



MEETING OF THE CITY OF RIDGECREST INFRASTRUCTURE COMMITTEE  
1<sup>ST</sup> FLOOR CITY COUNCIL CONFERENCE ROOM AREA B  
Thursday March 24, 2016 at 5:00 pm

Committee Members: Chair Mike Mower, Vice Chair Matt Baudhuin  
Vice Mayor James Sanders Planning Commissions Warren Cox  
Staff: Dennis Speer, Loren Culp  
Recording Secretary: Karen Harker

**AGENDA**  
**Meeting – 5:00 p.m.**

This meeting room is wheelchair accessible. Accommodations and access to City meetings for people with other handicaps may be requested of the City Clerk (499-5002) five working days in advance of the meeting.

**CALL TO ORDER**

**ROLL CALL**

**APPROVAL OF AGENDA**

**APPROVAL OF MINUTES**

- January 21, 2016
- February 25, 2016

**PUBLIC COMMENT OF ITEMS NOT ON THE AGENDA**

**DISCUSSION AND OTHER ACTION ITEMS**

Discussion of the Retention Basin at Norma Street and Felspar Avenue

- Preliminary Investigation

**COMMITTEE COMMENTS**

**SUPPORT STAFF COMMENTS**

**FUTURE AGENDA ITEMS**

**NEXT MEETING:**

- April 28, 2016

**ADJOURNMENT:**



MEETING OF THE CITY OF RIDGECREST INFRASTRUCTURE COMMITTEE  
1<sup>ST</sup> FLOOR CITY COUNCIL CONFERENCE ROOM AREA B  
Thursday January 21, 2016 at 5:00 pm

Committee Members: Chair Mike Mower, Vice Chair Matt Baudhuin  
Vice Mayor James Sanders Planning Commissions Warren Cox  
Staff: Dennis Speer, Loren Culp  
Recording Secretary: Karen Harker

**DRAFT MINUTES**  
**Meeting – 5:00 p.m.**

This meeting room is wheelchair accessible. Accommodations and access to City meetings for people with other handicaps may be requested of the City Clerk (499-5002) five working days in advance of the meeting.

**CALL TO ORDER:** Meeting was called to order 5:15

**ROLL CALL** Mayor Pro Tem James Sanders, Planning Commissioner Warren Cox, Mayor Peggy Breeden  
Absent: Chair Mike Mower, Vice Chair Matt Baudhuin  
Staff: Dennis Speer, Public Works Director; Loren Culp, City Engineer  
Recording Secretary: Karen Harker

**APPROVAL OF AGENDA**

*Motion To Approve the Agenda Was Made By Commissioner Mr. Cox, Seconded by Ms. Breeden.  
Motion Carried By Voice Vote of 3 Ayes (Cox, Sanders, Breeden) 0 Nays, 2 Absent (Mower,  
Baudhuin) 0 Abstain*

**APPROVAL OF MINUTES**

*Motion To Approve the Minutes of December 17, 2015 was Made By Commissioner Cox,  
Seconded by Ms. Breeden. Motion Carried By Voice Vote of 3 Ayes (Cox, Sanders, Breeden) 0  
Nays, 2 Absent (Mower, Baudhuin) 0 Abstain*

**PUBLIC COMMENT OF ITEMS NOT ON THE AGENDA**

**Public Comment Opened at 5:18 pm**

Gary Allred asked if the Ridgecrest Boulevard Project has been closed and what was the final cost. Mr. Speer indicated that staff would need to bring this item back to the committee at a later date. Staff is unable to comment at this time.

Mr. Allred also asked what is happening with the ADA compliance on Ridgecrest Boulevard.

- o L Culp – explained the schedule of the funding for the ADA Compliance with the Kern

County Community Development Block Grant (CDBG). Mr. Culp indicated this is a long and tedious process with approved schedules, approval of contracts, going out for Request for Proposals. It is necessary for the City of Ridgecrest to create and establish a Transition Plan to continue to receive federal funding. This is what the previous Council had allocated the CDBG funds be used for. It could take up to two years before we see any construction take place on the corridor.

- W. Cox – I don't think that we should wait two years for the transition plans for our ADA citizens.
- D Speer – Discussed his meeting with District 6 based on the drainage by the bulb-outs and not anything related to ADA compliance. He received a response stating if the City needed to make minor alterations/modifications to address drainage or traffic operations of the corridor, the City can do so at their own expense without any special approvals. Hydraulic flow-line adjustments could likely fit in the minor category. If the City would like to make major alterations / modifications, such as removing bulb-outs or center islands, you may have to pay back part or all of the Federal Funding. These major alterations/modifications could be subjective, but essentially the original scope and intent of the project needs to be maintained.
- W. Cox – I would be ok with this if we made sure that Ridgecrest Boulevard was still the number one priority with making the ADA compliance changes.
- J. Sanders – was concerned about the parking by the bulb-out
- D. Speers – we would mark 10-12 feet in red for no parking
- G. Allred – would the property owners who pulled a permit to fix the drive approaches and walkways be exempt of fees
- J. Sanders – no that would not be something that could be done by staff only by City Council
- G. Allred – I think you have opened a can of worm by putting in bulb-outs that no one wanted instead of doing ADA compliant ramps and drive approaches.
- D. Speer – how does the federal law apply to this area. It was on the recommendation of Caltrans not to do the drive approaches and sidewalk.
- G. Allred – there was a separate source of funding for the ADA requirements for the Ridgecrest Boulevard Project.

Mr. Allred was informed that there was not a separate source of funding and the only funding the City had was Federal Funds. The City used their maximum effort that allows the City to comply to reach the requirement,

There was discussion by the committee that it didn't seem fair that some of the business received new drive approaches and ADA curb ramps while others didn't.

**Public Comment Closed at 5:45 pm**

## **DISCUSSION AND OTHER ACTION ITEMS**

### ➤ New Murray Middle School Traffic Circulation

Loren Culp refreshed the committee of their decision to move forward with funding the New Murray Middle School Traffic Circulation. Staff has researched the funding sources available to do the project and recognized four sources:

**Tax Allocation Bonds** – would need to take from another project or from the unallocated funds of around 800K. Going before Council very soon will be a report asking for 100K on

the Downs Widening Project to Southern California Edison to remove poles.

**Regional Surface Transportation Projects** – the City receives these funds from Kern Council of Governments and can be up to a funding amount of 600K. Using these funds would take away from other street projects

**Community Development Block Grant Funds** - 130 K every year. The City would be eliminating our funding source for ADA compliance issues. Also would have to roll a fiscal year and advance a fiscal year to come up with the funding. We would still be short.

**Traffic Impact Fees** - 1.3 million are in this account and it is my recommendation to use this funding source for doing the project. It is the most appropriate.

