

Y O L O C O U N T Y A I R P O R T

*Aviation Advisory Committee,
West Plainfield Advisory Committee on Airport Development*

MINUTES

Lillard Hall, Yolo County Airport, 24905 County Road 95
Thursday, June 24, 2004

Members in Attendance: Jim Belenis, Stuart Buchan, Doug Kinkle, Ken Price, Roy Kanoff

Members Absent: Peter Defty, Chris Foe

Others in Attendance: Yolo County Board of Supervisor Lynnel Pollock,
Members of the community

Yolo County Staff: David Daly, Airport Manager

Call to Order

The meeting commenced at 7:05 p.m.

1. Approval of Agenda

The Agenda was approved by the members present.

2. Public Comments

None

3. Approval of Minutes

The Minutes of February 17, 2004 were approved by the members present as modified to reflect attendance by member Jim Belenis.

4. Status of Capital Improvement Projects.

Staff gave a status report on capital improvements including new runway lights, water well, and hanger development.



5. ~~FY 2004 – 2005 FAA Airport Improvement Program grant award for design of taxiway lights, two aircraft run-up areas, and replacement rotating beacon tower.~~

Staff announced that the Airport received an FAA AIP grant award to design taxiway lights, two aircraft run-up areas, and replacement rotating beacon tower. Staff stated that AIP grant award to construct a portion of the identified projects was anticipated for next year.

6. Information on Airport Enterprise Fund Fiscal Year 2004 – 2005 Budget.

Staff presented the proposed Fiscal Year 2004 – 2005 Budget for the Yolo County Airport Enterprise Fund. Staff noted increases in appropriations to reflect increases in facility maintenance and capital improvement projects. Staff also reviewed the Airport's Annual Financial Statement prepared by the Yolo County Auditor-Controller.

7. Other airport matters

The committee generally discussed Airport weed control and possible park / picnic area improvements adjacent to the Yolo County hangers.

