or RWQCB.



LSA

FIGURE 5

Legend

Biological Study Area

Culvert

Potential Jurisdictional Waters (0.089 ac)

Nonwetland Waters (0.047 ac)

Wetlands (0.042 ac)

0 200

Scale in Feet

SOURCE: BASEMAP - AIRPHOTO USA (5/2006); MAPPING - LSA ASSOCIATES, INC. (2007)

I:\Mro0702\gis\Fig5-wat_feat.mxd (1/3/08)

Redding Avenue Bikeway

Potential Jurisdictional Waters

5. Project Impacts

The proposed project could potentially affect special status (and other) birds nesting in the landscaped trees in the BSA and in the highway overpass if they are present when construction begins. Disturbance of these birds during their nesting season (March 1 to September 30) could result in "take" which is prohibited under the Migratory Bird Treaty Act and Section 3503 of the California Fish and Game Code. Mitigation to avoid disturbing nesting birds is described in Section 6.

Although no burrowing owls or owl sign were observed during surveys, burrows large enough to support burrowing owls were observed at the north end the BSA. Some potentially suitable foraging and nesting habitat is available for this species in the BSA. Burrowing owls could migrate into the BSA prior to construction and be affected by the project. Mitigation to avoid disturbing burrowing owls is described in Section 6.

Purple martins are known to nest in the weep holes of the Interstate 50 bridge structure and in the light rail overpass in the limits of the project area. Since no work will be done on either the highway overpass or light rail overpass it is unlikely the proposed Redding Avenue enhancements will impact purple martins. Consequently, no mitigation is proposed.

The proposed project will result in permanent impacts to 0.089 acre of potential jurisdictional waters during construction of the roadway improvements, as shown on Table 1. These impacts will occur to wetlands and nonwetland waters in an isolated roadside drainage ditch. Due to the minimal area of impact to wetlands, totaling 0.042 acre, no mitigation is proposed. This approach is consistent with USACE regulations which typically do not require mitigation for impacts to waters of the U.S. less than 0.1 acre.

Table 1: Project Impacts to Jurisdictional Waters (in acres)

Type	Permanent	Temporary	Total
Wetlands	0.042	0	0.042
Nonwetland Waters	0.047	0	0.047
Total	0.089	0	0.089

The project will also result in 0.79 acre of permanent impacts to the disturbed/ruderal plant community. Due to the low value of this community, no mitigation is proposed.

6. Avoidance and Minimization Measures

1) The following seasonal work restrictions will be implemented during construction to avoid disturbing nesting birds:

   If possible, all trees that will be impacted by project construction will be removed during the non-nesting season (between October 1 and February 29). If this is not possible and project construction is to begin during the nesting season (March 1 to September 30), all trees and other suitable nesting habitat within the limits of work shall be surveyed by a qualified biologist prior to initiating construction-related activities. Surveys will be conducted no more than 14 days prior to the start of work. If no nesting is discovered, construction can begin as planned. If an active nest is discovered, the nest tree shall be designated as an Environmentally Sensitive Areas (ESA) and protected using orange construction fence or equivalent. The ESA fencing shall be maintained in good condition until the end of the breeding season or until the young have fledged, as determined by a qualified biologist.

2) Because burrowing owls are known to occur in the vicitity of the BSA, a preconstruction survey for burrrowing owls shall be conducted in accordance with CDFG's Staff Report on Burrowing Owls (CDFG, 1995).

   If the preconstruction surveys identify burrowing owls nesting on the site during the breeding season (February 1 through August 31), the nest shall be designated as an ESA and a 250-foot buffer shall be established on the project site around the occupied burrow and delineated using orange construction fence or equivalent. The buffer shall be maintained in place until the end of the breeding season or until a qualified biologist determines through non-invasive methods that 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow(s) can be destroyed.

   If the preconstruction surveys identify burrowing owls on the site during the non-breeding season (September 1 through January 31), burrowing owls occupying the project site shall be evicted from the project site by passive relocation as described in the CDFG's Staff Report on Burrowing Owls (CDFG 1995).

3) Prior to issuance of a grading permit or other authorization to proceed with project construction, the project proponent shall obtain any necessary permits (e.g., from the RWQCB).

7. Permits Required

The project will result in a permanent discharge of fill into 0.089 acre of potential jurisdictional waters in the roadside ditch. It is not expected that USACE or CDFG will take jurisdiction over the ditch. However, authorization from RWQCB pursuant to PCWQCA will likely be required. It is expected the RWQCB will issue Waste Discharge Requirements to authorize discharges into waters of the State.

8. References

California Department of Fish and Game. 2007. Rarefind 2 personal computer program. Sacramento, CA.

California Department of Fish and Game. 1995. Staff Report on Burrowing Owls. Sacramento, CA.

California Native Plant Society. 2007. 6th Inventory of Rare and Endangered Vascular Plants of California - Online Edition.

Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Technical Report Y-97-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.

Hickman, James C, Ed. 1993. The Jepson Manual: Higher Plants of California. University of California Press.

Sawyer, John O., and Todd Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society. Sacramento, CA

U.S. Fish and Wildlife Service. 2007. Online Threatened and Endangered Species Lists. Sacramento Fish and Wildlife Office.