- D Speer – I agree with Mr. Culp that this is the funding source to take the funds from for the project. He wanted the committee to also realize that before the dissolution of RDA the Engineering Division would use this source of funding for the matching funds on State and Federal Projects.

Several committee members asked and discussed how much was the cost estimate to do the improvements around the new school.

- L Culp – \$490,000.00
- D. Speer - can we design this project in house instead of going out to a consultant
- L Culp – I feel we have a good study by a traffic engineer, and then the plans and specifications need to be signed. I am not well versed in traffic engineering that I would feel comfortable in signing the plans.

There was discussion about if Mr. Speer could act as the Traffic Engineer and if this project would be able to be done in house.

- W. Cox – SSUSD hired a traffic engineer. Shouldn't the City be able to indicate what the City intends for improvement and sign it off and send it over for design to their traffic engineer? They already have him retained and this would help with the cost.
- L Culp – explained this was discussed and that the traffic engineer and any funding (federal) for the school could not be used for street improvements.
- J Sander – what are the improvements for the school
- L Culp – raised medians with fence, acceleration/deceleration lanes, and turn pockets
- D Speer – wanted to raise awareness that the City used to submit all applications at our cost to the State and Federal funding agencies to do the Safe Routes to School Projects for them by putting in curb, gutter and sidewalk. This is not the responsibility of the City but the responsibility of each School District to provide a safe route of travel for their students.
- W. Cox – explained the reason for doing this project was for the public safety of doing the road. We need public participation and buy-in to this project so that when we do the project, our community and citizen aren't asking why we are going this project instead of paving streets. The District stated that they are willing to hold public hearing and send flyer home with students so that the parents are well aware of what is going on. I would like to make a recommendation to:
  - 1) put aside the funds from Traffic Impact Fees
  - 2) don't start the project until the New Murray Middle School Project starts
  - 3) talk to the District and ask them to have the engineer sign off on the entire traffic circulation design.

- D Speer – explained the difference between traffic impact and traffic analysis reports
- Water Ordinance - Discussion of Water Ordinance prepared by City Attorney
- Comments and/or revision
  - Madam Mayor – Can we please add in our new Ordinance the language from the Ordinance 100 from the Indian Wells Valley Water District that includes the hours and days for November through March of each year.
  - Sofia Merk – are we under the State Model Ordinance now

The City Council adopted the State Model Ordinance by default when they did not pass an ordinance by the end of the year.

- D. Speer – direction from the council was to make the ordinance more user friendly.
- W. Cox – unfunded mandate from the state with the model ordinance.
- D. Speer – provide an ordinance that is user friendly
- S Ratorja – would like to see the City approve the State Model Ordinance from the State. This way when the State makes changes, we will not have to go back and make changes to ours.
- D. Speer – the City cannot adopt this ordinance until the State Department of Water and Power approves it or we can just adopt the State Model. This ordinance just happens to be user friendly. We will be under the State Model Ordinance until ours is approved and adopted.
- L Culp – had questions regarding the language in the model ordinance
- D. Speer – explained that regulations are the State Model Ordinance and that our Ordinance is just referring back to the State. This Ordinance can be handed out to the public in its simplest form and if there are further questions, staff can refer to the State Model.
- *Motion was made by Madam Mayor to approve the Water Ordinance as prepared by the City Attorney with the changes of the language to include the Indian Wells Water District Ordinance 100 regarding hours and days for November through March. Seconded by Mr. Cox, carried with a Vote of 3 Aye (Sanders, Cox, Breeden) 0 Nays, 2 Absent (Mower, Baudhuin), 0 Abstain*
- Update on Downs Widening Project

Loren Culp explained to the Committee a protest letter was being crafted with the attorney and a staff report will go before City Council on February 3 or 17. Discussed the issue of the intersection of Downs Street and West Ridgecrest Boulevard and raised the issue of transmission and distribution poles. Southern California Edison (SCE) has agreed to remove one pole and move the other pole. Mr. Culp and Mr. Speer did a field review and found that by removing one pole, SCE could eliminate three other poles. Loren discussed this review with SCE and they were not receptive to the idea.

We are still moving forward with the \$100,000.00 to get the engineering started and right of way acquisitions. We want this project shovel ready for any funding that might be available.

Mr. Cox made a recommendation that the City finds out the attorney who litigated in the case of Livermore and contact the firm to discuss our situation.

Both Mr. Culp and Mr. Speer thought that this was an excellent idea and will pursue this avenue.

## **COMMITTEE COMMENTS**

### **SUPPORT STAFF COMMENTS**

Loren Culp commented on these projects:

- Capital Improvement Road Design for 2016 – received Request for Proposals and will be awarding contract in the next few City Council Meetings.
- Bowman Traffic Signal – Bids were opened and are being reviewed by Willdan Engineering for the lowest responsive and responsible bidder. The apparent low bid was A-C Electric
- Transit garage – Will be getting started in February. The Corporation Yard Project is coming to an end
- Walmart – double inspections, they are moving along quite well

### **FUTURE AGENDA ITEMS**

- Downs Street Widening Project
- Changes to the Bulb-outs on Ridgecrest Boulevard
- Community Development Block Grant – ADA Transition Plan
- Change of Special meeting 4<sup>th</sup> Thursday

### **NEXT MEETING:**

- **February 18, 2016**

**ADJOURNMENT:** Meeting was adjourned at 7:40 pm



MEETING OF THE CITY OF RIDGECREST INFRASTRUCTURE COMMITTEE  
1<sup>ST</sup> FLOOR CITY COUNCIL CONFERENCE ROOM AREA B  
Thursday February 25, 2016 at 5:30 pm

Committee Members: Chair Mike Mower, Vice Chair Matt Baudhuin  
Vice Mayor James Sanders Planning Commissions Warren Cox  
Staff: Dennis Speer, Loren Culp  
Recording Secretary: Karen Harker

**Draft Minutes of the Special Meeting**  
**Meeting – 5:30 p.m.**

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**CALL TO ORDER:** Meeting was called to order at 5:35

**ROLL CALL:** Chair Mike Mower, Vice Chair Matt Baudhuin, Planning Commissions Warren Cox  
Absent: Vice Mayor James Sanders

**APPROVAL OF AGENDA:** *Motion To Approve the Agenda Was Made By Planning Commissioner Cox, Seconded by Mr. Baudhuin. Motion Carried By Voice Vote of 3 Ayes (Mower, Cox, Baudhuin) 0 Nays, 1 Absent (Sanders), 0 Abstain*

*Mr. Sanders arrived late after roll call, the approval of the agenda, and the discussion item had already been voted on.*

**PUBLIC COMMENT OF ITEMS NOT ON THE AGENDA**

No public comment

**DISCUSSION AND OTHER ACTION ITEMS**

- Discussion of Moving the Date of the Infrastructure Committee Meetings

The Chair Mower indicated that Madam Mayor Breeden has asked him to attend the Kern Council of Government meetings and they happen to fall on the third Thursday of each month. We are here tonight to set a new date. I feel that the fourth Thursday would work as it does not interfere with any other meetings.