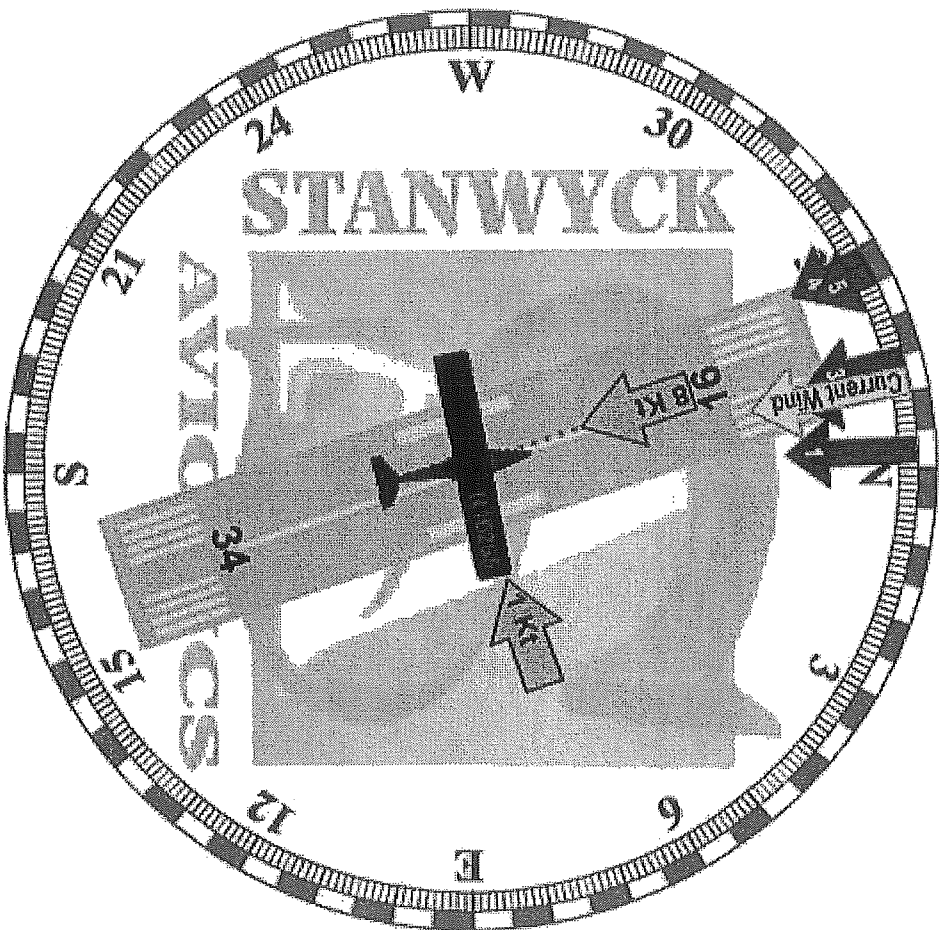
Adjournment

The meeting was adjourned at approximately 7:50 p.m.



Cal Aggie Flying Farmers - University Airport 005 - AWOS

University Airport, CA 1005	
17 FEB 05	22:49 Zulu
Wind Direction: 347	↑
Wind Speed: 08	↑
Wind Gust: N/A	
Wind Variable: N/A	
Altimeter: 29.83	↑
Dens Alt: N/A	↓
Elev: 67	
Temp: 51(F), 15(C)	↑
Dwpt: 57(F), 14(C)	↑
Wind Chill: 55 F	
Relative Humidity: 90%	↑
Ceiling: BKN090	
Visibility: 10	
Flight Weat: N/A	
POP/N: N/A	
Remarks: N/A	



22:49 ZULU Wind 347 at 08 Knots, Altimeter 29.83

METAR K005 172249Z AUTO 36008KT 10+SM BKN090 16/14 A2983 A02

- [Weather](#)
- [Wind Direction](#)
- [Wind Speed](#)
- [Wind Gusts](#)
- [Altimeter](#)
- [Temperature/](#)
- [Relative Hum](#)
- [AWOS D.](#)
- [Last 60 Minu](#)
- [Last 48 Hour](#)
- [Additions](#)
- [Sacramento F](#)
- [SMP METAR](#)
- [NWS Aviation](#)

Software de
 Stanwyck Av
 102 Gardner
 Newburgh, 1
www.stanwyck
 (845)-56

UPDATE AND REVISION OF THE YOLO COUNTY AIRPORT DRAINAGE PLAN

BACKGROUND & INTRODUCTION

The U.S. Army Corp constructed the Yolo County Airport circa 1942 (**Attachment C**). The Airport's existing drainage facilities were constructed concurrently, and generally include a system of ditches and underground pipes that keep the Airport's runway and other primary facilities and premise drained during storm events.

Water from the Yolo County Airport drains primarily from west to east under the runway and main taxiway then into three open, west to east, drainage ditches which then all feed into a single north-south drainage ditch. This north-south ditch flows south to the southeast corner of the Airport. At this point, the water leaves the Airport through Pleasant Prairie Canal into the Airport Slough.

According to historical local knowledge, water flowing off the Airport created only very little areas of on Airport flooding; however, areas toward the Airport's east side now experiences flooding during certain storm events due to changes in the drainage system surrounding the Airport. Flooding in the low-lying areas around Yolo County Airport can occur in the winter months, particularly after a heavy or prolonged storm, or series of storms.

Subsequent to the Airport's construction, alterations to adjoining and nearby drainage facilities and other natural drainage patterns have occurred to the east of the Airport. These changes have resulted in water being unable to leave the Airport. Consequently, water backs up onto the Airport during certain storm events creating areas of flooding along the Airport's East Side. An aerial photograph taken January 23, 1997 that's found in **Attachment A** best shows this area of flooding. As a consequence, a 100-year Flood Plain area on a portion of the East Side of the Airport has been designated. This flood plain area is on the Airport and is undeveloped and annually farmed; however, is designated for long-term commercial / light-industrial development. In response to this flooding issue, an initial Drainage Plan for the Yolo County Airport was prepared in 1984 (**Attachment G**).