9. Appendix

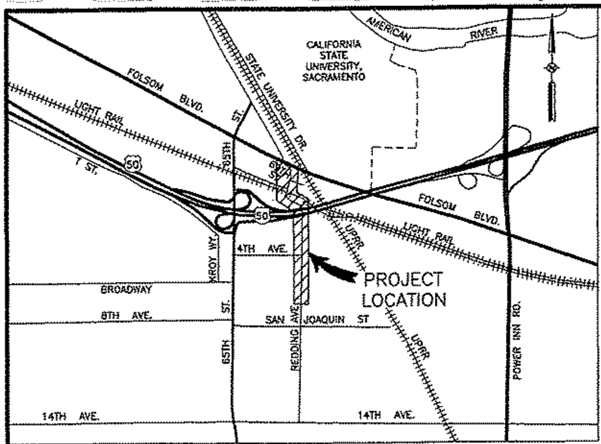
Appendix A – Design Plans

Appendix B – CNDDB, CNPS and USFWS Lists

Appendix C – List of Species Observed

Appendix D – Wetland Data Forms

Appendix A Design Plans



VICINITY MAP
SCALE: NTS

PLANS FOR CONSTRUCTION

CITY OF SACRAMENTO

REDDING AVENUE BICYCLE AND PEDESTRIAN IMPROVEMENTS PROJECT

30% SUBMITTAL DRAFT

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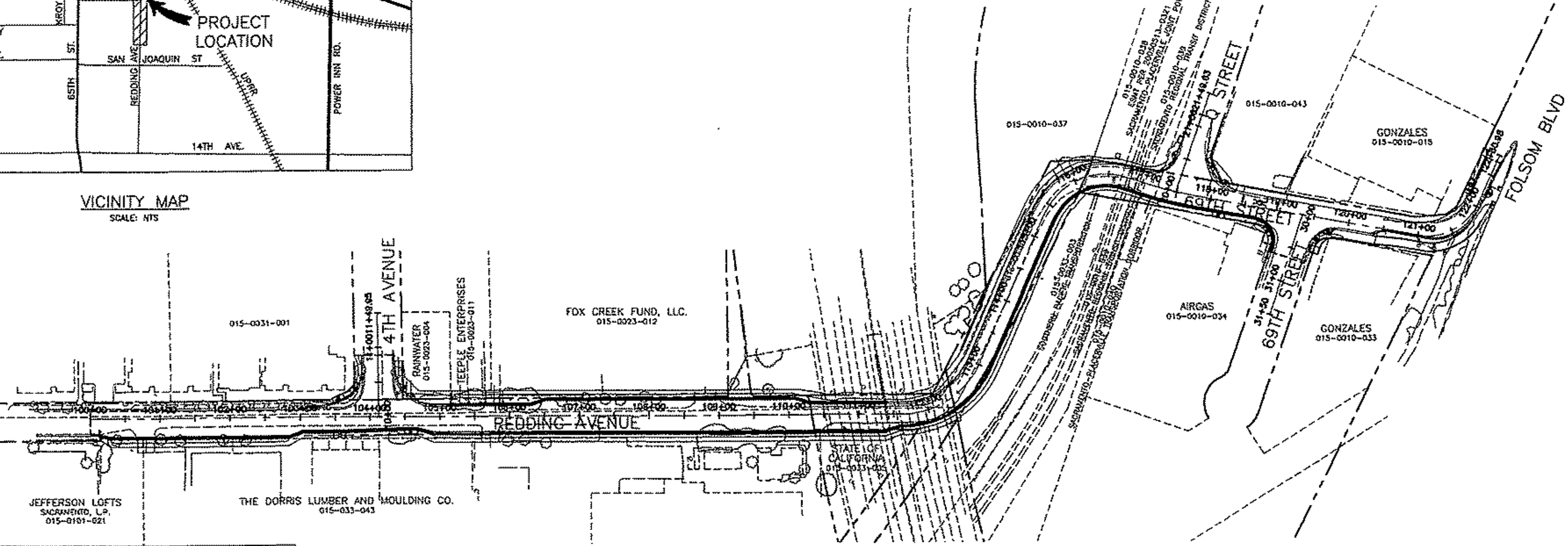

LOCATION MAP
SCALE: 1"=80'

UTILITY CONTACTS		
UTILITY	AGENCY	PHONE NUMBER
ELECTRICAL	SMUD	(916) 732-5789
WATER	CITY OF SACRAMENTO	(916) 808-1451
GAS	PG&E	(916) 388-5371
PETROLEUM PIPE	KINDER MORGAN	(916) 369-9772
DRAINAGE	CITY OF SACRAMENTO	(916) 808-1451
TELEPHONE	MCI NETWORK SERVICES, INC.	(408) 533-6179
TELEPHONE	AT&T	(916) 453-6136
FIBER OPTIC CABLE	SUREWEST	(916) 640-2431
FIBER OPTIC CABLE	QWEST	(916) 788-1041
FIBER OPTIC CABLE	LEVEL 3 COMMUNICATIONS	(720) 888-7566
SEWER	CITY OF SACRAMENTO	(916) 808-1451
USA	UNDERGROUND SERVICE ALERT	(800) 227-2600
FIRE	SACRAMENTO CITY FIRE DEPARTMENT	(916) 264-5260

SHEET INDEX:

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (USA) AT 800-642-2444 AT LEAST 2 WORKING DAYS PRIOR TO PERFORMING ANY EXCAVATION

REVISIONS			
NO.	DESCRIPTION	DATE	BY

BENCH MARK ELEV. 43.7
DESCRIPTION BM:
NGVD29 BASED ON BENCH MARK "HPGN D CA CSUS"

FIELD BOOK
SCALE HORIZ. 1"=80' VERT.