*Motion made by Commissioner Cox that the Infrastructure Committee changes the regularly scheduled meeting from the third Thursday of each month at 5:00 pm to the fourth Thursday of each month at 5:00 pm. Seconded by Planning Commission Bauhduin. Motion Carried By Voice Vote of 3 Ayes (Mower, Cox, Baudhuin) 0 Nays, 1 Absent (Sanders), 0 Abstain*

## **COMMITTEE COMMENTS**

Planning Commission Cox asked about the Downs Street Project – Discussed the Downs Street project and where the City is at. Once SCE gets their One Hundred Thousand Dollar (\$100,000) check, the design is eighteen months. They didn't take that long on the West Ridgecrest Boulevard Project but it was nine months. They have done some preliminary design on the Downs Street Project (Mark Gowin) so they have a head start and we might see the design somewhere within the nine to eighteen months.

Two items are going before City Council. On March 3<sup>rd</sup> a Change Order to the Original Contract in the amount of Thirty-Eight Thousand Dollars and some change to Willdan Engineering will be presented. This is for the right-of-way (plat maps, legal descriptions), the drive approach into Mather Brothers Dairy and also to have lighting put along the median.

The 2<sup>nd</sup> item will be on the City Council Agenda for March 16<sup>th</sup>. The Attorney has review the SCE Contract and crafted a protest letter to be attached to the Contract. We will then get the One Hundred Thousand Dollar (\$100,000) check out to SCE to start the design.

The potential funding options right now is Tax Allocation Bond Funds (TAB), either from the funds not being used completely by the Wal-Mart Project or funds left from the West Ridgecrest Boulevard Project. The West Ridgecrest Boulevard Project has not been completely closed out and we don't know the exact dollar value remaining. The third source is the Regional Surface Transportation Program through Kern Cog. We have submitted an application and should hear something in the next three to four months.

## **SUPPORT STAFF COMMENTS**

Loren Culp, City Engineer:

Wal-Mart is going to be doing work at the intersection of Bowman Road. Work will begin next Wednesday. Contractor has been instructed to notify all personnel, Police, Transit, Fire, Ambulance, School District. The Contract expects this to be a two week period of work in two phases. Eastside first of the intersection and parts of the roadway will be done; then going to the Westside of the intersection. There will always be one lane open for traffic.

The reason they are doing this work is potholing for utilities. The City had old as-builts drawing and they found when doing work on the eastside of the roadway of South China Lake Boulevard they were coming across utilities (mostly from Digital 395). Before moving forward and completely redoing the Bowman Channel they would like to know what it is they are working with.