The generated storm water runoff from the Airport (**Attachment A**) needs to be properly managed. Additionally, construction in the 100-year floodplain could result in potential water quality impacts from increased runoff, erosion/sedimentation, and pollutants. As required by the Yolo County Airport Specific Plan EIR, further drainage and flood detention improvements are to be completed prior to construction within the subject 100-year flood plain area.

Note: The primary goal of this effort is to update the 1984 Yolo County Airport Drainage Analysis Plan and confirm the necessary flood control facility(s) for the purpose of detaining Airport runoff and removing the subject airport flood plain area from the 100-Year floodplain designation.

SUPPLEMENTAL BACKGROUND

Floodplains are defined by the Federal Aviation Administration (FAA) Advisory Circular 5050.4A, as "the lowland and relatively flat areas adjoining inland...waters, including...area[s] subject to a one percent or greater chance of flooding in any given year, i.e., the area that would be inundated by a 100-year flood". The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) can be found in **Attachment B** (FEMA Panel Number 060423-0555-C, 3/23/1990).

Since the completion of the 1984 Yolo County Airport Drainage Plan, several significant storms have caused flooding in the low-lying areas around the airport in 1995 in addition to heavy flooding during the winter of 1996-1997. Refer to **Attachment A** for an aerial photograph.

Please be advised that the following information and data is based on 1984 documentation, the accuracy of which is undetermined at this time will require the selected consultant to confirm and update as necessary:

According to the 1984 Yolo County Airport Drainage Plan, the airport drainage currently has an area of approximately one square mile, which produces 180 acre-feet of runoff and a peak flow of 170 cubic feet per second (cfs) for a 100-year, 24-hour storm event. According to the 1984 Drainage Plan, storage capacity within the existing airport drainage channels is the equivalent of 20 percent of the channel storage in the Airport Slough. This is located near the south end of the Airport between County Road 95 (along the West Side of the Airport) and the Rolling Acres subdivision (a rural subdivision located adjacent and to the east of the Airport). Under normal circumstances when storm water backs up onto the Airport, the Airport's storm water storage capacity provides an extra 20 percent capacity in Airport Slough between County Road 95 and the Rolling Acres subdivision. When the Airport's capacity to detain storm water is exceeded, as in a 100-year flood, the storm water outflow from the airport would have a significant impact on the capacity of Airport Slough.

PROJECT DESCRIPTION

The Yolo County Department of Planning and Public Works, Airport Division is seeking to update the 1984 Yolo County Airport Drainage Plan and confirm the necessary flood control facility(s) for the purpose of detaining Airport runoff and removing the subject area of flooding from the 100 Year Flood Plain designation. It is further expected that the update will include recommendations on future construction of flood detention facilities to detain surface water runoff from the Yolo County Airport and its flood prone areas.

The project includes the successful preparation and approval of:

1. Updated Yolo County Airport Drainage Plan;
2. Principle analysis regarding flood detention needs of surface water;
3. Proposed preliminary design plans and designated area for future construction of Airport flood water detention facility;
4. Preliminary design plans to remove the affected Airport property area from the Special Flood Hazard Area (SFHA); the area subject to inundation by the base (1-percent-annual-chance, or 100-year) flood by providing all necessary preliminary design and plan requirements for this to occur;
5. All necessary data and calculations to: 1) determine if the drainage plan and project identified therein will result in changes to the effective Base Flood Elevations (BFE's) or floodway in the area of the airport; and 2) to obtain a Conditional Letter of Map Revision (CLOMR) from FEMA.