CITY OF SACRAMENTO
DEPARTMENT OF TRANSPORTATION

DRAWN BY: O. FORTHUN DATE JANUARY 21, 2008
DESIGN BY: M. PIERCE R.C.E. DATE
CHECKED BY: A. OLSON R.C.E. DATE

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REDDING AVENUE/69TH STREET
TITLE SHEET

SHEET 1 OF 9

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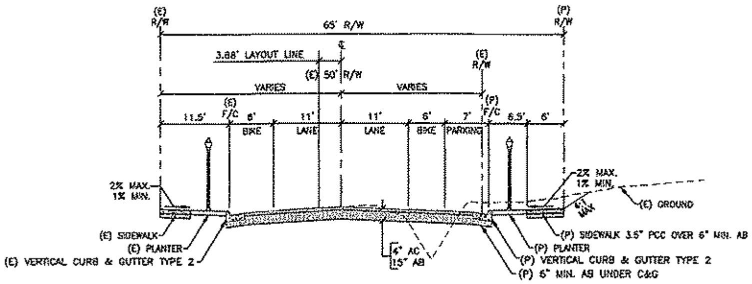

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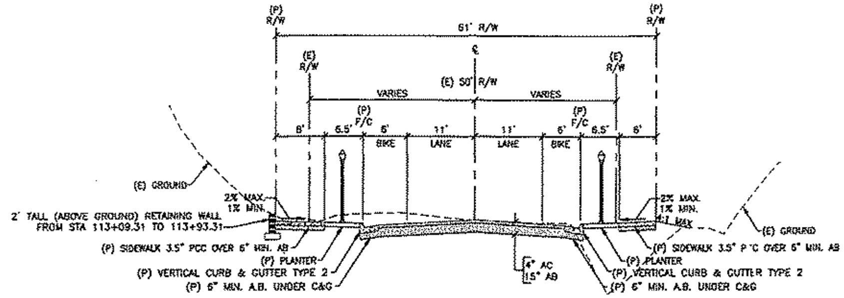

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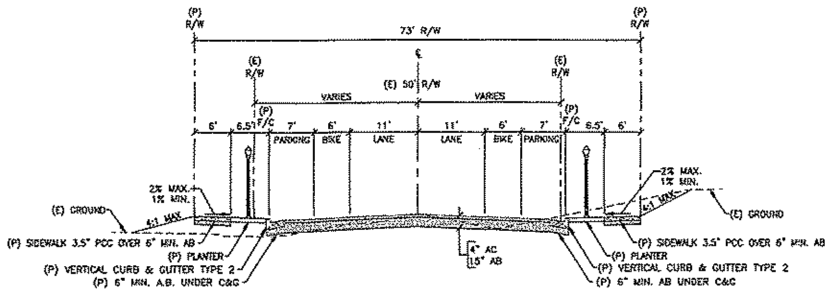

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*NOTE–THERE IS A GAP BETWEEN TYPICAL SECTIONS 1 AND 2, AND TYPICAL SECTIONS 2 AND 3 BECAUSE OF TRANSITIONS/TAPERS BETWEEN THEM.

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FIELD BOOK
SCALE HORIZ.

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REDDING AVENUE/69TH STREET
CONSTRUCTION DETAILS & TYPICAL SECTIONS

SHEET 2 OF 9

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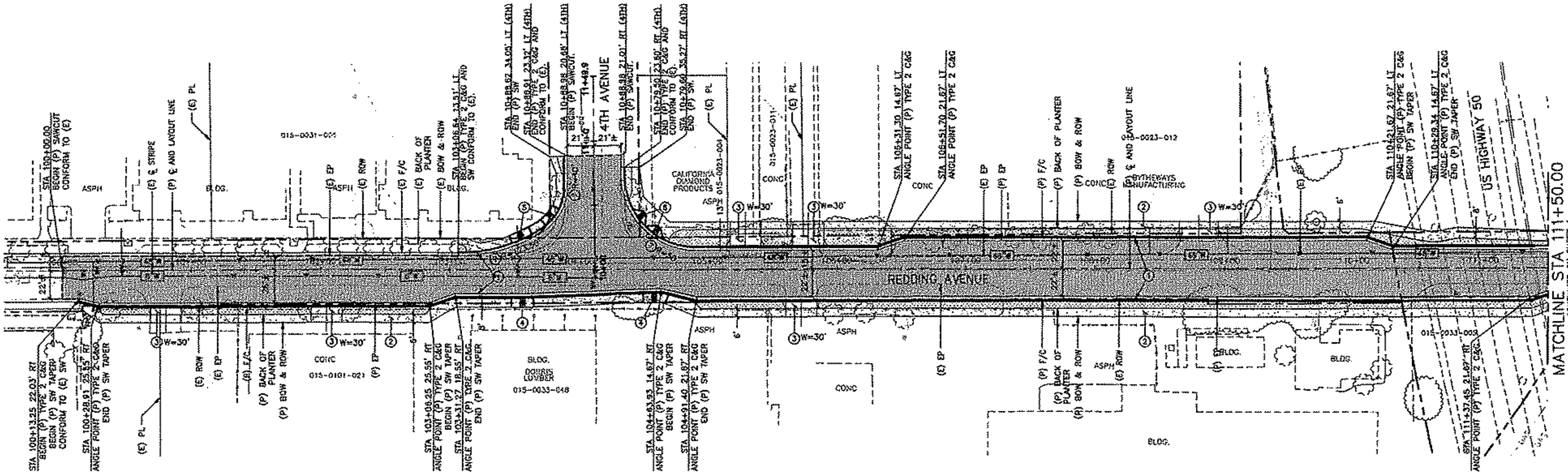