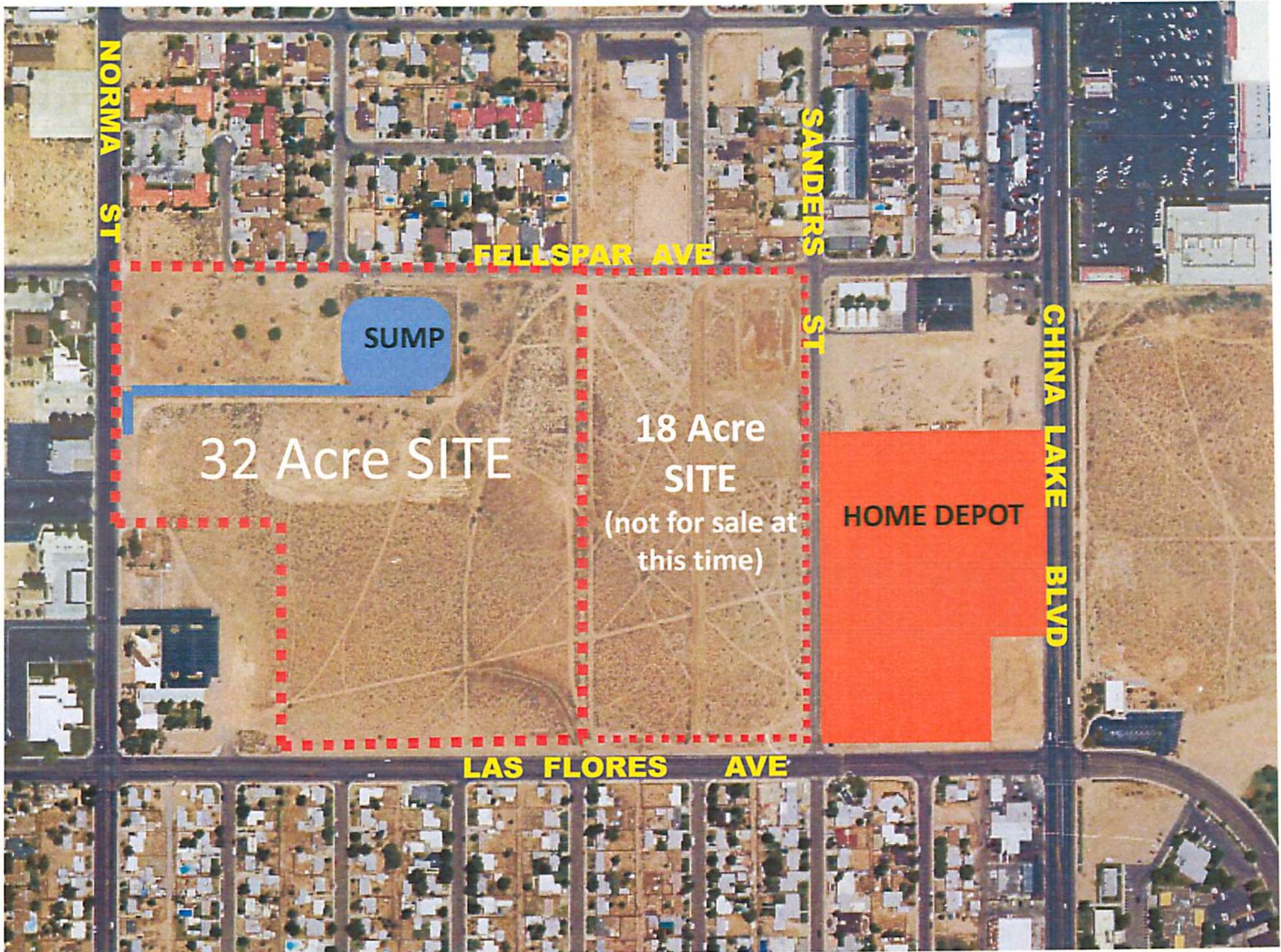
## **FUTURE AGENDA ITEMS**

Possible design of the Norma Street Sump – preliminary investigating

### **NEXT MEETING:**

- March 24, 2016

**ADJOURNMENT: Meeting was adjourned at 5:54**



**NORMA ST**

**SANDERS ST**

**CHINA LAKE BLVD**

**FELLSPAR AVE**

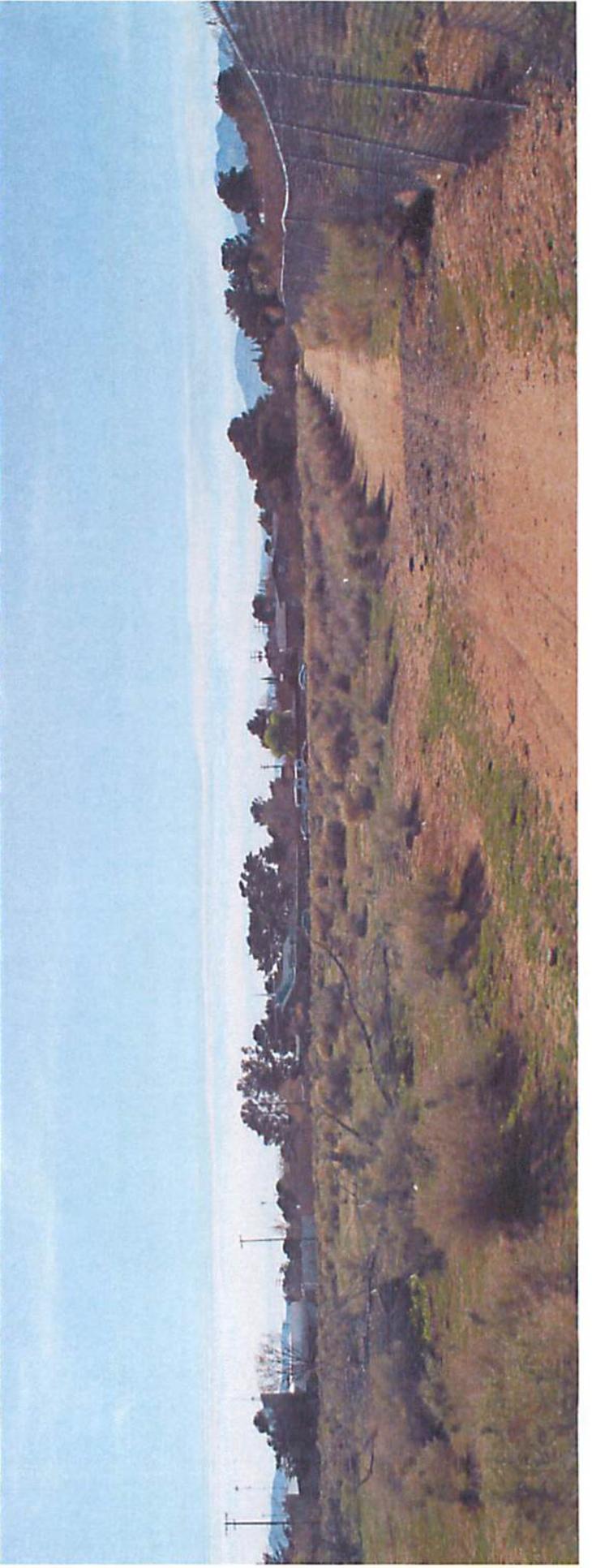
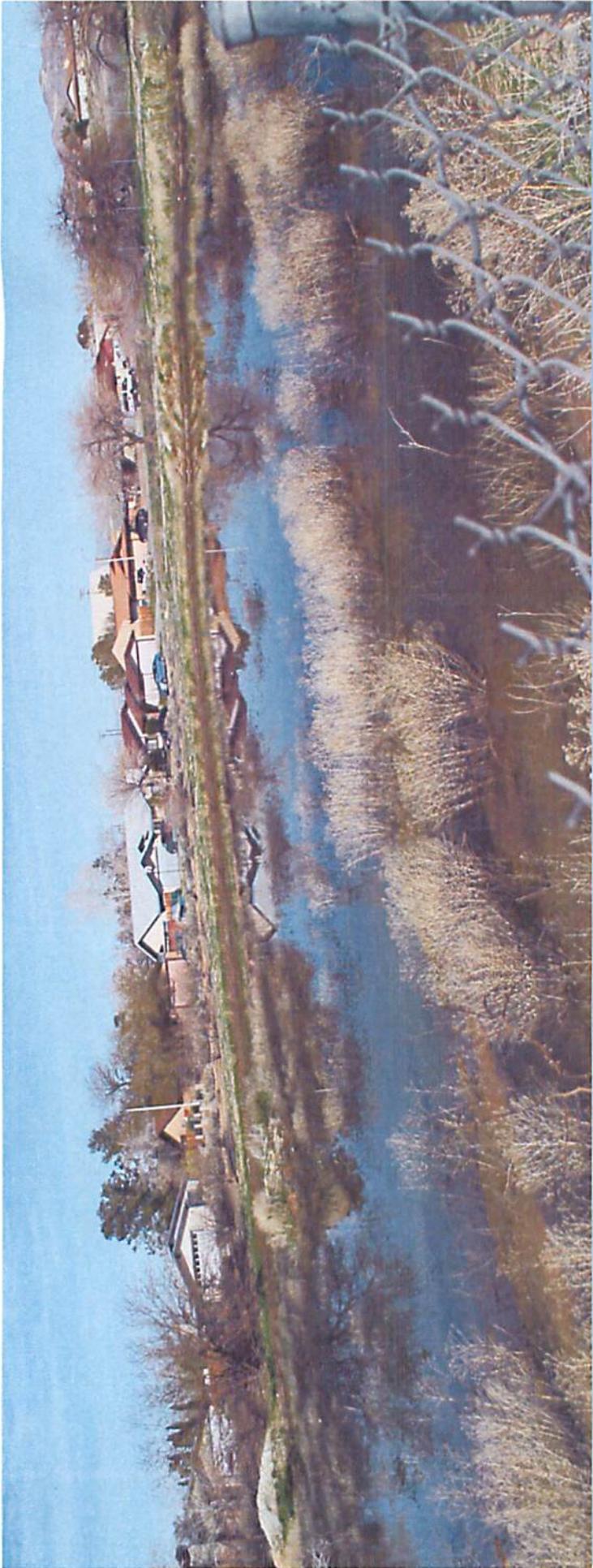
**LAS FLORES AVE**