This project should include research and analysis for design plans for a flood detention system for Yolo County Airport including past plans and available data. With consideration to the FAA including, AC 150/5320-5B, the following topics shall be discussed:

- 1) Rainfall Data (intensity/frequency)**
- 2) Study of Topographic Information (Attachment E)**
- 3) Airfield Boundary (Attachment D)**
- 4) Surface Flow & Drainage**
- 5) Computation, Collection, & Disposition of Runoff**
- 6) Analysis of the Current Airfield Drainage System (Attachment F)**
- 7) Preliminary design of a Drainage and Detention System**
- 8) Pollution Control and Maintenance of the System**

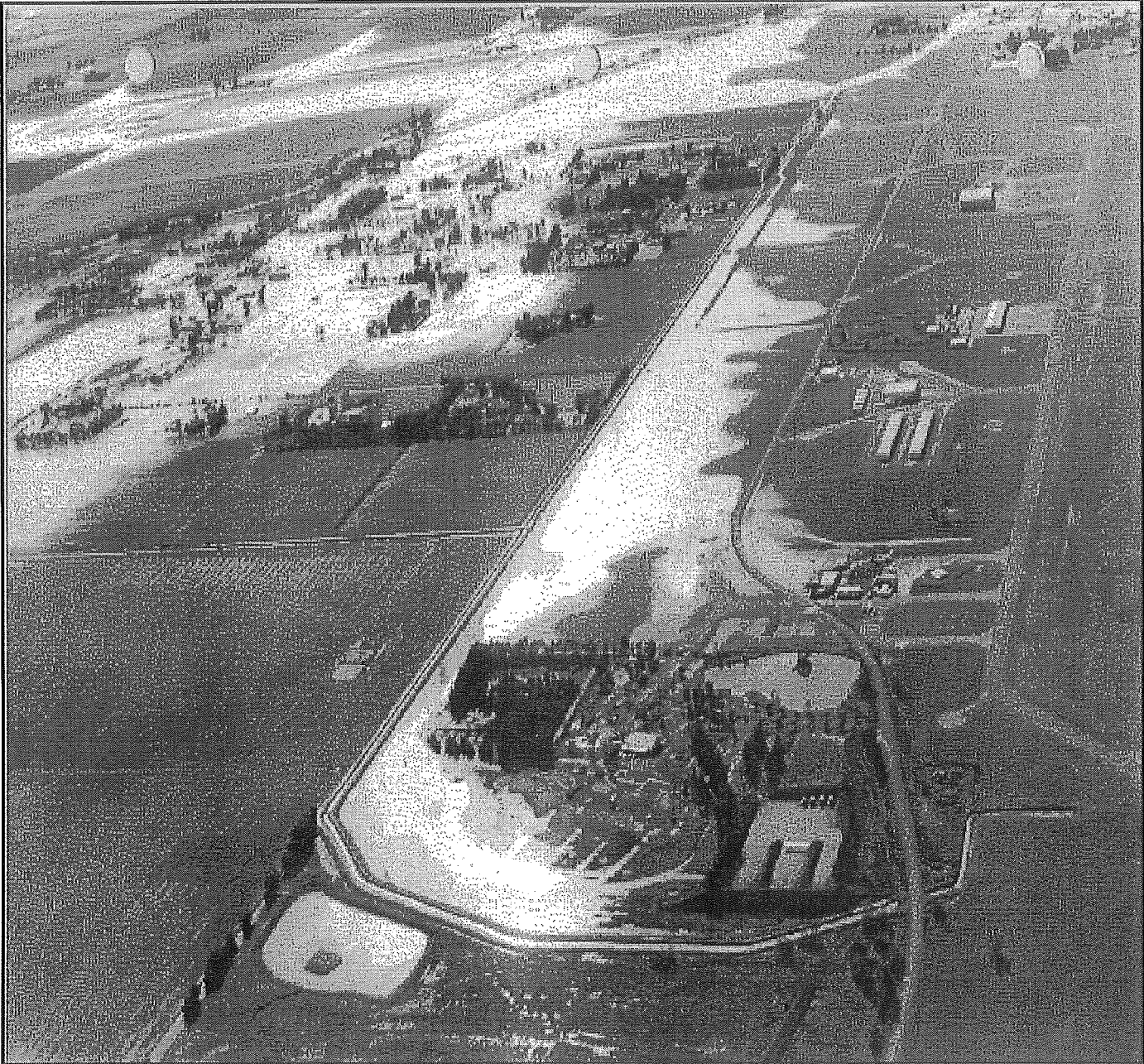
Note: The Yolo County Airport Preliminary Drainage Design Plans for a Flood Detention System must meet and satisfy all Planning and Public Works and Airport Division requirements including FAA Advisory Circular standards pertaining to design and construction including AC 150/5320-5B, *Airport Drainage*.

The proposal may include other services listed as itemized optional tasks, that in the firm's experience are necessary to complete this project, and that are not covered by this Request for Proposal (RFP). The maximum budget available for the update of the Yolo County Airport Drainage Plan is \$35,000.

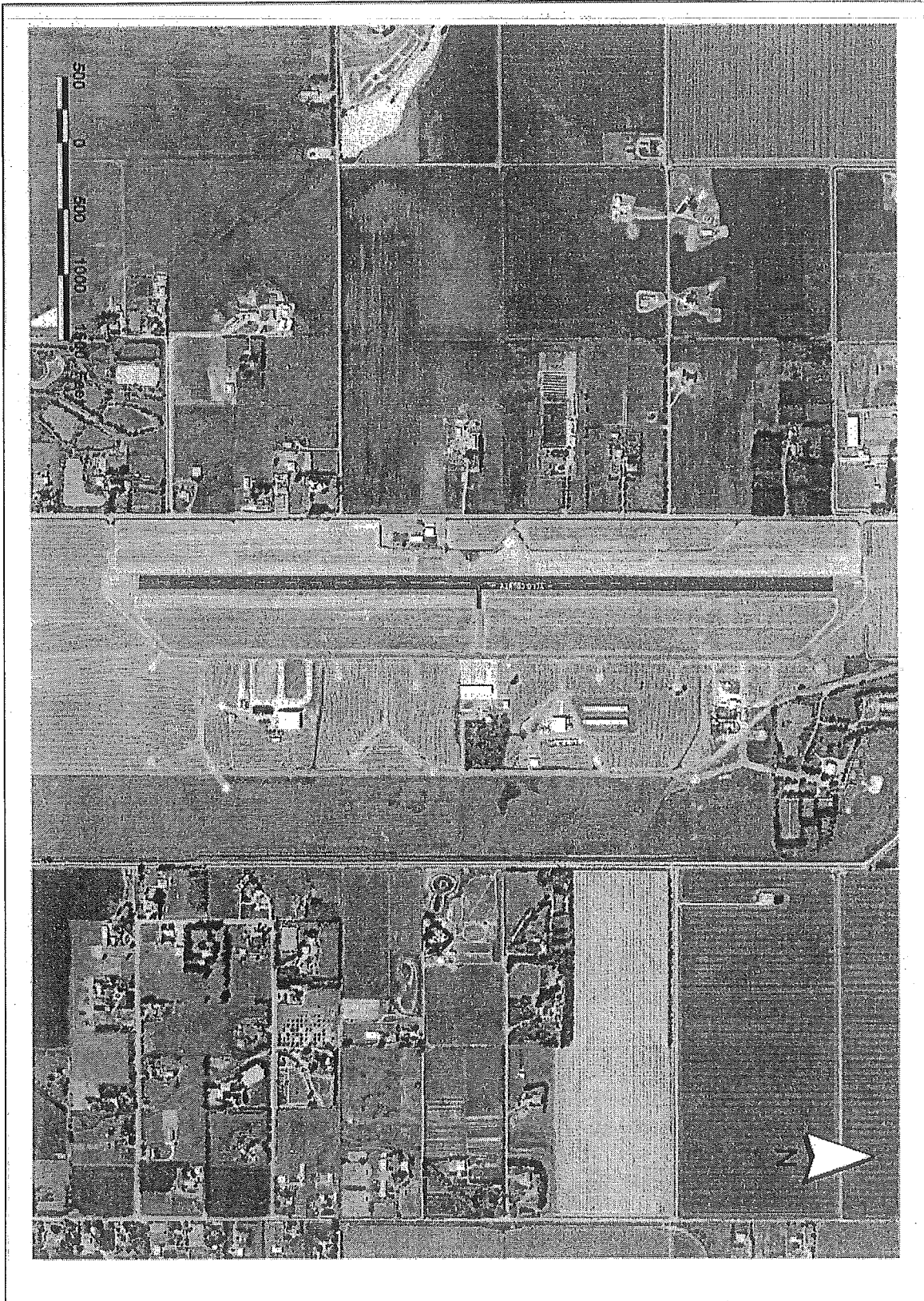
ATTACHMENTS

- A. Airport Aerial Flood Zone Map**
- B. FEMA Flood Insurance Rate Map (FIRM)**
- C. Yolo County Airport Aerial Photo**
- D. Yolo County Airport Layout Plan (ALP)**
- E. Yolo County Airport Contour Map**
- F. Proposed Storm Water Detention Basin (1984)**
- G. Yolo County Airport Drainage Plan (1984) pages 1-3**

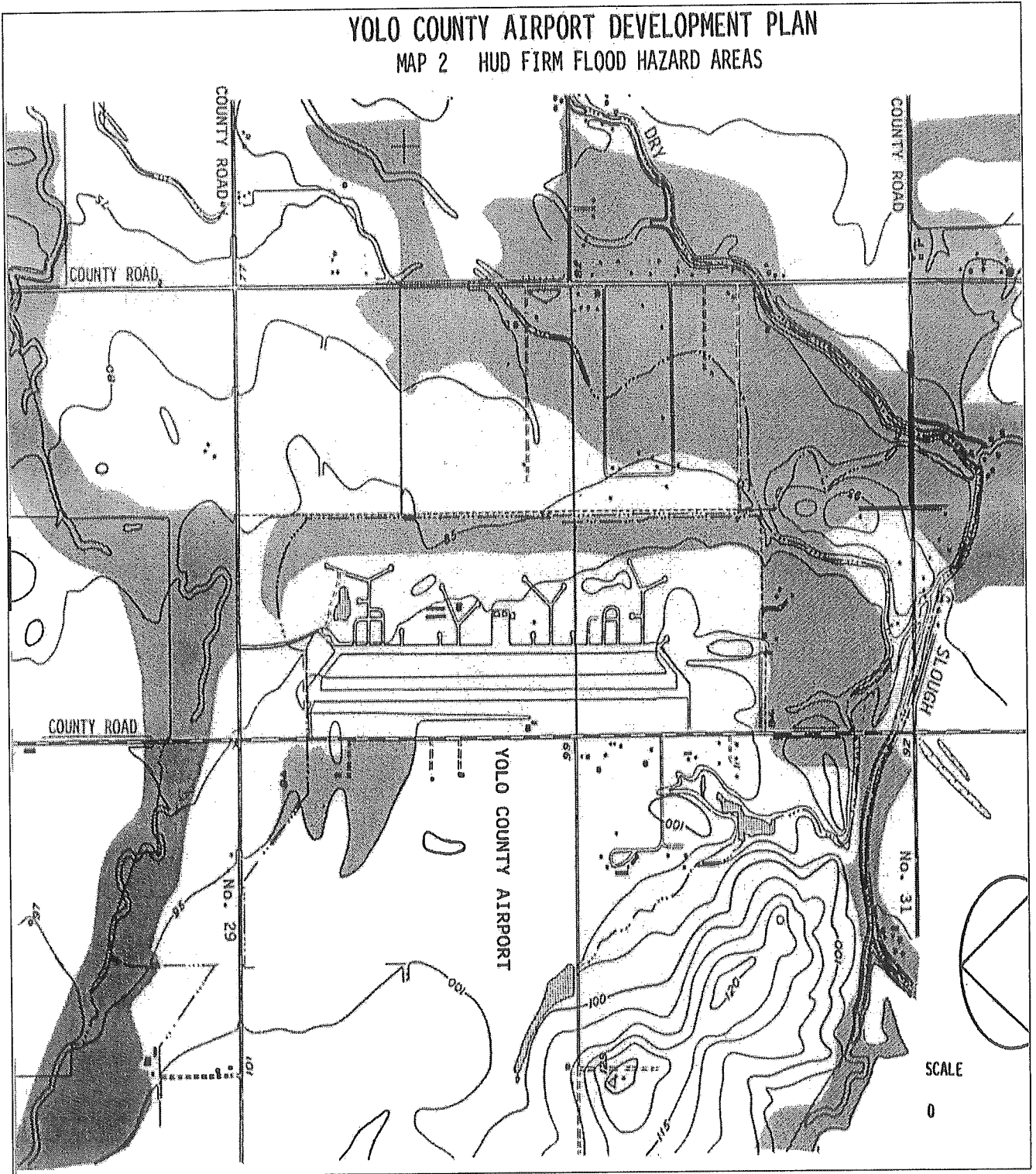
ATTACHMENT A. YOLO COUNTY AIRPORT FLOOD ZONE



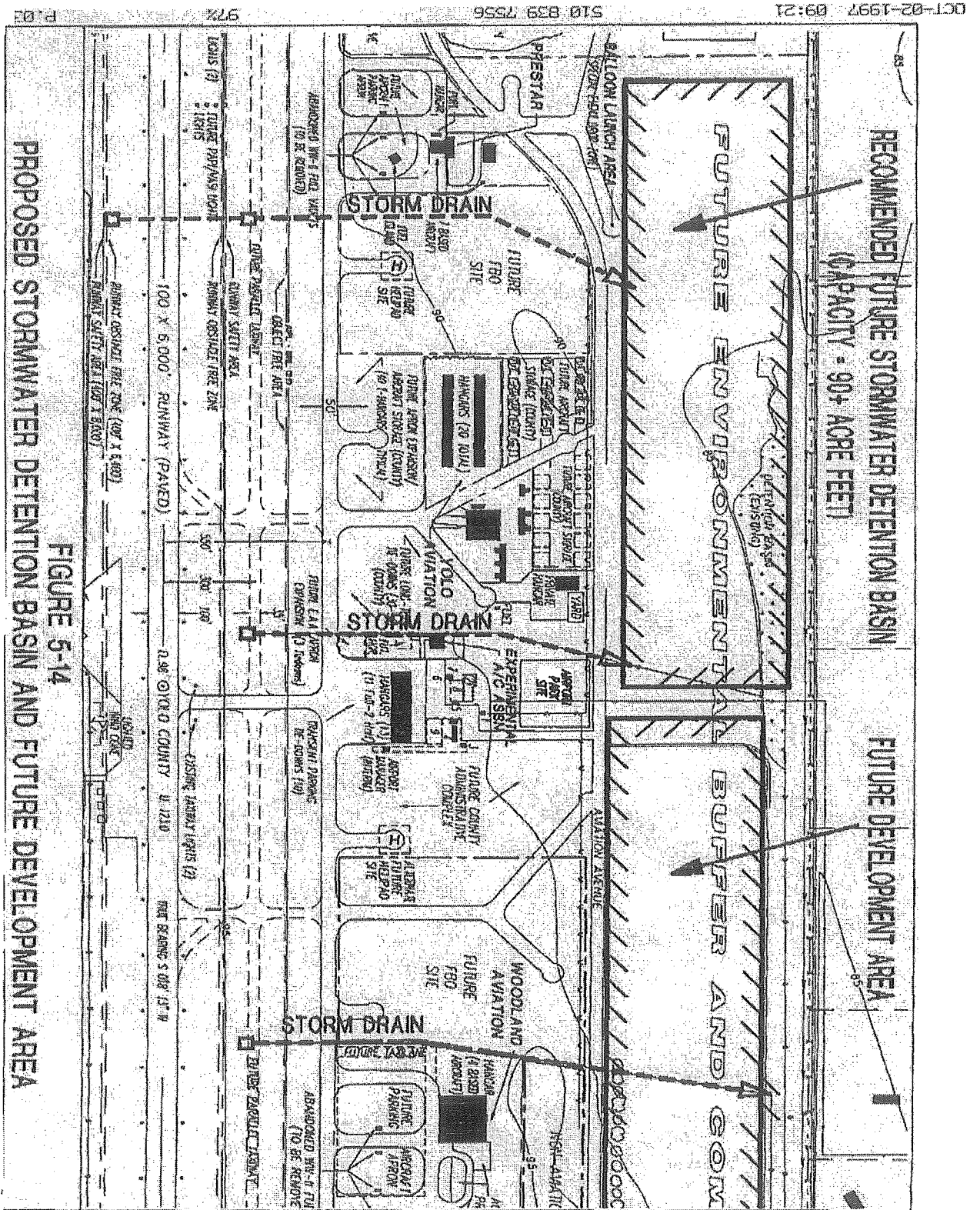
ATTACHMENT C. AERIAL PHOTO OF YOLO COUNTY AIRPORT



ATTACHMENT E. YOLO COUNTY AIRPORT CONTOUR MAP



Attachment F. Proposed Storm Water Detention Basin (1984)



PROPOSED STORMWATER DETENTION BASIN AND FUTURE DEVELOPMENT AREA

FIGURE 5-14

09:18 PM P&D CONSULTANTS
 09:21 09:21
 510 B39 7536
 97%

Attachment G. Yolo County Airport Drainage Plan (1984)

Page 1.

I. BACKGROUND

The eastern third of the Yolo County Airport is prone to flooding. A flood insurance study by the U.S. Department of Housing and Urban Development has identified lands in this area as being within the 100-year floodplain. Also, this area is subject to less severe and more frequent flooding.

The basic cause of the flooding is the relatively flat terrain. The present drainage from the airport follows a very flat, man-made course which causes the water to back up onto the low-lying areas of the airport. The general drainage pattern in Yolo County is for the water to flow easterly to the Yolo Bypass. At the airport, drainage has been diverted south thereby reducing the slope of its course since it now travels a greater distance for the same fall.