CONSTRUCTION NOTES:

1. CONSTRUCT CURB & GUTTER TYPE 2 PER CITY STD. DWG. T-11.
2. CONSTRUCT SIDEWALK.
3. CONSTRUCT DRIVEWAY PER CITY STD. DWG. T-22.
4. CONSTRUCT SINGLE PAN CURB RAMP PER CITY STD. DWG. T-71.
5. CONSTRUCT DUAL PAN CURB RAMPS PER CITY STD. DWG. T-72.
6. CONSTRUCT DUAL FLARE CURB RAMPS PER CITY STD. DWG. T-74.
7. ALL CORNER RADII ARE MEASURED AT THE FACE OF CURB.

EXISTING UTILITY LEGEND

DESCRIPTION	COLOR
TELEPHONE	
SMUD	
WATER	
SEWER	
STORM	
GAS	
FO	

REVISIONS			
NO.	DESCRIPTION	DATE	BY

BENCH MARK ELEV. 43.7
DESCRIPTION BM:
NGVD29 BASED ON BENCH MARK "HPGN D CA CSUS"

FIELD BOOK

SCALE HORIZ. 1"=40'

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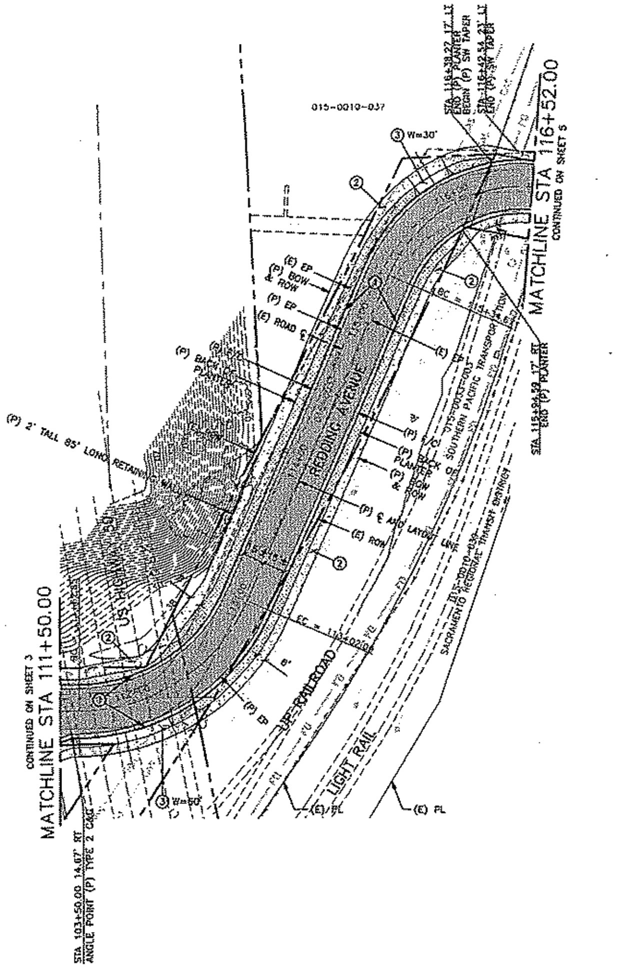

CONSTRUCTION NOTES:

1. CONSTRUCT CURB & GUTTER TYPE 2 PER CITY STD. DWG. T-11.
2. CONSTRUCT SIDEWALK.
3. CONSTRUCT DRIVEWAY PER CITY STD. DWG. T-22.

EXISTING UTILITY LEGEND

DESCRIPTION	COLOR
TELEPHONE	
SMUD	
WATER	
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STORM	
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REVISIONS			
NO.	DESCRIPTION	DATE	BY

BENCH MARK ELEV. 43.7
DESCRIPTION
NGVD29 BASED ON BENCH MARK "HPGN D CA CSUS"

FIELD BOOK
SCALE
HORIZ. 1"=40'
VERT.

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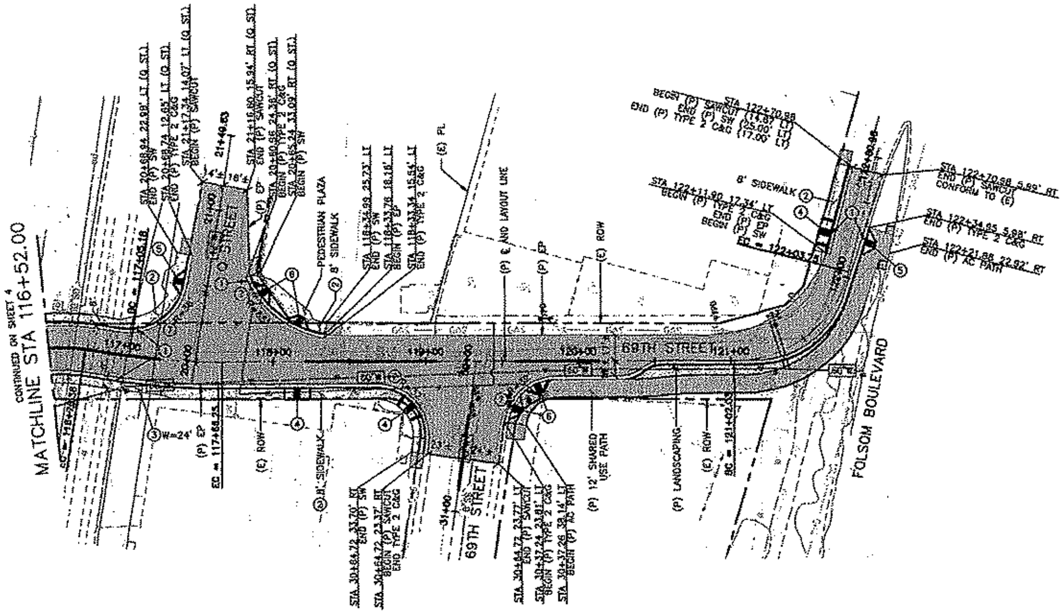