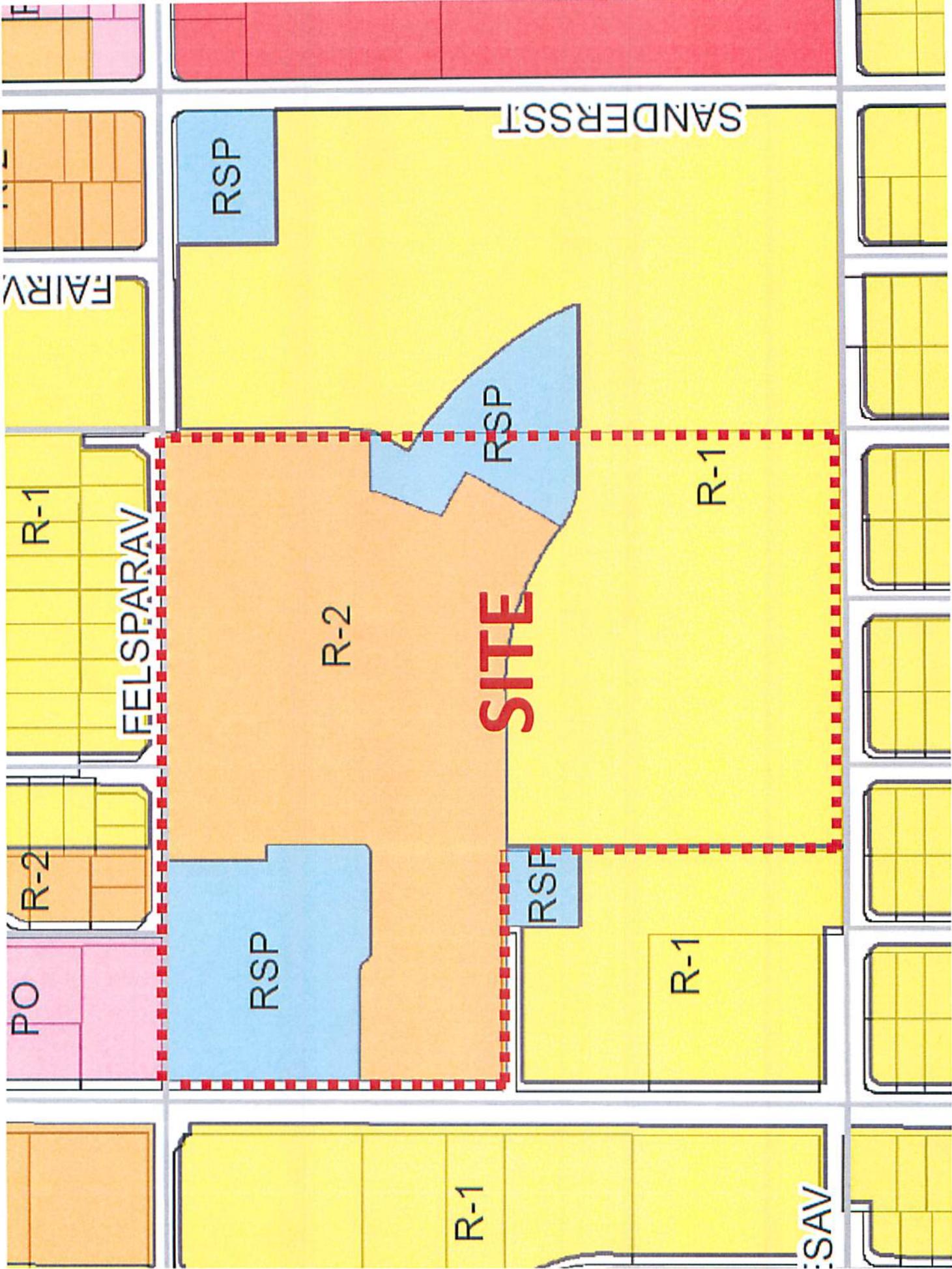
**32 Acre SITE**

**18 Acre SITE  
(not for sale at  
this time)**

**HOME DEPOT**

**SUMP**





F

FAIRVIEW

FAIRVIEW

R-1

FELSPARAV

R-2

SITE

R-2

PO

RSP

R-1

RSF

R-1

R-1

RSP

RSP

SANDERS ST

SAV



If flood insurance is available in this community, contact the National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 1000'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1045E

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**KERN COUNTY,**  
**CALIFORNIA**  
**AND INCORPORATED AREAS**

PANEL 1045 OF 4125

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
KERN COUNTY	000075	1045	E
ridgecrest, city of	000081	1045	E

Note to User: The Map Number shown below should be used when passing map orders. The Community Number shown above should be used on insurance applications for the subject community.