II. PURPOSE

The purpose of this study was to develop a drainage plan that would facilitate commercial development of lands within the Yolo County Airport without adversely impacting drainage and/or flooding along Airport Slough. ~~Drawings were to be provided for planning purposes only.~~

III. BASIS FOR DESIGN

The criteria and hydrology used in the design of the Airport Drainage Plan are summarized below:

Criteria

1. The level of protection specified for the parcels to be developed is that they shall not be flooded by a 100-year, 24-hour storm event.
2. The parcels to be developed shall be at least one foot higher than the 100-year floodplain.

Hydrology

A hydrologic analysis of the lands in the vicinity of the airport for a 100-year, 24-hour storm event shows the following:

1. The eastern portion of the airport property is poorly drained and is subjected to frequent flooding. Flood waters crest at about El. 86 and are maintained at about El. 84 for days at a time.
2. The airport drainage ditch along the airport's eastern boundary is essentially flat and, therefore, the height of the water in the adjoining Airport Slough affects flooding within the airport.
3. The drainage ditch and the culvert under Airport Road which convey drainage from the area west of the airport to the airport's eastern boundary are too small to convey the 100-year storm event.
4. Drainage from the airport constitutes approximately one-half the flow in Airport Slough just prior to its entering the residential development to the east.
5. Existing channel storage within the airport accounts for 20 percent of the channel storage in Airport Slough between the residential development and Road 95.
6. The airport drainage basin has an area of approximately one square mile, which produces 180 acre-feet of runoff and a peak flow of 170 cfs for a 100-year, 24-hour duration storm event.

7. Following the planned development of the airport, the runoff from 100-year, 24-hour duration storm event will increase the volume and peak flow to 210 acre-feet and 190 cfs, respectively.
8. The proposed drainage plan provides an initial 50 acre-feet of on-site detention storage which is enlarged to 90 acre-feet in the second phase, and reroutes drainage at a maximum of 80 cfs through the District's canal to Airport Slough.
9. The proposed plan will reduce flows in Airport Slough through the neighboring development.
10. Because of on-site storage which reduces high flows no adverse impacts are expected to occur along Airport Slough.