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2. CONSTRUCT SIDEWALK.
3. CONSTRUCT DRIVEWAY PER CITY STD. DWG. T-22.
4. CONSTRUCT SINGLE PAN CURB RAMP PER CITY STD. DWG. T-71.
5. CONSTRUCT SINGLE FLARE CURB RAMP PER CITY STD. DWG. T-73.
6. CONSTRUCT DUAL FLARE CURB RAMPS PER CITY STD. DWG. T-74.
7. ALL CORNER RADII ARE MEASURED AT THE FACE OF CURB.

EXISTING UTILITY LEGEND

DESCRIPTION	COLOR
TELEPHONE	
SMUD	
WATER	
SEWER	
STORM	
GAS	
FO	

REVISIONS			
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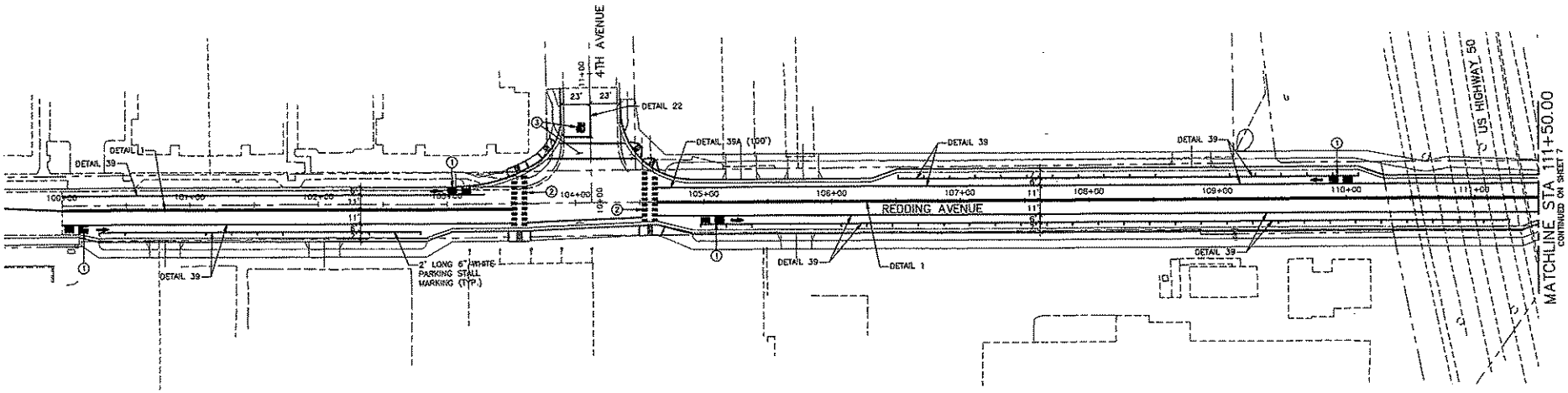

CONSTRUCTION NOTES:

1. "BIKE LANE" PAVEMENT MARKING AND ARROW
2. HIGH VISIBILITY TRIPLE FOUR CROSSWALK
3. "STOP" LEGEND AND CROSSWALK PER CITY STANDARD DWG. NO. T-180

REVISIONS			
NO.	DESCRIPTION	DATE	BY

BENCH MARK ELEV. 43.7
DESCRIPTION BM:
NGVD29 BASED ON BENCH MARK "HPGN D CA (SW)"

FIELD BOOK

SCALE
HORIZ. 1"=40'

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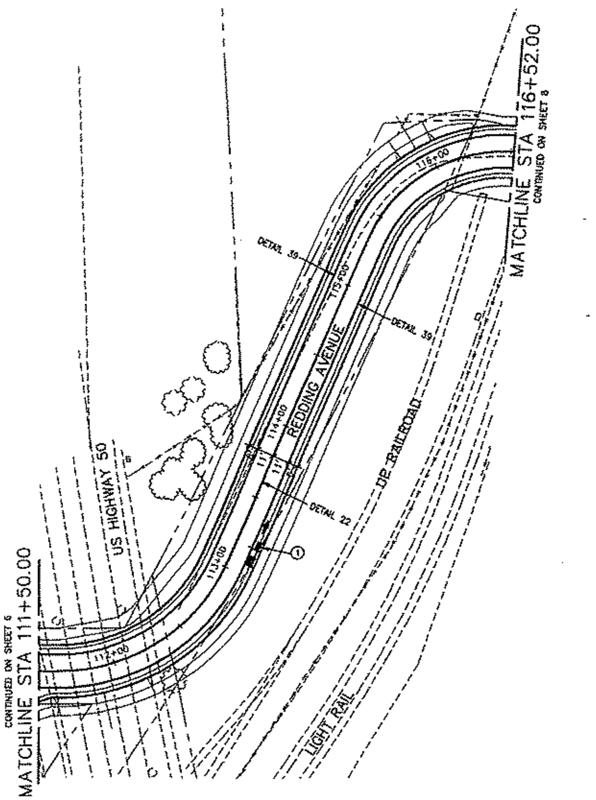
GRAPHIC SCALE
1 in = 40 ft