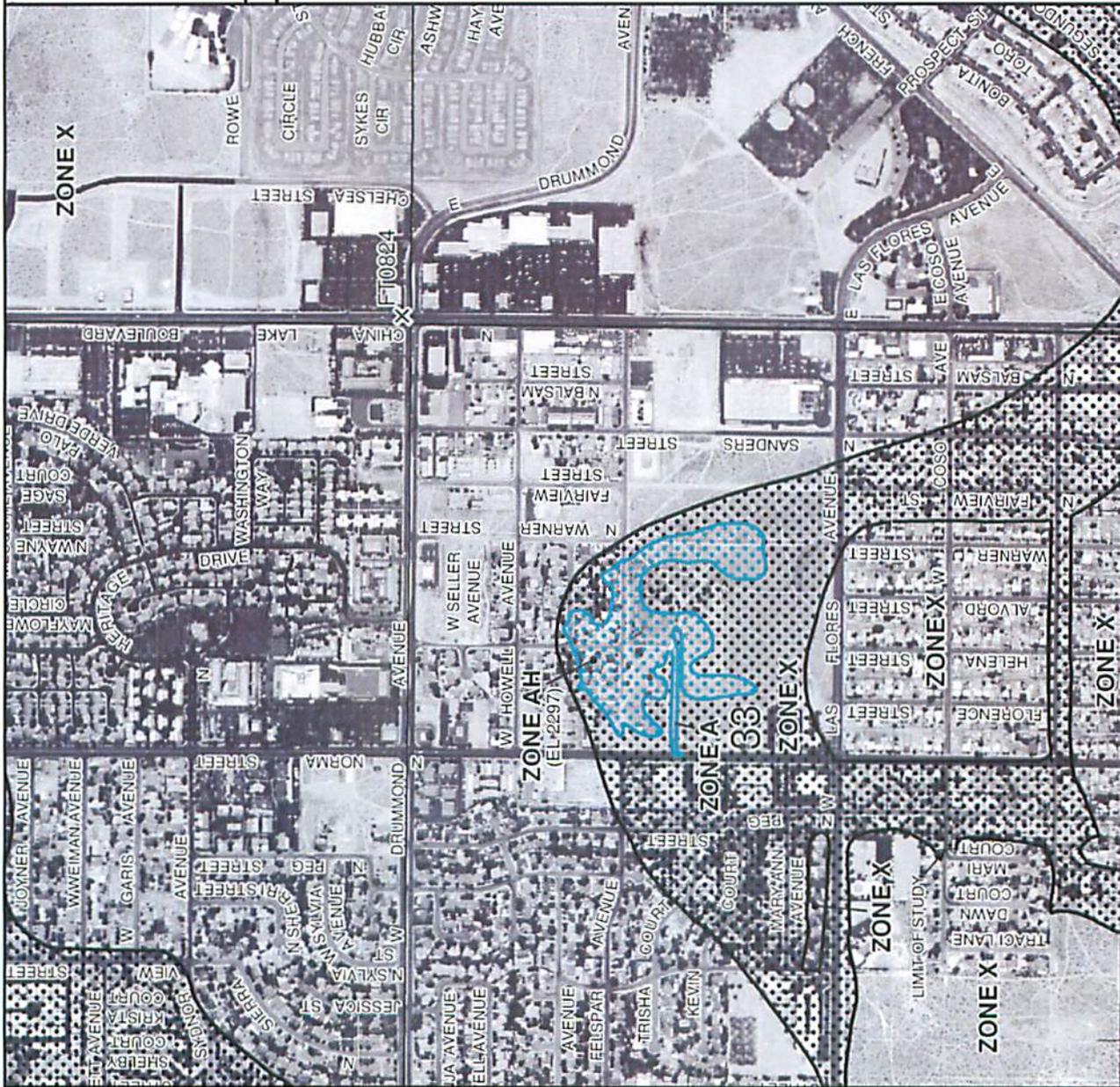


MAP NUMBER  
06029C1045E

EFFECTIVE DATE  
SEPTEMBER 26, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



Alternative 4 requires construction of large and expensive box culverts in Mahan St to convey flow between Graaf Ave and Inyokern Rd. As an option to the use of the Mahan St alignment, Alternative 5 includes a detention basin for the Mahan Channel. There are two potential sites on the northeast and southeast corners of the intersection of Mahan St and Sydnor Ave. Each site is about 8.2 acres (600 ft by 600 ft). The total volume of the Ridgecrest Wash 100-year hydrograph at this location is about 860 acre-feet, with a peak of 2,380 cfs. Providing retention storage of 101 acre-feet will reduce the peak flow downstream to about 1,500 cfs. This can be accomplished with a maximum retention basin depth of 17 feet (including 2 feet of freeboard), and will significantly reduce the required size of the downstream channel and storm drain.

A preliminary cost estimate showed that including the detention basin in Alternative 5 provides about a 19 percent savings over the all-conveyance Mahan Channel option in Alternative 4. However, it is still slightly more expensive than the detention option for the Brady Channel in Alternative 2, due to the channel lining for the Mahan Channel which is still used upstream of the detention basin.

#### **5.4 WEST CHINA LAKE DRAINAGE BASIN**

Alternatives in the West China Lake Drainage Basin rely on two primary facilities: the French Avenue Channel and the Norma/Felspar sump area. The former is an existing facility with more than adequate capacity for the naturally tributary ultimate condition flows; the latter is a small existing sump area which will be expanded in Alternative 2 to accommodate Master Plan flows.

Facilities in the West China Lake Drainage Basin alternatives are summarized in Table 5-2.

##### **Alternative 1**

This is the All Conveyance Alternative. In this alternative, drainage to the Norma/Felspar sump area is collected in main storm drains in Norma St both north and south of the basin inlet off of Norma Street (WCL-02 to WCL-03) and from a small portion of the Ridgecrest Wash Drainage Basin (subareas RCW270 and RCW280). Drains vary in diameter from 42 to 72 inches. To convey the drainage from RCW270 and RCW280 to the sump area site, a storm drain must be constructed in Las Flores Ave from Downs St to Norma St (WCL-09). The inlet channel off of Norma St (presently 16 feet wide and 3-4 feet deep) must be deepened to 7 feet in order to accept the storm drains. The existing fenced right-of-way for this channel is about 30 feet wide. If this is maintained with a 7-foot channel depth and the minimum unlined channel bottom width of 8 feet, then the side slopes of the channel must be steepened to 1.35:1. Under the proposed design criteria, this requires concrete or gunite lining for slope stability. Gunite is used for cost estimating purposes. Inlets to the sump area are also provided off of Las Flores Ave and Felspar Ave (WCL-07 and WCL-08). The inlet from Las Flores Ave is an unlined 8'w x 3.5'd channel with 3:1 side slopes; it traverses the currently open land between Las Flores and Felspar, but will require

acquisition of a 37 foot wide strip of right-of-way including an 8-foot wide access road. The Felspar inlet will be a 30-inch storm drain.

All the inflow to the Norma/Felspar sump area will be conveyed to the east via conduits or channels. The Felspar inlet ties into the Norma inlet which, in turn, ties into the Las Flores inlet just before it joins the Felspar outfall, an 84" RCP (WCL-12). The Felspar outfall continues due east across China Lake Blvd to French Ave, where it becomes an 8.5'w x 8.5'd channel with 2:1 side slopes. An unlined open channel option was investigated in place of the 84" RCP. However, because the headworks of the pipe is in the sump area, there is high ground between the pipe inlet and outlet. This would require a maximum channel depth of 23 feet, which with 3:1 side slopes would necessitate a channel right-of-way width of up to 171 feet. This was not considered to be a reasonable alternative for this area. Nonetheless, due to the lack of surface improvements along the proposed pipeline alignment, cast-in-place concrete pipe can be used to minimize the cost of this facility.

The southern portion of the West China Lake Drainage Basin drains to the French Avenue Channel. This alternative includes a storm drain in French Ave between Balsam Ave and the channel in order to convey the flow under China Lake Blvd (WCL-10). This facility is a 66-inch RCP, and replaces a 30-inch CMP. To accept a drain of this larger size, the French Avenue Channel invert must be lowered by up to 4 feet over a length of 600 feet.