CONSTRUCTION NOTES:

① "BIKE LANE" PAVEMENT MARKING AND ARROW

REVISIONS			
NO.	DESCRIPTION	DATE	BY

BENCH MARK ELEV. 43.7
DESCRIPTION BM:
NGVD29 BASED ON BENCH MARK 'HPGN D CA CS15'

FIELD BOOK
SCALE HORIZ. 1"=40'

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REDDING AVENUE/69TH STREET
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SHEET 7 OF 9

GRAPHIC SCALE
40 20 0 40 80
1 in = 40 ft

30% SUBMITTAL DRAFT

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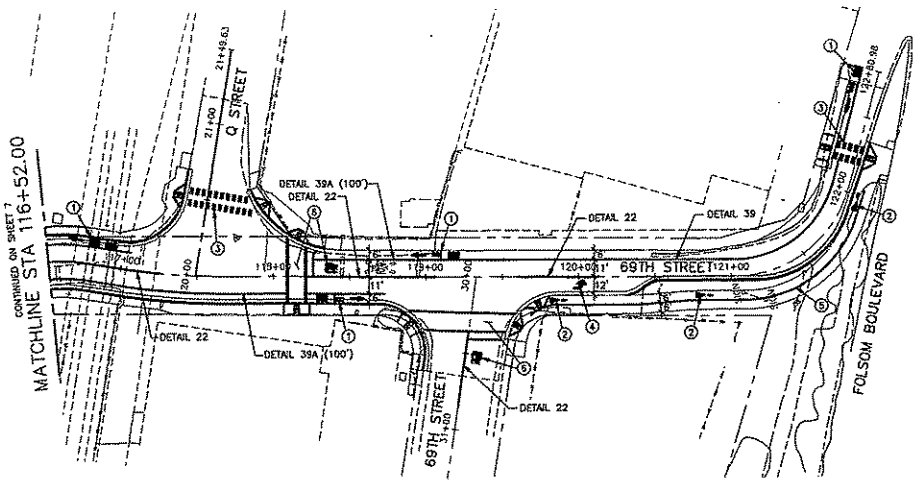

CONSTRUCTION NOTES:

1. "BIKE LANE" PAVEMENT MARKING AND ARROW
2. BICYCLE PAVEMENT MARKING AND ARROW
3. HIGH VISIBILITY TRIPLE FOUR CROSSWALK
4. TYPE IV ARROW
5. 4" SOLID YELLOW STRIPE
6. "STOP" LEGEND AND CROSSWALK PER CITY STANDARD DWG. NO. T-180

REVISIONS			
NO.	DESCRIPTION	DATE	BY

BENCH MARK ELEV. 43.7
DESCRIPTION SM:
NGVD29 BASED ON BENCH MARK TIPON D OA ESMT

FIELD BOOK

SCALE
HORIZ. 1"=40'

CITY OF SACRAMENTO
DEPARTMENT OF TRANSPORTATION

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DATE JANUARY 21, 2008 | R.C.E. DATE | R.C.E. DATE

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STA 116+52.00 TO STA 122+80.98

SHEET 8 OF 9

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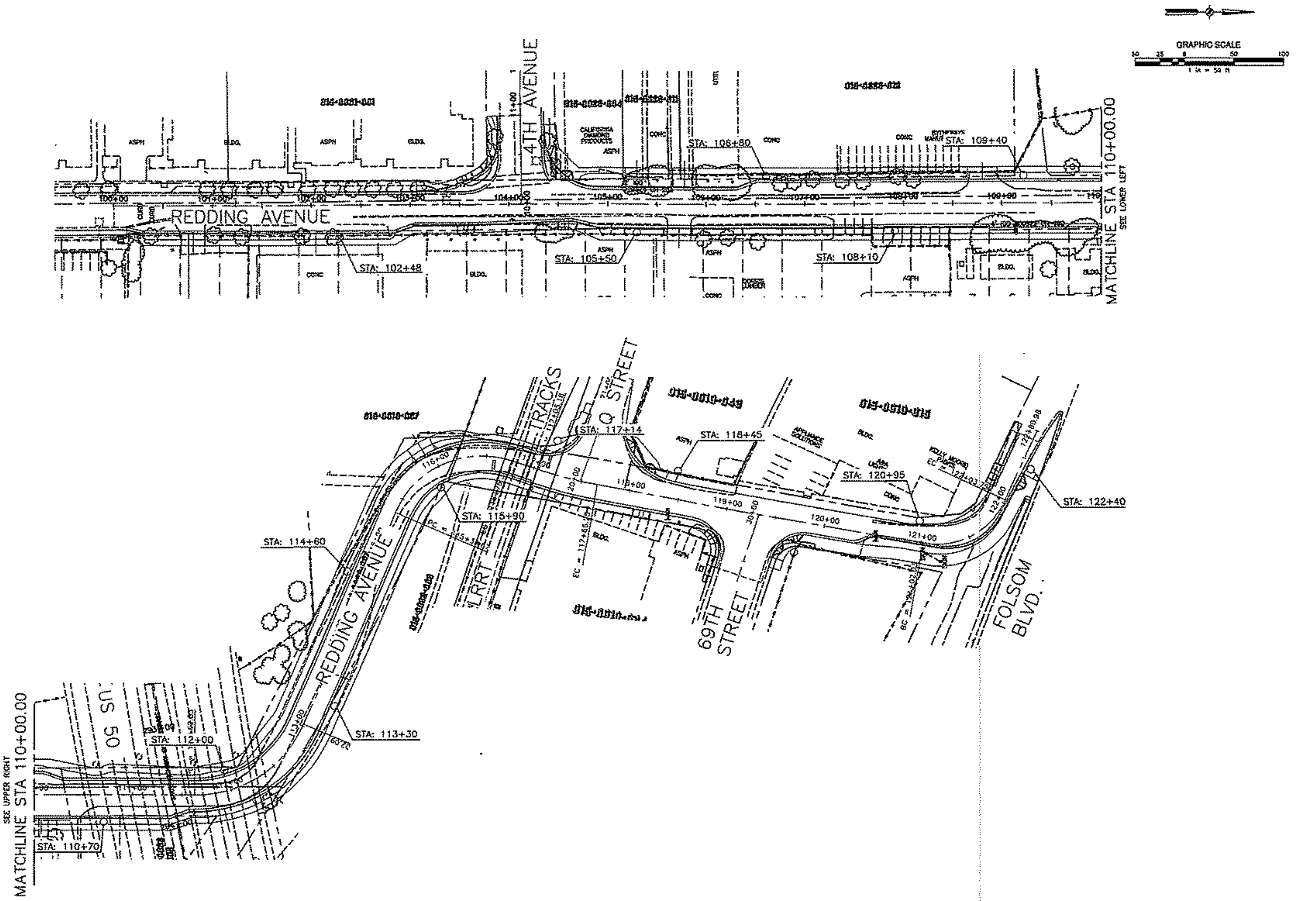

LEGEND

O ORNAMENTAL DECORATIVE STREET LIGHT

ACCEPTED BY:

SOMPOL CHATUSRIPITAK; P.E.: E-13633 DATE:
SENIOR ELECTRICAL ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

BENCH MARK ELEV. 43.7
DESCRIPTION BM:
NGVD29 BASED ON BENCH MARK "HPGN D CA CSUS"

FIELD BOOK

SCALE HORIZ. 1"=50'

CITY OF SACRAMENTO
DEPARTMENT OF TRANSPORTATION

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REDDING AVENUE/69TH STREET
ELECTRIC STREET LIGHTING PLANS

SHEET 9 OF 9

Appendix B CNDDB, CNPS and USFWS Lists

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
Redding Avenue Bikeway Project
Sacramento East Quadrangle

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	American badger *Taxidea taxus*	AMAJF04010			G5	S4	SC
2	California linderiella *Linderiella occidentalis*	ICBRA06010			G3	S2S3	
3	Cooper's hawk *Accipiter cooperii*	ABNKC12040			G5	S3	SC
4	Elderberry Savanna	CTT63440CA			G2	S2.1	
5	Sanford's arrowhead *Sagittaria sanfordii*	PMALI040Q0			G3	S3.2	1B.2
6	Swainson's hawk *Buteo swainsoni*	ABNKC19070		Threatened	G5	S2	
7	bank swallow *Riparia riparia*	ABPAU08010		Threatened	G5	S2S3	
8	burrowing owl *Athene cunicularia*	ABNSB10010			G4	S2	SC
9	purple martin *Progne subis*	ABPAU01010			G5	S3	SC
10	valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	IICOL48011	Threatened		G3T2	S2	
11	vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened		G3	S2S3	
12	vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered		G3	S2S3	
13	white-tailed kite *Elanus leucurus*	ABNKC06010			G5	S3	

Inventory of Rare and Endangered Plants

v7-07d 10-18-07

Status: search results for ""sacramento east "" - Mon, Dec. 10, 2007 16:53 c

"sacramento east " Search

Tip: Word fragments must be completed with a wildcard, e.g., `esch* hyp*` for Eschscholzia hypecoides.[all tips and help.][search history]

Hits 1 to 1 of 1
Requests that specify topo quads will return only Lists 1-3.

To save selected records for later study, click the ADD button.
ADD checked items to Plant Press | check all | check none
Selections will appear in a new window.

open	save	hits	scientific	common	family	CNPS
	☐	1	**Sagittaria sanfordii**	Sanford's arrowhead	Alismataceae	List 1B.2

No more hits.

Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species
that Occur in or may be Affected by Projects in the
STOCKTON EAST (461B)
U.S.G.S. 7 1/2 Minute Quad
Database Last Updated: August 16, 2007
Document Number: 071210055004

Species of Concern - The Sacramento Fish & Wildlife Office no longer maintaina a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. See www.fws.gov/sacramento/es/spp_concern.htm for more information and links to these sensitive species lists.

Red-Legged Frog Critical Habitat - The Service has designated final critical habitat for the California red-legged frog. The designation became final on May 15, 2006. See our map index.