## **Alternative 2**

In this alternative, drainage to the Norma/Felspar Retention Basin is collected in the same manner as drainage was collected at the sump area in Alternative 1. These facilities include the main storm drains in Norma St both north and south of the basin inlet off of Norma St (WCL-02 to WCL-03) and the storm drain in Las Flores Ave from Downs St to Norma St (WCL-09). An option was considered in which the runoff from subareas RCW270 and RCW280 was directed to the Downs storm drain in the Ridgecrest Wash Drainage Basin, and the West China Lake Drainage Basin facilities were sized to handle only local runoff. However, preliminary cost estimates indicated that it is more cost-effective to accommodate the RCW270 and RCW280 flows in the West China Lake drainage system and allow the Downs storm drain to be reduced in size.

As with Alternative 1, the inlet channel off of Norma St (WCL-02) must be deepened to 7 feet in order to accept the storm drain, and the sides must be lined with concrete due to the steep side slopes required to keep the channel in the existing right-of-way. The inlets to the retention basin off of Las Flores Ave and Felspar Ave (WCL-07 and WCL-08) from Alternative 1 are also used for Alternative 2. It is noted that the lengths of some of the inlet facilities to the retention basin are slightly different than those for Alternative 1, due to the configuration of the basin.

The retention basin (WCL-01) is located in a 5-acre parcel which is expected to be acquired by the City, at the site of the existing Norma/Felspar sump area. To accommodate the full 25-year inflow (including diversions from

**TABLE 5-2 (cont'd)**  
**WEST CHINA LAKE DRAINAGE BASIN**  
**ALTERNATIVE DRAINAGE IMPROVEMENTS**

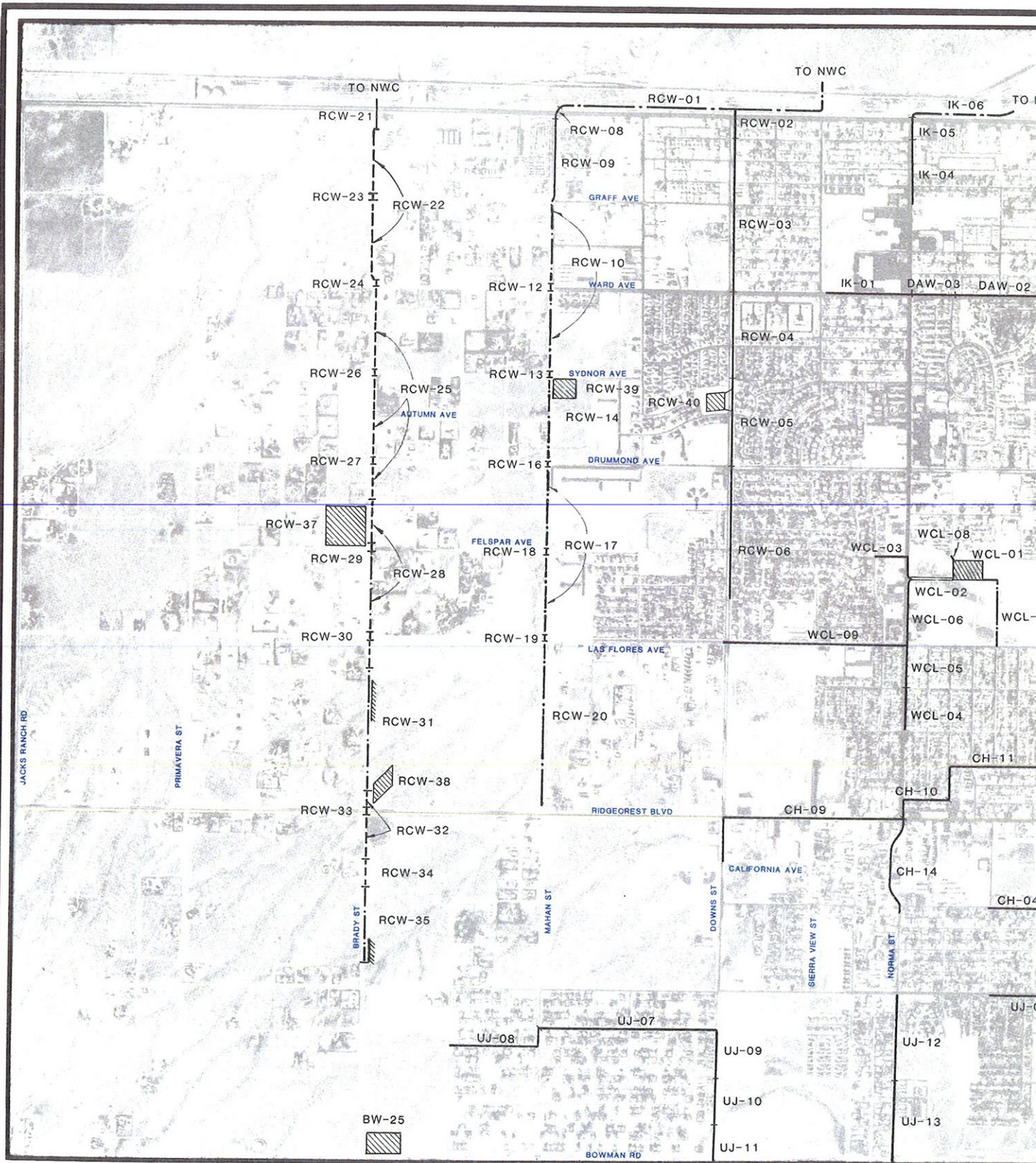
FACILITY NUMBER	DESCRIPTION	LENGTH (ft)	DESIGN FLOW (cfs)	DESIGN FREQUENCY (yr)	COMMENTS
<b>Alternative 2 - Detention</b>					
WCL-01	RETENTION BASIN - 55 AF 5 acres, 14' deep no outlet or spillway	-	460 inflow 0 outflow	25	At Norma and Felspar; expand present sump area
WCL-02	CHANNEL - 8'w x 7'd x 1.35:1 gunite sides no new R/W	650	300	25	Norma Inlet Channel
WCL-03	RCP - 54"	800	96	10	Norma North Drain
WCL-04	RCP - 42"	700	71	10	Norma South Drain - Argus to Coso
WCL-05	RCP - 48"	650	95	10	Norma South Drain - Coso to Las Flores
WCL-06	RCP - 72"	1,000	250	10	Norma South Drain - Las Flores to Outfall
WCL-07	CHANNEL - 8'w x 3.5'd x 3:1 unlined R/W = 37'	1,200	63	25	Las Flores Inlet Channel
WCL-08	RCP - 30"	200	23	10	Felspar Inlet Drain
WCL-09	RCP - 54"	2,750	150	10	Las Flores Drain
WCL-10	see CH-12				
WCL-11	see CH-13				

TABLE 6-3 (cont'd)

## COST ESTIMATES FOR IMPROVEMENT ALTERNATIVES

Description: WEST CHINA LAKE BASIN

FACILITY NUMBER	ITEM	***** ALTERNATIVE 2 - DETENTION *****					COMMENTS
		TYPE	QUANTITY	UNIT COST	TOTAL	PROJECT TOTAL w/ CONTINGENCIES	
WCL-01	RET. BASIN (55 AF)						Retention Basin - expand existing sump in park site
	Excavation	N/A	89,200	2.03	181,076		
	Dikes						
	Conveyance						
	Spillway						
WCL-01	Land Acquisition	R1	4.50	150,000	675,000		
	Landscaping	N/A	5	15,300	76,500		
	Subtotal				932,576	1,398,864	
WCL-02	CHANNEL (8'w x 7'd x 1.35:1)						Norma Inlet Channel  sides only
	Land Acquisition						
	Excavation	N/A	1,930	3.50	6,755		
	Lining	Gunite	1,700	36.00	61,200		
	Drop Structures						
	Subtotal				67,955	101,933	
WCL-03	RCP	54	800	166	132,800	199,200	Norma North Drain
WCL-04	RCP	42	700	121	84,700	127,050	Norma South Drain - Argus to Coso
WCL-05	RCP	48	650	142	92,300	138,450	Norma South Drain - Coso to Las Flores
WCL-06	RCP	72	1,000	241	241,000	361,500	Norma South Drain - Las Flores to Outfall
WCL-07	CHANNEL (8'w x 3.5'd x 3:1)						Las Flores Inlet Channel
	Land Acquisition	R1	1.02	150,000	153,000		
	Excavation	N/A	2,880	3.50	10,080		
	Lining						
	Drop Structures						
	Subtotal				163,080	244,620	
WCL-08	RCP	30	200	50	10,000	15,000	Felspar Inlet
WCL-09	RCP	54	2,750	166	456,500	684,750	Las Flores Drain
WCL-10	In Church Avenue System (CH-12)						



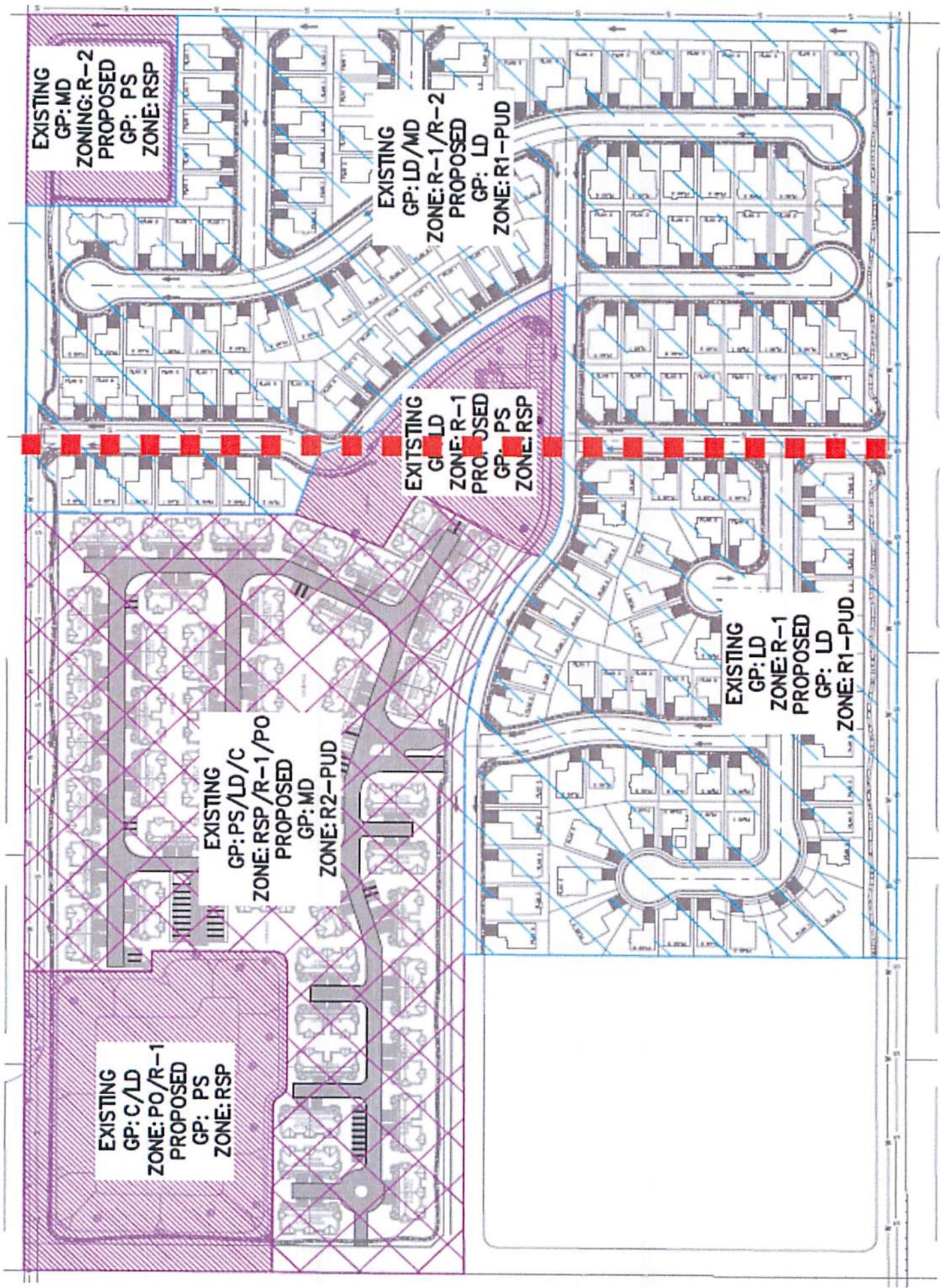
**JMM** James M. Montgomery  
 Consulting Engineers Inc.



30 Corporate Park Suite 310 Irvine, California 92714

# CITY OF RIDGECREST MASTER DRAINAGE PLAN





EXISTING  
GP: MD  
ZONING: R-2  
PROPOSED  
GP: PS  
ZONE: RSP

EXISTING  
GP: LD/MD  
ZONE: R-1/R-2  
PROPOSED  
GP: LD  
ZONE: R1-PUD

EXISTING  
GP: LD  
ZONE: R-1  
PROPOSED  
GP: PS  
ZONE: RSP

EXISTING  
GP: LD  
ZONE: R-1  
PROPOSED  
GP: LD  
ZONE: R1-PUD

EXISTING  
GP: PS/LD/C  
ZONE: RSP/R-1/PO  
PROPOSED  
GP: MD  
ZONE: R2-PUD

EXISTING  
GP: C/LD  
ZONE: PO/R-1  
PROPOSED  
GP: PS  
ZONE: RSP