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Hypomesus transpacificus
Critical habitat, delta smelt (X)
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)
Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana aurora draytonii
California red-legged frog (T)

Reptiles

Thamnophis gigas
giant garter snake (T)

Mammals

Vulpes macrotis mutica
San Joaquin kit fox (E)

Key:

(E) *Endangered* - Listed (in the Federal Register) as being in danger of extinction.
(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
(P) *Proposed* - Officially proposed (in the Federal Register) for listing as endangered or threatened.
(NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.
Critical Habitat - Area essential to the conservation of a species.
(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
(C) *Candidate* - Candidate to become a proposed species.
(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regard-less of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the quad or quads covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take

of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compen-sates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our critical habitat page for maps.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require

site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be March 09, 2008.

Appendix C List of Species Observed

Plant Species Observed in the Biological Study Area

Scientific Name	Common Name	Family
Alisma plantago-aquatica	Water plantain	Alismataceae
Avena sp.	Wild oats	Poaceae
Brassica nigra	Mustard	Brassicaceae
Bromus diandrus	Ripgut brome	Poaceae
Bromus hordeaceus	Soft chess	Poaceae
Carduus pycnocephalus	Italian thistle	Asteraceae
Centaurea solstitialis	Yellow star-thistle	Asteraceae
Convolulus arvensis	Bindweed	Convolvulaceae
Conyza canadensis	Horsetail	Asteraceae
Cynodon dactylon	Bermuda grass	Poaceae
Cyperus eragrostis	Nutsedge	Cyperaceae
Eremocarpus setigerus	Dove weed	Euphorbiaceae
Erodium sp.	Filaree	Geraniaceae
Foeniculum vulgare	Fennel	Apiaceae
Geranium dissectum	Cranesbill	Geraniaceae
Hordeum murinum var. *leporinum*	Barley	Poaceae
Juglans regia	Walnut	Juglandaceae
Juniperus sp.	Juniper	Cupressaceae
Lactuca serriola	Prickly lettuce	Asteraceae
Lathyrus argophyllus		Fabaceae
Lolium multiflorum	Ryegrass	Oleaceae
Lotus purshianus	Spanish lotus	Poaceae
Malvella leprosa	Alkali-mallow	Malvaceae
Paspalum dilatatum		Poaceae
Plantago lanceolata	English plantain	Plantatginaceae
Polygonum arenastrum		Polygonaceae
Prunus sp.	Flowering pear	Rosaceae
Rhaphanus sativus	Seed radish	Brassicaceae
Rubus discolor	Himalayan blackberry	Roseaceae
Rumex crispus	Curly dock	Polygonaceae
Salsola tragus	Tumbleweed	Chenopodiaceae
Silybum marianum	Milk thistle	Asteraceae
Sonchus oleraceus	Common sow thistle	Asteraceae
Tragopogon porrifolius	Oyster plant	Asteraceae
Trifolium hirtum		Fabaceae
Vicia villosa	Winter vetch	Fabaceae

Appendix D Wetland Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Redding Avenue Bikeway City/County: Sacramento Sampling Date: 12/4/07

Applicant/Owner: City of Sacramento State: CA Sampling Point: 1

Investigator(s): Mike Trueblood Section, Township, Range: Sec 15, T 8 N, R 5 E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil ✓, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Cyperus eggostis	10%	No	FACW
2. Plantago lanceolata	2%	No	FAC
3. Alisma plantago-aquatica	70%	Yes	OBL
4.			
5.			
6.			
7.			
8.			
Total Cover:	82%		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 18% % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Inundated Roadside ditch

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8"	10YR 3/2	100	—	—	—	—		gravelly loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks: Inundated conditions resulting in an aquic moisture regime.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ✓ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): 6"

Water Table Present? Yes ___ No ___ Depth (inches): —

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): —

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Ponding observed

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Redding Avenue Bikeway City/County: Sacramento Sampling Date: 12/4/07
Applicant/Owner: City of Sacramento State: CA Sampling Point: 1a
Investigator(s): Mike Trueblood Section, Township, Range: Sec 15, T.8.N, R.5.E.
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: _____ NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	Is the Sampled Area within a Wetland? Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. cynodon dactylon	80%	Yes	Fac
2. Plantago lanceolata	5%	No	
3. Annual grass	5%	No	UPL
4. Erodium sp.	5%	No	UPL
5.			
6.			
7.			
8.			
Total Cover: 95%			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5% % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 1a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5"	—		—		—		—	gravel
5-10"	10YR3/2	100%						cobbly gravelly loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): -

Water Table Present? Yes _____ No ✓ Depth (inches): >10"

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): >10"

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: upland data point.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Redding Avenue Bikeway City/County: Sacramento Sampling Date: 12/4/07

Applicant/Owner: City of Sacramento State: CA Sampling Point: 2

Investigator(s): Mike Trueblood Section, Township, Range: Sec 15, T.8N, R5E.

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Cynodon dactylon	70%	Yes	Fac
2. Erodium sp.	50%	Yes	Upl
3. Vicia villosa	10%	No	Upl
4. Annual Grasses	30%	Yes	Upl
5.			
6.			
7.			
8.			
Total Cover: 160%			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12"	10YR 2/2	100%						gravel loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Dark soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): —

Water Table Present? Yes _____ No ✓ Depth (inches): >12"

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): >12"

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: