Important Notice:

Not Yet Approved by FEMA

Subject to Change per FEMA Review

CHANDLER / GILBERT
FLOODPLAIN DELINEATION STUDY
PHASE 2
Consolidated Canal Watershed

CONTRACT FCD 2002C023

TECHNICAL DATA NOTEBOOK

Volume 1
(Sections 1, 2 & 3,
Appendix A, B, & C)

October 2008
Revised November 2008

Prepared for:

Federal Emergency Management Agency
Risk Studies Division
Federal Insurance Administration
500 C Street, SW Room 422
Washington, DC 20472

Submitted by:

David Evans and Associates, Inc.
2141 E. Highland Avenue, Suite 200
Phoenix, Arizona 85016
(602) 678-5151

In association with:
Project Engineering Consultants, Ltd
2310 W. Mission Lane, #4
Phoenix, Arizona 85021
(602) 906-1901

on behalf of:
Flood Control District of Maricopa County
2801 W. Durango Street
Phoenix, Arizona 85009
(602) 506-1501

CHANDLER / GILBERT
FLOODPLAIN DELINEATION STUDY

PHASE 2

Consolidated Canal Watershed

CONTRACT FCD 2002C023

TECHNICAL DATA NOTEBOOK

Volume 1

(Sections 1, 2 & 3,
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Expires 03/31/2011

Submitted by:

David Evans and Associates, Inc.
2141 E. Highland Avenue, Suite 200
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Expires On 3-31-10

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Exp On: 3-31-10

Registered Professional Engineer (Civil) CERTIFICATE NO. 23969 FRANK EDWARD BROWN Date Signed 25 Nov 2008 ARIZONA, U.S.A.

Expires 03/31/2011

Registered Professional Engineer (Civil) CERTIFICATE NO. 25972 MICHAEL D. HEATON Date Signed 11.25.08 ARIZONA, U.S.A.

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EXHIBITS

(Volume 3)

EXHIBIT A DRAINAGE AREA BOUNDARY MAP
EXHIBIT B DRAINAGE FLOW PATH MAP
EXHIBIT C SOILS MAP
EXHIBIT D LAND USE MAP
EXHIBIT E HEC-1 SCHEMATIC
EXHIBIT F FLOODPLAIN DELINEATION WORK MAP AND ANNOTATED FIRM PANELS

Preface

This floodplain delineation study was conducted for the Flood Control District of Maricopa County (FCDMC) by David Evans and Associates, Inc. (DEA). The study area is divided into three (3) Phases. Phase 1 consists of the area between the East Maricopa Floodway and Eastern Canal, which results in floodplain delineation along the Eastern Canal. Phase 2 consists of the area between the Eastern Canal and the Consolidated Canal, which results in floodplain delineation along the Consolidated Canal, plus a portion of the Union Pacific Railroad once the canal crosses the railroad. Phase 3 consists of the area between the Consolidated Canal and Union Pacific Railroad, which results in floodplain delineation along the Union Pacific Railroad. Each Phase is further subdivided into north and south regions. This report addresses Phase 2 – South and North, Consolidated Canal Watershed.

DEA prepared the hydrologic and hydraulic analyses for Phase 2 South, and Project Engineering Consultants (PEC) prepared the hydrologic and hydraulic analyses for Phase 2 North. The boundary between North and South is Ray Road.

Section 1: INTRODUCTION

1.1 Purpose of study

The Chandler / Gilbert study area has experienced a tremendous amount of development since the original Gilbert – Chandler Flood Insurance Study (Reference 1) was performed in 1990. The purpose of this floodplain delineation re-study is to update the current floodplain boundaries within the Chandler / Gilbert Study area.

The information presented in this study will be used to update existing Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panels. The information will also be used by local and regional planners and floodplain administrators to further promote sound land use practices and floodplain development.

The Chandler / Gilbert study consists of approximately eleven (11) linear miles of floodplain delineation along the Eastern Canal between Baseline Road and Hunt Highway; approximately eleven (11) linear miles of floodplain delineation along Consolidated Canal or Union Pacific Railroad between Baseline Road and Hunt Highway; approximately six (6) linear miles along the Union Pacific Railroad (UPRR) from US 60 and between the Consolidated Canal and the Eastern Canal; and approximately twelve (12) linear miles along the Union Pacific Railroad between US 60 and Hunt Highway. This report addresses only the Phase 2 study area, which is the Consolidated Canal watershed.

1.2 Authority for study

DEA performed this study under contract with the Flood Control District of Maricopa County (FCDMC). DEA's Project Manager for this project is Frank Edward Brown, P.E., CFM. The contract number is FCD 2002C023. The FCDMC is located at 2801 W. Durango Street, Phoenix, AZ. 85009 (602) 506-1501. The Project Manager for the FCDMC is Kathryn Gross, M.A., CFM.

1.3 Location of study reach

The Chandler / Gilbert FDS, Phase 2 study area is located in southeastern Maricopa County, Arizona (see Figure 1.3.1 and Figure 1.3.2). The watershed encompasses approximately 30.96 square miles and is bounded by the Eastern Canal \ RWCD Extension Canal to the east, Consolidated Canal or the Union Pacific Railroad to the west, Baseline Road to the north and Hunt Highway alignment to the south.

The climate is semi-arid and precipitation is typically divided into two seasons of comparative rainfall depths: summer and winter. The summer storms are associated with warm, moist tropical air masses that enter the state from the Gulf of Mexico producing moderate to intense

afternoon and evening thundershowers. Winter precipitation originates from the Pacific Ocean and produces light to moderate precipitation over relatively large areas.

Figure 1.3.1 Location Map

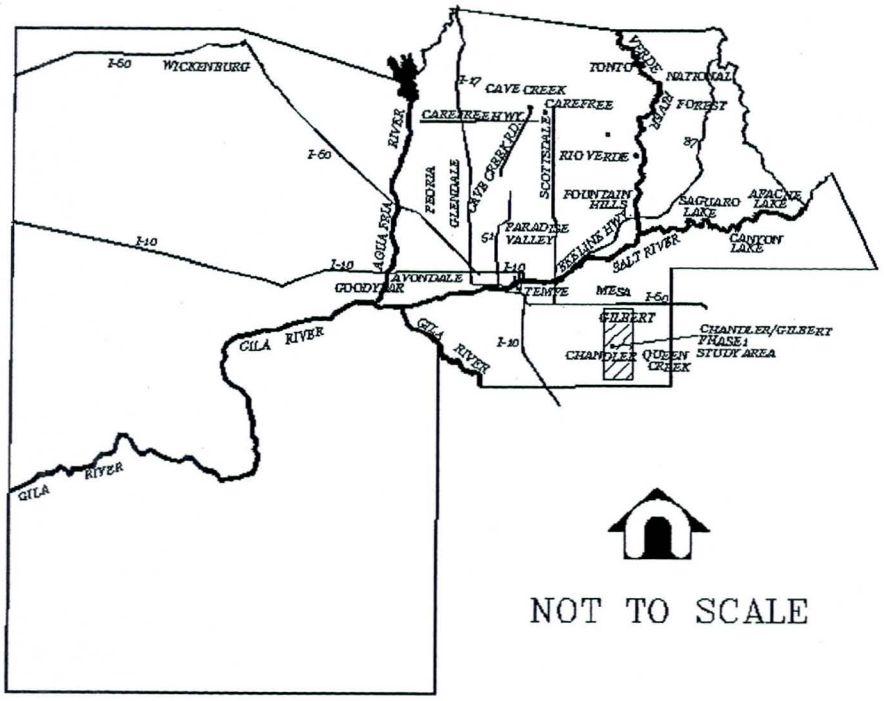
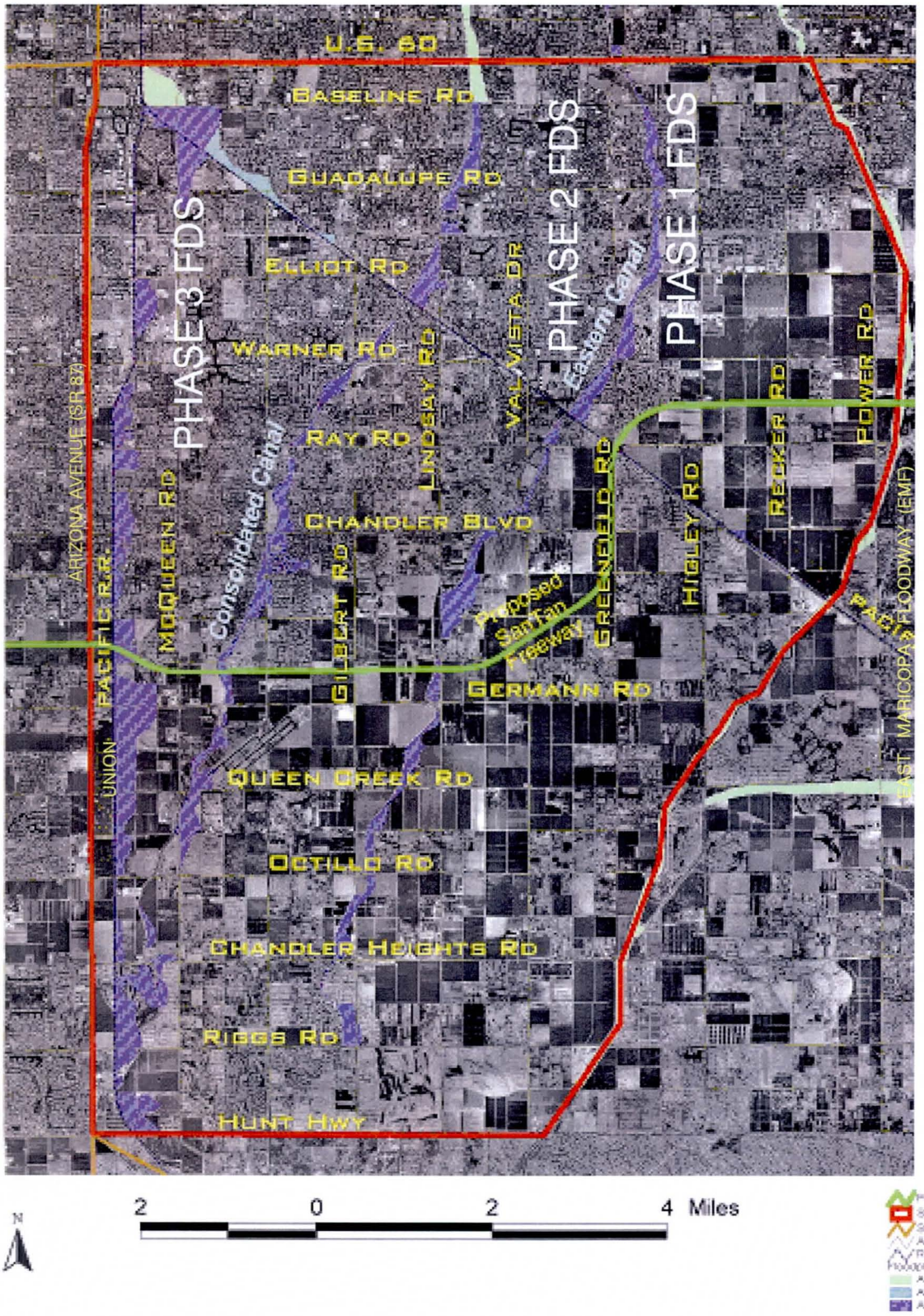


Figure 1.3.2 Vicinity Map



1.4 Methodology

1.4.1 Hydrology

The U.S. Army Corp of Engineers computer program HEC-1, Version 4.1, was used to determine the peak flows at structures, major road crossings, confluences and control features along the canals and railroads within the study area. Phase 2 was divided into two (2) sections, Phase 2-North and South, Consolidated Canal Watershed, with Ray Road as the boundary between the two sections. Separate HEC-1 models were prepared for each section. The watershed receives weir flow that spills across the Eastern Canal, which is the Phase 1 portion of this study, FEMA Case Number 08-09-1252P.

The preparation of the input data necessary for the analysis included sub-basin delineation, determination of drainage path lengths, precipitation calculations, soil texture classification for the calculation of rainfall losses, and overland and channel flow lengths and slopes to generate the hydrographs. The District's DDMSW Version 2.1.0 software was used to develop sub-basin and routing parameters. The sub-basin delineation was based on 10 foot contour mapping provided by the FCDMC. Rainfall depths for the 100-year, 6-hour and 24-hour storms were determined from NOAA Atlas 2 (see Appendix DS & DN.1, Volume 2). The Clark Unit Hydrograph method was utilized to develop the unit hydrographs for each sub-basin. Soil and land use classifications were utilized to determine rainfall losses using the Green and Ampt Loss procedures. Normal-Depth routing was applied for routing of flow, whereas storage routing was applied for areas of ponding.

Much of the floodplain within this study area consists of ponding areas along the upstream side of canals and other earthen embankment barrier structures. Stage-storage-discharge rating tables for these ponding areas were incorporated into the HEC-1 models and the resulting high-water elevations were used to map the extent of the floodplain. Refer to Sections 4S and 4N, Volume 2, for the hydrologic analyses.

1.4.2 Hydraulics

The hydraulic analyses for Phase 2 were limited to the storage routing within the HEC-1 modeling. Floodplain consists of ponding behind the Consolidated Canal or the Union Pacific Railroad, with pond to pond overtopping. Exhibit F, in Volume 3, depicts the floodplain extents and flood zones. Refer to Sections 5S and 5N, Volume 2, for a more detailed description of the hydraulic analyses.

1.5 Study Results

1.5.1 Final Hydrologic Results

Separate models for Phase 2 South and Phase 2 North are generated for the 100-year, 6-hour and 24-hour storm duration events. The 6-hour model resulted in higher ponding water surface elevations and flow rates for Phase 2 North and a portion of Phase 2 South. The 6-hour storm results are, therefore, used to map the floodplain within Phase 2 North and for a portion of Phase

2 South, namely that area north of the Santan Freeway. The 24-hour results are used to map the floodplain south of the Santan Freeway within Phase 2 South.

The detailed floodplain delineation is shown in the reduced-scale maps in Section 5S & 5N, located in Volume 2, and in full-scale maps contained in Exhibit F, located in Volume 3 of this TDN. The results of this study were presented to the public during an Open House held on 25 September 2008. The final floodplain maps were displayed, and their results discussed as needed with Phase 2 property owners. The Public Notification documents are found in Appendix B.6 in Volume 1.

1.5.2 Verification of Results

The peak flow rates generated as runoff at the sub-basin level for Phase 2, Consolidated Canal, are verified using the methods described below:

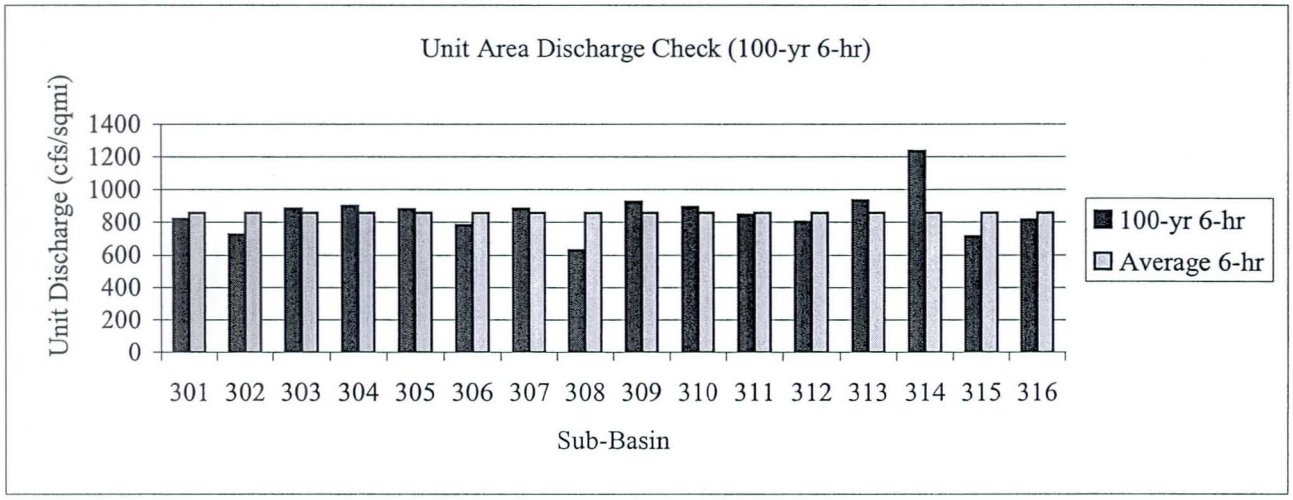
- The Phase 2 results are compared internally, in the form of flow rate per square mile of drainage area, for all of the Phase 2 subbasins. The unit discharge rates appear reasonable for the tributary area and considering the flow or runoff volume diversions. The comparison data summary sheets with the details of the results of these comparisons, one each for the North and South regions, are located on the next pages.

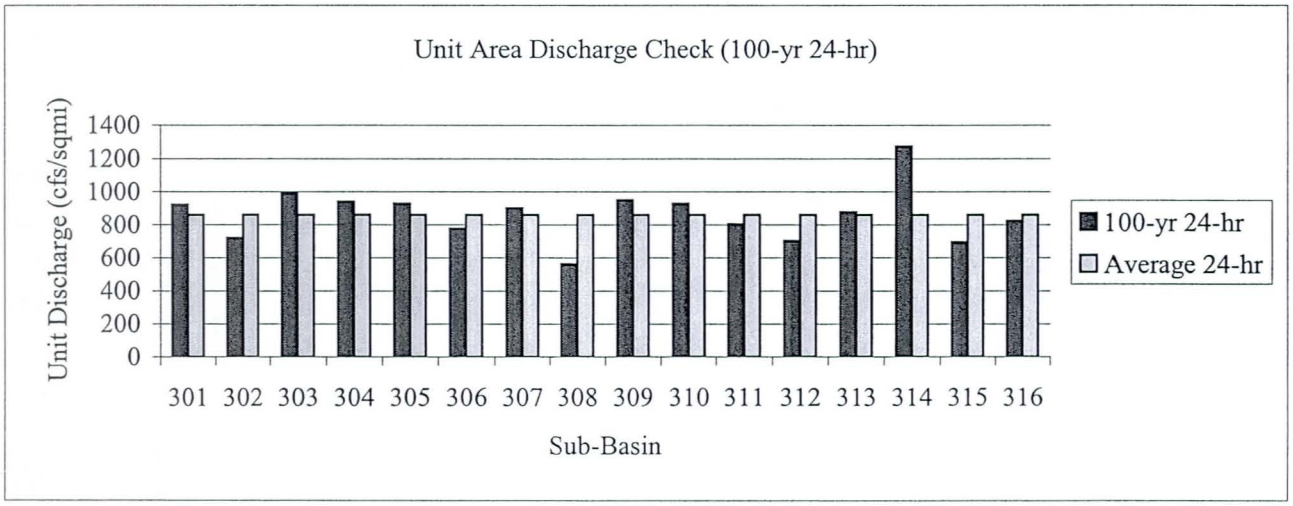
- The Phase 2 results were plotted against three envelope curves; USGS Comparative Graphs for Central Arizona (12) Region, Malvick's Comparative Graph, and Boughton's Comparative Graph. The FCDMC DDMSW program was used to produce the graphs. The value of unit discharge vs. drainage area were plotted. These plots are located on the following pages. Graphs from the Phase 2, North HEC-1 model are labeled as such. Graphs labeled MARI0040_SM are the results from the Phase 2 South HEC-1 model for the 24-hour storm, while MARI0040_SM6HR is used to identify the 6-hour storm results.

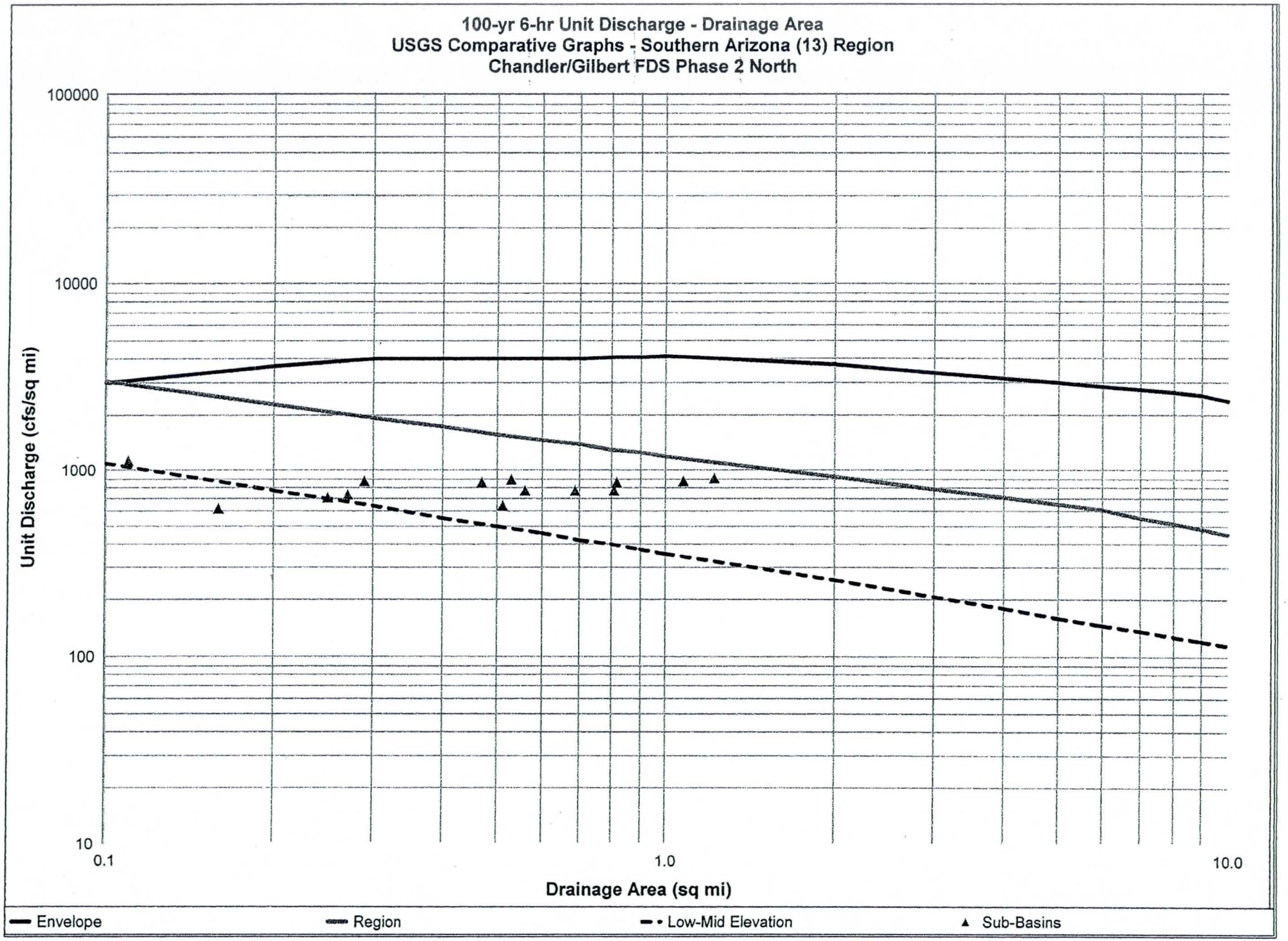
Generally, the results fall below the envelope curves, which are explained by the very flat slopes and retention diversions.

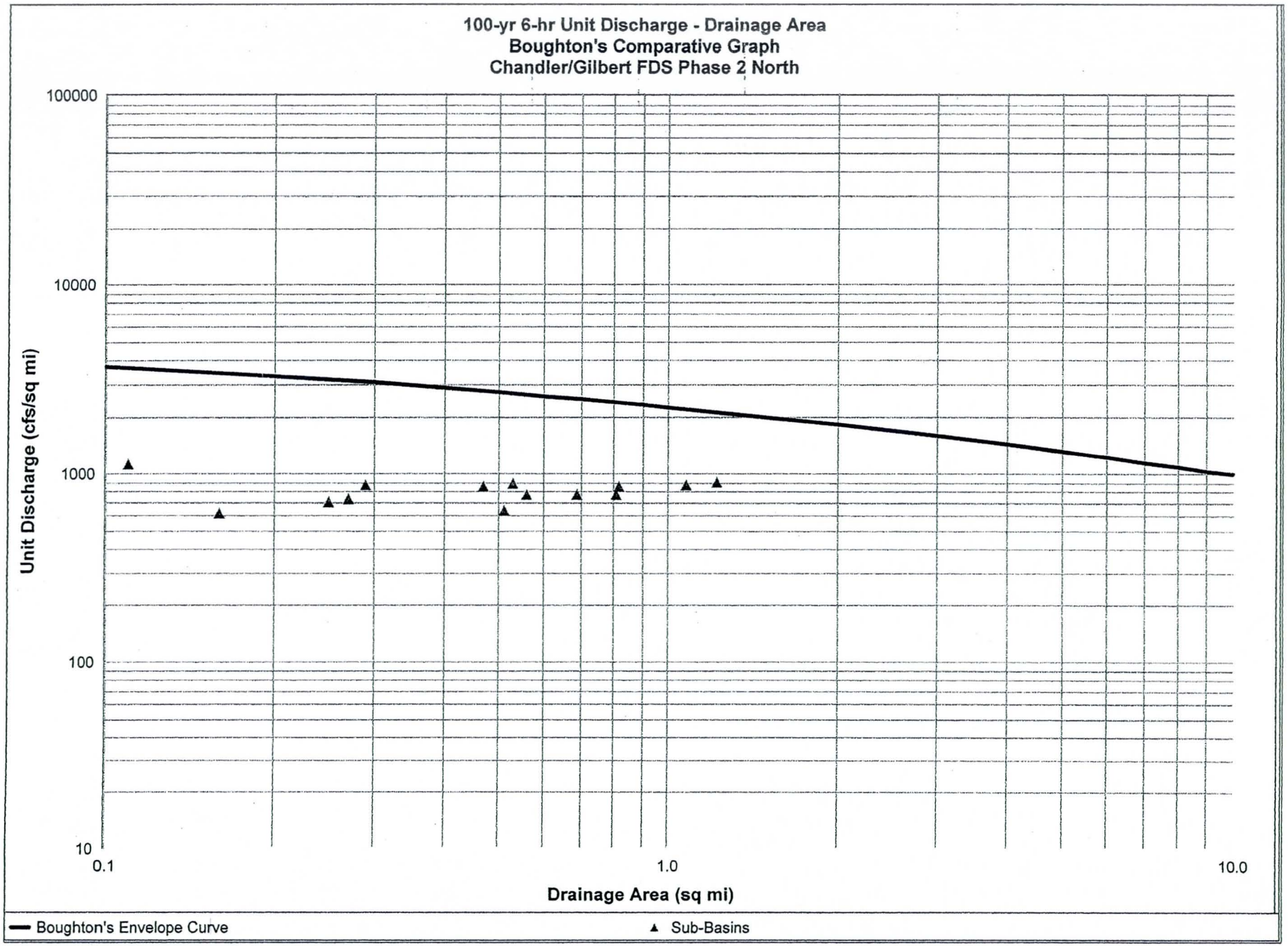
Chandler / Gilbert FDS
Phase 2 - North
Discharge per Square Mile Summary

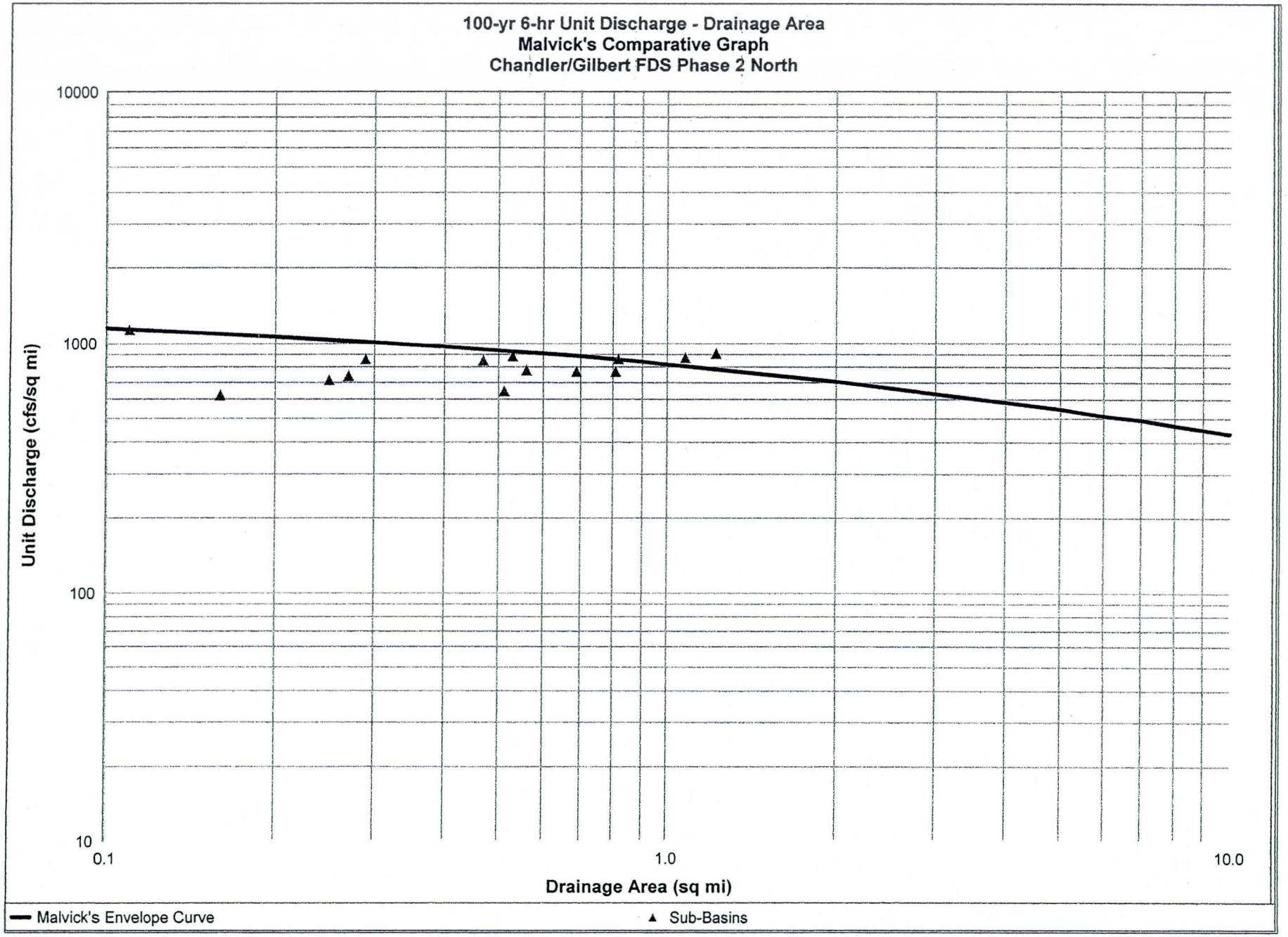
Sub-basin	Area	100-yr 6-hr discharge	100-yr 6-hr unit discharge	Average 6-hr unit discharge	100-yr 24-hr discharge	100-yr 24-hr unit discharge	Average 24-hr unit discharge
	sqmi	cfs	cfs/sqmi	cfs/sqmi	cfs	cfs/sqmi	cfs/sqmi
301	0.05	41	820	857	46	920	859
302	0.25	181	724	857	180	720	859
303	0.29	256	883	857	287	990	859
304	0.53	476	898	857	498	940	859
305	0.82	721	879	857	761	928	859
306	0.69	540	783	857	535	775	859
307	0.06	53	883	857	54	900	859
308	0.16	101	631	857	90	563	859
309	1.22	1131	927	857	1158	949	859
310	1.08	964	893	857	1001	927	859
311	0.56	474	846	857	450	804	859
312	0.71	570	803	857	498	701	859
313	0.47	439	934	857	411	874	859
314	0.11	136	1236	857	140	1273	859
315	0.51	363	712	857	354	694	859
316	0.27	220	815	857	222	822	859

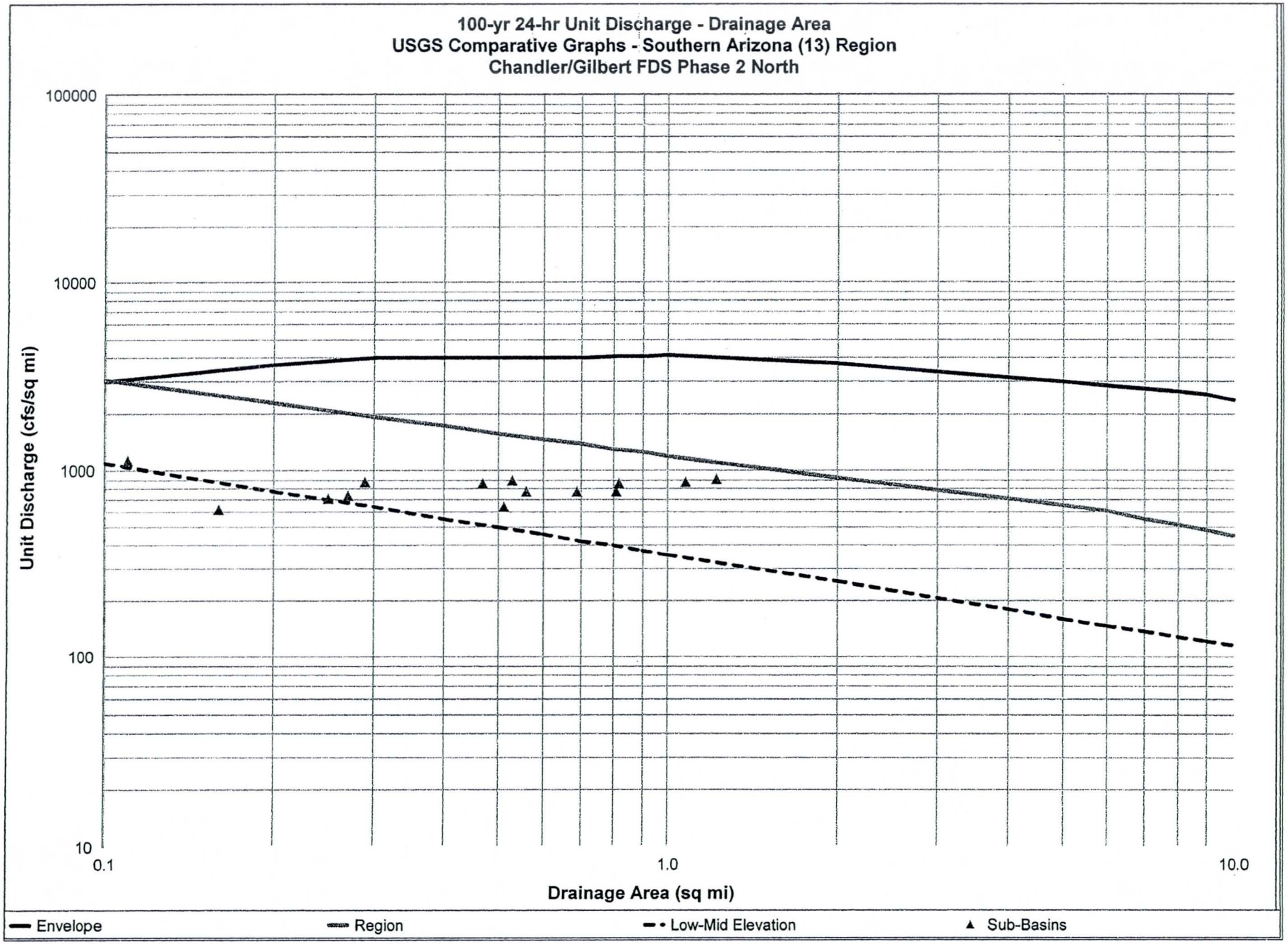


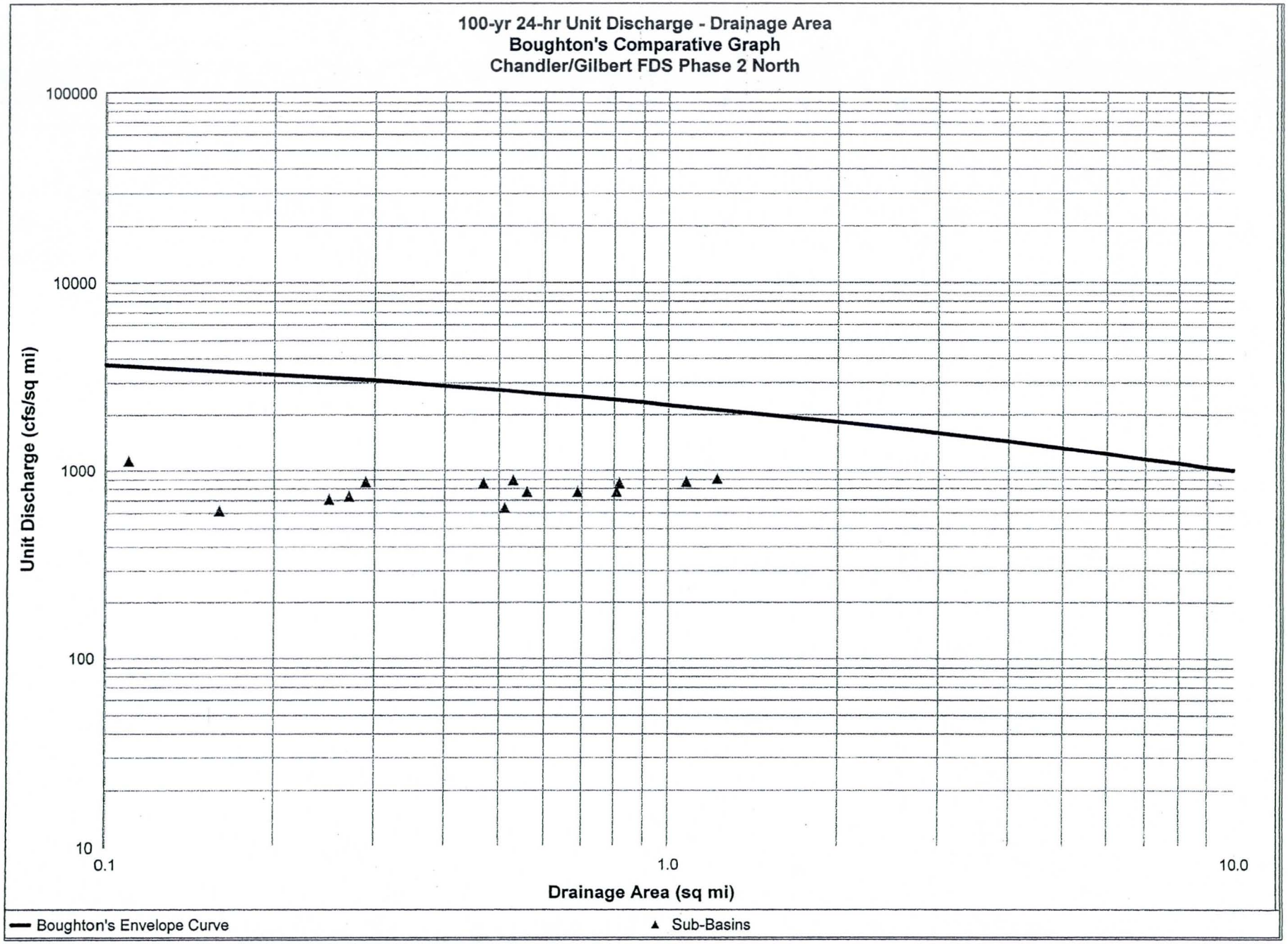


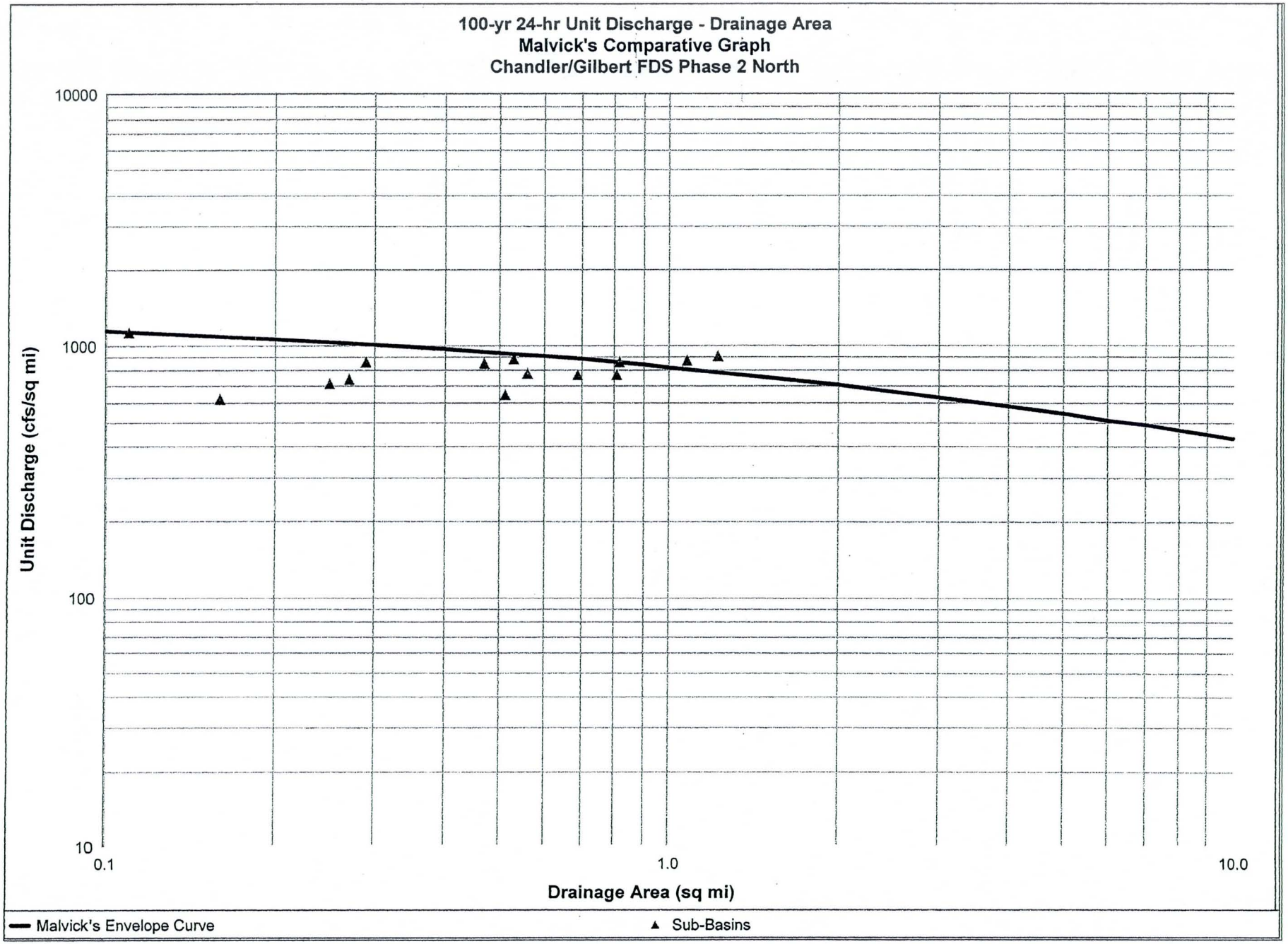

100-yr 6-hr Unit Discharge - Drainage Area
USGS Comparative Graphs - Southern Arizona (13) Region
Chandler/Gilbert FDS Phase 2 North
100000
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Envelope
Region
Low-Mid Elevation
Sub-Basins


100-yr 6-hr Unit Discharge - Drainage Area
Boughton's Comparative Graph
Chandler/Gilbert FDS Phase 2 North
100000
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Boughton's Envelope Curve
Sub-Basins


100-yr 6-hr Unit Discharge - Drainage Area
Malvick's Comparative Graph
Chandler/Gilbert FDS Phase 2 North
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Malvick's Envelope Curve
Sub-Basins

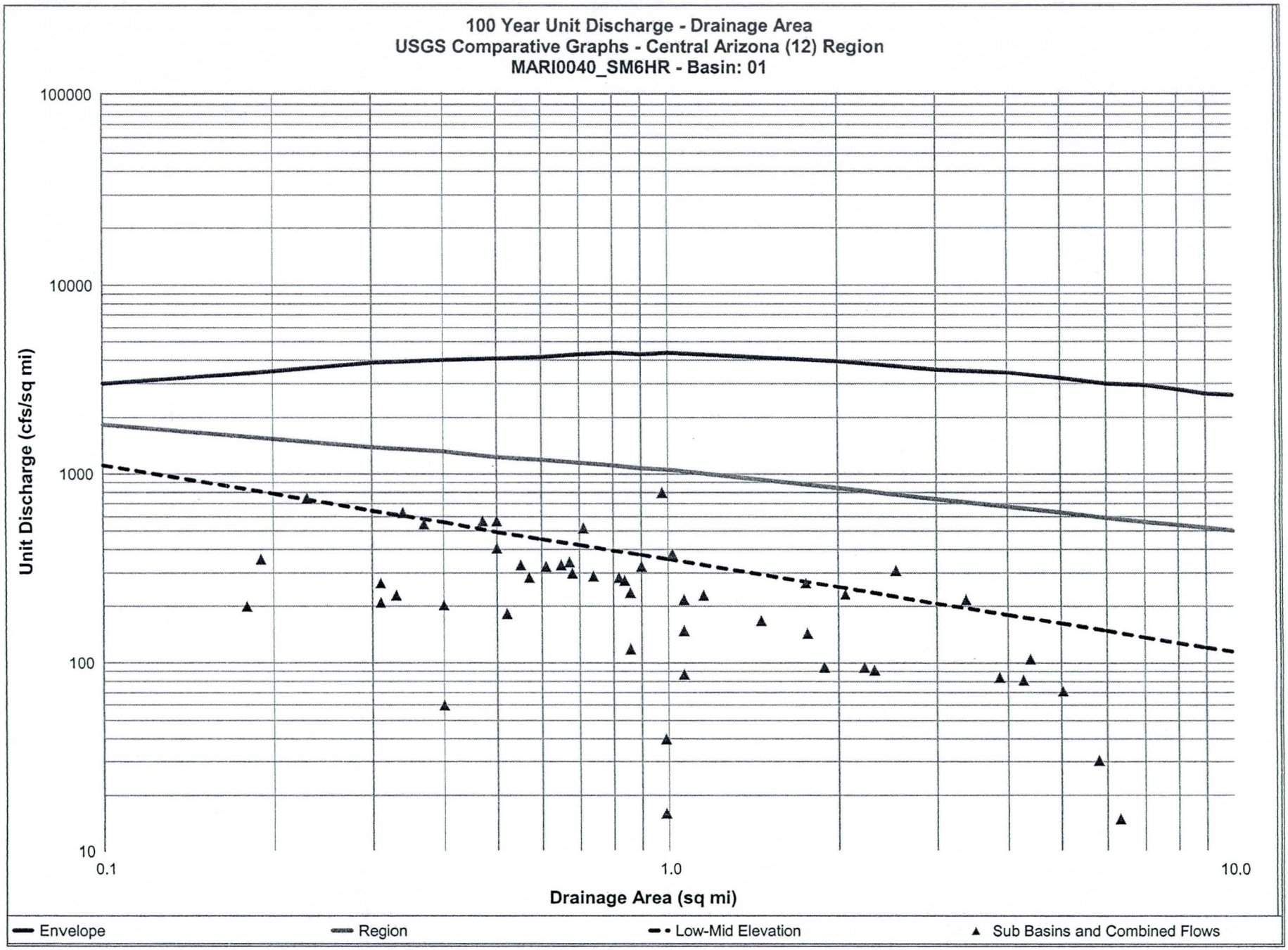

100-yr 24-hr Unit Discharge - Drainage Area
USGS Comparative Graphs - Southern Arizona (13) Region
Chandler/Gilbert FDS Phase 2 North
100000
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Envelope
Region
Low-Mid Elevation
Sub-Basins

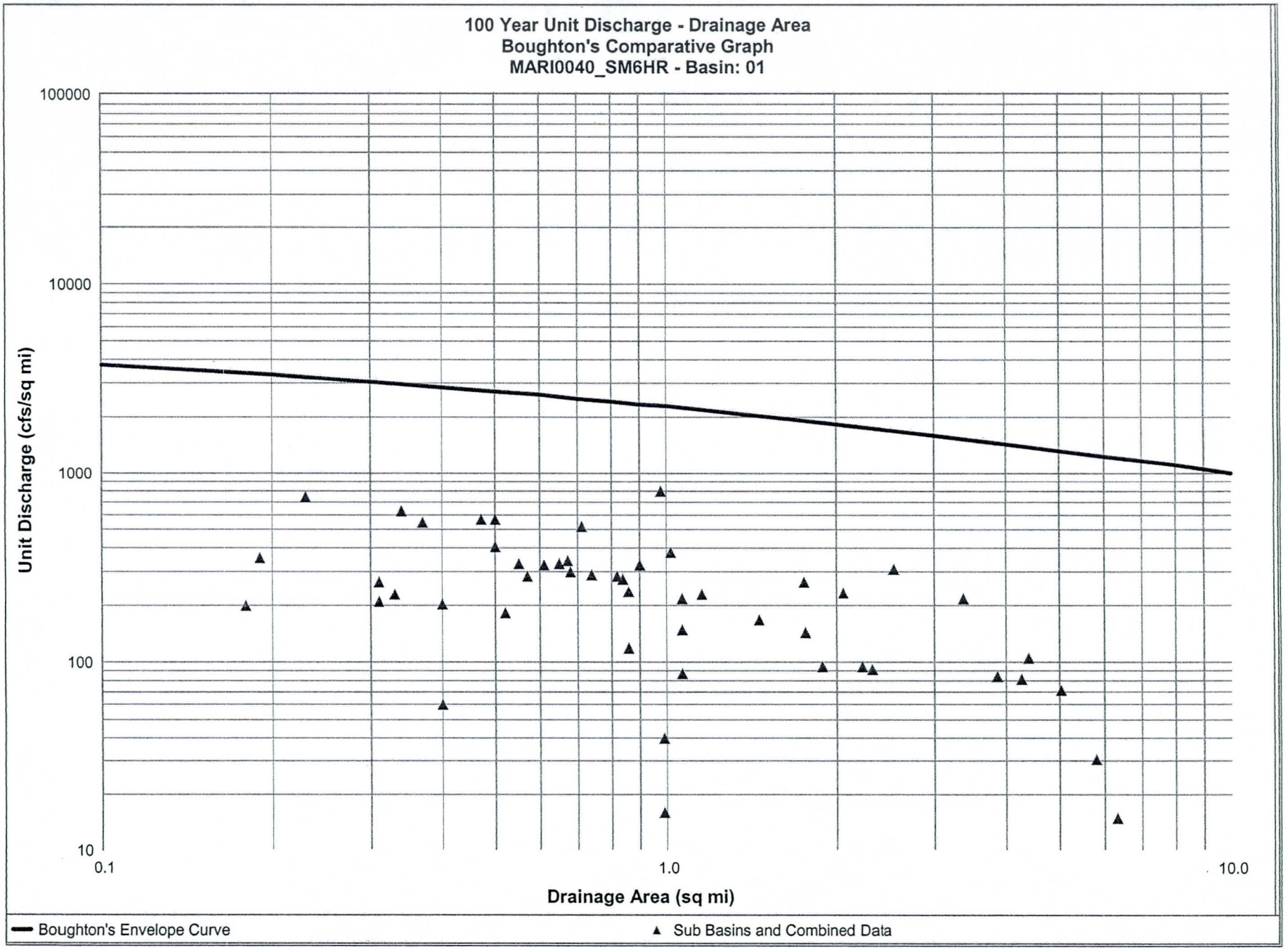

100-yr 24-hr Unit Discharge - Drainage Area
Boughton's Comparative Graph
Chandler/Gilbert FDS Phase 2 North
100000
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Boughton's Envelope Curve
Sub-Basins

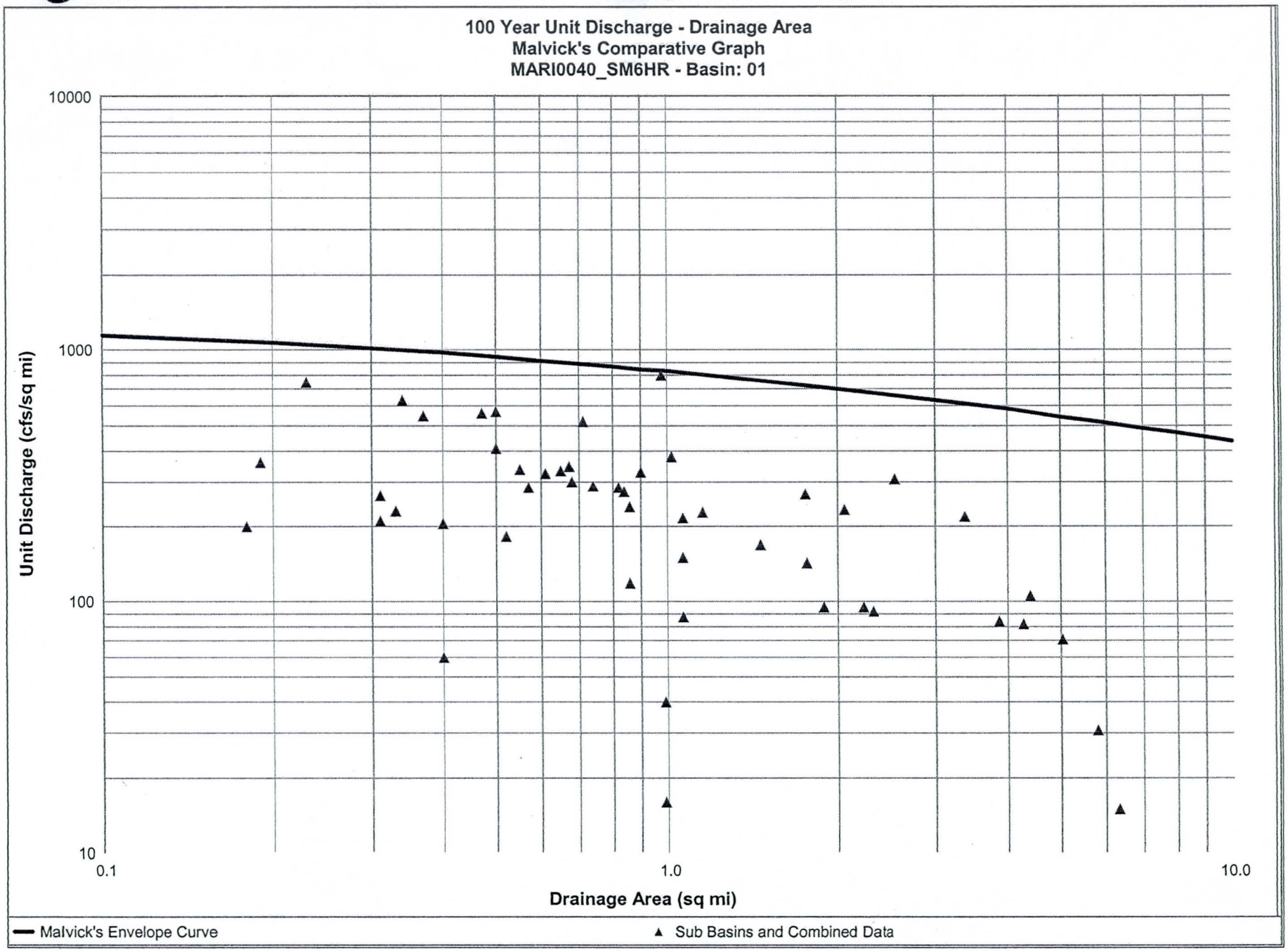

100-yr 24-hr Unit Discharge - Drainage Area
Malvick's Comparative Graph
Chandler/Gilbert FDS Phase 2 North
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Malvick's Envelope Curve
Sub-Basins

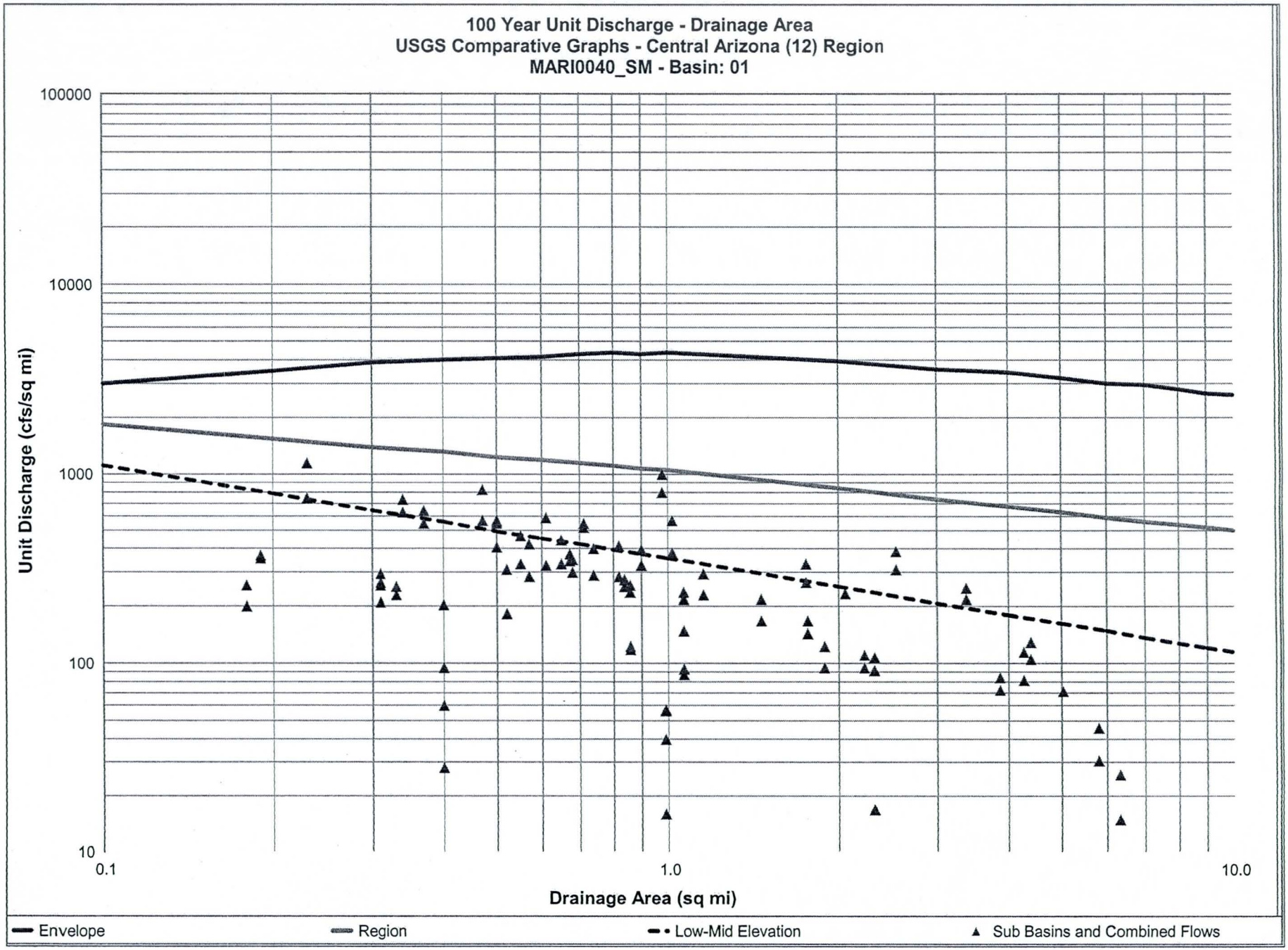
Chandler / Gilbert FDS
Phase 2 - South
Discharge per Square Mile Summary

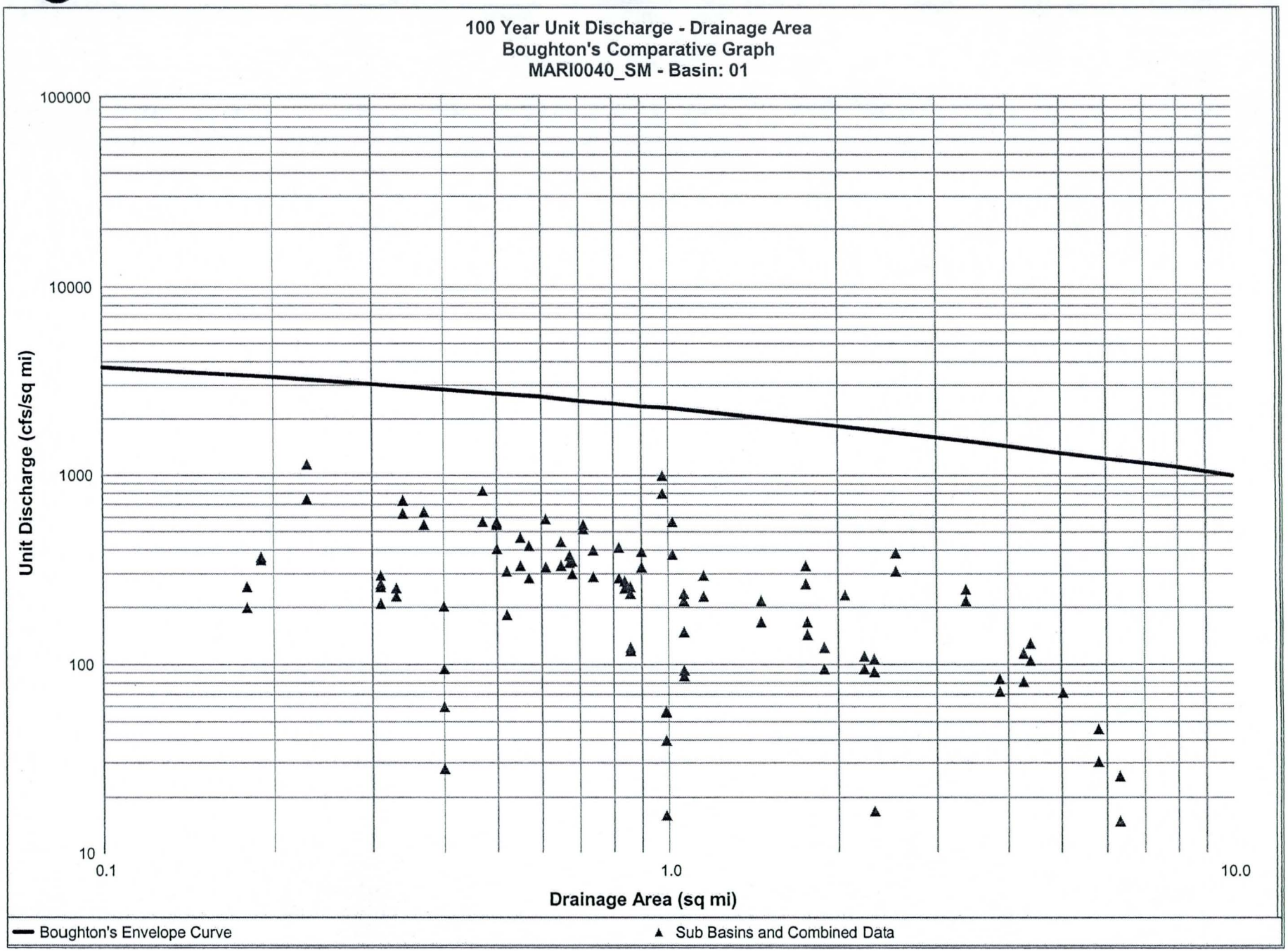
STATION	BASIN AREA	PEAK FLOW 24-hr	PEAK FLOW 6-hr	100-yr, 24-hr Q/mi^2	100-yr, 6-hr Q/mi^2
400	0.48	487	441	1015	919
401	0.98	981	866	1001	884
402	0.84	356	376	424	448
403	0.40	243	249	608	623
404	0.67	404	363	603	542
405	0.53	390	342	736	645
406N	0.495	379	366	766	739
406S	0.614	356	226	580	368
407	0.52	162	117	312	225
408	0.55	437	352	795	640
409	0.23	264	197	1148	857
410	0.31	168	148	542	477
411	0.37	256	244	692	659
412	0.18	46	45	256	250
413	0.34	149	251	438	738
414	0.82	341	275	416	335
415	0.71	387	407	545	573
416	0.19	70	75	368	395
417	0.65	276	251	425	386
418	0.50	274	235	548	470
419	0.57	250	221	439	388
420	0.50	448	353	896	706
422	0.90	450	394	500	438
423	0.99	419	374	423	378
424	0.33	93	95	282	288
425	0.74	300	234	405	316
426	1.02	574	427	563	419
427	0.32	206	162	644	506
428	0.47	392	291	834	619
430	0.99	672	542	679	547
432	0.31	80	72	258	232
433	0.09	95	49	1056	544

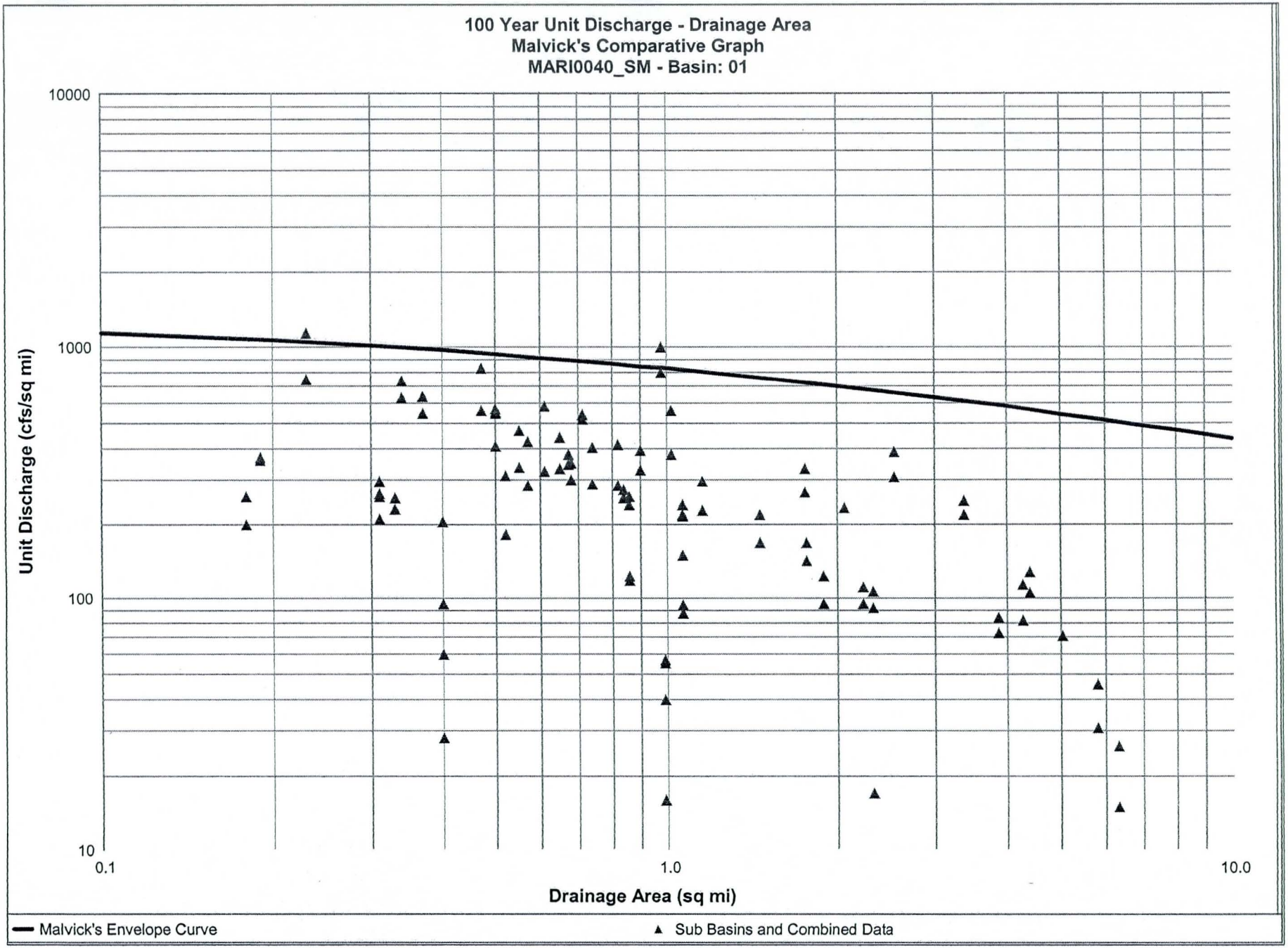

100 Year Unit Discharge - Drainage Area
USGS Comparative Graphs - Central Arizona (12) Region
MARI0040_SM6HR - Basin: 01
100000
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Envelope
Region
Low-Mid Elevation
Sub Basins and Combined Flows


100 Year Unit Discharge - Drainage Area
Boughton's Comparative Graph
MARI0040_SM6HR - Basin: 01
100000
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Boughton's Envelope Curve
Sub Basins and Combined Data


100 Year Unit Discharge - Drainage Area
Malvick's Comparative Graph
MARI0040_SM6HR - Basin: 01
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Malvick's Envelope Curve
Sub Basins and Combined Data


100 Year Unit Discharge - Drainage Area
USGS Comparative Graphs - Central Arizona (12) Region
MARI0040_SM - Basin: 01
100000
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Envelope
Region
Low-Mid Elevation
Sub Basins and Combined Flows


100 Year Unit Discharge - Drainage Area
Boughton's Comparative Graph
MARI0040_SM - Basin: 01
100000
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Boughton's Envelope Curve
Sub Basins and Combined Data


100 Year Unit Discharge - Drainage Area
Malvick's Comparative Graph
MARI0040_SM - Basin: 01
10000
1000
100
10
Unit Discharge (cfs/sq mi)
0.1
1.0
10.0
Drainage Area (sq mi)
Malvick's Envelope Curve
Sub Basins and Combined Data

Section 2: ADWR/FEMA Forms and Local Government/ADWR Abstracts

2.1 Study Documentation Abstract for FEMA Submittals

Study Documentation Abstract For FEMA Submittals	Initial Study	Restudy	X	CLOMR	LOMR	X	Other

Section 2.1: Study Documentation Abstract for FEMA Submittals		
2.1.1	Date Study Accepted	
2.1.2	Study Prime Contractor	David Evans and Associates, Inc.
	Contact(s)	Frank Edward Brown, P.E., CFM
	Address	2141 E. Highland Avenue, Suite 200 Phoenix, AZ 85016
	Phone	(602) 678-5151
	Internal Reference Number	MARI0000-0040
2.1.2	Study Sub-Contractor	Project Engineering Consultants, LTD.
	Contact(s)	Mike Heaton, P.E., CFM
	Address	2310 W. Mission Lane, Suite 4, Phoenix, AZ 85021
	Phone	(602) 906-1901
	Internal Reference Number	PEC PN 2069
2.1.2	Sub Study Sub-Contractor	
	Contact(s)	
	Address	
	Phone	
	Internal Reference Number	
2.1.3	FEMA Technical Review Contractor	Michael Baker, Jr.
	Contact(s)	Mounir Boudejemaa
	Address	3600 Eisenhower Ave. Suite 600 Alexandria, VA 22304
	Phone	703-317-6224
	Internal Reference Number	
2.1.4	FEMA Regional Reviewer	Michael Baker, Jr. Engineering
	Phone	(703) 960-8800
2.1.5	State Technical Reviewer	Arizona Department of Water Resources
	Phone	(602) 417-2400
2.1.6	Local Technical Reviewer	Flood Control District of Maricopa County (FCDMC)
	Phone	(602) 506-1501
2.1.7	Reach Description	Chandler / Gilbert FDS, Phase 2, Consolidated Canal
2.1.8	USGS Quad Sheet(s) with original photo date & latest photo revision date	Chandler, AZ, 1973; Higley, AZ, 1973; Gila Butte, AZ, 1973; Chandler Heights, AZ, 1973
2.1.9	Unique Conditions and Problems	
2.1.10	Coordination of Peak Discharges (Agency, Date, Comments)	

2.2 FEMA Forms

Part B. Overview of MT-2 Form 1 – Overview and Concurrence Form

Community No.	Community Name	State	Map No.	Panel No.	Effective Date
040044; 040048	Town of Gilbert; City of Mesa	AZ	04013C	2195G	9/30/2005
040037; 040040; 040044	Maricopa County; City of Chandler; Town of Gilbert	AZ	04013C	2660G	9/30/2005
040037; 040040	Maricopa County; City of Chandler	AZ	04013C	2665G	9/30/2005
040037; 040040; 040044	Maricopa County; City of Chandler; Town of Gilbert	AZ	04013C	2670G	9/30/2005
040037; 040040	Maricopa County; City of Chandler	AZ	04013C	3030H	9/30/2005

U.S. DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY

OVERVIEW & CONCURRENCE FORM

O.M.B No. 1660-0016
Expires: 12/31/2010

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1 hour per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, U.S. Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (1660-0016). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

A. REQUESTED RESPONSE FROM DHS-FEMA

This request is for a (check one):

☐ CLOMR: A letter from DHS-FEMA commenting on whether a proposed project, if built as proposed, would justify a map revision, or proposed hydrology changes (See 44 CFR Ch. 1, Parts 60, 65 & 72).

☒ LOMR: A letter from DHS-FEMA officially revising the current NFIP map to show the changes to floodplains, regulatory floodway or flood elevations. (See 44 CFR Ch. 1, Parts 60, 65 & 72)

B. OVERVIEW

1. The NFIP map panel(s) affected for all impacted communities is (are):

Community No.	Community Name	State	Map No.	Panel No.	Effective Date
Ex: 480301	City of Katy	TX	480301	0005D	02/08/83
480287	Harris County	TX	48201C	0220G	09/28/90
	SEE ATTACHED				

2. a. Flooding Source: Ponding along Consolidated Canal and short segment along Union Pacific Railroad

   b. Types of Flooding: ☐ Riverine ☐ Coastal ☒ Shallow Flooding (e.g., Zones AO and AH)

   ☐ Alluvial fan ☐ Lakes ☐ Other (Attach Description)

3. Project Name/Identifier: Chandler / Gilbert Floodplain Delineation Study, Phase 2, Consolidated Canal

4. FEMA zone designations affected: AH, X (choices: A, AH, AO, A1-A30, A99, AE, AR, V, V1-V30, VE, B, C, D, X)

5. Basis for Request and Type of Revision:

   a. The basis for this revision request is (check all that apply)

   ☒ Physical Change ☒ Improved Methodology/Data ☐ Regulatory Floodway Revision ☐ Base Map Changes

   ☐ Coastal Analysis ☒ Hydraulic Analysis ☒ Hydrologic Analysis ☐ Corrections

   ☐ Weir-Dam Changes ☐ Levee Certification ☐ Alluvial Fan Analysis ☐ Natural Changes

   ☒ New Topographic Data ☐ Other (Attach Description)

   Note: A photograph and narrative description of the area of concern is not required, but is very helpful during review.

   b. The area of revision encompasses the following structures (check all that apply)

   Structures: ☐ Channelization ☐ Levee/Floodwall ☐ Bridge/Culvert

   ☐ Dam ☐ Fill ☐ Other (Attach Description)

C. REVIEW FEE

Has the review fee for the appropriate request category been included? ☐ Yes Fee amount: $_____

☐ No, Attach Explanation

Please see the DHS-FEMA Web site at http://www.fema.gov/plan/prevent/fhm/frm_fees.shtm **for Fee Amounts and Exemptions.**

D. SIGNATURE

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: Kathryn Gross, M.A., CFM	Company: Flood Control District of Maricopa Count	
Mailing Address: 2801 West Durango Street Phoenix, AZ 85009	Daytime Telephone No.: 602-506-1501	Fax No.: 602-506-4601
	E-Mail Address: kag@mail.maricopa.gov	
Signature of Requester (required):	Date: 12/12/2008	

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision (LOMR) or conditional LOMR request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a conditional LOMR, will be obtained. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by FEMA, all analyses and documentation used to make this determination.

Community Official's Name and Title: Timothy S. Phillips, P.E., Chief Engineer & General Manager	Community Name: Maricopa County, Arizona	
Mailing Address: 2801 West Durango Street Phoenix, AZ 85009	Daytime Telephone No.: 602-506-1501	Fax No.: 602-506-4601
	E-Mail Address: TSP@mail.maricopa.gov	
Community Official's Signature (required):	Date: 2/13/09	

CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information data, hydrologic and hydraulic analysis, and any other supporting data. All documents submitted in support of this request are correct to the best of my knowledge. All analyses have been performed correctly and in accordance with sound engineering practices. All project works are designed in accordance with sound engineering practices to provide protection from the 1% annual chance flood. If "as-built" conditions data/plan provided, then the structure(s) has been built according to the plans being certified, is in place, and is fully functioning. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: Frank Edward Brown, P.E., CFM	License No.: 23969	Expiration Date: March 31, 2011
Company Name: David Evans and Associates, Inc.	Telephone No.: 602-678-5151	Fax No.: 602-678-5155
Signature: Frank Edward Brown		Date: 17 Oct 2008

Ensure the forms that are appropriate to your revision request are included in your submittal.

Form Name and (Number)	Required if ...
☒ Riverine Hydrology and Hydraulics Form (Form 2)	New or revised discharges or water-surface elevations
☐ Riverine Structures Form (Form 3)	Channel is modified, addition/revision of bridge/culverts, addition/revision of levee/floodwall, addition/revision of dam
☐ Coastal Analysis Form (Form 4)	New or revised coastal elevations
☐ Coastal Structures Form (Form 5)	Addition/revision of coastal structure
☐ Alluvial Fan Flooding Form (Form 6)	Flood control measures on alluvial fans

Registered Professional Engineer (Civil) CERTIFICATE NO. 23969 FRANK EDWARD BROWN Date Signed 17 Oct 2008 ARIZONA, U.S.A.

Expires 03/31/2011

C. REVIEW FEE

Has the review fee for the appropriate request category been included? ☐ Yes Fee amount: $_____

☐ No, Attach Explanation

Please see the DHS-FEMA Web site at http://www.fema.gov/plan/prevent/fhm/frm_fees.shtm **for Fee Amounts and Exemptions.**

D. SIGNATURE

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: Kathryn Gross, M.A., CFM	Company: Flood Control Districtof Maricopa County	
Mailing Address: 2801 West Durango Street Phoenix, AZ 85009	Daytime Telephone No.: 602-506-1501	Fax No.: 602-506-4601
	E-Mail Address: kag@mail.maricopa.gov	
Signature of Requester (required): Kathryn Gross	Date: 12/12/2008	

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision (LOMR) or conditional LOMR request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a conditional LOMR, will be obtained. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by FEMA, all analyses and documentation used to make this determination.

Community Official's Name and Title: Shaina Hughes Asst PWDir/City Engineer	Community Name: City of Chandler, Arizona	
Mailing Address: City of Chandler Mail Stop 405 PO Box 4008 Chandler Az 85244-4008	Daytime Telephone No.: 480 782 3300	Fax No.: 480 782 3415
	E-Mail Address: Shaina.Hughes@ChandlerAz.gov	
Community Official's Signature (required):	Date: Feb 3/09	

CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information data, hydrologic and hydraulic analysis, and any other supporting data. All documents submitted in support of this request are correct to the best of my knowledge. All analyses have been performed correctly and in accordance with sound engineering practices. All project works are designed in accordance with sound engineering practices to provide protection from the 1% annual chance flood. If "as-built" conditions data/plan provided, then the structure(s) has been built according to the plans being certified, is in place, and is fully functioning. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: Frank Edward Brown, P.E., CFM	License No.: 23969	Expiration Date: March 31, 2011
Company Name: David Evans and Associates, Inc.	Telephone No.: 602-678-5151	Fax No.: 602-678-5155
Signature: Frank Edward Brown		Date: 17 Oct 2008

Ensure the forms that are appropriate to your revision request are included in your submittal.

Form Name and (Number)	Required if ...
☒ Riverine Hydrology and Hydraulics Form (Form 2)	New or revised discharges or water-surface elevations
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☐ Coastal Analysis Form (Form 4)	New or revised coastal elevations
☐ Coastal Structures Form (Form 5)	Addition/revision of coastal structure
☐ Alluvial Fan Flooding Form (Form 6)	Flood control measures on alluvial fans

Registered Professional Engineer (Civil)
CERTIFICATE NO.
23969
FRANK EDWARD
BROWN
Date Signed 17 Oct 2008
ARIZONA, U.S.A.
Expires 03/31/2011

C. REVIEW FEE

Has the review fee for the appropriate request category been included? ☐ Yes Fee amount: $_____

☐ No, Attach Explanation

Please see the DHS-FEMA Web site at http://www.fema.gov/plan/prevent/fhm/frm_fees.shtm **for Fee Amounts and Exemptions.**

D. SIGNATURE

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: Kathryn Gross, M.A., CFM	Company: Flood Control Districtof Maricopa County	
Mailing Address: 2801 West Durango Street Phoenix, AZ 85009	Daytime Telephone No.: 602-506-1501	Fax No.: 602-506-4601
	E-Mail Address: kag@mail.maricopa.gov	
Signature of Requester (required):	Date: 12/12/2008	

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Community Official's Name and Title: EDGAR MEDINA, P.E. FLOODPLAIN ADMINISTRATOR	Community Name: City of Chandler, Arizona	
Mailing Address: 90 E. CIVIC CENTER DR. GILBERT, AZ. 85296	Daytime Telephone No.: 480.503.6754	Fax No.: 480.503.6178
	E-Mail Address: EDGARM@ci.gilbert.az.us	
Community Official's Signature (required):	Date: 02/23/09	

CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information data, hydrologic and hydraulic analysis, and any other supporting data. All documents submitted in support of this request are correct to the best of my knowledge. All analyses have been performed correctly and in accordance with sound engineering practices. All project works are designed in accordance with sound engineering practices to provide protection from the 1% annual chance flood. If "as-built" conditions data/plan provided, then the structure(s) has been built according to the plans being certified, is in place, and is fully functioning. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: Frank Edward Brown, P.E., CFM	License No.: 23969	Expiration Date: March 31, 2011
Company Name: David Evans and Associates, Inc.	Telephone No.: 602-678-5151	Fax No.: 602-678-5155
Signature: Frank Edward Brown		Date: 17 Oct 2008

Ensure the forms that are appropriate to your revision request are included in your submittal.

Form Name and (Number)	Required if ...
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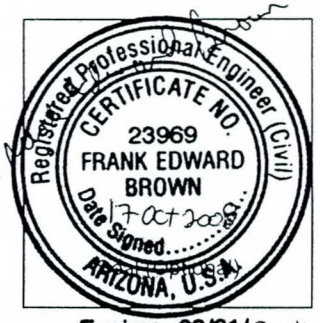
☐ Coastal Structures Form (Form 5)	Addition/revision of coastal structure
☐ Alluvial Fan Flooding Form (Form 6)	Flood control measures on alluvial fans



Expires 03/31/2011

Attachment for MT-2 Form 2:

Riverine Hydrology & Hydraulics Form, Section A.2, Comparison of Representative 1%-Annual-Chance Discharges.

Consolidated Canal (Watershed 2, aka Phase 2)
Comparison of Representative 1%-Annual-Chance Discharges

Location *	Area (sq mi) *	FIS (cfs)	Revised (cfs)
S.A. 21-PT8a / CP402 – Chandler Boulevard	2.81 / 3.37	395	526 (6 hr)
S.A. 22-PT8a / CP406S – Pecos Road	3.55 / 5.01	926	247 (6 hr)
S.A. 27-PT2 / CP417 – Appleby Road	1.52 / 0.65	594	276 (24 hr)

* Table order is Previous Flood Insurance Study / Revised Study

Attachment for MT-2 Form 2:

Riverine Hydrology & Hydraulics Form, Section A.2, Comparison of Representative 1%-Annual-Chance Discharges.

Union Pacific Railroad (Watershed 2, aka Phase 2)
Comparison of Representative 1%-Annual-Chance Discharges

Location *	Area (sq mi) *	FIS (cfs)	Revised (cfs)
S.A. 36-PT7a / CP432 – Hunt Highway	3.33 / 1.77	1298	80 (24 hr)

* Table order is Previous Flood Insurance Study / Revised Study

U.S. DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY

RIVERINE HYDROLOGY & HYDRAULICS FORM

O.M.B No. 1660-0016
Expires: 12/31/2010

PAPERWORK REDUCTION ACT

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Flooding Source: Ponding along Consolidated Canal
Note: Fill out one form for each flooding source studied

A. HYDROLOGY

1. Reason for New Hydrologic Analysis (check all that apply)

☐ Not revised (skip to section B) ☐ No existing analysis ☒ Improved data
☐ Alternative methodology ☐ Proposed Conditions (CLOMR) ☒ Changed physical condition of watershed

2. Comparison of Representative 1%-Annual-Chance Discharges

Location	Drainage Area (Sq. Mi.)	Effective/FIS (cfs)	Revised (cfs)
see attachment			1
			1
			1

Methodology for New Hydrologic Analysis (check all that apply)

☐ Statistical Analysis of Gage Records ☒ Precipitation/Runoff Model HEC-1
☐ Regional Regression Equations ☐ Other (please attach description)

Please enclose all relevant models in digital format, maps, computations (including computation of parameters) and documentation to support the new analysis.

4. Review/Approval of Analysis

If your community requires a regional, state, or federal agency to review the hydrologic analysis, please attach evidence of approval/review.

5. Impacts of Sediment Transport on Hydrology

Was sediment transport considered? ☐ Yes ☒ No If yes, then fill out Section F (Sediment Transport) of Form 3. If No, then attach your explanation for why sediment transport was not considered.

B. HYDRAULICS

1. Reach to be Revised

	Description	Cross Section	Water-Surface Elevations (ft.) Effective	Water-Surface Elevations (ft.) Proposed/Revised
Downstream Limit	Union Pacific Railroad north ofHunt Hwy			
Upstream Limit	Consolidated Canal at Baseline Road			

Hydraulic Method/Model Used

HEC-1 Storage Routing, with weir hydraulics

B. HYDRAULICS (CONTINUED)

3. Pre-Submittal Review of Hydraulic Models

DHS-FEMA has developed two review programs, CHECK-2 and CHECK-RAS, to aid in the review of HEC-2 and HEC-RAS hydraulic models, respectively. These review programs may help verify that the hydraulic estimates and assumptions in the model data are in accordance with NFIP requirements, and that the data are comparable with the assumptions and limitations of HEC-2/HEC-RAS. CHECK-2 and CHECK-RAS identify areas of potential error or concern. **These tools do not replace engineering judgment.** CHECK-2 and CHECK-RAS can be downloaded from http://www.fema.gov/plan/prevent/fhm/frm_soft.shtm. We recommend that you review your HEC-2 and HEC-RAS models with CHECK-2 and CHECK-RAS. Review of your submittal and resolution of valid modeling discrepancies may result in reduced review time.

4. Models Submitted	Natural Run		Floodway Run		Datum
Duplicate Effective Model*	File Name:	Plan Name:	File Name:	Plan Name:	_____
Corrected Effective Model*	File Name:	Plan Name:	File Name:	Plan Name:	_____
Existing or Pre-Project Conditions Model	File Name:	Plan Name:	File Name:	Plan Name:	_____
Revised or Post-Project Conditions Model	File Name:	Plan Name:	File Name:	Plan Name:	_____
Other - (attach description)	File Name:	Plan Name:	File Name:	Plan Name:	_____

* For details, refer to the corresponding section of the instructions.

☐ Digital Models Submitted? (Required)

C. MAPPING REQUIREMENTS

A **certified topographic map** must be submitted showing the following information (where applicable): the boundaries of the effective, existing, and proposed conditions 1%-annual-chance floodplain (for approximate Zone A revisions) or the boundaries of the 1%- and 0.2%-annual-chance floodplains and regulatory floodway (for detailed Zone AE, AO, and AH revisions); location and alignment of all cross sections with stationing control indicated; stream, road, and other alignments (e.g., dams, levees, etc.); current community easements and boundaries; boundaries of the requester's property; certification of a registered professional engineer registered in the subject State; location and description of reference marks; and the referenced vertical datum (NGVD, NAVD, etc.).

☒ Digital Mapping (GIS/CADD) Data Submitted

Note that the boundaries of the existing or proposed conditions floodplains and regulatory floodway to be shown on the revised FIRM and/or FBFM must tie-in with the effective floodplain and regulatory floodway boundaries. Please attach **a copy of the effective FIRM and/or FBFM,** annotated to show the boundaries of the revised 1%- and 0.2%-annual-chance floodplains and regulatory floodway that tie-in with the boundaries of the effective 1%- and 0.2%-annual-chance floodplain and regulatory floodway at the upstream and downstream limits of the area of revision.

☒ Annotated FIRM and/or FBFM (Required)

D. COMMON REGULATORY REQUIREMENTS*

1. For LOMR/CLOMR requests, do Base Flood Elevations (BFEs) increase? ☒ Yes ☐ No

   a. For CLOMR requests, if either of the following is true, please submit **evidence of compliance with Section 65.12 of the NFIP regulations**:
   - The proposed project encroaches upon a regulatory floodway and would result in increases above 0.00 foot.
   - The proposed project encroaches upon a SFHA with or without BFEs established and would result in increases above 1.00 foot.

   b. For LOMR requests, does this request require property owner notification and acceptance of BFE increases? ☒ Yes ☐ No
   If Yes, please attach **proof of property owner notification and acceptance (if available)**. Elements of and examples of property owner notification can be found in the MT-2 Form 2 Instructions.

2. Does the request involve the placement or proposed placement of fill? ☐ Yes ☒ No

   If Yes, the community must be able to certify that the area to be removed from the special flood hazard area, to include any structures or proposed structures, meets all of the standards of the local floodplain ordinances, and is reasonably safe from flooding in accordance with the NFIP regulations set forth at 44 CFR 60.3(a)(3), 65.5(a)(4), and 65.6(a)(14). Please see the MT-2 instructions for more information.

3. For LOMR requests, is the regulatory floodway being revised? ☐ Yes ☒ No

   If Yes, attach **evidence of regulatory floodway revision notification**. As per Paragraph 65.7(b)(1) of the NFIP Regulations, notification is required for requests involving revisions to the regulatory floodway. (Not required for revisions to approximate 1%-annual-chance floodplains [studied Zone A designation] unless a regulatory floodway is being added. Elements and examples of regulatory floodway revision notification can be found in the MT-2 Form 2 Instructions.)

4. For LOMR/CLOMR requests, does this request have the potential to impact an endangered species? ☐ Yes ☒ No

   If Yes, please submit documentation to the community to show that you have complied with Sections 9 and 10 of the Endangered Species Act (ESA). Section 9 of the ESA prohibits anyone from "taking" or harming an endangered species. If an action might harm an endangered species, a permit is required from U.S. Fish and Wildlife Service or National Marine Fisheries Service under Section 10 of the ESA.

   For actions authorized, funded, or being carried out by Federal or State agencies, please submit documentation from the agency showing its compliance with Section 7(a)(2) of the ESA.

* Not inclusive of all applicable regulatory requirements. For details, see 44 CFR parts 60 and 65.

U.S. DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY

RIVERINE HYDROLOGY & HYDRAULICS FORM

O.M.B No. 1660-0016
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Flooding Source: Ponding along Union Pacific Railroad
Note: Fill out one form for each flooding source studied

A. HYDROLOGY

1. Reason for New Hydrologic Analysis (check all that apply)

☐ Not revised (skip to section B) ☐ No existing analysis ☒ Improved data
☐ Alternative methodology ☐ Proposed Conditions (CLOMR) ☒ Changed physical condition of watershed

2. Comparison of Representative 1%-Annual-Chance Discharges

Location	Drainage Area (Sq. Mi.)	Effective/FIS (cfs)	Revised (cfs)
see attachment			1
			1
			1

3. Methodology for New Hydrologic Analysis (check all that apply)

☐ Statistical Analysis of Gage Records ☒ Precipitation/Runoff Model HEC-1
☐ Regional Regression Equations ☐ Other (please attach description)

Please enclose all relevant models in digital format, maps, computations (including computation of parameters) and documentation to support the new analysis.

4. Review/Approval of Analysis

If your community requires a regional, state, or federal agency to review the hydrologic analysis, please attach evidence of approval/review.

5. Impacts of Sediment Transport on Hydrology

Was sediment transport considered? ☐ Yes ☒ No If yes, then fill out Section F (Sediment Transport) of Form 3. If No, then attach your explanation for why sediment transport was not considered.

B. HYDRAULICS

1. Reach to be Revised

	Description	Cross Section	Water-Surface Elevations (ft.) Effective	Proposed/Revised
Downstream Limit	Hunt Highway			
Upstream Limit	Consolidated Canal south of Riggs Road			

Hydraulic Method/Model Used

HEC-1 Storage Routing, with weir hydraulics

B. HYDRAULICS (CONTINUED)

3. Pre-Submittal Review of Hydraulic Models

DHS-FEMA has developed two review programs, CHECK-2 and CHECK-RAS, to aid in the review of HEC-2 and HEC-RAS hydraulic models, respectively. These review programs may help verify that the hydraulic estimates and assumptions in the model data are in accordance with NFIP requirements, and that the data are comparable with the assumptions and limitations of HEC-2/HEC-RAS. CHECK-2 and CHECK-RAS identify areas of potential error or concern. **These tools do not replace engineering judgment.** CHECK-2 and CHECK-RAS can be downloaded from http://www.fema.gov/plan/prevent/fhm/frm_soft.shtm. We recommend that you review your HEC-2 and HEC-RAS models with CHECK-2 and CHECK-RAS. Review of your submittal and resolution of valid modeling discrepancies may result in reduced review time.

4. Models Submitted

	Natural Run		Floodway Run		Datum
Duplicate Effective Model*	File Name:	Plan Name:	File Name:	Plan Name:	_____
Corrected Effective Model*	File Name:	Plan Name:	File Name:	Plan Name:	_____
Existing or Pre-Project Conditions Model	File Name:	Plan Name:	File Name:	Plan Name:	_____
Revised or Post-Project Conditions Model	File Name:	Plan Name:	File Name:	Plan Name:	_____
Other - (attach description)	File Name:	Plan Name:	File Name:	Plan Name:	_____

* For details, refer to the corresponding section of the instructions.

☐ Digital Models Submitted? (Required)

C. MAPPING REQUIREMENTS

A **certified topographic map** must be submitted showing the following information (where applicable): the boundaries of the effective, existing, and proposed conditions 1%-annual-chance floodplain (for approximate Zone A revisions) or the boundaries of the 1%- and 0.2%-annual-chance floodplains and regulatory floodway (for detailed Zone AE, AO, and AH revisions); location and alignment of all cross sections with stationing control indicated; stream, road, and other alignments (e.g., dams, levees, etc.); current community easements and boundaries; boundaries of the requester's property; certification of a registered professional engineer registered in the subject State; location and description of reference marks; and the referenced vertical datum (NGVD, NAVD, etc.).

☒ Digital Mapping (GIS/CADD) Data Submitted

Note that the boundaries of the existing or proposed conditions floodplains and regulatory floodway to be shown on the revised FIRM and/or FBFM must tie-in with the effective floodplain and regulatory floodway boundaries. Please attach **a copy of the effective FIRM and/or FBFM,** annotated to show the boundaries of the revised 1%- and 0.2%-annual-chance floodplains and regulatory floodway that tie-in with the boundaries of the effective 1%- and 0.2%-annual-chance floodplain and regulatory floodway at the upstream and downstream limits of the area of revision.

☒ Annotated FIRM and/or FBFM (Required)

D. COMMON REGULATORY REQUIREMENTS*

1. For LOMR/CLOMR requests, do Base Flood Elevations (BFEs) increase? ☒ Yes ☐ No

   a. For CLOMR requests, if either of the following is true, please submit **evidence of compliance with Section 65.12 of the NFIP regulations**:
   - The proposed project encroaches upon a regulatory floodway and would result in increases above 0.00 foot.
   - The proposed project encroaches upon a SFHA with or without BFEs established and would result in increases above 1.00 foot.

   b. For LOMR requests, does this request require property owner notification and acceptance of BFE increases? ☒ Yes ☐ No
   If Yes, please attach **proof of property owner notification and acceptance (if available).** Elements of and examples of property owner notification can be found in the MT-2 Form 2 Instructions.

2. Does the request involve the placement or proposed placement of fill? ☐ Yes ☒ No

   If Yes, the community must be able to certify that the area to be removed from the special flood hazard area, to include any structures or proposed structures, meets all of the standards of the local floodplain ordinances, and is reasonably safe from flooding in accordance with the NFIP regulations set forth at 44 CFR 60.3(a)(3), 65.5(a)(4), and 65.6(a)(14). Please see the MT-2 instructions for more information.

3. For LOMR requests, is the regulatory floodway being revised? ☐ Yes ☒ No

   If Yes, attach **evidence of regulatory floodway revision notification**. As per Paragraph 65.7(b)(1) of the NFIP Regulations, notification is required for requests involving revisions to the regulatory floodway. (Not required for revisions to approximate 1%-annual-chance floodplains [studied Zone A designation] unless a regulatory floodway is being added. Elements and examples of regulatory floodway revision notification can be found in the MT-2 Form 2 Instructions.)

4. For LOMR/CLOMR requests, does this request have the potential to impact an endangered species? ☐ Yes ☒ No

   If Yes, please submit documentation to the community to show that you have complied with Sections 9 and 10 of the Endangered Species Act (ESA). Section 9 of the ESA prohibits anyone from "taking" or harming an endangered species. If an action might harm an endangered species, a permit is required from U.S. Fish and Wildlife Service or National Marine Fisheries Service under Section 10 of the ESA.

   For actions authorized, funded, or being carried out by Federal or State agencies, please submit documentation from the agency showing its compliance with Section 7(a)(2) of the ESA.

* Not inclusive of all applicable regulatory requirements. For details, see 44 CFR parts 60 and 65.

Section 3: SURVEY AND MAPPING INFORMATION

3.1 Field Survey Information

Refer to the Chandler / Gilbert Flood Delineation Study, Phase 1 Eastern Canal Watershed, Technical Data Notebook, Volume 2, for all survey information relative to Phase 2 of the study.

Appendices A, B, and C:

Table of Contents

APPENDIX A: REFERENCES

The references for this study are contained in the data collection summary.

CHANDLER/GILBERT
FLOODPLAIN DELINEATION STUDY

FCD CONTRACT NO. 2002C023

SUMMARY REPORT FOR
TASK 2 DATA COLLECTION

December 2003
Updated October 2008 for Phase 2 specific information

David Evans and Associates, Inc. (DEA) has collected and reviewed data that are pertinent to the hydrology and hydraulics of the project study area. The Flood Control District of Maricopa County and some outside sources provided access to these data. The categories of data which were sought include: previous floodplain and hydrology reports for the study area; existing topographic mapping, aerial photos, land use and soils data; as-built plans for existing structures; drainage reports for existing and under construction residential developments and drainage reports and horizontal alignment data for the proposed Santan Freeway. In addition, new developments that were added since September 2005 are included in this appendix.

Previous Floodplain and Hydrology Studies:

1. Franzoy-Corey, 1990. Flood Insurance Study, Gilbert-Chandler Area, Maricopa County, Arizona, FCD 87-24.

2. Flood Control District of Maricopa County, 1993. Gilbert-Chandler Area Drainage Master Study.

3. Dibble & Associates, 2000. Higley Area Drainage Master Plan, FCD #98-13.

Existing Topographic Mapping, Aerial Photos, Land Use, Soils Data and Parcel data:

1. Flood Control District of Maricopa County, ArcInfo and AutoCad electronic DTM files, March 2003.

2. Flood Control District of Maricopa County, 10-foot contour interval electronic .dxf files, March 2003.

3. Flood Control District of Maricopa County, Land use electronic .shp files, March 2003 and June 7, 2006.

4. Flood Control District of Maricopa County, Soils data electronic .shp files, March 2003.

5. Flood Control District of Maricopa County, Aerial photo electronic .tif files, March 2003.

6. Flood Control District of Maricopa County, Aerial Photo electronic .sid files, March 2003.

7. Flood Control District of Maricopa County, Parcel data electronic .shp file, February 2004.

As-built Plans

1. None

Development Drainage Reports:

1. Colonia Coronita, Letter of Map Change for Colonia Coronita, and Elevation Certificates for Colonia Coronita lots 428, 434, 435, 500, 501, 502, 525, 545, 561 and 562, FEMA Case No. 04-09-1791V.

2. Dibble Engineering, Nozomi Park, McQueen Road and Queen Creek Road, Retention Volume Study, August 2008.

3. Dibble Engineering, Nozomi Park Recreation Area, Civil Plans, McQueen Road and Queen Creek Road, Phase II Grading Plans, August 2008.

4. Erie & Associates, Inc., Mammoth Park Master Drainage Plan and Modification to FEMA Floodplain, June 2003.

5. San Tan Vista Unit 3, Floodplain Volume Computations, CLOMR submittal, FEMA Case No. 05-09-0629A.

FEMA (C)LOMR Submittals:

1. David Evans and Associates, Inc., Chandler / Gilbert Floodplain Delineation Study, Phase 1, Eastern Canal Watershed, Technical Data Notebook, December 2007, FCD 2002C023, FEMA Case Number 08-09-1252P.

Drainage Reports and Horizontal Alignment Data for the Proposed Santan Freeway:

1. Arizona Department of Transportation, Santan Freeway horizontal alignment electronic .dgn file, April 2003.

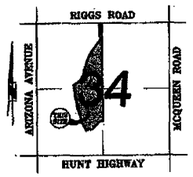
2. DMJM Harris, Santan Freeway HEC-1 schematic electronic .dgn file for Arizona Avenue to Gilbert Road, May 2003.

3. J2 Engineering and Environmental Design, Plan and Profile Drawings, Santan Freeway, Gilbert Road to Frye Road, August 2004.

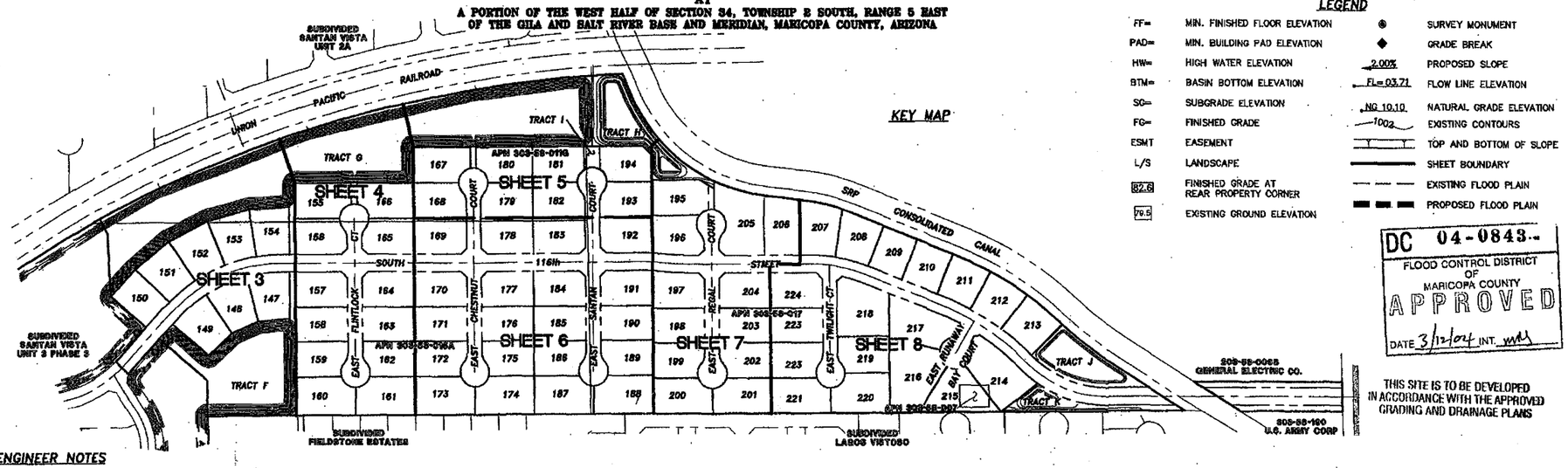
4. J2 Engineering and Environmental Design, Plan and Profile Drawings, Santan Freeway, Arizona Avenue to Gilbert Road, May 2003.

5. J2 Engineering and Environmental Design, Plan and Profile Drawings, East Channel for the Santan Freeway, Arizona Avenue to Gilbert Road, May 2003.

GRADING PLANS
FOR
SANTAN VISTA UNIT 3
PHASES 4 & 5
AT
A PORTION OF THE WEST HALF OF SECTION 34, TOWNSHIP 2 SOUTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA



VICINITY MAP
N.T.S.



KEY MAP

SCALE: 1"=200'

SCALE: 1" = 200'
0 200 400 600

LEGEND

FF=	MIN. FINISHED FLOOR ELEVATION	◉	SURVEY MONUMENT
PAD=	MIN. BUILDING PAD ELEVATION	◆	GRADE BREAK
HW=	HIGH WATER ELEVATION	2.00%	PROPOSED SLOPE
BTM=	BASIN BOTTOM ELEVATION	FL=03.71	FLOW LINE ELEVATION
SG=	SUBGRADE ELEVATION	NG 10.10	NATURAL GRADE ELEVATION
FG=	FINISHED GRADE	1002	EXISTING CONTOURS
ESMT	EASEMENT		TOP AND BOTTOM OF SLOPE
L/S	LANDSCAPE		SHEET BOUNDARY
82.6	FINISHED GRADE AT REAR PROPERTY CORNER		EXISTING FLOOD PLAIN
79.5	EXISTING GROUND ELEVATION		PROPOSED FLOOD PLAIN

DC 04-0843.-
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
APPROVED
DATE 3/12/04 INT. mls

THIS SITE IS TO BE DEVELOPED IN ACCORDANCE WITH THE APPROVED GRADING AND DRAINAGE PLANS

ENGINEER NOTES

THE CONTRACTOR SHALL MAKE NO CLAIM AGAINST THE OWNER OR THE ENGINEER REGARDING ALLEGED INACCURACY OF CONSTRUCTION STAKES SET BY THE ENGINEER UNLESS ALL SURVEY STAKES SET BY THE ENGINEER ARE MAINTAINED INTACT AND CAN BE VERIFIED AS TO THEIR ORIGIN. IF, IN THE OPINION OF THE ENGINEER, THE STAKES ARE NOT MAINTAINED INTACT AND CANNOT BE VERIFIED AS TO THEIR ORIGIN, ANY REMEDIAL WORK REQUIRED TO CORRECT ANY ITEM OR IMPROPER CONSTRUCTION WORK IN THIS DEVELOPMENT SHALL BE PERFORMED AT THE SOLE EXPENSE OF THE RESPONSIBLE CONTRACTOR OR SUBCONTRACTOR.

NOTHING CONTAINED IN THE CONTRACT DOCUMENTS SHALL CREATE, NOR SHALL BE CONSTRUED TO CREATE, ANY CONTRACTUAL RELATIONSHIP BETWEEN THE ENGINEER AND THE CONTRACTOR OR ANY SUBCONTRACTOR.

THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK, AND HE WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING EARTHWORK QUANTITIES OR THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE DUE TO THE VARYING FIELD CONDITIONS, CHANGING SOIL TYPES, ALLOWABLE CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF THE ENGINEER.

PRIOR TO BIDDING THE WORK THE CONTRACTOR SHALL THOROUGHLY SATISFY HIMSELF AS TO THE ACTUAL CONDITIONS AND EARTHWORK QUANTITIES, IF ANY. NO CLAIM SHALL BE MADE AGAINST THE OWNER/DEVELOPER OR ENGINEER FOR ANY EXCESS OR DEFICIENCY THEREIN, ACTUAL OR RELATIVE.

THE ENGINEER WILL PERFORM FIELD SURVEYS FOR PAD ELEVATION CERTIFICATIONS UPON NOTIFICATION BY THE GRADING CONTRACTOR THAT THE PADS ARE COMPLETE AND READY FOR CERTIFICATION. IT IS UNDERSTOOD THAT THE CERTIFICATION PROVIDES ONLY A REPRESENTATIVE ELEVATION OF THE AVERAGE GRADE OF EACH LOT, BUILDINGS OR UNIT PAD, AND SHALL NOT BE CONSTRUED TO INCLUDE YARD AND STREET SUBGRADE CERTIFICATION OR CERTIFICATION THAT THE ENTIRE PAD IS LEVEL, THAT IT WAS CONSTRUCTED IN THE DESIGNED LOCATION OR WAS GRADED TO THE CROSS-SECTION SET FORTH ON THE PLANS OR AS DESIGNATED IN THE SOILS REPORT.

EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED ACCORDING TO INFORMATION PROVIDED BY THE AGENCY OPERATING EACH UTILITY. LOCATIONS SHOWN ARE APPROXIMATELY ONLY, AND ARE NOT RELIABLE FOR CONSTRUCTION PURPOSES. CALL BLUE STAKE FOR FIELD LOCATION @ (602) 263-1100.

THE ENGINEER AND APPLICABLE AGENCY MUST APPROVE, PRIOR TO CONSTRUCTION, ANY ALTERATION OR VARIANCE FROM THESE PLANS. ANY VARIATIONS FROM THESE PLANS SHALL BE PROPOSED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE ENGINEER.

THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES ON THE SITE. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN OR NOT ON THE DRAWING, SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING SURFACE FEATURES AND FENCING SHALL BE REPLACED IN KIND.

ANY INSPECTION BY THE CITY, COUNTY, OR THE ENGINEER, SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH APPLICABLE CODES AND AGENCY REQUIREMENTS.

CONTRACTOR TO LOCATE ALL EXISTING PROPERTY MONUMENTS PRIOR TO CONSTRUCTION. ANY MONUMENTS DISTURBED DURING THE CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.

TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE MAG SPECIFICATION 401 AND THE CITY OF PHOENIX BARRICADE MANUAL.

PRIOR TO FINAL APPROVAL AND ACCEPTANCE OF THE WORK THE DEVELOPER/CONTRACTOR WILL BE REQUIRED TO CLEAN AND REPAIR ADJACENT (OFF-PROJECT) ROADWAYS USED OR DAMAGED DURING THE COURSE OF CONSTRUCTION.

CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL STORM DRAIN PIPES AND DRAINAGE FACILITIES FROM DAMAGE DURING ALL STAGES OF CONSTRUCTION. THE DEPTH OF COVER ON THE STORM DRAINAGE PIPE IS DESIGNED FOR FINAL GRADE, THEREFORE, EXTRA CARE SUCH AS BERMING OVER PIPES, FLAGGING OR SIGNAGE SHOULD BE USED DURING CONSTRUCTION TO MAINTAIN COVER OR PROTECT THE PIPES.

ESTIMATED EARTHWORK QUANTITIES

(NOT TO BE USED FOR BIDDING PURPOSE. CONTRACTOR IS RESPONSIBLE FOR HIS OWN CUT & FILL QUANTITIES)

	CUT (C.Y.)	FILL (C.Y.)
RAW QUANTITIES	118,510	141,382
SHRINK (20%)		+28,276
GROUND LOSS (23%)	-24,138	
		75,286 (F) NET

UTILITIES	UTILITY COMPANIES	DATE OF SUBMITTAL
ELECTRICITY	ARIZONA PUBLIC SERVICE CO. (602) 583-5760	11/20/03
TELEPHONE	QWEST COMMUNICATIONS (802) 831-4775	11/20/03
GAS	SOUTHWEST GAS CORP. (602) 484-5266	11/20/03
CABLE	COX COMMUNICATIONS (602) 352-5860	11/20/03
WATER	PIMA UTILITY COMPANY (480) 895-9367	11/20/03
SEWER	PIMA UTILITY COMPANY (480) 895-9367	11/20/03

DEVELOPER
HANCOCK COMMUNITIES
8501 E. PRINCESS DRIVE, STE 200
SCOTTSDALE, AZ 85255
PHONE (480) 303-6700
FAX (480) 303-0338
CONTACT: KEN QUARTERMAIN JR.

ENGINEER
RBF CONSULTING
DANIEL J. POTTINGER
16605 N. 28TH AVENUE, STE 100
PHOENIX, ARIZONA 85053
PHONE (602) 467-2200
FAX (602) 467-2201

BENCH MARK
COC NO. 56
3" COC BRASS CAP IN CONCRETE FLUSH. 380± EAST OF SW COR SEC 34. 18' SOUTH OF SOUTH FOGLINE HUNT HIGHWAY, 4.5' NORTH OF EAST-WEST POWER POLE ALIGNMENT ON SOUTH SIDE OF HUNT HIGHWAY. ELEV=1215.03

SHEET INDEX

FLOOD PLAIN APPROVAL ONLY

THIS APPROVAL IMPLIES COMPLIANCE WITH THE FLOOD PLAIN REGULATIONS OF MARICOPA COUNTY ONLY. THIS APPROVAL DOES NOT IMPLY THAT THE TOTAL DRAINAGE CONCEPT FOR THE SITE HAS BEEN REVIEWED OR APPROVED, BY OUR OFFICE. FA03-214A 3/24/04 LMT

APPROVALS

MARICOPA COUNTY PLANNING AND DEVELOPMENT

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AND SURVEY MONUMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR — DATE

REGISTRATION NUMBER

CALL BLUE STAKE, INC. 602-263-1100 Blue Stake, Inc. CALL BEFORE!

DANIEL J. POTTINGER, P.E.
ERIC J. FROBERG, P.E.

DESIGN	DRAWN	CHECKED	REVIEWED
EJF	DAB		DJP

SCALE: 1"=200'

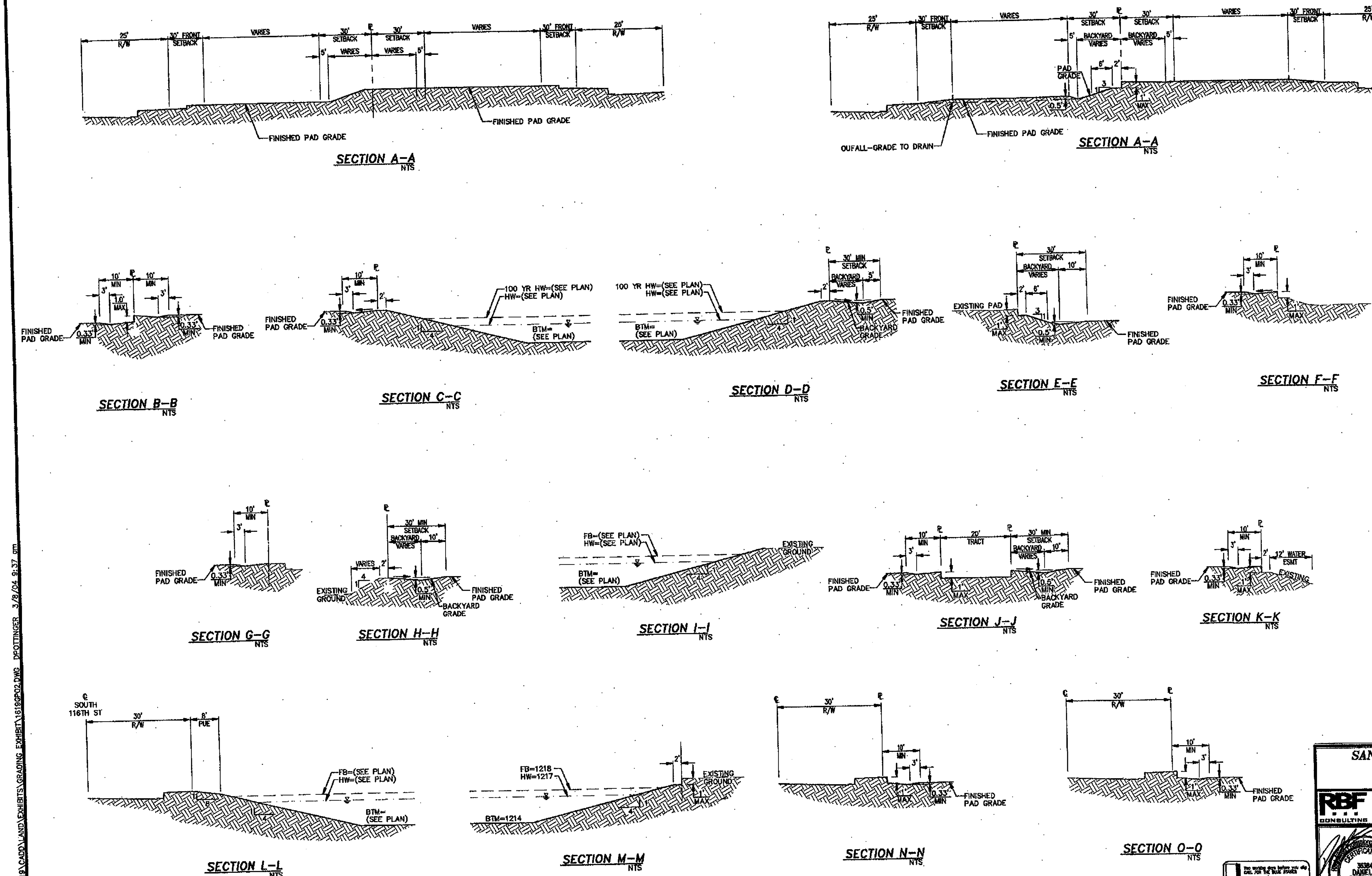
RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION
16605 NORTH 28th AVENUE, SUITE 100
PHOENIX, ARIZONA 85053-2602
602.467.2200 • FAX 602.467.2201 • www.RBF.com

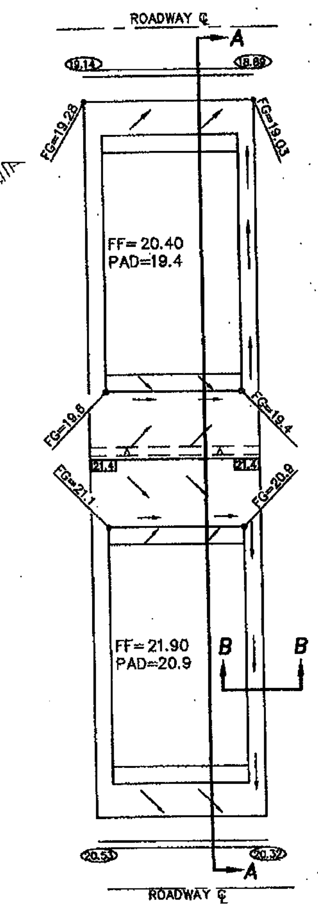
DIRECTOR/SECTION: HANCOCK COMMUNITIES
PROJECT NAME: SANTAN VISTA UNIT 3 PHASES 4 & 5
PLAN TYPE: GRADING PLANS

ORIGINAL PLAN DATE: OCT/2003
LATEST REVISION DATE: MAR/2004
SHEET NUMBER: 1 of 9
PROJECT NUMBER: 45101619

B200401368

REVISED RECD MAR 18 2004





TYPICAL LOT GRADING PLAN

SANTAN VISTA - UNIT 3
PHASES 4 & 5
GRADING PLANS

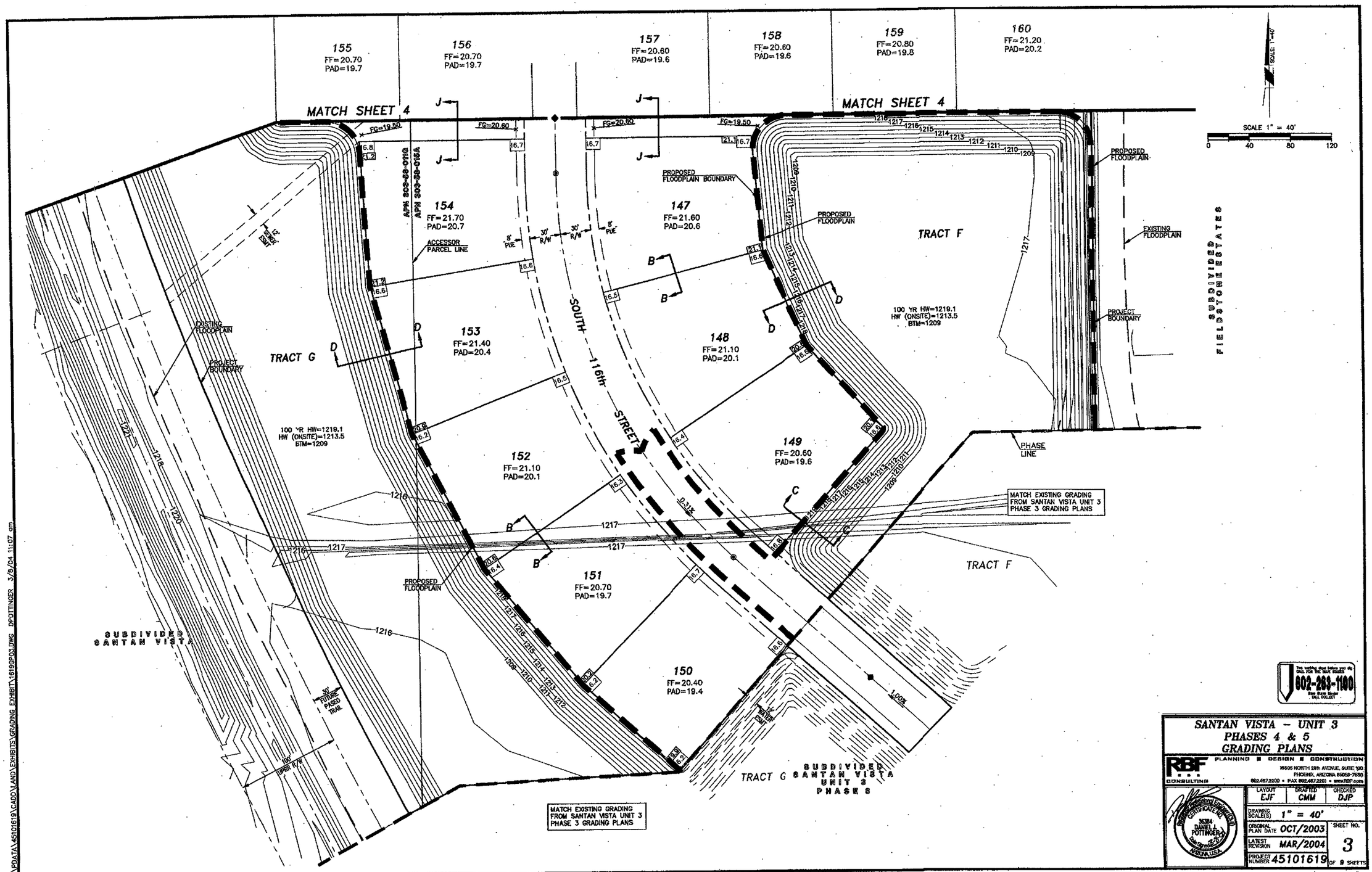
RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION
16605 NORTH 28th AVENUE, SUITE 100
PHOENIX, ARIZONA 85053-7550
602.467.2200 • FAX 602.467.2201 • www.RBF.com

LAYOUT	DRAFTED	CHECKED
EJF	DAB	DJP

DRAWING SCALE(S) 1" = 40'
ORIGINAL PLAN DATE OCT/2003
LATEST REVISION MAR/2004
PROJECT NUMBER 45101619
SHEET NO. 2 OF 9 SHEETS

Registered Professional Engineer (Civil) CERTIFICATE NO. 36384 DANIEL J. POTTINGER ARIZONA, U.S.A.

602-263-1100



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SCALE 1" = 40'
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172 FF=20.80 PAD=19.8
173 FF=21.20 PAD=20.2

MATCH SHEET 5
MATCH SHEET 6
MATCH SHEET 3
MATCH SHEET 3

PROPOSED FLOODPLAIN
EXISTING FLOODPLAIN
PROJECT BOUNDARY
EXISTING FLOODPLAIN
PROJECT BOUNDARY

TRACT G

116th STREET

EAST A — FLINTLOCK A — COURT

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157 FF=20.60 PAD=19.6
158 FF=20.60 PAD=19.6
159 FF=20.80 PAD=19.8
160 FF=21.20 PAD=20.2

SOUTH

APN 303-58-015G
APN 303-58-015A

ACCESSOR PARCEL LINE

8' PUE 30' R/W 30' R/W 8' PUE

100 YR HW=1219.1
HW (ONSITE)=1213.5
BTM=1209

35' FUTURE PAVED TRAIL

100' UPRR R/W

FIELDSTONE ESTATES SUBDIVIDED

602-263-1100
Arizona Blue Stake, Inc.
DIAL 811 OR DIAL 602-263-1100

SANTAN VISTA – UNIT 3
PHASES 4 & 5
GRADING PLANS

RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION
16605 NORTH 28th AVENUE, SUITE 100
PHOENIX, ARIZONA 85053-7580
602.487.2200 • FAX 602.487.2201 • www.RBF.com

LAYOUT	DRAFTED	CHECKED
EJF	CMM	DJP

DRAWING SCALE(S): 1" = 40'
ORIGINAL PLAN DATE: OCT/2003
LATEST REVISION: MAR/2004
PROJECT NUMBER: 45101619
SHEET NO. 4 OF 9 SHEETS

REGISTERED ENGINEER
CERTIFICATE NO. 36364
DANIEL J. POTTINGER
Date Signed 3-8-04
ARIZONA, U.S.A.

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SCALE: 1"=40'

SCALE 1" = 40'
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TRACT G

TRACT H
HW=1215.5
BTM=1212.5
SG=1212.2

100 YR HW=1219.1
HW (ONSITE)=1213.5
BTM=1209

EXISTING FLOODPLAIN

PROPOSED FLOODPLAIN

PROJECT BOUNDARY

PHASE 4

APN 303-55-011G

APN 303-55-017

ACCESSOR PARCEL LINE

TRACT 7

PHASE LINE

MATCH SHEET 4

MATCH SHEET 6

MATCH SHEET 7

E CHESTNUT CT

SANTAN CT

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PAD=19.7	PAD=19.7	PAD=19.7	PAD=19.7
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FF=20.70	FF=21.10	FF=21.10	FF=21.10	FF=21.10	FF=20.10
PAD=19.7	PAD=20.1	PAD=20.1	PAD=20.1	PAD=20.1	PAD=19.1

602-263-1100
Blue Stake, Center
CALL COLLECT

SANTAN VISTA – UNIT 3
PHASES 4 & 5
GRADING PLANS

RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION
16605 NORTH 28th AVENUE, SUITE 100
PHOENIX, ARIZONA 85053-7550
602.457.2290 • FAX 602.457.2291 • www.RBF.com

LAYOUT	DRAFTED	CHECKED
EJF	CMM	DJP

DRAWING SCALE(S): 1" = 40'
ORIGINAL PLAN DATE: OCT/2003
LATEST REVISION: MAR/2004
PROJECT NUMBER: 45101619
SHEET NO. 5 OF 9 SHEETS

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SCALE 1" = 40'

0 40 80 120

MATCH SHEET 5

MATCH SHEET 4

MATCH SHEET 7

APN 303-58-011G

APN 303-58-015A

ACCESSOR PARCEL LINE

APN 303-58-017

PHASE LINE

EXISTING FLOODPLAIN

PROJECT BOUNDARY

SUBDIVIDED FIELDSTONE ESTATES

SUBDIVIDED LAGOS VISTOSO

SOUTH 116th STREET

EAST CHESTNUT COURT

WEST SANTAN COURT

EAST SANTAN COURT

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SANTAN VISTA – UNIT 3
PHASES 4 & 5
GRADING PLANS

RBF CONSULTING — PLANNING ■ DESIGN ■ CONSTRUCTION

16605 NORTH 28th AVENUE, SUITE 100
PHOENIX, ARIZONA 85053-7580
602.457.2200 ▸ FAX 602.457.2201 ▸ www.RBF.com

REGISTERED PROFESSIONAL ENGINEER — JOHN DANIEL POTTINGER — ARIZONA, U.S.A.

LAYOUT	DRAFTED	CHECKED
EJF	CMM	DJP

DRAWING SCALE(S): 1" = 40'

ORIGINAL PLAN DATE: OCT/2003

LATEST REVISION: MAR/2004

PROJECT NUMBER: 45101619

SHEET NO. 6 OF 9 SHEETS

602-263-1100 — BLUE STAKE, INC. — ARIZONA BLUE STAKE, INC. — CALL BEFORE YOU DIG!

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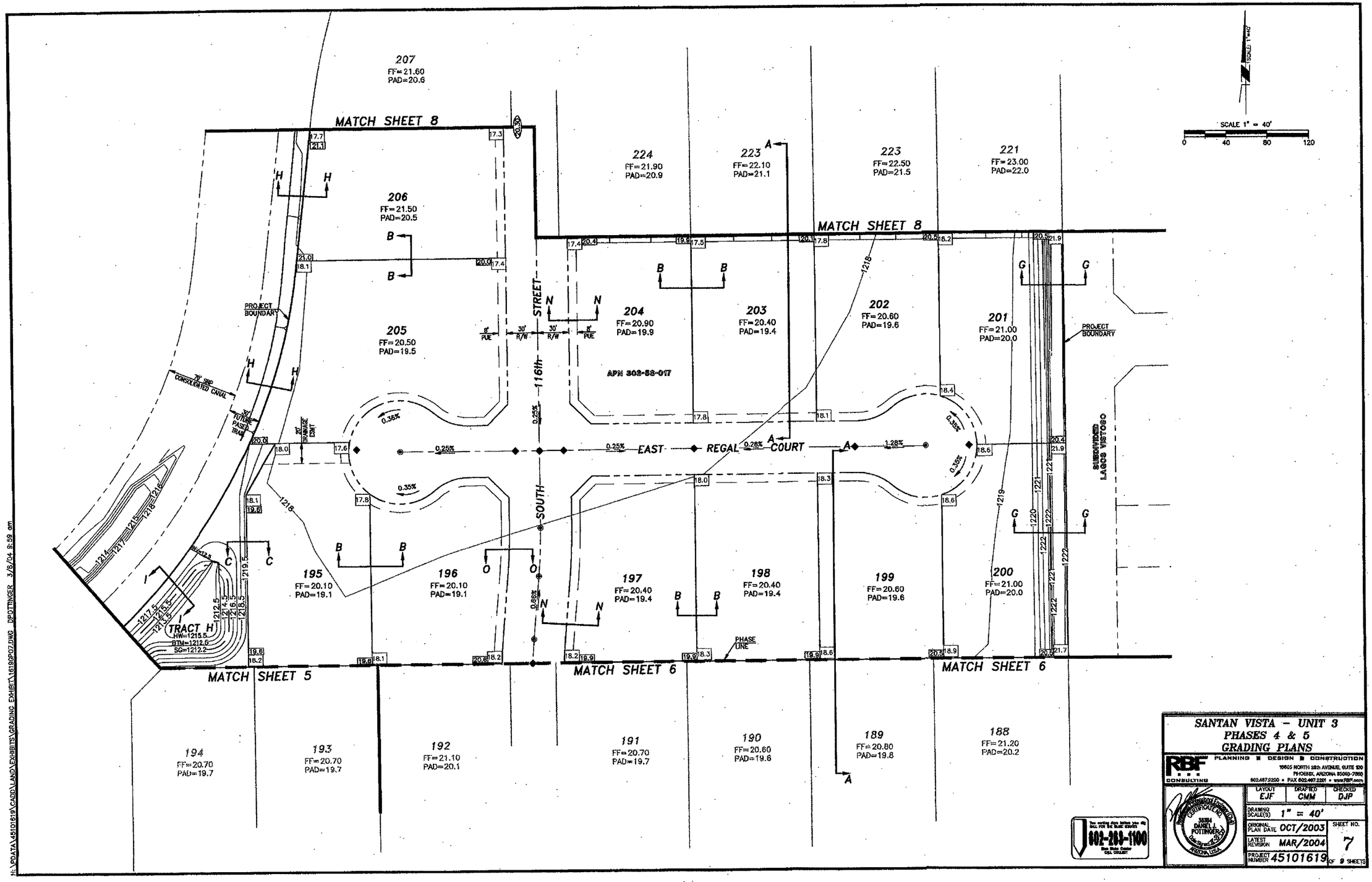

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SANTAN VISTA – UNIT 3
PHASES 4 & 5
GRADING PLANS

RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION
10605 NORTH 28th AVENUE, SUITE 100
PHOENIX, ARIZONA 85051-7866
602.457.2200 ■ FAX 602.457.2201 ■ www.RBF.com

LAYOUT	DRAFTED	CHECKED
EJF	CMM	DJP

DRAWING SCALE(S): 1" = 40'
ORIGINAL PLAN DATE: OCT/2003
LATEST REVISION: MAR/2004
PROJECT NUMBER: 45101619
SHEET NO. 7 OF 9 SHEETS

SCALE: 1"=40'

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205
FF=20.50
PAD=19.5

206
FF=21.50
PAD=20.5

MATCH SHEET 7

207
FF=21.60
PAD=20.6

208
FF=21.30
PAD=20.3

209
FF=21.00
PAD=20.0

210
FF=20.70
PAD=19.7

211
FF=20.40
PAD=19.4

212
FF=20.00
PAD=19.0

213
FF=19.50
PAD=18.5

MATCH SHEET 9

204
FF=20.90
PAD=19.9

224
FF=21.90
PAD=20.9

218
FF=21.90
PAD=20.9

217
FF=20.90
PAD=19.9

203
FF=20.40
PAD=19.4

223
FF=22.10
PAD=21.1

219
FF=22.50
PAD=21.5

202
FF=20.60
PAD=19.6

223
FF=22.50
PAD=21.5

216
FF=20.60
PAD=19.6

214
FF=20.30
PAD=19.3

201
FF=21.00
PAD=20.0

221
FF=23.00
PAD=22.0

220
FF=23.00
PAD=22.0

215
FF=20.60
PAD=19.6

APN 303-68-017

APN 303-68-007

SOUTH 116th STREET

COURT

EAST TWILIGHT

EAST RUNAWAY BAY COURT

70' SRP CONSOLIDATION CANAL

PROJECT BOUNDARY

EXISTING OVERHEAD ELECTRIC TO BE RELOCATED

ACCESSOR PARCEL LINE

SUBDIVIDED LAGOS VISTOSO

MATCH SHEET 7

MATCH SHEET 9

1218

1220 1221 1222 1223 1224

0.25% 0.36% 0.95% 1.28% 0.39% 1.36% 0.30% 0.35% 1.31% 0.45%

H:\PDATA\45101619\CADD\LAND\EXHIBITS\GRADING EXHIBIT\16190P08.DWG DPOTTINGER 3/8/04 10:02 am

SANTAN VISTA – UNIT 3
PHASES 4 & 5
GRADING PLANS

RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION
15605 NORTH 28th AVENUE, SUITE 100
PHOENIX, ARIZONA 85053-7550
602.482.8200 ▪ FAX 602.482.2201 ▪ www.rbf.com

LAYOUT	DRAFTED	CHECKED
EJF	CMM	DJP

DRAWING SCALE(S): 1" = 40'

ORIGINAL PLAN DATE: OCT/2003

LATEST REVISION: MAR/2004

SHEET NO. 8

PROJECT NUMBER 45101619 OF 9 SHEETS

30304 DANIEL A. POTTINGER REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. DATE OF SIGNATURE 3-8-04 ARIZONA, U.S.A.

602-263-1100
Blue Stake, Inc.
CALL BEFORE YOU DIG

SCALE 1" = 40'

0 40 80 120

213
FF=19.50
PAD=18.5

214
FF=20.30
PAD=18.3

MATCH SHEET 8

MATCH SHEET 8

PHASE 5

APN 303-58-017

TRACT J
HW=1217
BTM=1214
SG=1213.7

TRACT K
HW=1217
BTM=1214
SG=1213.7

1216
1217
1218
1219
1220

1217-1216-1215-1214

0.25%

0.35%

0.47%

1.00%

70' SRP CONSOLIDATED CANAL

10' FUTURE PARKWAY

303-58-0088
GENERAL ELECTRIC CO.

TRACT M

TRACT L

6' PUE

30' R/W

SOUTH 116th STREET

RIGGS ROAD

3HO-2

EXISTING OVERHEAD ELECTRIC TO BE RELOCATED

SUBDIVIDED
LAGOS VISTOSO

303-58-120
U.S. ARMY CORP

H:\DATA\45101619\CADD\LAND\EXHIBITS\GRADING EXHIBIT\16195GP09.DWG DPOTTINGER 3/8/04 10:26 am

SANTAN VISTA – UNIT 3
PHASES 4 & 5
GRADING PLANS

RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION
16605 NORTH 28th AVENUE, SUITE 100
PHOENIX, ARIZONA, 85053-7605
602.467.2200 ■ FAX 602.467.2201 ■ www.RBF.com

LAYOUT	DRAFTED	CHECKED
EJF	–	DJP

DRAWING SCALE(S): 1" = 40'

ORIGINAL PLAN DATE: OCT/2003

LATEST REVISION: MAR/2004

PROJECT NUMBER: 45101619

SHEET NO: 9 OF 9 SHEETS

36384 DANIEL J. POTTINGER REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. ARIZONA, U.S.A.

602-263-1100

CITY OF CHANDLER, ARIZONA

NOZOMI PARK AND QUEEN CREEK BASIN

PROJECT NO. ST0601-201

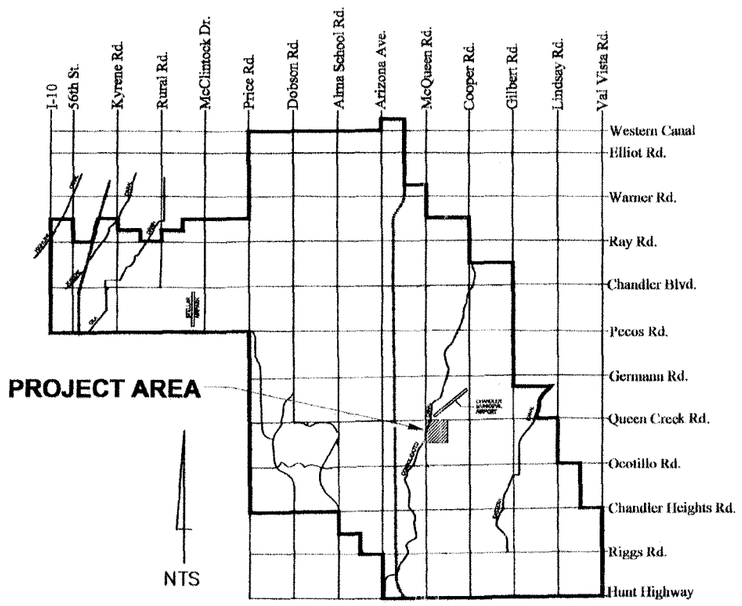
DATE: DECEMBER 18, 2008

Chandler + Arizona
Where Values Make The Difference

MAYOR
BOYD DUNN

VICE MAYOR
LOWELL HUGGINS

COUNCIL
BOB CACCAMO
TRINITY DONOVAN
MATT ORLANDO
MARTIN SEPULVEDA
JEFF WENINGER



APPROVED:

PUBLIC WORKS DIRECTOR	DATE
CITY ENGINEER	DATE
CITY TRANSPORTATION ENGINEER	DATE
LANDSCAPE ARCHITECT	DATE
DEVELOPMENT SERVICE ENGINEER	DATE
MARICOPA COUNTY ENVIRONMENTAL SERVICE DEPARTMENT (AS REQUIRED)	DATE
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY (AS REQUIRED)	DATE

COMMUNITY SERVICES DEPARTMENT
125 E. COMMONWEALTH AVE.
CHANDLER, AZ 85225
PHONE NO. (480) 782 - 0000

DATE: DECEMBER 18, 2008
STATUS: 95% CONSTRUCTION DOCUMENTS

▲ **BENCHMARK CMCN NO. 47A**

SECTION 14, T2S, R5E, SET 3" BRASS CAP IN CONCRETE, 215' EAST OF INTERSECTION OF MCQUEEN ROAD AND OCOTILLO RD; 4' NORTH OF BACK OF CURB. (NORTHING 817878.803, EASTING 728629.500)
LEGAL DESCRIPTION- SEE SHEET C1.01

REV. NO.	DATE	DRWN	CHKD	REMARKS

epg
environmental planning group
PLANNING, PERMITTING, LANDSCAPE ARCHITECTURE

EPG, INC.
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, AZ 85018
PHONE NO. (602) 956 - 4370

95% CONSTRUCTION DOCUMENTS

Expires 12-31-2010

C.O.C. LOG NO. ENR08-0050

GENERAL NOTES

REFER TO CIVIL PLANS SHEET C1.03

RECLAIMED WATER NOTES

1. RECLAIMED WATER LINE SHALL BE CONSTRUCTED IN ACCORDANCE WITH MAG STANDARD SPECIFICATION SECTION 616 EXCEPT AS MODIFIED BY THESE NOTES.
2. THE MINIMUM DEPTH OF COVER WITHIN THE RIGHT OF-WAY OF ARTERIAL STREETS SHALL BE 7', AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. PIPE SEPARATION ALSO SHALL CONFORM TO ARIZONA RULE R18-9-602, PIPELINE CONVEYANCES OF RECLAIMED WATER.
4. A REDUCED PRESSURE BACKFLOW DEVICE SHALL BE INSTALLED, AS PART OF THE ORIGINAL SYSTEM, ON A RECLAIMED WATER SYSTEM THAT WILL USE POTABLE WATER AS AN INITIAL SOURCE AND WILL USE RECLAIMED WATER AS A SOURCE LATER. ON SUCH A SYSTEM, CONCURRENT CONNECTIONS SHALL NOT BE MADE AT ANY TIME TO BOTH POTABLE WATER AND RECLAIMED WATER SYSTEMS, REGARDLESS WHETHER ONE OR BOTH SYSTEMS ARE DEVOID OF SUPPLY.
5. RECLAIMED WATER PIPE GREATER THAN OR EQUAL TO 4" IN DIAMETER SHALL BE PRESSURE-RATED POLYVINYL CHLORIDE (PVC) PLASTIC PIPE MEETING THE REQUIREMENTS OF AWWA C900 FOR 4" THROUGH 12" PIPE AND AWWA C905 FOR 14" THROUGH 48" PIPE. C900 PIPE SHALL BE RATED FOR A MINIMUM WORKING PRESSURE OF 150 PSI. C905 PIPE SHALL BE RATED FOR A MINIMUM WORKING PRESSURE OF 235 PSI. DUCTILE IRON PIPE MAY BE USED PROVIDED THAT IT MEETS THE REQUIREMENTS OF DUCTILE IRON PIPE FOR POTABLE WATER. DUCTILE IRON PIPE SHALL BE PROTECTED FROM CORROSION BY ENCASEMENT IN A POLYETHYLENE PROTECTIVE WRAPPING (POLYWRAP).
6. RECLAIMED WATER PIPE LESS THAN 4" IN DIAMETER SHALL BE PVC PIPE RATED FOR A MINIMUM WORKING PRESSURE OF 200 PSI AND SHALL MEET THE REQUIREMENTS OF ASTM D2241 OR ASTM D1785.
7. PIPE SLEEVES SHALL BE PIPE MEETING THE REQUIREMENTS ABOVE AND SHALL BE TWO (2) NOMINAL SIZES LARGER THAN THE CONVEYANCE PIPE.
8. PRIVATE RECLAIMED WATER LINES SHALL BE INSTALLED IN SLEEVES WHERE THEY CROSS PUBLIC OR PRIVATE RIGHT-OF-WAY.
9. FITTINGS FOR RECLAIMED WATER PIPE GREATER THAN OR EQUAL TO 4" IN DIAMETER SHALL BE DUCTILE IRON AND SHALL CONFORM TO AWWA C110 OR C153 FOR A MINIMUM WORKING PRESSURE OF 250 PSI. FITTINGS SHALL HAVE A CEMENT-MORTAR LINING IN ACCORDANCE WITH AWWA C104. THE EXTERIOR OF FITTINGS SHALL BE COATED IN ACCORDANCE WITH AWWA C110. FITTINGS THAT REQUIRE TRANSITION GASKETS TO IRON PIPE SIZE (IPS) SHALL BE FURNISHED ONLY IN 6" THROUGH 8" DIAMETERS. DUCTILE IRON FITTINGS SHALL BE PROTECTED FROM CORROSION BY ENCASEMENT IN A POLYETHYLENE PROTECTIVE WRAPPING (POLYWRAP).
10. PIPE, INCLUDING PIPE SLEEVES, SHALL BE INTEGRALLY COLORED PURPLE AND THE PIPE SHALL BEAR THE MESSAGE "CAUTION: RECLAIMED WATER, DO NOT DRINK" AS PART OF EACH SET OF PIPE IDENTIFICATION MARKINGS. UNLESS NOTED OTHERWISE, PIPE THAT CANNOT BE PURPLE IN COLOR SHALL BE MARKED PER MAG STANDARD SPECIFICATION SECTION 616 WITH THE ABOVE MESSAGE. DUCTILE IRON PIPE MAY BE MARKED BY WRAPPING WITH PURPLE POLYETHYLENE ENCASEMENT (POLYWRAP) MEETING THE REQUIREMENTS OF THE MAG STANDARD SPECIFICATIONS. THE POLYWRAP SHALL INCLUDE THE ABOVE MESSAGE.
11. RECLAIMED WATER IRRIGATION SYSTEM SPRINKLER HEADS, VALVE BOXES AND COVERS, AND FLOW CONTROL HANDLES ON VALVES SHALL BE PURPLE.
12. PVC PIPE SHALL NOT BE EXPOSED TO DIRECT ULTRAVIOLET RADIATION (SUNLIGHT) FOR MORE THAN 30 DAYS, WHETHER THE TIME IS CONTINUOUS OR CUMULATIVE. PVC PIPE SHALL BE PROTECTED FROM DIRECT ULTRAVIOLET RADIATION FOR ANY TIME OF EXPOSURE EXCEEDING 30 DAYS. PVC PIPE THAT HAS BEEN DISCOLORED BY EXPOSURE TO ULTRAVIOLET RADIATION IS UNACCEPTABLE.
13. VALVES 4" THROUGH 24" SHALL BE GATE VALVES UNLESS NOTED OTHERWISE. EACH VALVE SHALL BE FURNISHED WITH A BAR WELDED TO THE OPERATING NUT IN ACCORDANCE WITH CITY OF CHANDLER STANDARD DETAIL C-406, THEREBY REQUIRING A TOOL WITH A KEY SLOT TO EXERCISE THE VALVE. VALVE BOXES AND COVERS SHALL CONFORM TO CITY OF CHANDLER STANDARD DETAIL C-406. A DEBRIS CAP, WHICH CONFORMS TO CITY OF CHANDLER STANDARD DETAIL C-318, SHALL BE INSTALLED IN EACH VALVE BOX.
14. NO VALVE, RISER, BOX OR COVER SHALL BE LOCATED BENEATH OR WITHIN A SIDEWALK OR SIDEWALK RAMP.
15. CITY RECLAIMED WATER VALVES SHALL BE OPERATED BY CITY OF CHANDLER PERSONNEL ONLY.
16. CITY OF CHANDLER WILL FURNISH AND INSTALL 2" AND SMALLER WATER METERS WITH PREVAILING COSTS PAID BY THE DEVELOPER.
17. METER BOXES AND COVERS SHALL BE SUPPLIED BY THE DEVELOPER AND SHALL BE INSTALLED BY THE CONTRACTOR FACING AWAY FROM THE STREET. METER BOXES FOR METERS 2" AND SMALLER SHALL BE CONCRETE AND SHALL CONFORM TO MAG STANDARD DETAIL 320 OR SHALL BE POLYMER CONCRETE AND CONFORM TO CITY OF CHANDLER STANDARD DETAIL C-301. THE INSIDE OF EACH METER BOX SHALL BE PAINTED PURPLE. METER BOX COVERS SHALL BE POLYMER CONCRETE AND SHALL CONFORM TO CITY OF CHANDLER STANDARD DETAIL C-301. METER BOX COVERS SHALL BE CAST WITH THE WORDS "RECLAIMED WATER" IN THE OUTSIDE SURFACE OR HAVE TAGS WITH THE WORDS "RECLAIMED WATER" FIRMLY ATTACHED TO THE OUTSIDE SURFACE. LETTERING SIZE AND FORMAT SHALL BE SIMILAR TO THE LETTERING IN MAG STANDARD DETAIL 310. TAGS SHALL OTHERWISE MEET THE REQUIREMENTS FOR RECLAIMED WATER VALVE TAGS.
18. WATER METER 3" AND LARGER, METER VAULTS AND COVERS SHALL BE SUPPLIED BY THE DEVELOPER AND SHALL BE INSTALLED BY THE CONTRACTOR. WATER METERS SHALL BE IN ACCORDANCE WITH CITY OF CHANDLER STANDARD DETAIL C-404 AND C-405, APPROVED BY THE CITY OF CHANDLER, AND SHALL BE EQUIPPED WITH AN "ITRON ERT SIGNAL UNIT". WHERE THE METER IS INSTALLED BELOW GROUND, INSTALLATION SHALL CONFORM TO CITY OF CHANDLER STANDARD DETAIL C-316. WHERE THE METER IS INSTALLED ABOVE GROUND, THE REMOTE-READ "ITRON ERT SIGNAL UNIT" SHALL BE INSTALLED IN A WATER METER BOX IN ACCORDANCE WITH CITY OF CHANDLER STANDARD DETAIL C-301. THE INSIDE OF EACH METER VAULT AND METER BOX SHALL BE PAINTED PURPLE. METER VAULT AND METER BOX COVERS SHALL INCLUDE THE WORDS "RECLAIMED WATER" AS REQUIRED FOR METER BOX COVERS ABOVE FOR METERS 2" AND SMALLER. THE CITY OF CHANDLER WATER DISTRIBUTION DIVISION SHALL BE NOTIFIED 24 HOURS BEFORE INSTALLATION AT 480-782-3700.
19. WARNING SIGNS: AREAS IRRIGATED WITH RECLAIMED WATER SHALL BE IDENTIFIED BY SURFACE MOUNTED SIGNS, AT LEAST 12" WIDE BY 9" HIGH, WITH THE FOLLOWING MESSAGE IN BOLD, WHITE LETTERS ON A PURPLE BACKGROUND. THE SIGN LAYOUT SHALL BE AS FOLLOWS: FIRST LINE, "IRRIGATION"; SECOND LINE, "RECYCLED WATER"; THIRD LINE, "DO NOT DRINK"; FOURTH LINE, DISPLAY THE INTERNATIONAL "DO NOT DRINK" SYMBOL AND FIFTH LINE, "NO BEBER". SIGNS SHALL BE FABRICATED FROM FLAT SHEET ALUMINUM. SIGNS SHALL BE AS MANUFACTURED BY CHRISTY SIGNS OR SHALL BE AN APPROVED EQUAL. SIGNS SHALL BE PROMINENTLY LOCATED AT ALL SUBDIVISION AND PARK ENTRANCES, IN ALL AREAS SUBJECT TO IRRIGATION, AND AT ALL LAKES AND WATER FEATURES. SIGNS SHALL BE POSTED AT EACH PEDESTRIAN ENTRANCE AND ACCESS POINT TO AN AREA WHERE RECLAIMED WATER IS USED. SIGNS SHALL BE SPACED AT A MAXIMUM INTERVAL OF 100 YARDS, EXCEPT FOR ROADWAY MEDIANS, WHERE SIGNS MAY BE SPACED AT A MAXIMUM INTERVAL OF 300 YARDS.
20. RECLAIMED WATER LINES GREATER THAN OR EQUAL TO 4" IN DIAMETER SHALL BE TESTED IN ACCORDANCE WITH THE SAME REQUIREMENTS AS POTABLE WATER LINES. RECLAIMED WATER LINES LESS THAN 4" IN DIAMETER ARE NOT REQUIRED TO BE TESTED. THE TESTING REQUIREMENTS OF CITY OF CHANDLER STANDARD SPECIFICATION NO. 10 SHALL APPLY TO RECLAIMED WATER LINES GREATER THAN OR EQUAL TO 4" IN DIAMETER. ON A RECLAIMED WATER SYSTEM THAT WILL NOT USE POTABLE WATER AS AN INITIAL SOURCE, RECLAIMED WATER MAY BE USED IN LIEU OF POTABLE WATER TO FILL RECLAIMED WATER PIPE BEING TESTED. DISINFECTION OF THE RECLAIMED WATER MAIN SHALL NOT BE REQUIRED.

SEWER NOTES

REFER TO CIVIL PLANS SHEET C1.02

COORDINATION WITH CITY OF CHANDLER FIRE MARSHALL

THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF CHANDLER FIRE MARSHALL ON ALL PROJECTS WHICH INCLUDE WATER LINES OF ANY TYPE IN THE SCOPE OF WORK. THE PURPOSE OF THE COORDINATION IS TO CONFIRM THAT EXISTING FIRE PROTECTION SYSTEMS ARE CONNECTED TO A WATER LINE SUPPLYING ADEQUATE WATER FOR THE FIRE PROTECTION SYSTEM. THIS MAY INCLUDE RECONNECTION OF AN EXISTING FIRE PROTECTION SYSTEM, CONNECTION OF AN EXISTING SYSTEM TO A NEW OR REPLACED WATER LINE, OR PROVISIONS TO CONNECT A FUTURE FIRE PROTECTION SYSTEM IF PLANNED.

FOR EXISTING LIVE UTILITY
AND ALL ABANDON UTILITY
TWO WORKING DAY BEFORE YOU DIG.
CALL FOR THE BLUE STAKES
263-1100
Blue Stake Center

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: LIG
DRAWN BY: LIG
SHEET CHK'D BY: DLW
CROSS CHK'D BY: SCP
APPROVED BY: DLW
DATE: 12/18/2008

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 17?
DAVID L. WILSON
ARIZONA, U.S.A.
PRELIMINARY
Expires 12-31-2010

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

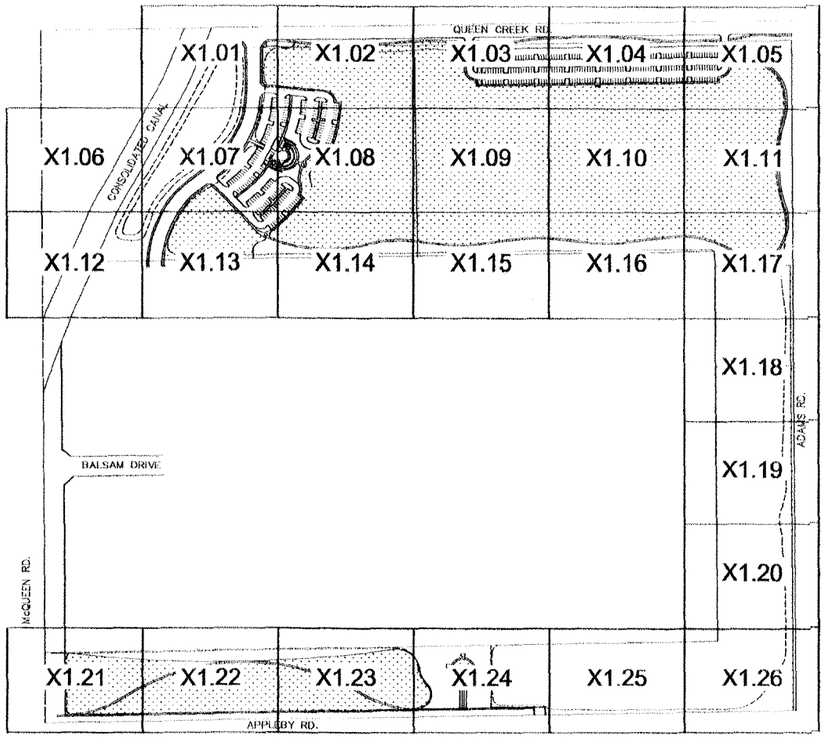
CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

95% CONSTRUCTION DOCUMENTS
GENERAL NOTES

PROJECT NO. ST0601-201
FILE NAME: NOZOMI PARK

SHEET NO.
G-1
SHEET 1 OF 167

SHEET INDEX



KEY MAP
SCALE: 1"=300'

NOTIFICATION UTILITY
AND ALL AVIATION UTILITY
TWO WORKING DAY BEFORE YOU DIG
CALL FOR THE BLUE STAKES
263-1100
(Arizona Blue Stake Center)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: LJG
DRAWN BY: LJG
SHEET CHKD BY: DLW
CROSS CHKD BY: SCP
APPROVED BY: DLW
DATE: 12/18/2009

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 17705
DAVID L. WILSON
Revised
ARIZONA, U.S.A.
Expires 12-31-2010

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

95% CONSTRUCTION DOCUMENTS
SHEET INDEX AND KEY MAP

PROJECT NO. ST0801-201
FILE NAME: NOZOMI PARK

SHEET NO.
G-2
SHEET 2 OF 167

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	E	ELECTRIC(ITY)	POT	POINT ON TANGENT
		e	EXTERNAL	PP	POWER POLE
AB	AGGREGATE BASE	EC	END OF CURVE	PRC	POINT OF REVERSE CURVATURE
AC	ASHPALTIC CONCRETE	ECR	END CURB RETURN	Prel	PRELIMINARY
ACFC	ASPHALT CONCRETE FRICTION COURSE	EFS	END FULL SUPER ELEVATION	PROJ	PROJECT
		EL	ELEVATION	PROP	PROPOSED
ACI	AMERICAN CONCRETE INSTITUTE	EMB	EMBANKMENT	PRVC	POINT OF REVERSE VERTICAL CURVATURE
		EP	EDGE OF PAVEMENT		
ACP	ASBESTOS CONCRETE PIPE	ESMT	EASEMENT	PT	POINT OF TANGENCY
ACSC	ASPHALT CONCRETE SURFACE COURSE	EXC	EXCAVATION	PVC	POINT OF VERTICAL CURVATURE
		EVC	END VERTICAL CURB	PVC	POLY VINYL CHLORIDE
ADOT	ARIZONA DEPARTMENT OF TRANSPORTATION	EXIST	EXIST(ING)	PVI	POINT OF VERTICAL INTERSECTION
		EXP JT	EXPANSION JOINT	Pvmt	PAVEMENT
		EVAC	EAST VALEY ASPHALT COMMITTEE	PVT	POINT OF VERTICAL TANGENCY
Ahd	AHEAD				
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION			Q	QUANTITY OF DRAINAGE RUNOFF
		F/C	FACE OF CURB	Qtr	QUARTER
Applic	APPLICATION	FCDMC	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY		
APS	ARIZONA PUBLIC SERVICE COMPANY			R	RADIUS
Aaph	ASPHALT	FF	FINISHED FLOOR (ELEVATION)	R	RANGE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	FG	FINISHED GRADE (UNPAVED)	RCP	REINFORCED CONCRETE PIPE
		FH	FIRE HYDRANT	Rdwy	ROADWAY
		Fnd	FOUND	REBAR	REINFORCING BAR
BC	BRASS CAP	FRWY	FREEWAY	Reinf	REINFORCED(ING)
BOC	BEGINNING OF CURVE	FS	FINISHED SURFACE (PAVED)	Reloc	RELOCATE
B/C	BACK OF CURB			Rem	REMOVE
BCR	BEGIN CURB RETURN	G	GUTTER (FLOWLINE ELEVATION)	Ret	RETAIN(ING)
BCT	BREAKAWAY CABLE TERMINAL	ga	GAUGE	RGRCP	RUBBER GASKET REINFORCED CONCRETE PIPE
Bdy	BOUNDARY	GB	GRADE BREAK		
Bev	BEVEL(ED)	GM	GAS METER	RR	RAILROAD
BFS	BEGIN FULL SUPER ELEVATION	Gnd	GROUND	RT	RIGHT
BIT	BITUMINOUS	GP	GUY POLE	R/W	RIGHT OF WAY
Bk	BACK	Gr	GRADE		
Bkfl	BACKFILL	GR	GUARDRAIL	S	SLOPE
BLM	BUREAU OF LAND MANAGEMENT	GRIC	GILA RIVER INDIAN COMMUNITY	SCH	SCHEDULE
BM	BENCHMARK	GV	GAS VALVE	SCS	SOIL CONSERVATION SERVICE
Br	BRIDGE			SD	STORM DRAIN
BVC	BEGIN VERTICAL CURB	HDPE	HIGH DENSITY POLYETHYLINE	SE	SLOPE EASEMENT
		HDWL	HEADWALL	SEC	SECTION
C&G	CURB AND GUTTER	HH	HAND HOLE	SM	SQUARE METER
CAP	CORRUGATED ALUMINUM PIPE	HW	HIGH WATER	SG	SUBGRADE
CAPA	CORRUGATED ALUMINUM PIPE ARCH			Shldr	SHOULDER
		ID	INSIDE DIAMETER	Shr	SHRINKAGE
CB	CATCH BASIN	INV	INVERT	SHT	SHEET
CBC	CONCRETE BOX CULVERT	Irr	IRRIGATION	SK	SKEW
COC	CITY OF CHANDLER			SM	SELECT MATERIAL
CM	CUBIC METER	L	LENGTH OF CURVE	SPECS	SPECIFICATIONS
CG	CATTLE GUARD	LC	LONG CHORD	SRP	SALT RIVER PROJCT
CIP	CAST IRON PIPE	LM	LINEAR METER	SS	SANITARY SEWER
COM	CITY OF MESA	LS	LUMP SUM	STA	STATION
COND	CONDUIT	LT	LEFT	STLT	STREET LIGHT
COP	CITY OF PHOENIX			Struc	STRUCTURAL
COS	CITY OF SCOTTSDALE	MAG	MARICOPA ASSOCIATION OF GOVERNMENTS	SUBDIV	SUBDIVISION
CIPP	CAST-IN-PLACE PIPE			SUPER	SUPERELEVATION
CLR	CLEAR(ANCE)	MATL	MATERIAL	SW	SWELL
CLD	CONCRETE LINED DITCH	MC	MARICOPA COUNTY	S/W	SIDEWALK
CMP	CORRUGATED METAL PIPE	MCDOT	MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION	SWG	SOUTHWEST GAS CORPORATION
CO	CLEAN OUT				
CONC	CONCRETE	MH	MANHOLE	T	TANGENT LENGTH
CONN	CONNECTION	MAX	MAXIMUM	T	TOWNSHIP
CONSTR	CONSTRUCTION	MIN	MINIMUM	TBM	TEMPORARY BENCH MARK
CONT	CONTINUOUS	MOC	MIDDLE OF CURVE	TC	TOP OF CURB
COR	CORNER	MOD	MODIFY	TCE	TEMPORARY CONSTRUCTION EASEMENT
CORR	CORRECTION (VPI TO VC)	MON	MONUMENT	Tech	TECHNICAL
CR	CROWN			T/F	TOP OF FOOTING
CSP	CORRUGATED STEEL PIPE	NC	NORMAL CROWN	TOE	TOP OF EMBANKMENT
CSPA	CORRUGATED STEEL PIPE ARCH	NG	NATURAL GROUND	Trans	TRANSITION
		NPI	NON-PAY ITEM	TREN	TRENCH
CTB	CONCRETE TREATED BASE	NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	TrRk	TRASH RACK
				TS	TRAFFIC SIGNAL POLE
DA	DRAINAGE AREA	NTS	NOT TO SCALE	T/W	TOP OF WALL
DDL	DUST TO DAWN LIGHT			TYP	TYPICAL
DE	DRAINAGE EASEMENT	OC	ON CENTER		
Def	DEFLECTION	OD	OUTSIDE DIAMETER	USW	US WEST COMMUNICATIONS
Det	DETAIL				
DG	DECOMPOSED GRANITE	P	PAVEMENT (SURFACE ELEVATION)	VC	VERTICAL CURVE
DIP	DUCTILE IRON PIPE	Ped	PEDESTAL	VCP	VITRIFIED CLAY PIPE
Dm	DRAIN(AGE)	PC	POINT OF CURVATURE	VG	VALLEY GUTTER
D/W	DRIVEWAY	POCC	POINT OF COMPOUND CURVATURE		
DWG	DRAWING	PCC	PORTLAND CEMENT CONCRETE	W/	WITH
		PI	POINT OF INTERSECTION	W/O	WITHOUT
		POC	POINT ON CURVE	WM	WATER METER
				WV	WATER VALVE
				WWF	WELDED WIRE FABRIC

SYMBOLS

- G.B. - GRADE BREAK
- RIGHT-OF-WAY LINE
- PROPERTY LINE
- CENTER OR MONUMENT LINE
- EASEMENT LINE
- PROPOSED CONTOURS
- EXISTING CONTOURS
- DISTRICT BOUNDARY OR CITY LIMITS
- SHEET NO. over DETAIL NO.
- TYPE OF PAVEMENT REPLACEMENT over NO. OF SQ. YARDS
- COMPACTION CLASS
- BENCH MARK
- EXISTING ELEVATION (1349.51)
- PROPOSED ELEVATION 1351.00
- WIRE FENCE
- MASONRY AND WROUGHT IRON FENCE
- MASONRY FENCE
- WOOD FENCE
- CHAIN LINK FENCE
- BARRICADE
- RIP RAP
- TRAFFIC SIGN
- EXISTING CURB AND GUTTER ELEVATION T.C. (1351.00) G (1350.50)
- PROPOSED CURB AND GUTTER ELEVATION T.C. 1351.00 G. 1350.50
- ELECTRICAL BALL MARKER
- EXISTING SEWER LINE & SIZE (18" OR LARGER AT 20 SCALE)
- EXISTING SEWER LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- NEW SEWER LINE & SIZE (18" OR LARGER AT 20 SCALE)
- NEW SEWER LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- SEWER SERVICE
- SEWER MANHOLE
- DROP SEWER CONNECTION
- SEWER CLEAN OUT
- CORP STOP
- EXISTING STORM DRAIN LINE & SIZE (18" OR LARGER AT 20 SCALE)
- EXISTING STORM DRAIN LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- STORM DRAIN LINE & SIZE (18" OR LARGER AT 20 SCALE)
- IRRIGATION LINE
- SECTION LINE
- RAILROAD
- POWER OR JOINT LINE
- "L" HEADWALL
- STORM DRAIN LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- GUTTER INLET
- CURB INLET
- EXISTING IRRIGATION LINE & SIZE (18" OR LARGER AT 20 SCALE)
- EXISTING IRRIGATION LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- IRRIGATION LINE & SIZE (18" OR LARGER AT 20 SCALE)
- IRRIGATION LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- CONCRETE LINED DITCH
- DIRT DITCH
- CENTER OF STREAM (W/DIRECTION OF FLOW - FL)
- TOP OF BANK TOE OF SLOPE
- EXISTING TOP OF BANK EXISTING TOE OF SLOPE
- IRRIGATION BERM
- IRRIGATION JUNCTION BOX
- WING TYPE HEADWALL
- PLAIN HEADWALL
- IRRIGATION STANDPIPE
- ALFALFA VALVE
- EDGE OF EXISTING PAVEMENT (NO CURB)
- NATURAL GROUND IN A PROFILE
- NEW VERTICAL CURB & GUTTER
- EXIST VERTICAL CURB & GUTTER
- NEW ROLL CURB & GUTTER
- EXIST ROLL CURB & GUTTER
- FINISHED GRADE CONTOUR
- NEW SINGLE VERTICAL CURB
- EXIST SINGLE VERTICAL CURB
- CONCRETE SAFETY CURB
- CONCRETE VALLEY GUTTER (W/DIRECTION OF FLOW)
- EDGE OF EXISTING PAVEMENT
- EDGE OF PROPOSED PAVEMENT W/THICKENED EDGE
- WING TYPE DRIVEWAY
- RETURN TYPE DRIVEWAY
- CONCRETE APRON
- SURVEY MONUMENT (BRASS CAP, STONE, ETX. IN HAND HOLE)
- SURVEY MONUMENT (BRASS CAP ON SURFACE)
- SURVEY MONUMENT (REBAR OR PIPE)
- WATER OR GAS VALVE
- DUCTILE IRON PIPE
- TEE
- CROSS
- BEND
- VALVE BOX & COVER
- DELINEATOR
- COMMERCIAL SIGN
- TAPPING SLEEVE & VALVE
- FIRE HYDRANT
- THRUST BLOCK
- METER BOX & SERVICE
- REDUCER
- STREET SIGN
- MAIL BOX
- EXISTING STREETLIGHT
- NEW STREETLIGHT
- UTILITY POLE
- GUY ANCHOR
- TRAFFIC SIGNAL LIGHT (DIRECTION LIGHT FACES)
- EXISTING WATER LINE & SIZE (18" OR LARGER AT 20 SCALE)
- EXISTING WATER LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- WATER LINE & SIZE (18" OR LARGER AT 20 SCALE)
- WATER LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- EXISTING WATER LINE
- EXISTING TELEPHONE LINE
- EXISTING GAS LINE
- EXISTING STORM DRAIN LINE
- EXISTING IRRIGATION LINE
- GAS LINE & SIZE
- HIGH PRESSURE GAS LINE
- TELEVISION CABLE
- TRAFFIC SIGNAL CONDUIT
- GAS METER
- PALM TREE (SHOW HEIGHT)
- TREE (KIND & TRUNK DIA.)
- EVERGREEN TREE (KIND & TRUNK DIA.)
- HEDGE
- EXISTING A/C PAVEMENT
- CONCRETE UNDERLAY
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- CONCRETE PAVEMENT SECTION
- SUBGRADE SEAL SECTION
- SELECT MATERIAL SECTION
- AGGREGATE BASE SECTION
- BITUMINOUS PAVEMENT SECTION
- EXISTING PAVEMENT
- OBLITERATE PAVEMENT
- BITUMINOUS PAVEMENT

Notes:

1. PLANS SHALL BE OF A QUALITY TO ALLOW MICROFILMING, (I.E. LINE WEIGHT AND LETTER SIZE SHALL BE EASILY READ WHEN REDUCED BY 50%) MINIMUM TEXT HEIGHT SHOULD BE 0.10".
2. EXISTING IMPROVEMENTS SUCH AS CURB, GUTTER, SIDEWALK, DRIVEWAYS, ETC. SHALL BE SHOWN BY DASHED LINES.
3. ALL PROPOSED CONSTRUCTION NOTES SHALL BE BOXED.
4. DO NOT USE △ EXCEPT FOR POST-APPROVAL REVISIONS.
5. STANDARD DICTIONARY ABBREVIATIONS NOT INCLUDED.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: LJG
DRAWN BY: LJG
SHEET CHKD BY: DLW
CROSS CHKD BY: SCP
APPROVED BY: DLW
DATE: 12/19/2008

REGISTERED LANDSCAPE ARCHITECT — CERTIFICATE NO. 17405 — DAVID L. WILSON — Expires 12-31-2010

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

95% CONSTRUCTION DOCUMENTS
ABBREVIATIONS AND SYMBOLS

PROJECT NO. ST0801-201
FILE NAME: NOZOMI PARK

SHEET NO. G-3

SHEET 3 OF 161

NOZOMI PARK
RECREATION AREA

PHASE II CIVIL PLANS

SE CORNER OF QUEEN CREEK & McQUEEN RD
CHANDLER, ARIZONA

GRADE CERTIFICATION

THIS IS TO CERTIFY THAT THIS GRADING PLAN IS IN COMPLIANCE WITH THE GRADE REQUIREMENTS OF THE SOILS REPORT PREPARED BY:
HOQUE & ASSOCIATES ON MAY 28, 2008

REGISTERED CIVIL ENGINEER DATE:

FINISH GRADE CERTIFICATION

THIS IS TO CERTIFY THAT THE FINISH GRADES SHOWN OR AS-BUILT SHOWN ON THIS GRADING PLAN ARE IN COMPLIANCE WITH THE SOILS REPORT PREPARED BY:
HOQUE & ASSOCIATES ON MAY 28, 2008

REGISTERED CIVIL ENGINEER DATE:

I HEREBY CERTIFY THE SETBACKS FOR UTILITY POLES, STRUCTURES, AND OTHER SIMILAR FACILITIES GREATER THAN 18 INCHES IN HEIGHT SHALL BE 5.5 FEET BACK OF CURB. IN CASES WHERE THE FACILITIES ARE ADJACENT TO A DECELERATION LANE OR BUS BAY, THE SETBACK CAN BE REDUCED TO 2.5 FEET BACK OF CURB.

REGISTERED CIVIL ENGINEER DATE:

APPROVED FOR COMPLIANCE WITH CITY CODE:

DIRECTOR OF PUBLIC WORKS DATE:

CITY ENGINEER DATE:

DEVELOPMENT SERVICES ENGINEER DATE:

NOTE:
A RETAINING WALL WILL BE REQUIRED IF AT THE COMPLETION OF GRADING THERE EXISTS MORE THAN ONE FOOT OF DIFFERENCE IN ELEVATION BETWEEN THIS SITE AND ADJACENT PROPERTIES.

▲ BENCHMARK CMCN NO.47A

SECTION 14, T2S, R5E, SET 3" BRASS CAP IN CONCRETE, 215' EAST OF INTERSECTION OF MCQUEEN RD AND OCOTILLO RD; 4' NORTH OF BACK OF CURB. (NORTHING 817878.803, EASTING 728629.500)

ELEVATION=1227.92

PROJECT BENCHMARK

BM 47A - 3" BRASS CAP IN CONCRETE

N: 17879.49

E: 28630.03

Z: 1227.92

COMBINED SCALE FACTOR: 1.00015316

NORTHING: -800,000

EASTING: -700,000

(PROJECT NORTHING +800,000)/COMBINED SCALE FACTOR = STATE PLANE NORTHING

(PROJECT EASTING + 700,000)/COMBINED SCALE FACTOR = STATE PLANE EASTING

QUEEN CREEK BASIN / NOZOMI PARK

DESCRIPTION OF PHASING

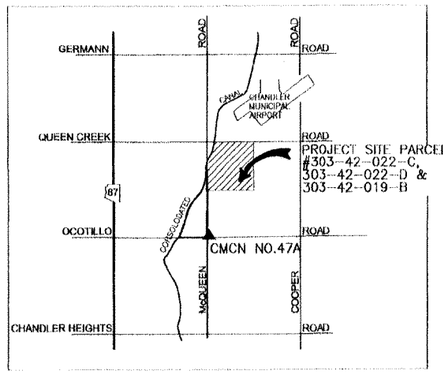
PHASE I

PHASE I INCLUDES THE EXCAVATION OF APPROXIMATELY 309,330 CUBIC YARDS OF SOIL FROM THE EAST HALF OF THE SITE. THIS EXCAVATED SOIL WILL BE USED BY THE AIRPORT COMMERCE PARK (ACP) PARCEL TO ACT AS FILL ON THEIR PROPERTY. THE ACP HAS FILED FOR A FLOOD PLAIN USE PERMIT TO ALLOW FILL ON THEIR SITE. EXCAVATED SOIL WILL BE PLACED AT THE PASEO VISTA RECREATION AREA FACILITY LOCATED AT THE NORTHWEST CORNER OF McQUEEN ROAD AND OCOTILLA ROAD. PROPER DRAINAGE OF THE BASIN WITHIN 36 HOURS WILL BE ADDRESSED IN PHASE II.

PHASE II

PHASE II INCLUDES THE FULL BUILD-OUT AND SHAPING OF THE BASIN TO TIE TO THE ADJACENT ROADWAYS AND AIRPORT COMMERCE PARK DEVELPMENT. THE PHASE II BASIN IS DESIGNED TO RETAIN 154 ACRE-FEET OF VOLUME AS REQUIRED BY THE MARICOPA FLOOD CONTROL DISTRICT.

UTILITY COORDINATION	DATE SUBMITTED
QWEST COMMUNICATIONS	08/01/2008
COX COMMUNICATIONS	08/01/2008
SOUTHWEST GAS	08/01/2008
SALT RIVER PROJECT (POWER)	08/01/2008
SALT RIVER PROJECT (IRRIGATION)	08/01/2008



1 VICINITY MAP
T2S, R5E, S15 NTS

INDEX OF SHEETS

CUT/FILL

CUT =	20,625	CUBIC YARDS
FILL =	4,859	CUBIC YARDS

BASIN VOLUMES

BASIN A	5.02 AC FT
BASIN B & C	104.88 AC FT
BASIN D	12.95 AC FT
TOTAL VOLUME	122.85 AC FT

OWNER
CITY OF CHANDLER, ARIZONA
215 EAST BUFFALO STREET
CHANDLER, ARIZONA

LANDSCAPE ARCHITECT
epg
4141 NORTH 32nd STREET
SUITE 102
PHOENIX, ARIZONA 85018
CONTACT: DAVE WILSON
PHONE: 602.956.4370

ENGINEER
DIBBLE ENGINEERING
2440 NORTH LITCHFIELD ROAD,
SUITE 210
PHOENIX, ARIZONA 85020
CONTACT: JEFF McBRIDE
PHONE: 623.935.2258

CONTRACTOR
VALLEY RAIN
1614 EAST CURRY ROAD
TEMPE, ARIZONA 85281
CONTACT: BRETT FOWLER
PHONE: 602.894.2835

LEGEND

ROADWAY CENTER LINE
SECTION LINE
PROPERTY LINE
EASEMENT LINE
R/W LINE
FLOOD PLAIN LIMIT
GRADE BREAK
EXISTING WATER LINE W
EXISTING SEWER LINE 55
EXISTING ELECTRIC LINE E
EXISTING TELEPHONE LINE 60MM
EXISTING STORM DRAIN LINE 50
EXISTING EDGE OF PAVEMENT
EXISTING VEGITATION
FLOW ARROW
PROPOSED ELEVATION XX.XX
EXISTING ELEVATION XXXX
BACK OF CURB BOC
RIGHT-OF-WAY R/W
EXISTING EXST
FINISHED FLOOR FF

CONTOURS
EXISTING MAJOR 1015
EXISTING MINOR 1012
PROPOSED MAJOR 1015
PROPOSED MINOR 1012
FLOOD PLAIN
EXISTING VEGETATION TO PROTECT IN PLACE

LEGAL DESCRIPTION

A portion of the Northwest quarter of Section 14, Township 2 South, Range 5 East, of the Gila and Salt River Base and Meridian, Maricopa County, Arizona, more particularly known as: BEGINNING at the North quarter corner of said Section 14, said point being a brass cap flush with paving; THENCE South 00 degrees 38 minutes 20 seconds West along the North-South mid-section line of said Section 14, a distance of 2647.61 feet; THENCE South 89 degrees 55 minutes 13 seconds West along the East-West mid-section line of said Section 14, a distance of 1325.00 feet; THENCE North 00 degrees 40 minutes 04 seconds East along the West line of the East half of said Northwest quarter, a distance of 270.02 feet; THENCE North 89 degrees 55 minutes 13 seconds East parallel with and 270.02 feet North of the East-West mid-section line of said Section 14, a distance of 1049.85 feet; THENCE North 00 degrees 38 minutes 20 seconds East parallel with 275.02 feet West of the North-South mid-section line of said Section 14, a distance of 1496.08 feet; THENCE South 89 degrees 55 minutes 13 seconds West, a distance of 1049.09 feet; THENCE North 00 degrees 40 minutes 04 seconds East along the West line of the East half of said Northwest quarter, a distance of 883.48 feet; THENCE South 89 degrees 59 minutes 41 seconds East along the North line of said Northwest quarter, a distance of 1323.65 feet to the POINT OF BEGINNING.

That portion of the West half of the Northwest quarter of Section 14, Township 2 South, Range 5 East, Gila and Salt River Base and Meridian, Maricopa County, Arizona, said portion being described as follows: COMMENCING at the Northwest corner of said Section 14, Thence, along the North line of said section, North 89°01'01" East a distance of 603.33 feet to a point of intersection with the Easterly right of way line of the Consolidated Canal and the POINT OF BEGINNING; Thence continuing North 89°01'01" East a distance of 720.36 feet to the intersection with the East line of the West half of the Northwest quarter of said section; Thence, along said East line, South 00°18'17" East a distance of 1468.60 feet, Thence South 89042'31" West a distance of 1324.37 feet to a point on the West line of said section; Thence, along said West line, North 00°17'29" West a distance of 71.88 feet to a point of intersection with the Easterly right of way line of the Consolidated Canal; Thence, leaving the West line of said section run Northeasterly along the Easterly line of said Canal the following courses; North 18°37'19" East a distance of 239.55 feet to the beginning of a non-tangent curve, concave to the Southeast, with a radial bearing of South 71°18'58" East and a radius of 1634.35 feet; Thence Northeasterly though a central angle of 3028'47" along said curve an arc distance of 99.29 feet; Thence North 22°07'03" East a distance of 307.35 feet to the beginning of a non-tangent curve, concave to the Southeast, with a radial bearing of South 67°59'41" East and a radius of 1105.40 feet; Thence Northeasterly through a central angle of 5°07'44" along said curve an arc distance of 98.95 feet; Thence North 27°08'03" East a distance of 481.83 feet to the beginning of a non-tangent curve, concave to the Northwest, with a radial bearing of North 62°11'30" West and a radius of 881.57 feet; Thence Northerly through a central angle of 6°34'33" along said curve an arc distance of 101.18 feet; Thence North 20°48'22" East a distance of 187.75 feet to the North line of said section and the POINT OF BEGINNING. The above described parcel contains 1,536,617 square feet or 35.2759 Acres more or less.

That portion of the West half of the Northwest quarter Section 14, Township 2 South, Range 5 East, of the Gila and Salt River Base and Meridian, Maricopa County, Arizona, being more particularly described : COMMENCING at the Northwest corner of said Section 14; Thence, along the West line of said section, South 00°17'29 West a distance of 1452.62 feet to the POINT OF BEGINNING; Thence North 89°42'31" East a distance of 1324.37 feet; Thence South 00°19'17" East a distance of 1151.02 feet to the intersection with the north line of the South 30 feet of the Northwest quarter of said section; Thence, along said North line, South 88°55'58" West a distance of 1325.10 feet to the intersection with the West line of said section; Thence, along said West line, North 00°17'29" West a distance of 1168.96 feet to the POINT OF BEGINNING. The above described parcel contains 1,536,616 square feet or 35.2758 Acres more or less.

EXCEPT (City Transfer Parcel)
A portion of the Northwest quarter of Section 14, Township 2 South, Range 5 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona, more particularly described as follows: COMMENCING at the West quarter corner of said Section 14; THENCE North 00 degrees 41 minutes 47 seconds East, along the West line of said Northwest quarter of Section 14, a distance of 270.02 feet to the POINT OF BEGINNING; THENCE continuing North 00 degrees 41 minutes47 seconds East, a distance of 1001.01 feet; THENCE North 19 degrees 37 minutes 44 seconds East, 239.32 feet to the beginning of a 1634.35 foot radius tangent curve concave to the East; THENCE Northerly along said curve, through a central angle of 03 degrees 29 minutes 00 seconds, an arc distance of 99.36 feet; THENCE tangent to said curve, North xx degrees 6 minutes 44 seconds East, a distance of 192.87 feet; THENCE North 89 degrees 55 minutes 13 seconds East, a distance of 1137.83 feet; THENCE South 00 degrees 40 minutes 04 seconds West, a distance of 1496.09 feet; THENCE South 89 degrees 55 minutes 13 seconds West, parallel with and 270.02 feet North of the East-West Mid-Section line of said Section 14, a distance of 1324.87 feet to the POINT OF BEGINNING.

C.O.C. LOG NO. ENR 08-0050

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/16/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
COVER SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C1.01
SHEET 1 OF 1

COC CIVIL ENGINEERING GENERAL NOTES REV: 6/3/05

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT ADOPTED MAG SPECIFICATIONS AND STANDARD DETAILS AS MODIFIED BY THE CITY OF CHANDLER.

THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.

THE CITY ENGINEER'S OFFICE SHALL BE NOTIFIED 24 HOURS PRIOR TO STARTING EACH PHASE OF CONSTRUCTION (480-782-3331).

PRIOR TO ANY CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR/DEVELOPER SHALL NOTIFY THE LANDSCAPE ARCHITECT AT 480-782-3428. ANY CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE RESTORED TO ORIGINAL CONDITIONS USING THE FOLLOWING REQUIREMENTS:

A. ALL TREES IMPACTED BY CONSTRUCTION SHALL BE REPLACED WITH THE SAME SIZE AND TYPE OF TREE AT A LOCATION DETERMINED BY THE CITY;

B. ALL IRRIGATION SYSTEMS SHALL BE RESTORED TO FULLY FUNCTIONING STATUS. ANY IRRIGATION LOCATED BENEATH ASPHALT OR CONCRETE SHALL BE SLEEVED WITH SCHEDULE 40 PVC TWO (2) NOMINAL SIZES LARGER;

C. THE AREA OF CONSTRUCTION SHALL BE TREATED WITH PRE-EMERGENT HERBICIDE (I.E. SURFLAN);

D. GRANITE OF A SIZE AND COLOR TO MATCH EXISTING SHALL BE SPREAD A MINIMUM OF TWO (2) INCHES THICK;

E. THE STREET DIVISION SHALL BE CONTACTED TO INSPECT ALL WORK BEFORE A CONDITIONAL ACCEPTANCE IS ISSUED;

F. THE CONTRACTOR/DEVELOPER SHALL MAINTAIN THE AREA FOR NINETY (90) DAYS AFTER CONDITIONAL ACCEPTANCE. AFTER 90 DAYS THE CITY SHALL BE CONTACTED FOR FINAL ACCEPTANCE AND ASSUMPTION OF MAINTENANCE.

ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE CITY ENGINEER AND/OR ALL WORK AND MATERIAL NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL UNCOVER ALL EXISTING LINES BEING TIED INTO TO VERIFY THEIR LOCATION. THE CONTRACTOR SHALL LOCATE OR HAVE LOCATED ALL EXISTING UNDERGROUND UTILITIES (ELECTRIC, TELEPHONE, PIPELINES, ETC.) AND STRUCTURES IN ADVANCE OF CONSTRUCTION AND SHALL ELIMINATE ALL CONFLICTS PRIOR TO START OF CONSTRUCTION. BLUE STAKE TELEPHONE (602)-263-1100.

THE CITY OF CHANDLER IS NOT RESPONSIBLE FOR LIABILITY ACCRUED DUE TO DELAYS AND/OR DAMAGES TO UTILITIES IN CONJUNCTION WITH THIS CONSTRUCTION. THE CITY WILL NOT PARTICIPATE IN THE COST OF CONSTRUCTION OR UTILITY RELOCATION.

NO FINAL ACCEPTANCE SHALL BE ISSUED UNTIL 4 MIL PHOTO MYLAR REPRODUCIBLE "AS-BUILTS" PLANS CERTIFIED AND SEALED BY A REGISTERED CIVIL ENGINEER, HAVE BEEN SUBMITTED AND ACCEPTED BY THE CITY ENGINEER.

BACKFILLING SHALL NOT BE STARTED UNTIL LINES ARE APPROVED BY THE CITY ENGINEER.

ALL BACKFILL SHALL BE INSTALLED IN ACCORDANCE WITH MAG STANDARD SPECIFICATION 601, TYPE I.

DISPOSAL OF AND STOCKPILING OF EXCESS MATERIAL WITHIN THE CHANDLER CITY LIMITS OR PLANNING AREA SHALL BE DONE IN SUCH A WAY THAT WILL NOT CREATE A NUISANCE. THE PLACING OF MATERIAL ON PRIVATE PROPERTY OF ANOTHER REQUIRES WRITTEN AUTHORIZATION. EARTHWORK STOCKPILES ARE NOT TO EXCEED 6 FEET IN HEIGHT. SLOPES ON ALL SIDES OF THE STOCKPILE SHALL NOT EXCEED A 1 TO 2 RATIO OF HEIGHT TO LENGTH. ANY EARTHWORK STOCKPILE, EVEN LESS THAN 6 FEET, MUST BE REMOVED WITHIN 7 DAYS OF CITY NOTIFICATION IF DUST SUPPRESSION EFFORTS FAIL TO MAINTAIN SATISFACTORY AIRBORNE CONTAMINANT CONTROL.

TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE CHANDLER TRAFFIC BARRICADE MANUAL.

THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALLAY DUST, AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST-FREE CONDITION AT ALL TIMES.

APPLICATIONS FOR STREET CUT PERMITS MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO APPROVAL OF IMPROVEMENT PLANS. ALL PAVEMENT REPLACEMENT SHALL BE EITHER FULL-DEPTH OF A.B.C. OR A.B.C. SLURRY BACKFILL IN ACCORDANCE WITH CITY OF CHANDLER STANDARD SPECIFICATION 3 AND CITY OF CHANDLER STANDARD DETAIL C-110.

AN APPROVED SET OF PLANS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES THAT WORK IS IN PROGRESS. DEVIATION FROM THE PLANS SHALL NOT BE ALLOWED WITHOUT AN APPROVED PLAN REVISION.

A MINIMUM HORIZONTAL SEPARATION OF SIX (6) FEET IS REQUIRED BETWEEN SEWER SERVICES AND WATER OR FIRE LINE SERVICES. A MINIMUM HORIZONTAL SEPARATION OF SIX (6) FEET IS REQUIRED BETWEEN RECLAIMED WATER SERVICES AND SEWER, WATER, OR FIRE LINE SERVICES.

SETBACKS FOR UTILITY POLES, STRUCTURES, AND OTHER SIMILAR FACILITIES GREATER THAN 18 INCHES IN HEIGHT SHALL BE 5.5 FEET BACK OF CURB. IN CASES WHERE THE FACILITIES ARE ADJACENT TO A DECELERATION LANE OR BUS BAY, THE SETBACK CAN BE REDUCED TO 2.5 FEET BACK OF CURB.

ANY PROPOSED RETAINING WALLS, OR COMBINATION RETAINING/SCREEN WALLS, SHALL BE CONSTRUCTED, AND THE RETAINING WALL AS-BUILT CERTIFICATION SIGNED BY THE REGISTERED CIVIL/STRUCTURAL ENGINEER, BEFORE ANY IMPROVEMENTS ARE ACCEPTED, OR CONDITIONALLY ACCEPTED, BY THE CITY ENGINEER.

ANY CONSTRUCTION DETOURS WILL REQUIRE AN ALL-WEATHER SURFACE PER MARICOPA COUNTY AIR QUALITY REQUIREMENTS.

I HEREBY CERTIFY THAT THE "AS-BUILT" INFORMATION AS SHOWN HEREON WAS MADE UNDER MY SUPERVISION, OR AS NOTED, AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

_____ _____ _____
REGISTERED LAND SURVEYOR REGISTRATION NO. DATE
FIRM NAME:

I HEREBY CERTIFY THAT THE AS-BUILT INFORMATION SHOWN HEREON SATISFIES THE INTENT OF THE DESIGN

_____ _____ _____
REGISTERED CIVIL ENGINEER REGISTRATION NO. DATE
FIRM NAME:

COC CIVIL ENGINEERING GRADING & DRAINAGE NOTES REV: 3/11/05

1. A GRADING PERMIT IS REQUIRED.
2. NO MINIMUM FINISH FLOOR ELEVATION SHALL BE ALTERED.
3. STAKING FINISH FLOOR ELEVATION IS THE RESPONSIBILITY OF THE DEVELOPER AND HIS ENGINEER.
4. CERTIFIED SHALLOW PIT PERCOLATION TEST RESULTS ARE 3.3 MIN/IN AND 2.7 MIN/IN. BASED ON A 50% ATTENUATION OF THE SHALLOW PIT PERCOLATION TEST RESULTS, THE ESTIMATED DRAINAGE TIME OF RETENTION POND N/A IS N/A HRS. IF TIME IS GREATER THAN 36 HOURS ONE OR MORE DRYWELLS ARE REQUIRED.
**PROPER DRAINAGE OF THE BASIN WITHIN 36-HOURS WILL BE ADDRESSED WITH THE PHASE II DOCUMENTS.
5. CONTRACTOR SHALL PROVIDE GRADING FOR POSITIVE DRAINAGE IN ALL RETENTION BASINS AT ELEVATIONS AS SHOWN ON THE PLANS. BOTTOM OF BASIN SHALL BE GRADED TO DRAIN TOWARD DRYWELLS (WHEN USED). MAXIMUM SIDESLOPES SHALL BE 4:1.
6. DRYWELL INLET GRATE SHALL BE 2" ABOVE FINISH GRADE AT BOTTOM OF THE RETENTION BASIN.
7. DRILLING LOGS FOR DRYWELLS WILL BE FURNISHED TO THE CITY INSPECTOR PRIOR TO FINAL ACCEPTANCE.
8. A PERCOLATION TEST WILL BE REQUIRED OF COMPLETED DRYWELLS PRIOR TO ACCEPTANCE. SHOULD EXISTING SOIL CONDITIONS BE ENCOUNTERED WHICH LACK SUFFICIENT PERCOLATION RATES, ADDITIONAL DRYWELLS OR AN ALTERNATE METHOD OF STORM WATER RUN-OFF DISPOSAL WILL BE REQUIRED. THE PERCOLATION RATE FOR DRYWELL NO. * IS * CFS.
9. DRYWELL CONSTRUCTION SHALL BE DONE ONLY BY CONTRACTORS LICENSED BY THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY. APPLICATION FOR DRYWELL REGISTRATION WAS SUBMITTED TO ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ON N/A (DATE).
**PROPER DRAINAGE OF THE BASIN WITHIN 36-HOURS WILL BE ADDRESSED WITH THE PHASE II DOCUMENTS.
10. THE APPROVED DRYWELL REGISTRATION SHALL BE SUBMITTED TO THE CITY BY THE DEVELOPER OR HIS ENGINEER AT THE TIME AS-BUILTS ARE SUBMITTED.
11. ALL WEEP HOLES IN WALLS SHALL BE PROVIDED WITH EROSION PROTECTION 12" THICK WITH D50 = 4" RIPRAP, 24" IN WIDTH, EXTENDED TO THE BACK OF SIDEWALK OR TO THE BOTTOM OF RETENTION BASIN, WHICHEVER APPLIES.

COC CIVIL ENGINEERING WATER NOTES REV: 5/18/06

1. FIRE HYDRANTS SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED IN ACCORDANCE WITH CITY OF CHANDLER STANDARD DETAILS C-303 AND C-304. ALL FIRE HYDRANTS SHALL BE PAINTED ACCORDING TO FIRE DEPARTMENT STANDARDS AFTER INSTALLATION.
2. ALL WATER SERVICE LINE AND METER BOX INSTALLATIONS SHALL CONFORM TO CITY OF CHANDLER STANDARD DETAIL C-301.
3. METER BOXES AND LIDS SHALL BE SUPPLIED BY THE DEVELOPER AND INSTALLED FACING THE LOT. (SEE CITY OF CHANDLER STANDARD DETAIL C-301.) NO PLASTIC METER BOXES.
4. CITY OF CHANDLER WILL FURNISH AND INSTALL ALL 2" AND SMALLER WATER METERS WITH PREVAILING COSTS TO BE PAID BY DEVELOPER.
5. ALL WATER METERS 3" AND LARGER SHALL BE INSTALLED BY THE CONTRACTOR AND BE INSTALLED WITH A REQUIRED 2" BY-PASS WATER METER. THE CITY OF CHANDLER WATER DIVISION SHALL BE NOTIFIED AT (480) 782-3700 24 HOURS PRIOR TO INSTALLATION.
(SEE CITY OF CHANDLER STANDARD DETAIL C-316)
6. ALL VALVES 6" - 24" SHALL BE GATE TYPE IN CONFORMANCE WITH MAG STANDARD SPECIFICATION 630.3, UNLESS OTHERWISE NOTED.
7. ALL VALVE BOXES SHALL CONFORM TO CITY OF CHANDLER STANDARD DETAILS C-318 AND C-307.
8. CITY WATER VALVES SHALL BE OPERATED BY CITY PERSONNEL ONLY.
9. BUTTERFLY VALVE OPERATOR SHALL BE OFFSET TO THE SIDE OF MAIN AWAY FROM MONUMENT LINE.
10. ALL TAPS SHALL USE A BRONZE SERVICE SADDLE. EIGHT (8) INCHES OR LESS SHALL BE SINGLE STRAP AND TEN (10) INCHES OR GREATER SHALL BE DOUBLE STRAP.
11. TAPS IN ACP SHALL BE MADE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE ACP MANUFACTURES ASSOCIATION.
12. ALL FIRELINE PIPING, POTABLE WATER DISTRIBUTING PIPING LARGER THAN TWO (2) INCHES IN DIAMETER SHALL HAVE TRACER WIRES INSTALLED PER CITY OF CHANDLER SPECIFICATION NO. 11.
13. ALL PIPE IN THE GROUND SHALL HAVE AWG THWN #10 INSULATED COPPER TRACING WIRE ATTACHED TO THE BOTTOM OF THE PIPE AND INTERCONNECTED TO VALVES AT VALVE BOX SPACING INTERVALS. WARNING TAPE IS TO BE USED BURIED A MINIMUM 12" ABOVE THE PIPE. POLYETHYLENE ENCASEMENT SHALL CONFORM WITH THE APPLICABLE REQUIREMENTS OF AWWA C-600, C-105.
14. MECHANICAL JOINT OR RESTRAINED DUCTILE IRON PIPE SHALL BE USED FOR WATER LINE PROTECTION WHEN MAG STANDARD DETAIL 404 IS SPECIFIED ON THE PLANS.
15. VALVE BOX AND COVER GRADE LOCATED OUTSIDE OF A PAVED AREA SHALL BE SET ONE TO TWO (1-2) INCHES ABOVE SIDEWALK OR SIDEWALK RAMP.
16. NO VALVE SHALL BE LOCATED BENEATH SIDEWALK OR SIDEWALK RAMP.
17. ALL 1" SERVICES SHALL BE INSTALLED WITH FORD ANGLE BALL METER VALVES, OR APPROVED EQUAL, OF A SIZE DEPENDENT ON WATER METER SIZE AS FOLLOWS:
A. 5/8" OR 3/4" METER-FORD BA23-342W.
B. 1" METER-FORD BA23-444W.
18. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH "OUT OF SERVICE" SIGNS AT TIME OF INSTALLATION. THE SIGNS SHALL COMPLY WITH FIRE DEPARTMENT STANDARD DETAIL NO. FD123 AND SHALL REMAIN ON THE FIRE HYDRANTS UNTIL THE WATER LINES ARE TESTED, APPROVED, AND PRESSURIZED. THE SIGNS SHALL BE REINSTALLED AT ANY TIME ANY FIRE HYDRANTS ARE TAKEN OUT OF SERVICE, REGARDLESS OF REASON OR THE AMOUNT OF TIME THE FIRE HYDRANTS ARE EXPECTED TO BE OUT OF SERVICE, AND DISPATCH SHALL BE NOTIFIED AT (480) 782-4130. ONLY OFFSITE PERSONNEL SHALL REMOVE A SIGN.

COC CIVIL ENGINEERING SEWER NOTES REV: 5/19/06

1. ALL SEWER TAPS SHALL BE WYE TYPE.
2. CONNECTIONS TO EXISTING SEWER MAINS SHALL BE ACCOMPLISHED BY MACHINE TAPPING, UTILIZING A SADDLE, OR BY CONSTRUCTION OF A MANHOLE.
3. SEWER TAPS SHOULD BE 4-1/2 FEET DEEP AT PROPERTY LINE. TO RAISE THE TAP FROM THE MAINS DEEPER THAN 6 FEET, THE WYE AND 1/8 BEND SHALL BE SET AT A 45 DEGREE ANGLE FROM HORIZONTAL AND A SHORT PIECE OF STRAIGHT PIPE SHALL BE PLACED ON THE 1/8 BEND. ANOTHER 1/8 BEND IS PLACED AT THE OTHER END OF THE SHORT PIPE TO BRING THE TAP TO APPROPRIATE GRADE AT THE PROPERTY LINE.
4. ALL SEWER SERVICE CONNECTIONS SHALL BE EXTENDED A SUFFICIENT DISTANCE BEYOND STREET RIGHT-OF-WAY LINES TO CLEAR ALL FACILITIES TO BE INSTALLED IN PUBLIC UTILITY EASEMENTS WHICH PARALLEL THE STREET RIGHT-OF-WAY. REFER TO MAG STANDARD DETAIL 440-1, TYPE A FOR ADDITIONAL REQUIREMENTS.
5. METALLIC, DETECTABLE WARNING TAPE OR LOCATOR WIRE SHALL BE REQUIRED AT LOCATIONS DESIGNATED BY THE OFFSITE INSPECTOR WHEN CHANGES IN HORIZONTAL PIPE ALIGNMENTS ARE NOT APPARENT FROM SURFACE APPURTENANCES. THE TAPE OR WIRE SHALL BE PLACED ONE FOOT ABOVE THE TOP OF PIPE (MAXIMUM DEPTH 4 FEET) AND SHALL EXTEND A MINIMUM OF 6 FEET IN EACH DIRECTION FROM THE ALIGNMENT CHANGE AND SHALL BE SHOWN ON AS-BUILT PLANS. REFER TO THE CITY OF CHANDLER SPECIFICATION NO. 11 FOR ADDITIONAL MARKING STANDARDS.
6. ALL PLASTIC PIPE WITH A CURVED ALIGNMENT SHALL BE IDENTIFIED WITH 3-INCH WIDE METALLIC, DETECTABLE WARNING TAPE WITH THE WORD SEWER OR WASTEWATER. THE TAPE SHALL BE INSTALLED 12 TO 18 INCHES BELOW THE GROUND SURFACE OVER THE ENTIRE LENGTH OF THE PIPE.
7. MANHOLE FRAME AND COVER SHALL BE ADJUSTED PER MAG STANDARD DETAIL 422, EXCEPT WHEN OUTSIDE OF PAVEMENT, IN WHICH CASE IT SHALL BE ADJUSTED PER CITY OF CHANDLER SPECIFICATION 2.
8. ALL MANHOLE INTERIORS SHALL BE PAINTED WITH "INSECTA INSECTICIDAL COATING - WHITE SEMI-GLOSS LATEX" OR APPROVED EQUAL.
9. ALL SEWER PIPE SHALL BE CONSTRUCTED WITH BEDDING CONFORMING TO CITY OF CHANDLER STANDARD DETAIL C-402. ALL SEWER LINES 10 FEET IN DEPTH AND GREATER SHALL BE VCP PIPE, OR AS SPECIFIED ON SEWER LINE PLANS.
10. ALL SEWER SHALL BE VACTORED AND INSPECTED FOR DEBRIS PRIOR TO ACCEPTANCE.

ENGINEERING NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST APPLICABLE MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM STANDARD SPECIFICATIONS AND DETAILS PLUS THE LATEST CITY OF CHANDLER SUPPLEMENTS TO MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS UNLESS MODIFIED ON THESE PLANS.
2. CONSTRUCTION SHALL CONFORM WITH THE SOILS INVESTIGATION REPORT PREPARED FOR THIS PROJECT BY HOQUE AND ASSOCIATES DATED MAY 28, 2008.
3. POSITIVE DRAINAGE SHALL BE PROVIDED AWAY FROM ALL BUILDINGS. LANDSCAPE AREA GRADES SHOULD BE SLOPED AWAY FROM THE BUILDING WITH A DROP IN ELEVATION OF AT LEAST 6 INCHES IN THE FIRST 10 FEET. SITE CONSTRUCTION SHALL COMPLY WITH THE GEOTECHNICAL EVALUATION PROVIDED BY HOQUE AND ASSOCIATES DATED MAY 28, 2008
4. CONTRACTOR TO CONFIRM PRIOR TO CONSTRUCTION NO MODIFICATIONS HAVE BEEN MADE TO THE GEOTECHNICAL REPORT BY
HOQUE AND ASSOCIATES DATED MAY 28, 2008

C.O.C. LOG NO. ENR 08-005

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(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

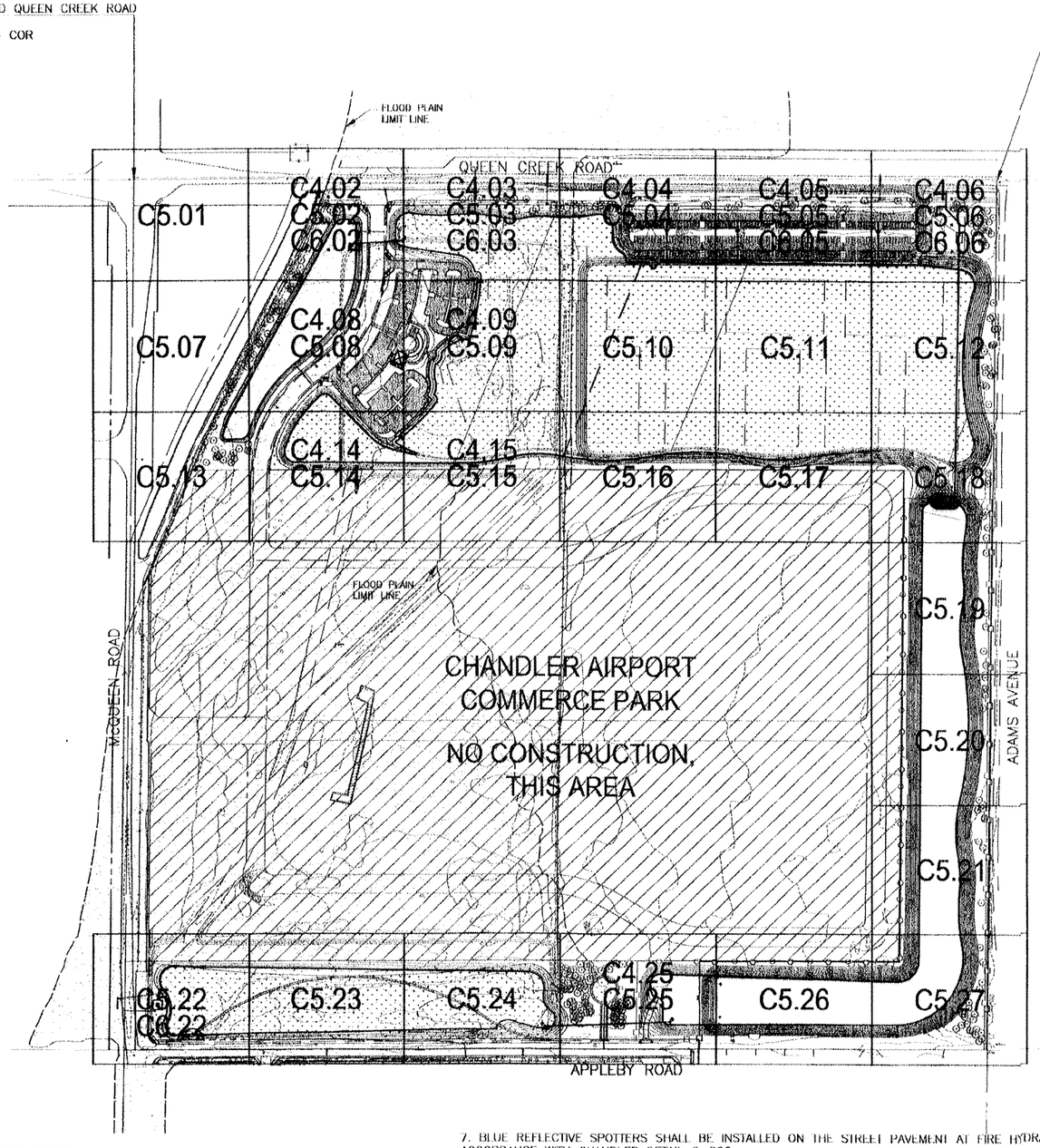
PHASE II GRADING
NOTE SHEET

PROJECT NO. ST0601-201
FILE NAME:
SHEET NO. C1.02
SHEET 9A OF 167

FILE:\2007\10-0753\CAD\C102-NOTE-GRAD-PHS2.dwg DATE:Dec. 17 2008 TIME: 11:30 am

CITY OF CHANDLER RECLAIMED WATER NOTES

1. RECLAIMED WATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH MAG STANDARD SPECIFICATION SECTION 616 EXCEPT AS MODIFIED BY THESE NOTES.
2. THE MINIMUM DEPTH OF COVER WITHIN THE RIGHT-OF-WAY OF ARTERIAL STREETS SHALL BE 7', AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. PIPE SEPARATION ALSO SHALL CONFORM TO ARIZONA RULE R18-9-602, PIPELINE CONVEYANCES OF RECLAIMED WATER.
4. A REDUCED PRESSURE BACKFLOW DEVICE SHALL BE INSTALLED, AS PART OF THE ORIGINAL SYSTEM, ON A RECLAIMED WATER SYSTEM THAT WILL USE POTABLE WATER AS AN INITIAL SOURCE AND WILL USE RECLAIMED WATER AS A SOURCE LATER. ON SUCH A SYSTEM, CONCURRENT CONNECTIONS SHALL NOT BE MADE AT ANY TIME TO BOTH POTABLE WATER AND RECLAIMED WATER SYSTEMS, REGARDLESS WHETHER ONE OR BOTH SYSTEMS ARE DEVOID OF SUPPLY.
5. RECLAIMED WATER PIPE GREATER THAN OR EQUAL TO 4" IN DIAMETER SHALL BE PRESSURE-RATED POLYVINYL CHLORIDE (PVC) PLASTIC PIPE MEETING THE REQUIREMENTS OF AWWA C900 FOR 4" THROUGH 12" PIPE AND AWWA C905 FOR 14" THROUGH 48" PIPE. C900 PIPE SHALL BE RATED FOR A MINIMUM WORKING PRESSURE OF 150 PSI. C905 PIPE SHALL BE RATED FOR A MINIMUM WORKING PRESSURE OF 235 PSI. DUCTILE IRON PIPE MAY BE USED PROVIDED THAT IT MEETS THE REQUIREMENTS OF DUCTILE IRON PIPE FOR POTABLE WATER. DUCTILE IRON PIPE SHALL BE PROTECTED FROM CORROSION BY ENCASEMENT IN A POLYETHYLENE PROTECTIVE WRAPPING (POLYWRAP).
6. RECLAIMED WATER PIPE LESS THAN 4" IN DIAMETER SHALL BE PVC PIPE RATED FOR A MINIMUM WORKING PRESSURE OF 200 PSI AND SHALL MEET THE REQUIREMENTS OF ASTM D2241 OR ASTM D1785.
7. PIPE SLEEVES SHALL BE PIPE MEETING THE REQUIREMENTS ABOVE AND SHALL BE TWO (2) NOMINAL SIZES LARGER THAN THE CONVEYANCE PIPE.
8. PRIVATE RECLAIMED WATER LINES SHALL BE INSTALLED IN SLEEVES WHERE THEY CROSS PUBLIC OR PRIVATE RIGHT-OF-WAY.
9. FITTINGS FOR RECLAIMED WATER PIPE GREATER THAN OR EQUAL TO 4" IN DIAMETER SHALL BE DUCTILE IRON AND SHALL CONFORM TO AWWA C110 OR C153 FOR A MINIMUM WORKING PRESSURE OF 250 PSI. FITTINGS SHALL HAVE A CEMENT-MORTAR LINING IN ACCORDANCE WITH AWWA C104. THE EXTERIOR OF FITTINGS SHALL BE COATED IN ACCORDANCE WITH AWWA C110. FITTINGS THAT REQUIRE TRANSITION GASKETS TO IRON PIPE SIZE (IPS) SHALL BE FURNISHED ONLY IN 6" THROUGH 8" DIAMETERS. DUCTILE IRON FITTINGS SHALL BE PROTECTED FROM CORROSION BY ENCASEMENT IN A POLYETHYLENE PROTECTIVE WRAPPING (POLYWRAP).
10. PIPE, INCLUDING PIPE SLEEVES, SHALL BE INTEGRALLY COLORED PURPLE AND THE PIPE SHALL BEAR THE MESSAGE "CAUTION: RECLAIMED WATER, DO NOT DRINK" AS PART OF EACH SET OF PIPE IDENTIFICATION MARKINGS. UNLESS NOTED OTHERWISE, PIPE THAT CANNOT BE PURPLE IN COLOR SHALL BE MARKED PER MAG STANDARD SPECIFICATION SECTION 616 WITH THE ABOVE MESSAGE. DUCTILE IRON PIPE MAY BE MARKED BY WRAPPING WITH PURPLE POLYETHYLENE ENCASEMENT (POLYWRAP) MEETING THE REQUIREMENTS OF THE MAG STANDARD SPECIFICATIONS. THE POLYWRAP SHALL INCLUDE THE ABOVE MESSAGE.
11. RECLAIMED WATER IRRIGATION SYSTEM SPRINKLER HEADS, VALVE BOXES AND COVERS, AND FLOW CONTROL HANDLES ON VALVES SHALL BE PURPLE.
12. PVC PIPE SHALL NOT BE EXPOSED TO DIRECT ULTRAVIOLET RADIATION (SUNLIGHT) FOR MORE THAN 30 DAYS, WHETHER THE TIME IS CONTINUOUS OR CUMULATIVE. PVC PIPE SHALL BE PROTECTED FROM DIRECT ULTRAVIOLET RADIATION FOR ANY TIME OF EXPOSURE EXCEEDING 30 DAYS. PVC PIPE THAT HAS BEEN DISCOLORED BY EXPOSURE TO ULTRAVIOLET RADIATION IS UNACCEPTABLE.
13. VALVES 4" THROUGH 24" SHALL BE GATE VALVES UNLESS NOTED OTHERWISE. EACH VALVE SHALL BE FURNISHED WITH A BAR WELDED TO THE OPERATING NUT IN ACCORDANCE WITH CITY OF CHANDLER STANDARD DETAIL C-406, THEREBY REQUIRING A TOOL WITH A KEY SLOT TO EXERCISE THE VALVE. VALVE BOXES AND COVERS SHALL CONFORM TO CITY OF CHANDLER STANDARD DETAIL C-406. A DEBRIS CAP, WHICH CONFORMS TO CITY OF CHANDLER STANDARD DETAIL C-318, SHALL BE INSTALLED IN EACH VALVE BOX.
14. NO VALVE, RISER, BOX OR COVER SHALL BE LOCATED BENEATH OR WITHIN A SIDEWALK OR SIDEWALK RAMP.
15. CITY RECLAIMED WATER VALVES SHALL BE OPERATED BY CITY OF CHANDLER PERSONNEL ONLY.
16. CITY OF CHANDLER WILL FURNISH AND INSTALL 2" AND SMALLER WATER METERS WITH PREVAILING COSTS PAID BY THE DEVELOPER.
17. METER BOXES AND COVERS SHALL BE SUPPLIED BY THE DEVELOPER AND SHALL BE INSTALLED BY THE CONTRACTOR FACING AWAY FROM THE STREET. METER BOXES FOR METERS 2" AND SMALLER SHALL BE CONCRETE AND SHALL CONFORM TO MAG STANDARD DETAIL 320 OR SHALL BE POLYMER CONCRETE AND CONFORM TO CITY OF CHANDLER STANDARD DETAIL C-301. THE INSIDE OF EACH METER BOX SHALL BE PAINTED PURPLE. METER BOX COVERS SHALL BE POLYMER CONCRETE AND SHALL CONFORM TO CITY OF CHANDLER STANDARD DETAIL C-301. METER BOX COVERS SHALL BE CAST WITH THE WORDS "RECLAIMED WATER" IN THE OUTSIDE SURFACE OR HAVE TAGS WITH THE WORDS "RECLAIMED WATER" FIRMLY ATTACHED TO THE OUTSIDE SURFACE. LETTERING SIZE AND FORMAT SHALL BE SIMILAR TO THE LETTERING IN MAG STANDARD DETAIL 310. TAGS SHALL OTHERWISE MEET THE REQUIREMENTS FOR RECLAIMED WATER VALVE TAGS.
18. WATER METERS 3" AND LARGER, METER VAULTS AND COVERS SHALL BE SUPPLIED BY THE DEVELOPER AND SHALL BE INSTALLED BY THE CONTRACTOR. WATER METERS SHALL BE IN ACCORDANCE WITH CITY OF CHANDLER STANDARD DETAIL C-404 AND C- 405, APPROVED BY THE CITY OF CHANDLER, AND SHALL BE EQUIPPED WITH AN "ITRON ERT SIGNAL UNIT". WHERE THE METER IS INSTALLED BELOW GROUND, INSTALLATION SHALL CONFORM TO CITY OF CHANDLER STANDARD DETAIL C-316. WHERE THE METER IS INSTALLED ABOVE GROUND, THE REMOTE-READ "ITRON ERT SIGNAL UNIT" SHALL BE INSTALLED IN A WATER METER BOX IN ACCORDANCE WITH CITY OF CHANDLER STANDARD DETAIL C-301. THE INSIDE OF EACH METER VAULT AND METER BOX SHALL BE PAINTED PURPLE. METER VAULT AND METER BOX COVERS SHALL INCLUDE THE WORDS "RECLAIMED WATER" AS REQUIRED FOR METER BOX COVERS ABOVE FOR METERS 2" AND SMALLER. THE CITY OF CHANDLER WATER DISTRIBUTION DIVISION SHALL BE NOTIFIED 24 HOURS BEFORE INSTALLATION AT (480) 782-3700.
19. WARNING SIGNS: AREAS IRRIGATED WITH RECLAIMED WATER SHALL BE IDENTIFIED BY SURFACE MOUNTED SIGNS, AT LEAST 12" WIDE BY 9" HIGH, WITH THE FOLLOWING MESSAGE IN BOLD, WHITE LETTERS ON A PURPLE BACKGROUND. THE SIGN LAYOUT SHALL BE AS FOLLOWS: FIRST LINE, "IRRIGATION"; SECOND LINE, "RECYCLED WATER"; THIRD LINE, "DO NOT DRINK"; FOURTH LINE, DISPLAY THE INTERNATIONAL "DO NOT DRINK" SYMBOL AND FIFTH LINE, "NO BEBER". SIGNS SHALL BE FABRICATED FROM FLAT SHEET ALUMINUM. SIGNS SHALL BE AS MANUFACTURED BY CHRISTY SIGNS OR SHALL BE AN APPROVED EQUAL. SIGNS SHALL BE PROMINENTLY LOCATED AT ALL SUBDIVISION AND PARK ENTRANCES, IN ALL AREAS SUBJECT TO IRRIGATION, AND AT ALL LAKES AND WATER FEATURES. SIGNS SHALL BE POSTED AT EACH PEDESTRIAN ENTRANCE AND ACCESS POINT TO AN AREA WHERE RECLAIMED WATER IS USED. SIGNS SHALL BE SPACED AT A MAXIMUM INTERVAL OF 100 YARDS, EXCEPT FOR ROADWAY MEDIANS, WHERE SIGNS MAY BE SPACED AT A MAXIMUM INTERVAL OF 300 YARDS.
20. RECLAIMED WATER LINES GREATER THAN OR EQUAL TO 4" IN DIAMETER SHALL BE TESTED IN ACCORDANCE WITH THE SAME REQUIREMENTS AS POTABLE WATER LINES. RECLAIMED WATER LINES LESS THAN 4" IN DIAMETER ARE NOT REQUIRED TO BE TESTED. THE TESTING REQUIREMENTS OF CITY OF CHANDLER STANDARD SPECIFICATION NO. 10 SHALL APPLY TO RECLAIMED WATER LINES GREATER THAN OR EQUAL TO 4" IN DIAMETER. ON A RECLAIMED WATER SYSTEM THAT WILL NOT USE POTABLE WATER AS AN INITIAL SOURCE, RECLAIMED WATER MAY BE USED IN LIEU OF POTABLE WATER TO FILL RECLAIMED WATER PIPE BEING TESTED. DISINFECTION OF THE RECLAIMED WATER MAIN SHALL NOT BE REQUIRED.
21. RECLAIMED WATER LINES LARGER THAN TWO (2) INCHES IN DIAMETER SHALL HAVE TRACER WIRE INSTALLED PER CITY OF CHANDLER SPECIFICATION NO. 11.



LEGEND

C4.X	SITE SHEETS
C5.X	GRADING SHEETS
C6.X	UTILITY SHEETS

C.O.C. LOG NO. ENR 08-0050

N

0' 100' 200' 400'
1"=200'

CITY OF CHANDLER PAVING NOTES

1. THE LOCATION OF ALL VALVES MUST BE REFERENCED AT ALL TIMES BY THE CONTRACTOR DURING CONSTRUCTION.
2. NO PAVING CONSTRUCTION SHALL BE PERFORMED UNTIL ALL UNDERGROUND UTILITIES WITHIN THE RIGHT-OF-WAY HAVE BEEN COMPLETED.
3. THE BASE COURSE WILL NOT BE PLACED ON SUBGRADE UNTIL BASE REQUIREMENTS HAVE BEEN COMPLETED AND ACCEPTED BY THE CITY ENGINEER.
4. GUTTERS WILL BE WATER TESTED IN THE PRESENCE OF THE CITY ENGINEER TO INSURE PROPER DRAINAGE PRIOR TO FINAL APPROVAL.
5. THE EXACT POINT OF PAVEMENT MATCHING FOR TERMINATION AND OVERLAY MAY BE DETERMINED IN THE FIELD BY THE CITY ENGINEER.
6. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT AND SIDEWALKS HAVE BEEN SWEPT CLEAN OF ALL DIRT AND DEBRIS.
7. BLUE REFLECTIVE SPOTTERS SHALL BE INSTALLED ON THE STREET PAVEMENT AT FIRE HYDRANT LOCATIONS IN ACCORDANCE WITH CHANDLER DETAIL C-306.
8. STREET NAME SIGNS WILL BE INSTALLED BY THE CITY ON DEVELOPER INSTALLED POLES AT THE DEVELOPER'S EXPENSE. POLES SHALL BE CITY OF CHANDLER STANDARD DETAIL C-613. PAYMENT WILL BE COLLECTED AT THE TIME A PAVING PERMIT IS ISSUED.
9. CERTIFIED SOIL TEST SHOWS 2% PERCENT SWELL TESTED AT 2 TO 3 PERCENT BELOW OPTIMUM MOISTURE WITH 100 PSF SURCHARGE. MINIMUM DENSITY REQUIREMENTS FOR COMPACTION UNDER SIDEWALKS AND CURBS SHALL BE 95% PERCENT. ALL COMPACTION UNDER SIDEWALKS AND CURBS SHALL BE PERFORMED WITHIN 3 PERCENT OF THE OPTIMUM MOISTURE CONTENT.
10. ALL COMPACTION UNDER PAVEMENT AREAS SHALL BE PERFORMED ACCORDING TO MAG SPECIFICATIONS AND AT 0 TO 5 PERCENT BELOW OPTIMUM MOISTURE CONTENT.
11. ALL TRAFFIC CONTROL SIGNS SHALL BE CONSTRUCTED OF HIGH INTENSITY GRADE SHEETING, UNLESS OTHERWISE NOTED.
12. ALL STREET SECTIONS, EXCEPT ARTERIALS, SHALL HAVE INSTALLED A PRESERVATIVE SEAL COAT PER MAG STANDARD SPECIFICATION 334 AND SHALL BE EMULSIFIED ASPHALT GRADE SS-1H PER MAG STANDARD SPECIFICATION 713.
13. ALL CATCH BASIN ACCESS COVERS SHALL BE PER CITY OF CHANDLER STANDARD DETAIL C-505.

CALL TWO WORKING DAYS BEFORE YOU DIG
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1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
KEY MAP/CONTROL/NOTES

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C2.01
SHEET 42 OF 67

STA 10+00
FOUND BCIHI
NW COR, SEC 14
T2S, R5E

QUEEN CREEK ROAD

10+00 | 11+00 | 12+00 | 13+00

1224.16
BC 20046-1

126+51.46

126+00

125+00

124+00

McQUEEN ROAD

8C" EXST R/W

8C" EXST R/W

8C" DECLARED COUNTY ROADWAY

EXST EDGE OF ASPHALT

OHE

79' EXST R/W

75' EXST R/W

60' EXST R/W

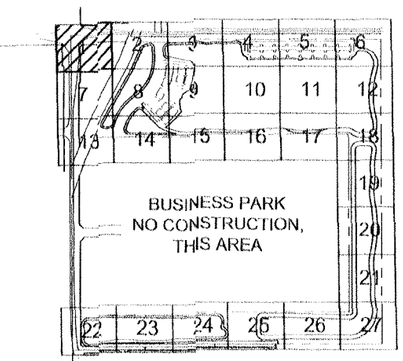
75' EXST R/W

MATCH LINE – SHEET C5.02

MATCH LINE – SHEET C5.04

NOTE:
ALL ELEVATIONS ARE +1200 FEET

C.O.C. LOG NO. ENR 08-0050



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG
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1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

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NOZOMI PARK
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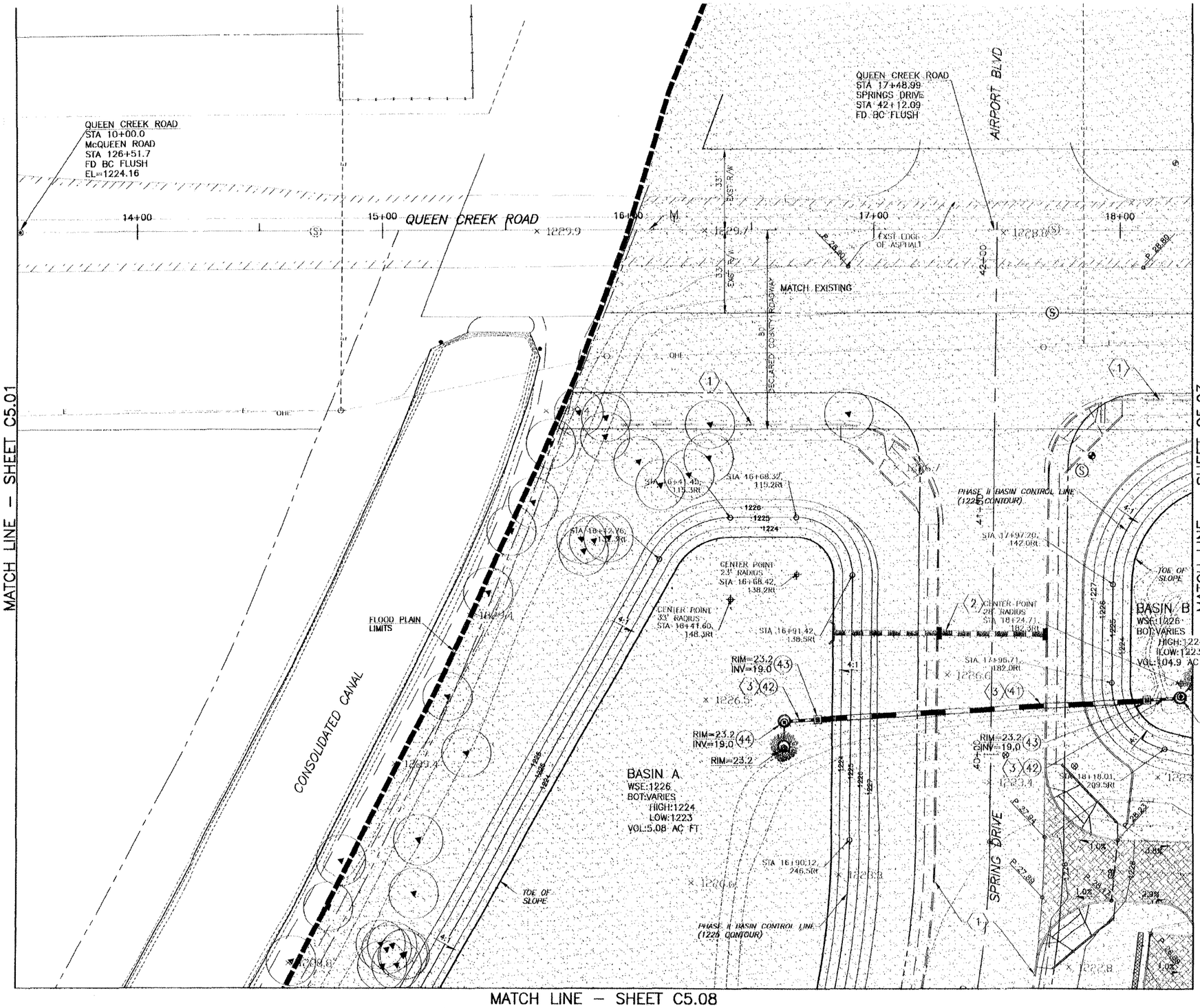
PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C5.01
SHEET 54 OF 167

FILE:G:\2007\10-0753\CAD\C50-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:44 am



CONSTRUCTION NOTES

(41) 24" STORM DRAIN HDPE

(42) 12" STORM DRAIN HDPE

(43) STORM BUBBLER (CATCH BASIN) CITY OF CHANDLER DETAIL C-507

(44) DRYWELL CITY OF CHANDLER DETAIL C-501

REFERENCE NOTES

(1) ROADWAY IMPROVEMENTS DESIGN BY OTHERS

(2) STORM DRAIN PIPE DESIGN BY OTHERS

(3) REFER TO PIPE PROFILE SHEET C7.02

LEGEND

FLOOD PLAIN AREA

CONCRETE SIDEWALK

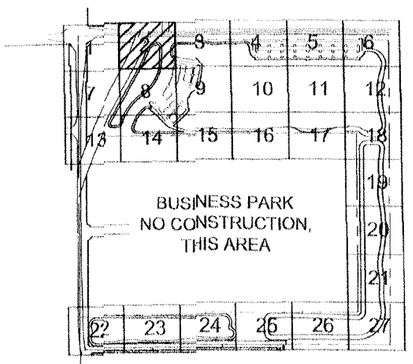
ASPHALT PAVEMENT

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED

C.O.C. LOG NO. ENR 08-0050



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ADN
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CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

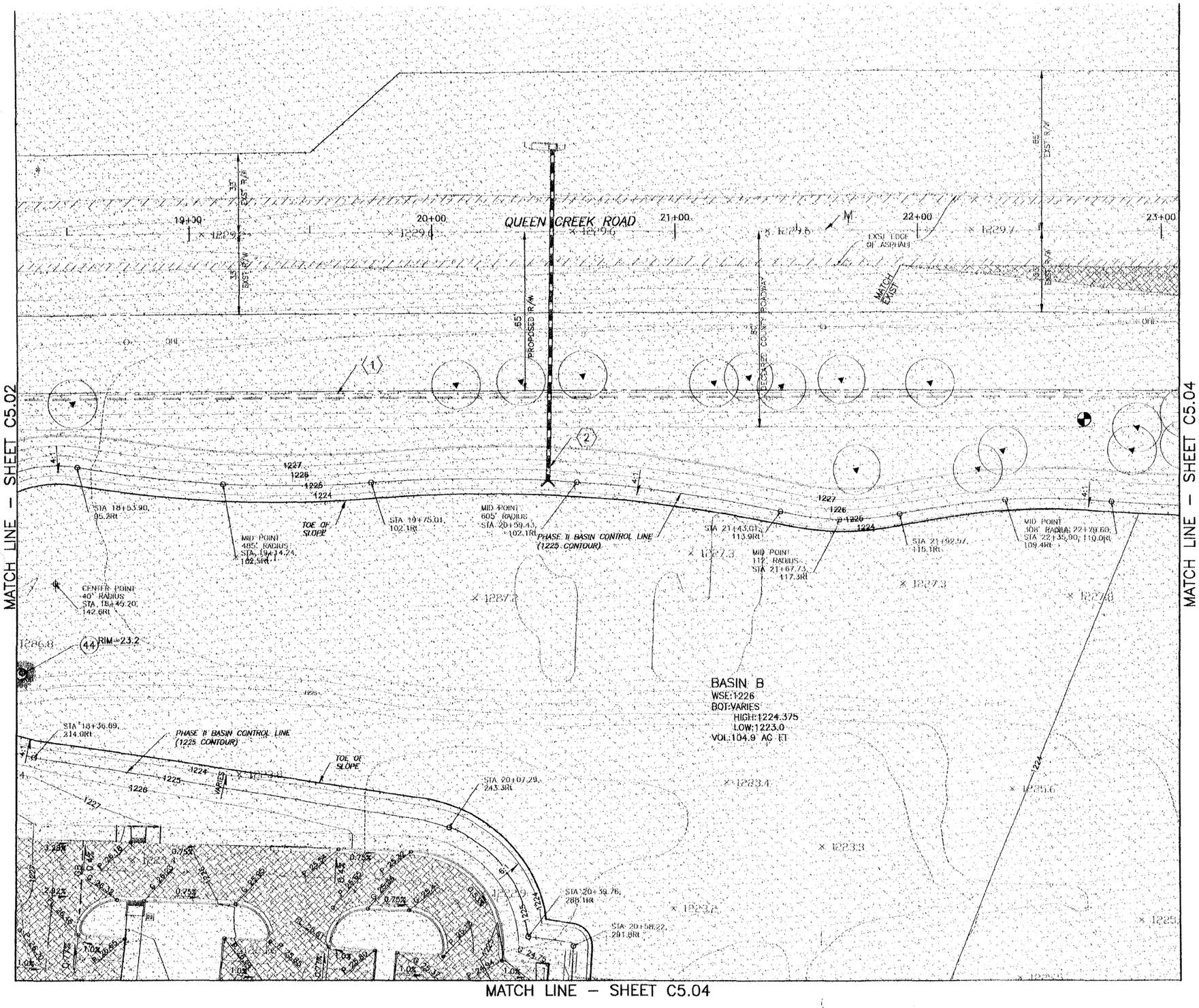
SHEET NO.
C5.02
SHEET 55 OF 167

FILE:S:\2007\10-0753\CAD\C502-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:45 am

MATCH LINE — SHEET C5.02

MATCH LINE — SHEET C5.04

C.O.C. LOG NO. ENR 08-0050



MATCH LINE — SHEET C5.04

CONSTRUCTION NOTES

(44) DRYWELL
CITY OF CHANDLER DETAIL C-501

REFERENCE NOTES

〈1〉 ROADWAY IMPROVEMENTS
DESIGN BY OTHERS

〈2〉 STORM DRAIN PIPE
DESIGN BY OTHERS

LEGEND

FLOOD PLAIN AREA

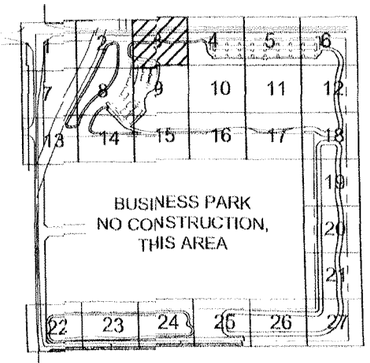
CONCRETE SIDEWALK

ASPHALT PAVEMENT

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ARN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

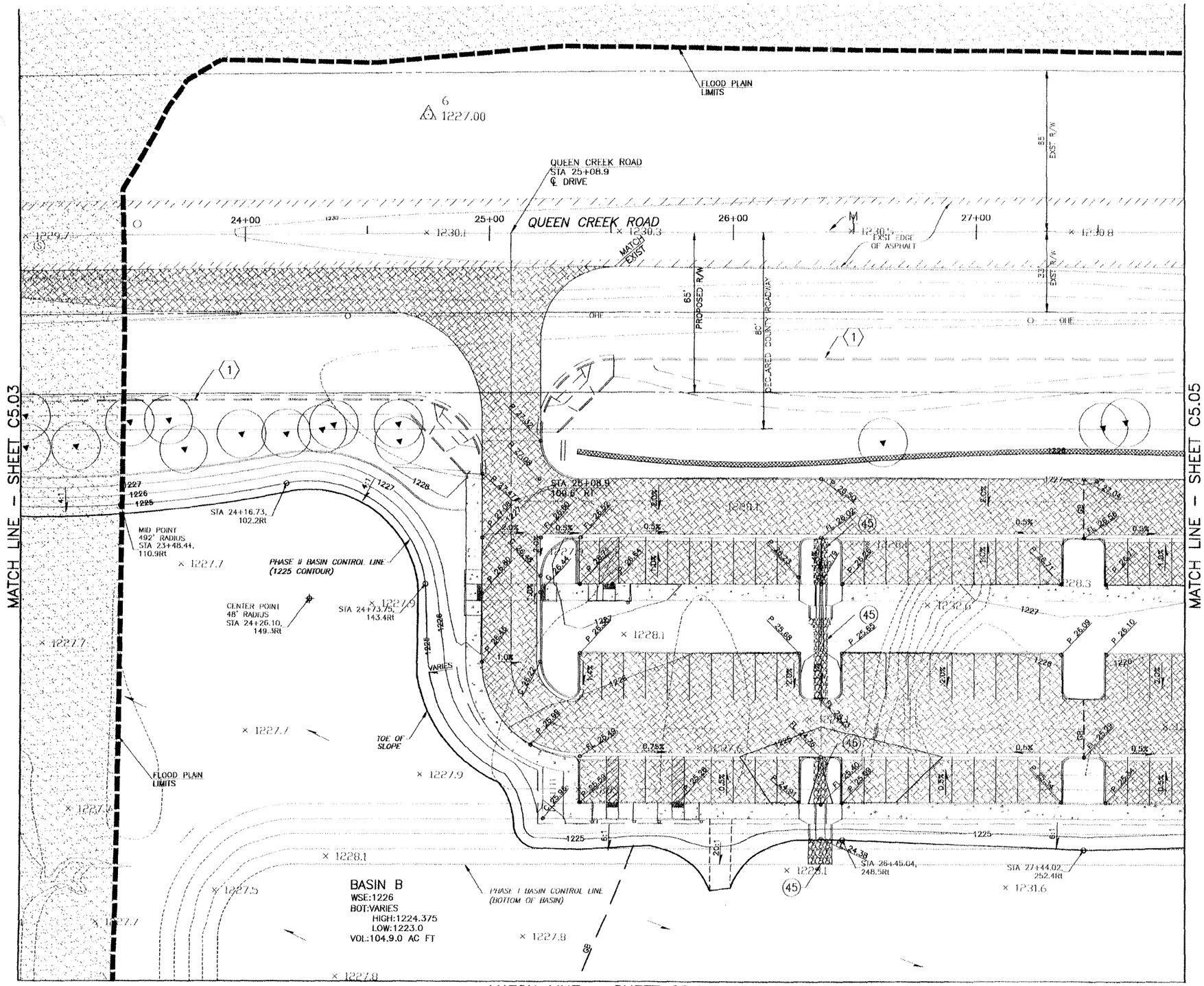
CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C5.03
SHEET 56 OF 161

FILE:\2007\10-0753\CAD\C503-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:45 am



CONSTRUCTION NOTES

(45) RIPRAP D50=6", 12" DEPTH, 8' WIDTH

REFERENCE NOTES

⟨1⟩ ROADWAY IMPROVEMENTS DESIGN BY OTHERS

⟨2⟩ STORM DRAIN PIPE DESIGN BY OTHERS

LEGEND

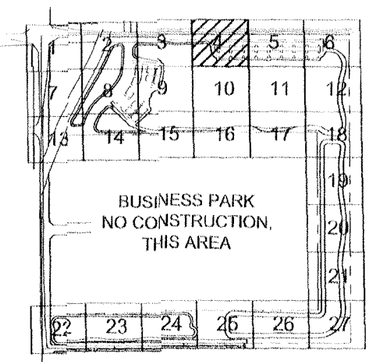
- FLOOD PLAIN AREA
- CONCRETE SIDEWALK
- ASPHALT PAVEMENT
- RIPRAP D_{50} = 6"

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED

C.O.C. LOG NO. ENR 08-0050



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG (602) 263-1100 1-800-STAKE-IT (OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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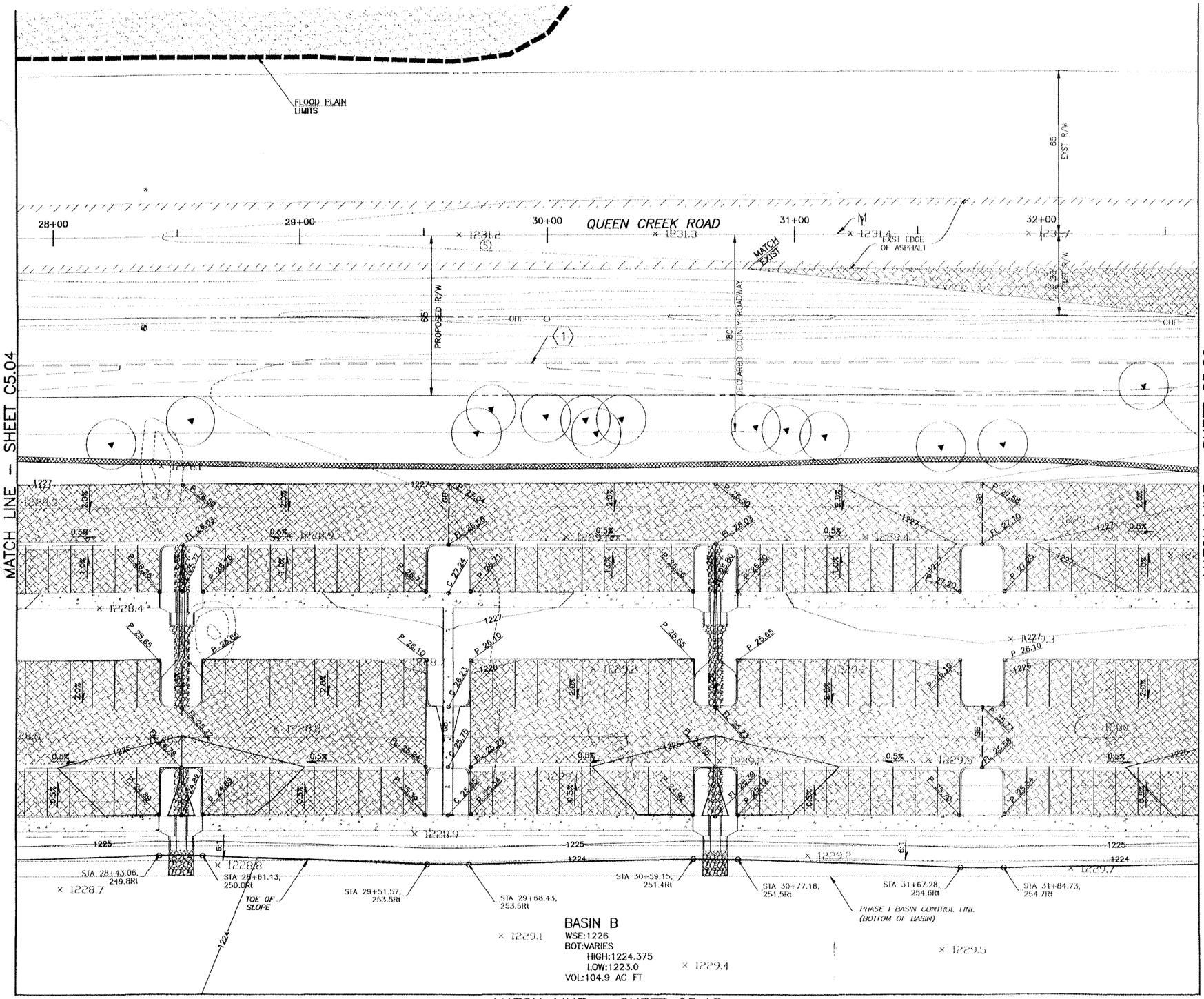
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C5.04
SHEET 57 OF 161

FILES:\2007\10-0753\DAD\C504-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:46 am



CONSTRUCTION NOTES

(45) RIPRAP D50=6", 12" DEPTH, 8' WIDTH

REFERENCE NOTES

(1) ROADWAY IMPROVEMENTS DESIGN BY OTHERS

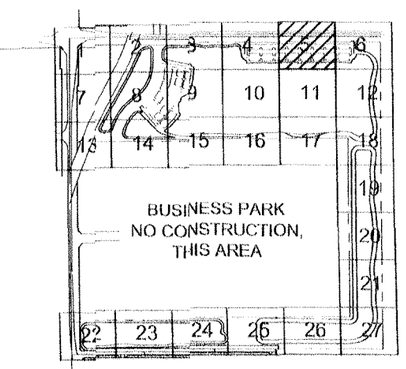
LEGEND

- FLOOD PLAIN AREA
- CONCRETE SIDEWALK
- ASPHALT PAVEMENT
- RIPRAP D_{50} = 6"

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG (602) 263-1100 1-800-STAKE-IT (OUTSIDE MARICOPA COUNTY)

C.C.C. LOG NO. ENR 08-0055

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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SUITE 102
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PHONE: 602-956-4370
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AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C5.05
SHEET 58 OF 167

CONSTRUCTION NOTES

(45) RIPRAP D50=6", 12" DEPTH, 8' WIDTH

(72) 10,000 GPM LIFT STATION
(NOT A PART OF THIS CONTRACT)

(73) 24" STORM DRAIN MAIN
PVC C-905 CLASS 200

(74) 30" STORM DRAIN PIPE
PVC C-905 CLASS 200

REFERENCE NOTES

〈1〉 ROADWAY IMPROVEMENTS
DESIGN BY OTHERS

LEGEND

CONCRETE SIDEWALK

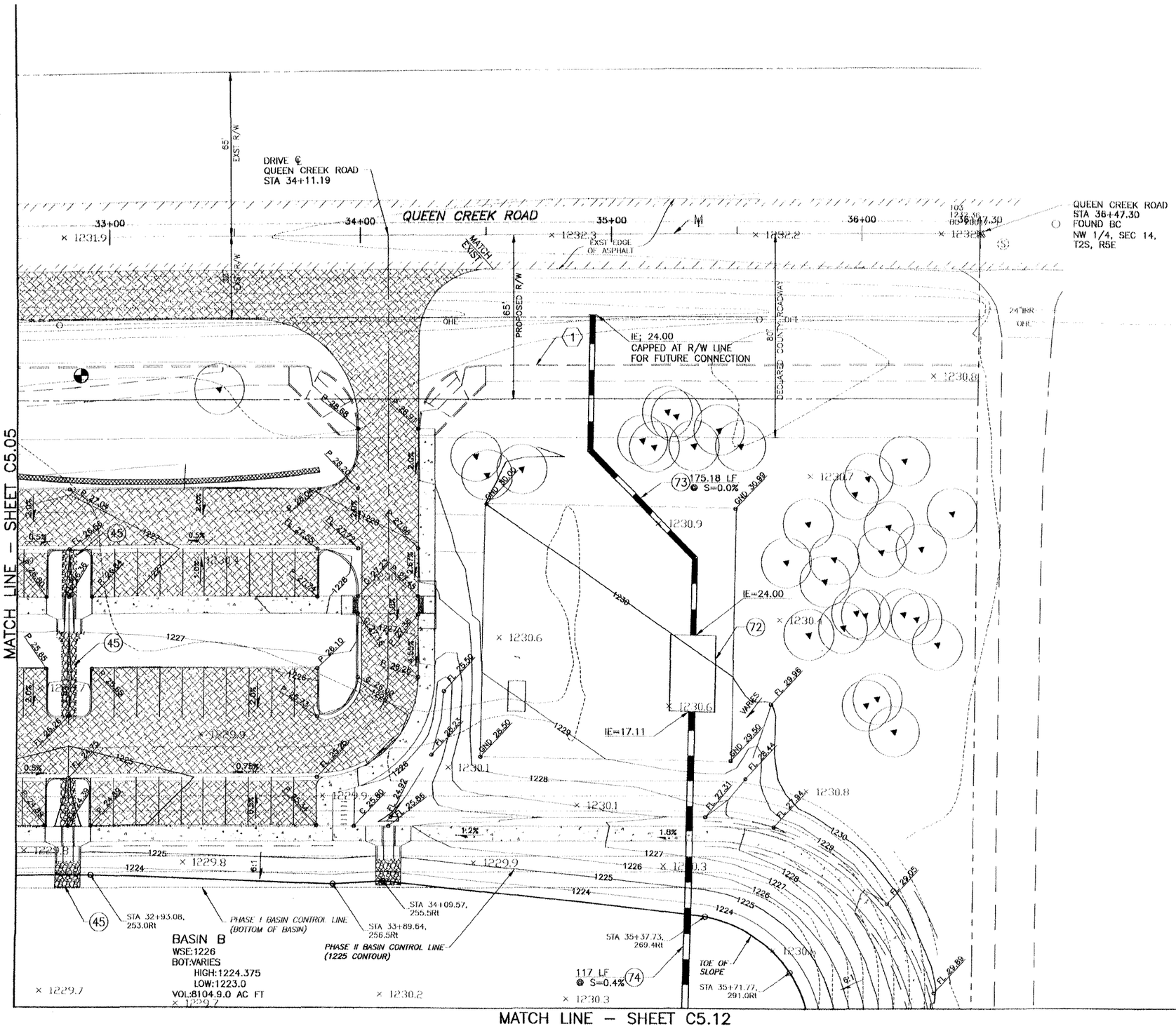
ASPHALT PAVEMENT

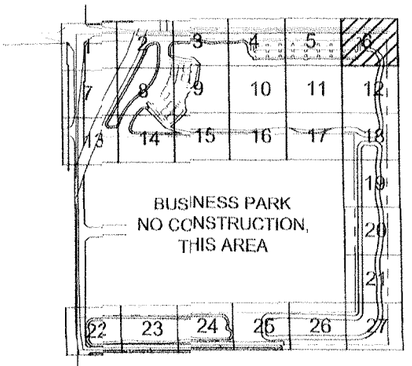
RIPRAP D_{50} = 6"

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED





KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

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(OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

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CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0801-201
FILE NAME:

SHEET NO.
C5.06
SHEET 58 OF 160

FILE:G:\2007\1C-0753\CAD\C506-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:47 am

MATCH LINE – SHEET C5.01

65'
EXST R/W

75'
EXST R/W

123+00

122+00

121+00

120+00

McQUEEN ROAD

EXST EDGE OF ASPHALT

65'
EXST R/W

65'
EXST R/W

MATCH LINE – SHEET C5.13

MATCH LINE – SHEET C5.08

CONSOLIDATED CANAL

FLOOD PLAIN LIMITS

TOE OF SLOPE

PHASE II BASIN CONTROL LINE (1225 CONTOUR)

BASIN A
WSE:1226
BOT:VARIES
HIGH:1224
LOW:1223
VOL:5.08 AC FT

STA 124+97.13,
699.5Rt

LEGEND

FLOOD PLAIN AREA

BUSINESS PARK
NO CONSTRUCTION,
THIS AREA

KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

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PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
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CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0001-201
FILE NAME:

SHEET NO.
C5.07
SHEET 60 OF 167

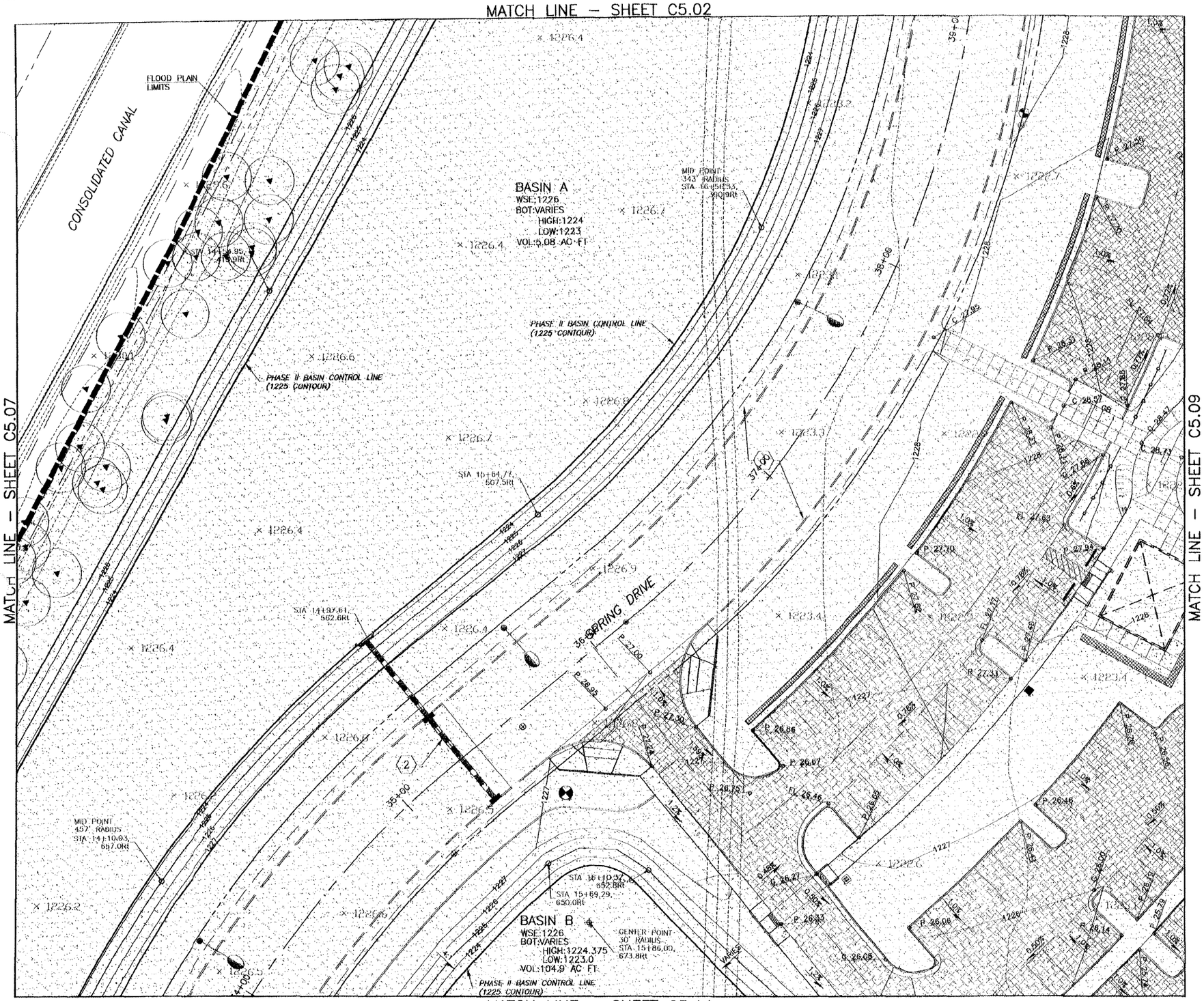
FILES:\2007\10-0755\CAD\C507-GRAC.dwg DATE:Dec, 17 2008 TIME: 11:47 am

MATCH LINE – SHEET C5.02

MATCH LINE – SHEET C5.07

MATCH LINE – SHEET C5.09

MATCH LINE – SHEET C5.14



〈〉 REFERENCE NOTES 〈〉

〈1〉 ROADWAY IMPROVEMENTS DESIGN BY OTHERS

〈2〉 STORM DRAIN PIPE DESIGN BY OTHERS

LEGEND

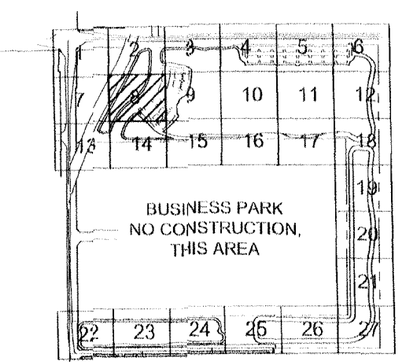
- FLOOD PLAIN AREA
- CONCRETE SIDEWALK
- ASPHALT PAVEMENT

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED

C.O.C. LOG NO. ENR 08-0050



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/19/2008

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PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C5.08
SHEET 61 OF 161

MATCH LINE – SHEET C5.03

MATCH LINE – SHEET C5.08

MATCH LINE – SHEET C5.10

MATCH LINE – SHEET C5.04

STA 20+47.85, 380.1Rt

PHASE II BASIN CONTROL LINE (1225 CONTOUR)

STA 20+26.83, 473.8Rt

TOE OF SLOPE

STA 20+01.83, 474.1Rt

STA 19+35.71, 522.9Rt

STA 19+21.17, 552.5Rt

STA 19+17.79, 610.8Rt

STA 19+12.13, 653.9Rt

STA 19+22.91, 670.5Rt

BASIN B
WSE:1226
BOT:VARIES
HIGH:1224.375
LOW:1223.0
VOL:104.9 AC-FT

FLOOD PLAIN LIMITS

CONSTRUCTION NOTES

(45) RIPRAP D50=6", 12" DEPTH, 8' WIDTH

LEGEND

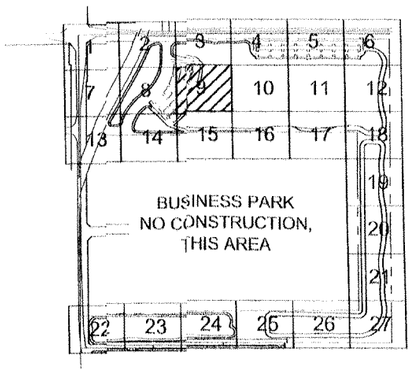
- FLOOD PLAIN AREA
- CONCRETE SIDEWALK
- ASPHALT PAVEMENT
- RIPRAP D_{50} = 6"

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED

C.O.C. LOG NO. ENR 08-0050



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHKD BY: JLMc
GROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
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PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. STD601-201
FILE NAME:

SHEET NO.
C5.09
SHEET 62 OF 167

FILE:G:\2007\10-075\CAD\C509-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:48 am

MATCH LINE – SHEET C5.04

MATCH LINE – SHEET C5.09

MATCH LINE – SHEET C5.11

MATCH LINE – SHEET C5.16

FLOOD PLAIN LIMITS

PHASE 1 BASIN CONTROL LINE (BOTTOM OF BASIN)

BASIN B
WSE:1226
BOT:VARIES
HIGH=1224.25
LOW=1222.95
VOL:104.9 AC FT

LEGEND

FLOOD PLAIN AREA

BUSINESS PARK
NO CONSTRUCTION,
THIS AREA

KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

C.O.C. LOG NO. ENR 08-0050

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
GROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY
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CONSTRUCTION
OR RECORDING

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SUITE 102
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CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0801-201
FILE NAME:

SHEET NO.
C5.10
SHEET 63 OF 167

MATCH LINE – SHEET C5.05

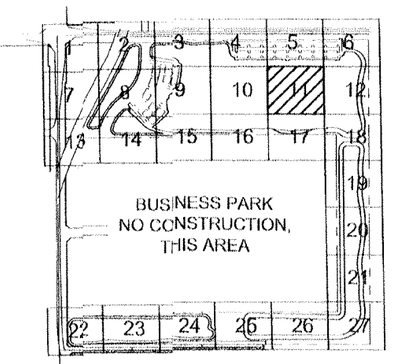
MATCH LINE – SHEET C5.10

MATCH LINE – SHEET C5.12

MATCH LINE – SHEET C5.13

× 1228.9 × 1228.6 × 1229.2 × 1229.4 × 1229.5 × 1229.1 × 1229.3 × 1229 × 1229.2 × 1229.1 × 1229.4 × 1229.7 × 1229.1 × 1229.1 × 1229.1 × 1229.6 × 1229.8 × 1229.2 × 1229.3 × 1229.1 × 1229.3 × 1229.4 × 1229.8 × 1229.2 × 1229.4 × 1229.1 × 1229.6 × 1229.4 × 1229.7 × 1228.7 × 1229.1 × 1229.2 × 1229.3 × 1228.8 × 1229.6 × 1229.6 × 1229.5 × 1229.1 × 1229.1 × 1228.6 × 1229.1 × 1229.6 × 1229.6 × 1229.8 × 1229.1 × 1229.4 × 1229.1 × 1229.3 × 1229.6

BASIN B
WSE:1226
BOT:VARIES
HIGH=1224.25
LOW=1222.95
VOL:104.9 AC FT



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY
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PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C5.11
SHEET 64 OF 167

FILE:G:\2007\10-0753\CAD\0511-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:52 am

MATCH LINE – SHEET C5.06

MATCH LINE – SHEET C5.11

MATCH LINE – SHEET C5.18

× 1230.5
STA 35+76.21, 331.1RT

× 1230.2

× 1230.1

× 1230.4

× 1230.1

× 1230.1

× 1230.6

× 1230.9

× 1230.1

× 1230.2

× 1230.2

× 1230.2

× 1230.3

× 1230.8

398 LF
@ S=0.4%
74

× 1230.2

× 1230.1

× 1230.2

× 1230.1

× 1230.9

BASIN B
WSE:1226
BOT:VARIES
HIGH=1224.25
LOW=1222.95
VOL:104.9 AC FT

× 1230.8

× 1231.1

× 1230.2

× 1230.1

MID POINT
780' RADIUS
STA 35+42.80
542.9RT

× 1229.7

× 1230.8

PHASE I BASIN CONTROL LINE
(BOTTOM OF BASIN)

× 1230.5

× 1230.2

× 1230.5

× 1229.7

× 1230.6

TOE OF SLOPE

× 1231.4

× 1230.1

× 1230.3

× 1230.1

× 1230.5

CONSTRUCTION NOTES

(74) 30" STORM DRAIN PIPE PVC C-905 CLASS 200

REFERENCE NOTES

〈3〉 REFER TO PIPE PROFILE SHEET C7.03

LEGEND

CONCRETE SIDEWALK

BUSINESS PARK
NO CONSTRUCTION,
THIS AREA

KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

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1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

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PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0801-201
FILE NAME:

SHEET NO.
C5.12
SHEET 60 OF 167

FILE:\\2007\10-0753\CAD\0512-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:53 am

MATCH LINE – SHEET C5.07

65' EXST R/W

65' EXST R/W

119+00

118+00

117+00

116+00

McQUEEN ROAD

EXST EDGE OF ASPHALT

CONSOLIDATED CANAL

FLOOD PLAIN LIMITS

BASIN A
WSE:1226
BOT:1223
VOL:5.08 AC FT

MID POINT
300' RADIUS
STA 121+79.47,
737.2RT

TOE OF SLOPE

CENTER POINT
38' RADIUS
STA 131+22.56,
47.4RT

STA 121+67.16,
777.1RT

CENTER POINT
150' RADIUS
STA 121+81.76,
780.6RT

STA 131+23.51,
794.4RT

STA 121+82.19,
795.6RT

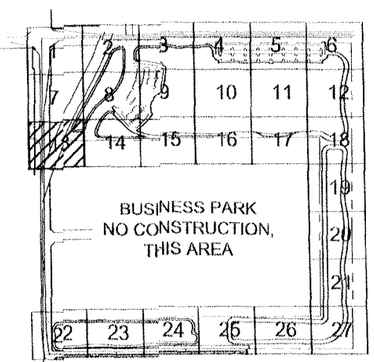
PHASE II BASIN CONTROL LINE
(1225 CONTOUR)

CHANDLER AIRPORT
COMMERCE PARK

MATCH LINE – SHEET C5.14

LEGEND

FLOOD PLAIN AREA



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

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(OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

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CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0501-201
FILE NAME:

SHEET NO.
C5.13
SHEET 66 OF 167

MATCH LINE – SHEET C5.08

MATCH LINE – SHEET C5.13

MATCH LINE – SHEET C5.03

BASIN A
WSE:1226
BOT:1223
VOL:5.08 AC. FT

BASIN B
WSE:1226
BOT:VARIES
HIGH:1224.375
LOW:1223.0
VOL:104.9 AC. FT

PHASE II BASIN CONTROL LINE (1225 CONTOUR)

PHASE II BASIN CONTROL LINE (1225 CONTOUR)

PHASE II BASIN CONTROL LINE (1225 CONTOUR)

SPRING DRIVE

STA 14+98.92, 728.9Rt

STA 14+58.66, 823.9Rt

STA 14+96.67, 828.6Rt

CENTER POINT 40' RADIUS

STA 14+96.49, 888.5Rt

TOE OF SLOPE

STA 17+89.69, 791.9Rt

STA 17+99.99, 787.7Rt

STA 17+84.44, 816.0Rt

CHANDLER AIRPORT COMMERCE PARK

REFERENCE NOTES

(1) ROADWAY IMPROVEMENTS DESIGN BY OTHERS

LEGEND

FLOOD PLAIN AREA

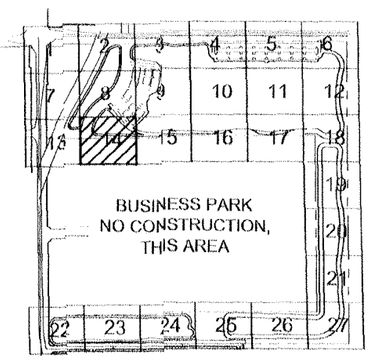
CONCRETE SIDEWALK

ASPHALT PAVEMENT

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG (602) 263-1100 1-800-STAKE-IT (OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

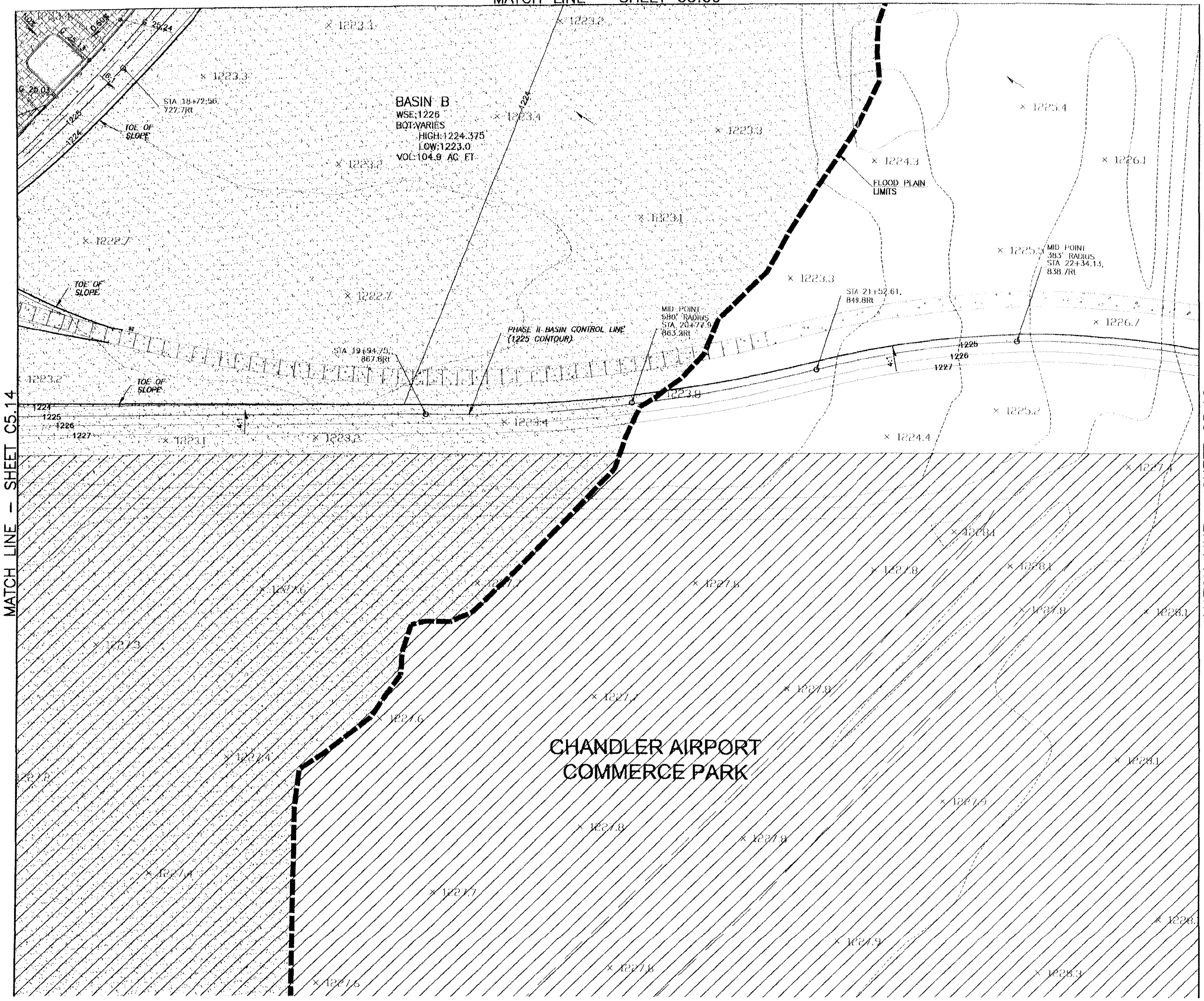
CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0001-201
FILE NAME:

SHEET NO.
C5.14
SHEET 67 OF 163

MATCH LINE – SHEET C5.09



MATCH LINE – SHEET C5.14

MATCH LINE – SHEET C5.16

LEGEND

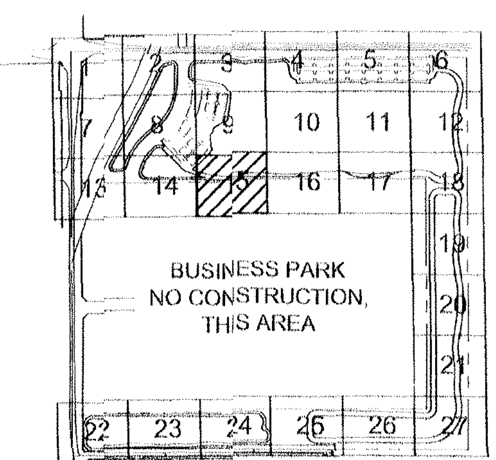
- FLOOD PLAIN AREA
- CONCRETE SIDEWALK
- ASPHALT PAVEMENT

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED

C.O.C. LOG NO. ENR 08-0050



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

(602) 263-1100
1-800-STAKE-IT

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHK'D BY: JLMc
CROSS CHK'D BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg

4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0801-201
FILE NAME:

SHEET NO.
C5.15
SHEET 68 OF 161

MATCH LINE – SHEET C5.10

MATCH LINE – SHEET C5.15

MATCH LINE – SHEET C5.17

BASIN B
WSE:1226
BOT:VARIES
HIGH:1224.375
LOW:1223.0
VOL:104.9 AC FT

FLOOD PLAIN LIMITS

PHASE I BASIN CONTROL LINE (BOTTOM OF BASIN)

PHASE II BASIN CONTROL LINE (1225 CONTOUR)

TOE OF SLOPE

STA 23+13.13, 845.3Rt

MID POINT 735' RADIUS STA 24+50.87, 858.2Rt

STA 25+85.68, 846.2Rt

STA 27+29.28, 833.4Rt

FL 24.37

FL 24.08

FL 23.85

FL 23.72

FL 23.65

VARIES

4:1

1224

1225

1226

1227

1228

CHANDLER AIRPORT COMMERCE PARK

LEGEND

FLOOD PLAIN AREA

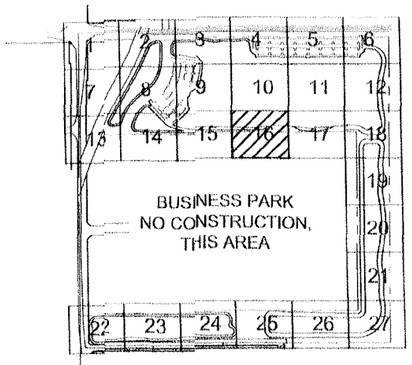
CONCRETE SIDEWALK

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED

C.O.C. LOG NO. ENR 08-0050



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/19/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

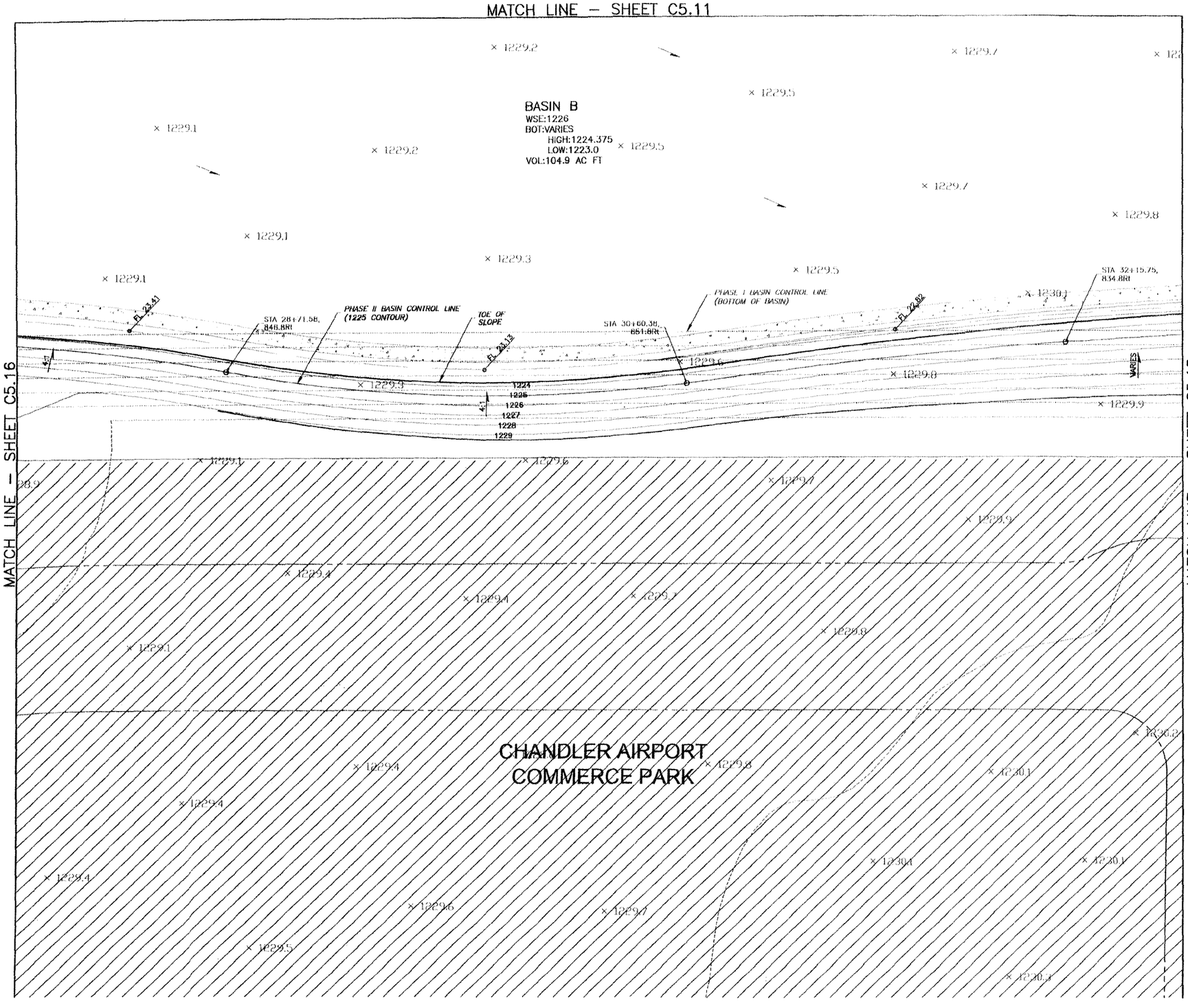
SHEET NO.
C5.16
SHEET 69 OF 167

FILE:\C:\2007\10-0753\CAD\C516-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:54 am

MATCH LINE – SHEET C5.11

MATCH LINE – SHEET C5.16

MATCH LINE – SHEET C5.18



LEGEND

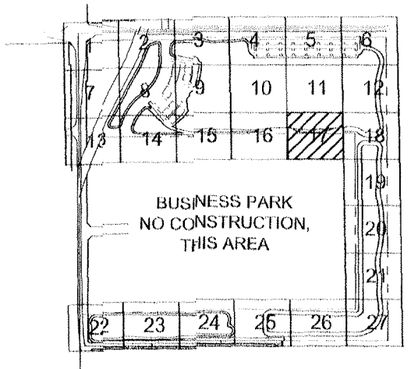
CONCRETE SIDEWALK

NOTES:

ALL DESIGN GRADE ELEVATIONS ARE +1200 FEET

ALL TOP OF CURB ELEVATIONS ARE +6" UNLESS OTHERWISE NOTED

C.O.C. LOG NO. ENR 08-0050



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG (602) 263-1100 1-800-STAKE-IT (OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHKD BY: JLM
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C5.17
SHEET 70 OF 161

FILE:G:\2007\0-0755\CAD\C5-17-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:55 am

MATCH LINE – SHEET C5.12

MATCH LINE – SHEET C5.17

MATCH LINE – SHEET C5.19

BASIN B
WSE:1226
BOT:VARIES
HIGH:1224.375
LOW:1223.0
VOL:104.9 AC FT

BASIN C
WSE:1226
BOT: VARIES
HIGH:1221
LOW:1220
VOL:104.9 AC FT

ADJUST BOTTOM OF PHASE I BASIN TO SLOPE TOWARDS NORTH END

TOE OF SLOPE

PHASE I BASIN CONTROL LINE (BOTTOM OF BASIN)

PHASE II BASIN CONTROL LINE (1225 CONTOUR)

270 LF @ S=0.4%

IE=20.25

STA 32+92.01, 830.9Rt
STA 34+15.44, 856.2Rt
STA 34+51.01, 903.1Rt
STA 34+28.71, 947.1Rt
STA 35+98.24, 1007.2Rt
STA 35+42.89, 866.0Rt
STA 35+82.92, 765.3Rt
STA 35+90.34, 790.0Rt
STA 35+87.30, 828.6Rt
STA 35+82.02, 890.8Rt
STA 35+25.49, 929.5Rt
STA 35+48.82, 971.9Rt
STA 35+75.63, 1038.3Rt

FL 22.39
FL 22.22
FL 22.16
FL 22.09

VARIES

6:1
4:1

113' EXST R/W

ADAMS AVENUE

CHANDLER AIRPORT COMMERCE PARK

CONSTRUCTION NOTES

(74) 30" STORM DRAIN PIPE PVC C-905 CLASS 200

(75) LAYBACK HEADWALL REFER TO DETAILS 1 AND 2 SHEET C7.04

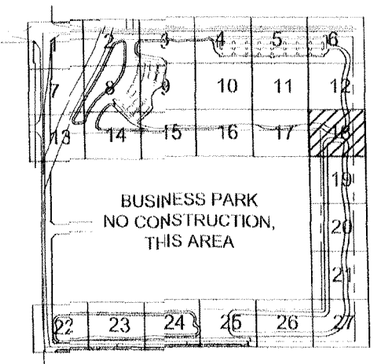
REFERENCE NOTES

(2) FENCE REFER TO PHASE I PLANS

(3) REFER TO PIPE PROFILE SHEET C7.03

LEGEND

CONCRETE SIDEWALK



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

C.O.C. LOG NO. ENR 08-0050

(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHKD BY: BJMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/16/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0801-201
FILE NAME:

SHEET NO.
C5.18
SHEET 71 OF 161

FILE:G:\2007\10-0753\CAD\C518-GRAD.dwg DATE:Dec 17 2008 TIME: 11:55 am

MATCH LINE – SHEET C5.18

× 1230.5 × 1230.6 × 1230.6 × 1230.6 × 1230.6 × 1230.9 × 1230.6 × 1230.8 × 1230.8 × 1230.9 × 1230.9 × 1230.8 × 1230.6 × 1230.9 × 1230.7 × 1230.9 × 1230.9 × 1230.8 × 1230.9 × 1230.9 × 1230.9 × 1231.1 × 1231.1 × 1231.1 × 1231.1 × 1231.1 × 1231.1 × 1231.1 × 1231.2 × 1231.1 × 1231.1 × 1231.2 × 1231.5 × 1231.6 × 1231.6 × 1231.6 × 1231.6 × 1231.4 × 1231.6 × 1231.6 × 1231.6

4:1 4:1 4:1 4:1 4:1 4:1 4:1 4:1

PHASE I BASIN CONTROL LINE (BOTTOM OF BASIN)

TOE OF SLOPE

TOE OF SLOPE

PHASE I BASIN CONTROL LINE (BOTTOM OF BASIN)

BASIN C
WSE:1226
BOT: VARIES
HIGH:1221
LOW:1220
VOL:104.9 AC FT

ADJUST BOTTOM OF PHASE I BASIN TO SLOPE TOWARDS NORTH END

ADAMS AVENUE

CHANDLER AIRPORT COMMERCE PARK

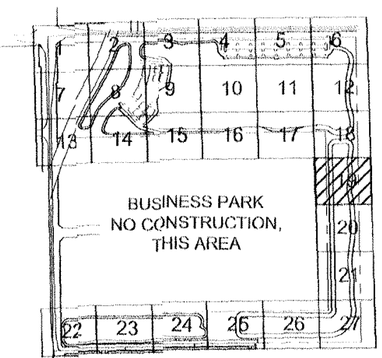
⟨2⟩ ⟨2⟩ ⟨2⟩

MATCH LINE – SHEET C5.20

⟨⟩ REFERENCE NOTES ⟨⟩

⟨2⟩ FENCE
REFER TO PHASE 1 PLANS

C.O.C. LOG NO. ENR 08-0050



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHK'D BY: JLMc
CROSS CHK'D BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-958-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

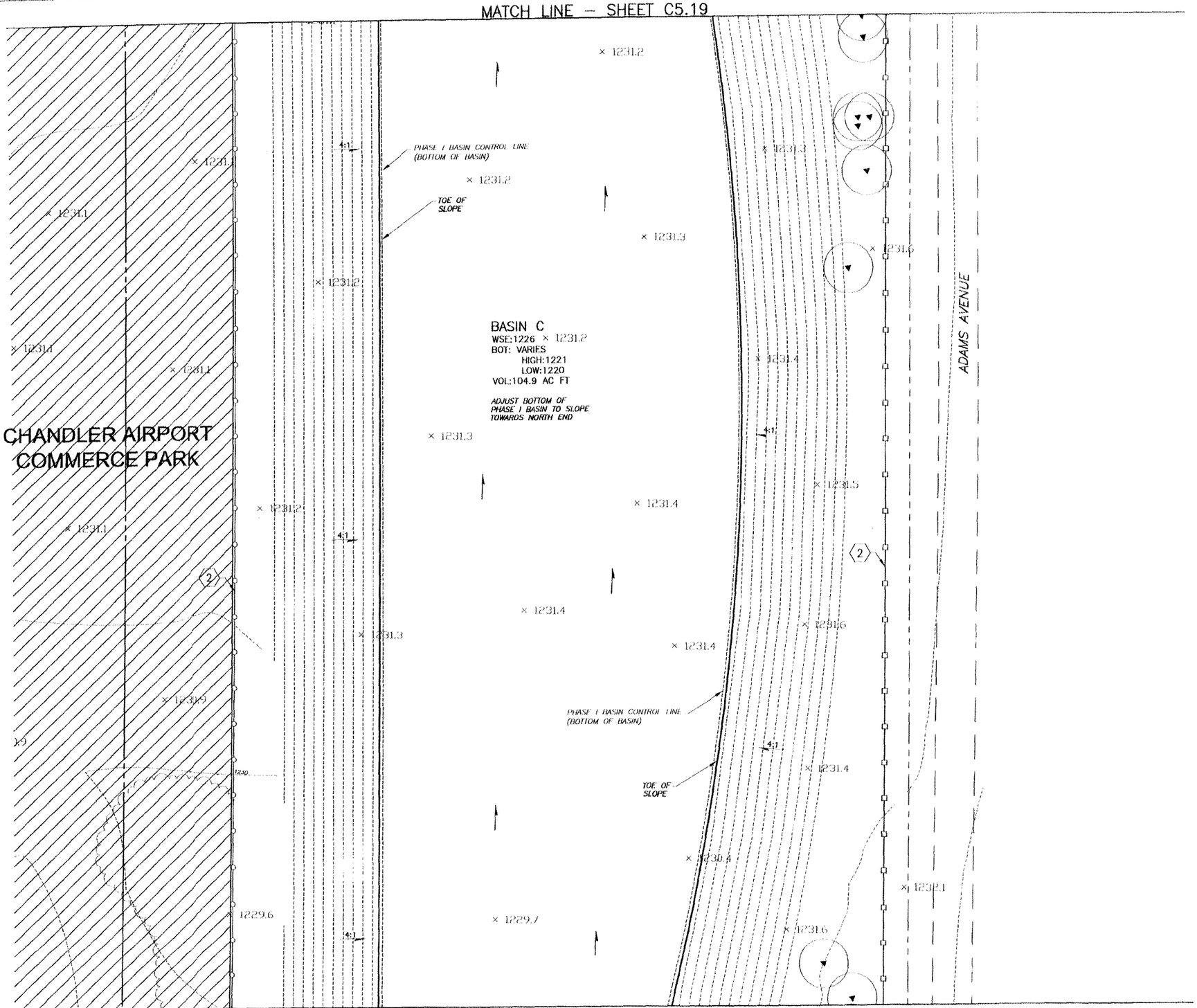
PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0801-201
FILE NAME:

SHEET NO.
C5.19
SHEET 22 OF 161

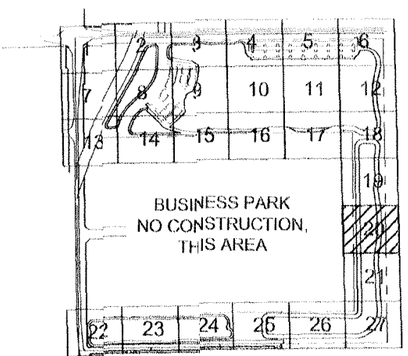
FILE:S:\2007\10-0753\CAD\C519-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:56 am

MATCH LINE – SHEET C5.19



⟨⟩ REFERENCE NOTES ⟨⟩

⟨2⟩ FENCE
REFER TO PHASE 1 PLANS



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

MATCH LINE – SHEET C5.21

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHK'D BY: JLMc
CROSS CHK'D BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

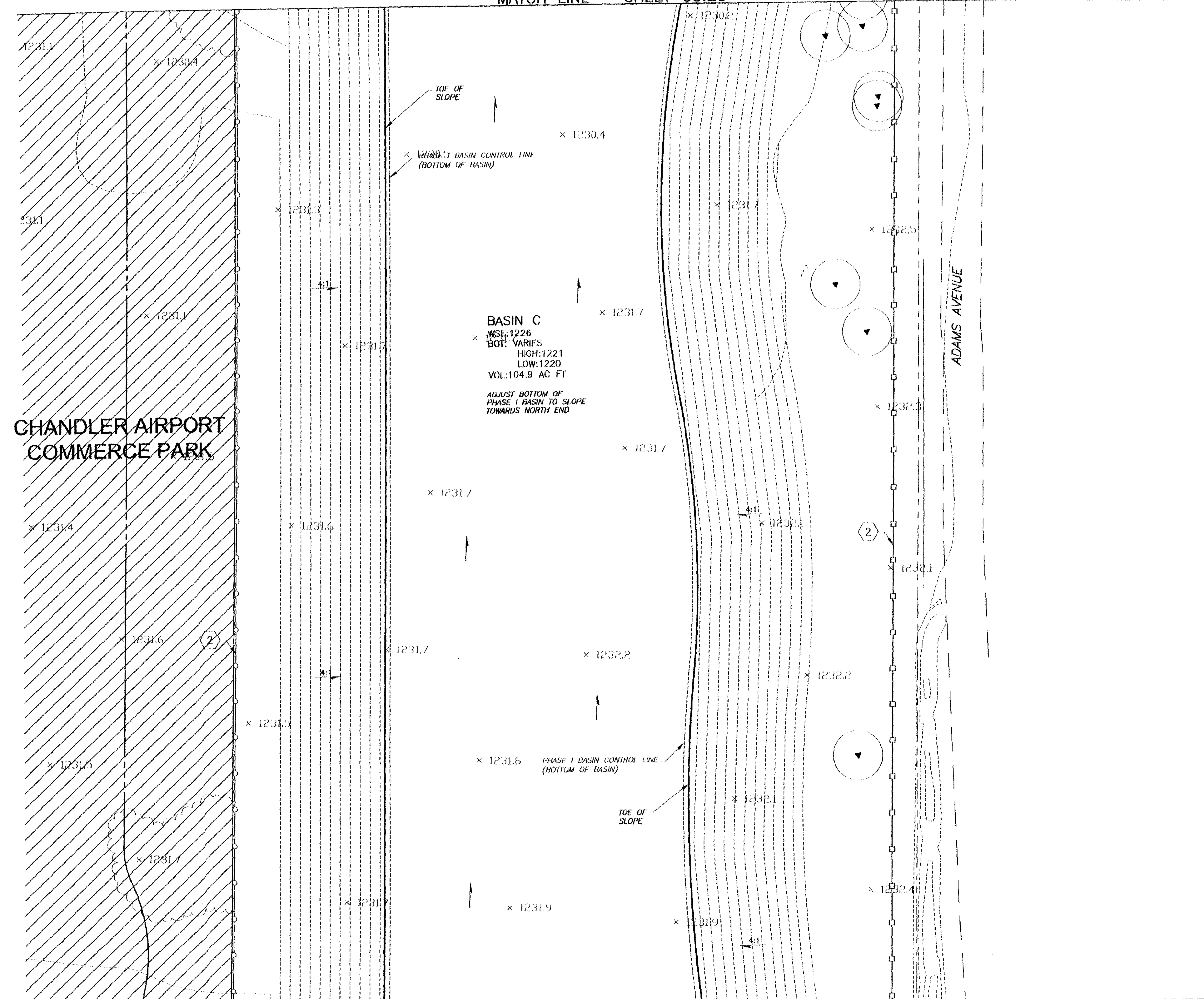
CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0691-201
FILE NAME:

SHEET NO.
C5.20
SHEET 73 OF 161

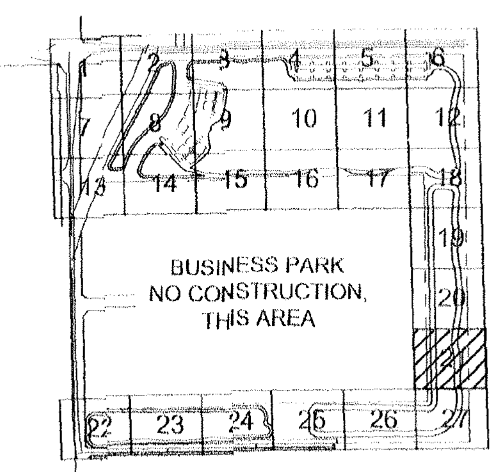
MATCH LINE – SHEET C5.20



MATCH LINE – SHEET C5.27

⟨ ⟩ REFERENCE NOTES ⟨ ⟩

⟨2⟩ FENCE
REFER TO PHASE 1 PLANS



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAE
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C5.21
SHEET 24 OF 167

CHANDLER AIRPORT
COMMERCE PARK

McQUEEN ROAD

APPLEBY ROAD

STA 11+20.67,
2392.4Rt

PHASE II BASIN CONTROL LINE
(1225 CONTOUR)

TOE OF
SLOPE

CENTER POINT
42' RADIUS
STA 11+20.08,
2438.4Rt

STA 10+86.27,
2469.5Rt

STORM DRAIN PIPE
& HEADWALL
BY OTHERS

MID POINT
82' RADIUS
STA 11+07.23,
2514.8Rt

BASIN D
WSE:1226
BOT:VARIES
HIGH:1224.3
LOW:1223.0
VOL:12.95 AC FT

NEW SIDEWALK

STA 10+97.96,
2563.9Rt

CENTER POINT
32' RADIUS
STA 11+26.11,
2579.2Rt

STA 11+67.21,
2595.6Rt

TOE OF
SLOPE

STA 11+39.40,
2608.3Rt

STA 11+92.96,
2611.4Rt

EXST EDGE
OF ASPHALT

EXST R/W

EXST R/W

FLOOD PLAIN
LIMITS

FLOOD PLAIN
LIMITS

MATCH LINE -- SHEET C5.23

LEGEND

FLOOD PLAIN AREA

CONCRETE SIDEWALK

BUSINESS PARK
NO CONSTRUCTION,
THIS AREA

KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(ARIZONA BLUE STAKE, INC.)

C.O.C. LOG NO. ENR 08-0350

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
GROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

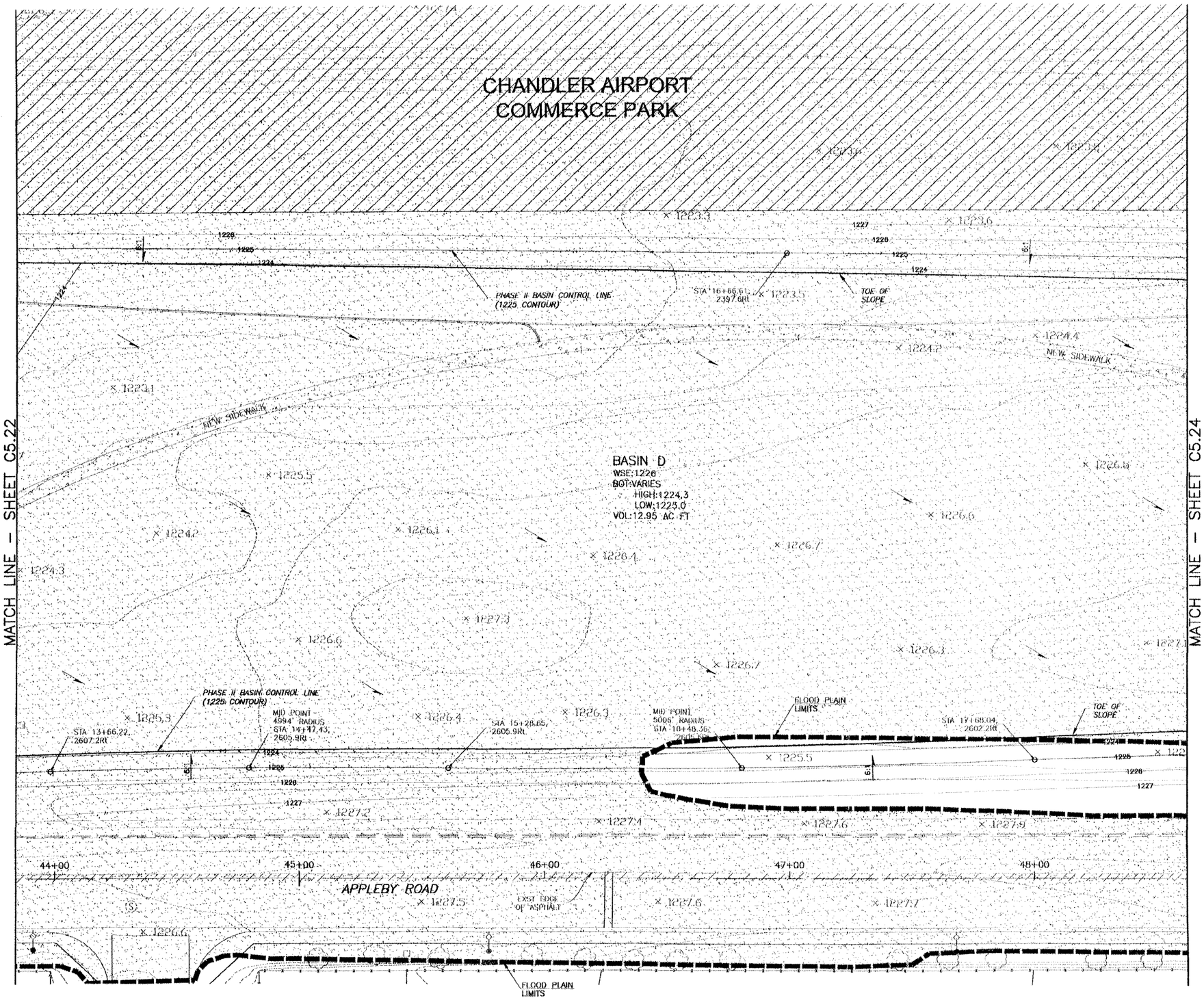
CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0801-201
FILE NAME:

SHEET NO.
C5.22
SHEET 75 OF 167

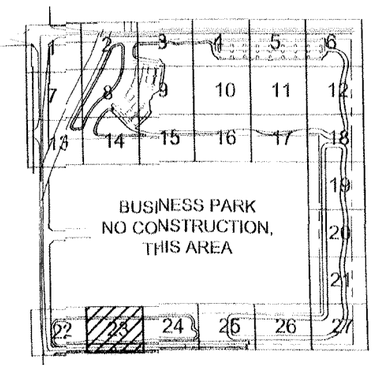
FILE:\\2007\15-0753\CAD\C522-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:57 am



LEGEND

FLOOD PLAIN AREA

CONCRETE SIDEWALK



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

C.C.C. LOG NO. ENR 08-0050

(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: RAF
SHEET CHKD BY: JLMc
GROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0801-201
FILE NAME:

SHEET NO.
C5.23
SHEET 76 OF 167

FILE:\2007\0-0785\CAD\0523-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:57 am

CHANDLER AIRPORT
COMMERCE PARK

MATCH LINE – SHEET C5.23

MATCH LINE – SHEET C5.25

PHASE II BASIN CONTROL LINE (1225 CONTOUR)

STA 22+10.69, 2402.9Rt

TOE OF SLOPE

CENTER POINT 61' RADIUS STA 22+10.10, 2463.9Rt

STA 22+69.57, 2477.4Rt

MID POINT 44' RADIUS STA 22+71.49, 2503.3Rt

STA 22+67.80, 2523.5Rt

CENTER POINT 41' RADIUS STA 22+64.42, 2557.3Rt

RIM=23.2 (44) INV=19.0

STA 22+62.20, 2598.3Rt

STA 22+74.17, 2580.0Rt

STA 22+10.95, 2590.0Rt

FLOOD PLAIN LIMITS

BASIN D
WSE:1226
BOT:VARIES
HIGH:1224.3
LOW:1223.0
VOL:12.95 AC FT

NEW SIDEWALK

MID POINT 4991' RADIUS STA 18+97.06, 2598.8Rt

STA 20+26.13, 2598.7Rt

STA 21+39.54, 2600.1Rt

VARIES

20:1

353 LF @ S=0.05% (41)

EXST EDGE OF ASPHALT

49+00 50+00 51+00 52+00 53+00

CONSTRUCTION NOTES

(41) 24" STORM DRAIN HDPE

(42) 12" STORM DRAIN HDPE

(43) STORM BUBBLER (CATCH BASIN) CITY OF CHANDLER DETAIL C-507

(44) DRYWELL CITY OF CHANDLER DETAIL C-501

REFERENCE NOTES

〈3〉 PIPE PROFILE REFER TO SHEET C7.02

LEGEND

FLOOD PLAIN AREA

CONCRETE SIDEWALK

SLOPE ARROW

BUSINESS PARK
NO CONSTRUCTION,
THIS AREA

KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG (602) 263-1100 1-800-STAKE-IT (OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

epg
4141 NORTH 32ND STREET
SUITE 102
PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO
C5.24
SHEET 77 OF 167

CHANDLER AIRPORT
COMMERCE PARK

FLOOD PLAIN LIMITS

MATCH LINE – SHEET C5.24

MATCH LINE – SHEET C5.26

APPLEBY ROAD

BASIN C
WSE:1226
BOT:VARIES
HIGH:1224.2
LOW:1220.0
VOL:50.29 AC FT

PHASE II BASIN CONTROL LINE (1225 CONTOUR)

PHASE I BASIN CONTROL LINE (BOTTOM OF BASIN)

ADJUST BOTTOM OF PHASE I BASIN TO SLOPE TOWARDS NORTH END

TOE OF SLOPE

CENTER POINT 44' RADIUS STA 26+12.18, 2448.7Rt

STA 26+13.31, 1224.4Rt

STA 25+68.24, 2446.5Rt

STA 26+02.38, 2570.6Rt

CENTER POINT 24.5' RADIUS STA 26+28.66, 2562.4Rt

STA 25+68.26, 2531.4Rt

STA 26+28.97, 2589.9Rt

43 RIM=21.2 INV=17.30

44 RIM=21.2 INV=17.20

12 LF @ S=0.05% (42)

ACCESS RAMP

NEW SIDEWALK

EXST EDGE OF ASPHALT

C 29.50 C 29.20 C 28.80

11+82.08 11+00

1.0% TYP

6:1 4:1 15:1 VARIES

54+00 55+00 56+00 57+00 57+64.35

10'-0"OC

CONSTRUCTION NOTES

(41) 24" STORM DRAIN HDPE

(42) 12" STORM DRAIN HDPE

(43) STORM BUBBLER (CATCH BASIN) CITY OF CHANDLER DETAIL C-507

(44) DRYWELL CITY OF CHANDLER DETAIL C-501

REFERENCE NOTES

〈2〉 FENCE REFER TO PHASE 1 PLANS

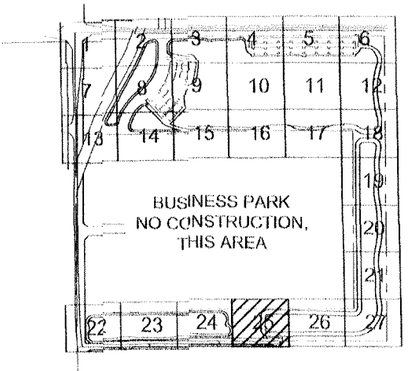
〈3〉 PIPE PROFILE REFER TO SHEET C7.02

LEGEND

FLOOD PLAIN AREA

CONCRETE SIDEWALK

C.O.C. LOG NO. ENR 08-0050



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG (602) 263-1100 1-800-STAKE-IT (OUTSIDE MARICOPA COUNTY)

REV NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

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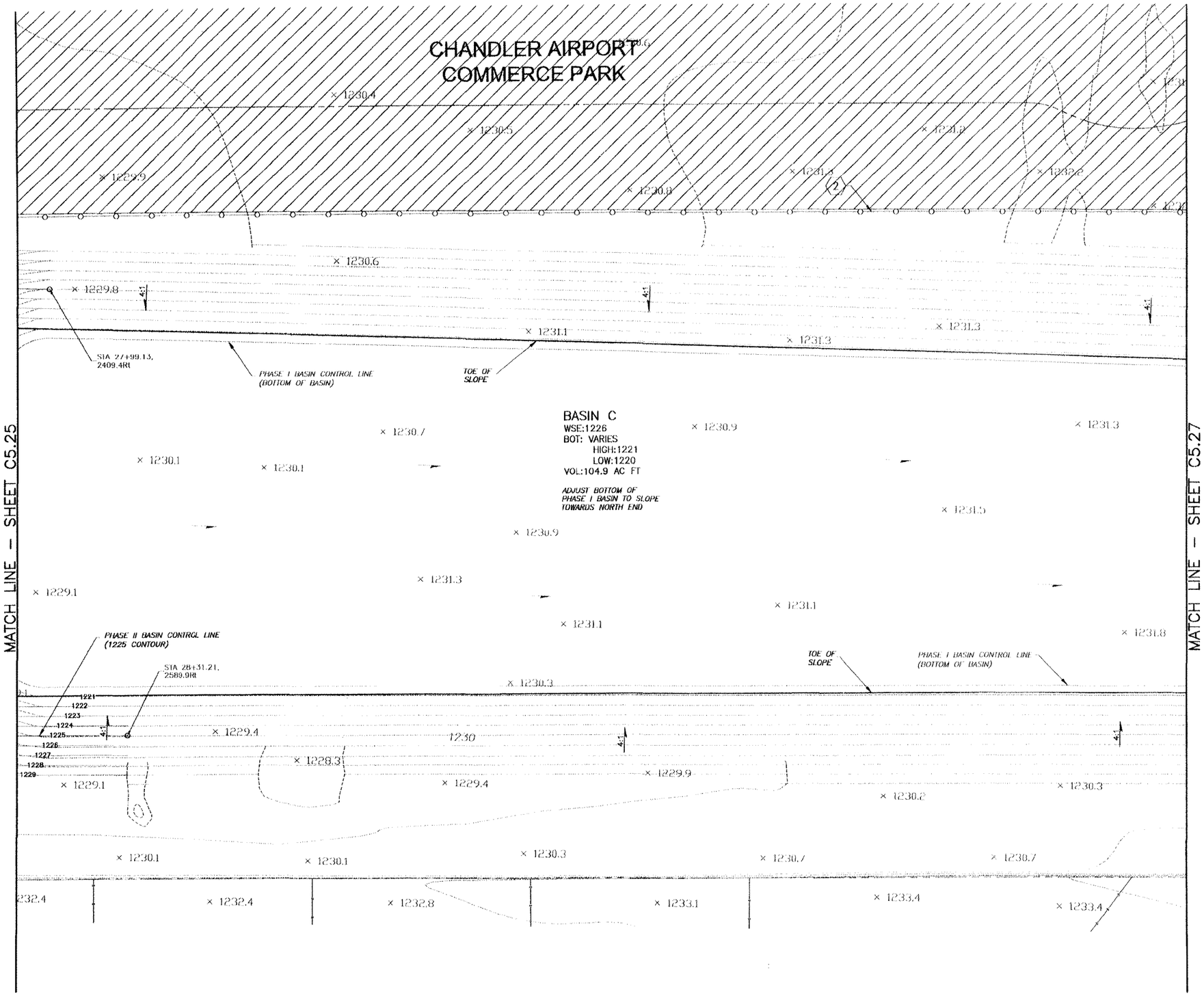
CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

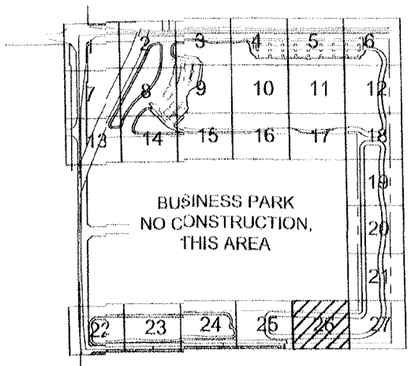
SHEET NO.
C5.25
SHEET 78 OF 167

FILE:G:\2007\07-2753\CAD\C525-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:58 am



⟨⟩ REFERENCE NOTES ⟨⟩

⟨2⟩ FENCE
REFER TO PHASE 1 PLANS



KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

FILE:G:\2007\10-0757\CAD\C526-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:59 am

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
STREET CHKD BY: JLMc
CROSS CHKD BY:
APPROVED BY:
DATE: 12/18/2008

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

epg
4141 NORTH 32ND STREET
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PHOENIX, ARIZONA 85018
PHONE: 602-956-4370
FAX: 602-956-4374
CONTACT: DAVE WILSON, RLA

CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C5.26
SHEET 79 OF 167

MATCH LINE – SHEET C5.21

MATCH LINE – SHEET C5.26

CHANDLER AIRPORT COMMERCE PARK

× 1232.6 × 1232.6 × 1232.6 × 1232.1 × 1232.2 × 1232.4 × 1232.5 × 1233.1 × 1233.4 × 1232.3 × 1232.6 × 1232.7 × 1232.1 × 1232.5 × 1232.4 × 1232.5 × 1232.5 × 1232.2 × 1233.3 × 1232.3 × 1230.6 × 1230.6 × 1231.4 × 1231.4 × 1231.8 × 1234.2 × 1234.2 × 1234.3 × 1231.6 × 1233.6 × 1232.2

4:1

TOE OF SLOPE

PHASE I BASIN CONTROL LINE (BOTTOM OF BASIN)

PHASE I BASIN CONTROL LINE (BOTTOM OF BASIN)

BASIN C
WSE:1226
BOT: VARIES
HIGH:1221
LOW:1220
VOL:104.9 AC FT

ADJUST BOTTOM OF PHASE I BASIN TO SLOPE TOWARDS NORTH END

2

4
1234.34

〈〉 REFERENCE NOTES 〈〉

〈2〉 FENCE
REFER TO PHASE 1 PLANS

BUSINESS PARK
NO CONSTRUCTION,
THIS AREA

KEY PLAN
NO SCALE

NORTH

Scale: 1" = 20' - 0"

North

(602) 263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

C.O.C. LOG NO. ENR 08-0050

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: ABN
DRAWN BY: PAF
SHEET CHKD BY: JLMc
GRDSS CHKD BY:
APPROVED BY:
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CITY OF CHANDLER, ARIZONA
NOZOMI PARK
AND QUEEN CREEK BASIN

PHASE II GRADING
GRADING SHEET

PROJECT NO. ST0601-201
FILE NAME:

SHEET NO.
C5.27
SHEET 60 OF 161

FILE:G:\2007\10-0757\CAD\C527-GRAD.dwg DATE:Dec. 17 2008 TIME: 11:59 am

APPENDIX B: GENERAL DOCUMENTATION AND CORRESPONDENCE

Appendix B: Table of Contents

B.1 Special Problem Reports

There are no additional special problems to report for this study.

B.2 Contact (telephone) Report

Chandler contacts.

R.J. Thomas	C.O.C. Civil Plan Review	480-782-3117
Ying Xu	PEZ	602-906-1901
Sam Sherrill	C.O.C.	480-782 3124
Alan Zimmerman	C.O.C.	480-782-3301
Peter Jansen	C.O.C. Plan Review	480-782-3128
Greg Jones	DEA	602-678-5151
David Jeffers	Civil Plan Review	480 782 3149
Charles Huggins	Civil Plans Review	480-782-3154
Mike Heaton	Project Engineering Consultants	602-906-1501
Kathryn Gross	FCDMC	602 506-4837
Geoff Brownell	DEA	602-678-5151
Teri George	DEA	602-678-5151
Julie Cox	FCDMC	602 506 8401

B.3 Meeting Minutes or Reports

Meeting Minutes for Kick-off Meeting

Chandler-Gilbert FDS – Phase 2 – Consolidated Canal Watershed Kickoff Meeting
DATE: 1/11/2008, from 10.30 am to 12.30 pm
Location: David Evans and Associates, Inc.
Attendees:

Kathryn Gross, FCD	Frank Brown, DEA	Mike Heaton, PEC
Julie Cox, FCD	R. Todd Livermore, DEA	Ying Xu, PEC
	Chuck Horvath, DEA	
	Tom Lute, DEA	
	Roger Baele (brief appearance), DEA	

Notes:

a) Refer to separate DEA and FCD Agendas, as additional items are contained therein.
b) FEMA Submittal Package for Phase 2 ready by late March – early April 2008.
c) FEMA Submittal Package for Phase 3 ready by 6/30/2008.
d) Complete Phase 2 before starting on Phase 3.
e) Obtain hydrology approval prior to workmaps revisions. If overtopping canal, combine flows with subbasin then perform retention diversion.
f) Monthly coordination meetings to be held at DEA on 1st Tuesday of each month at 2 pm. PEC may attend by speaker telephone.
g) Meeting minutes to be extremely brief with bullet points for action items.
h) Quarterly billing projections are still important for these two phases of work.
i) First public meeting about mid to end of March 2008, lead time needed for public meetings.
j) Second public meeting about end of May to beginning of June 2008.
k) Per revision to Scope of Work, no PDF of TDN will be submitted by DEA.

Action Items:

DEA:
1. Notice to Proceed – Effective Date 1/14/2008.
2. Send to PEC the DEA schedule for billing.
3. Tom L. to include Nozomi Park benchmark as part of the County/City Datum Check, if his proposal is accepted by the City. This affects new subdivisions built per City of Chandler benchmarks, and perhaps Nozomi Park is affected.
4. Frank B. to contact Dibble regarding Nozomi Park benchmarks.
5. Start work on HIS submittal for Phase 1.
6. Prepare an exhibit with retention basins and report table with volume per subbasin.
7. Will submit HEC-1 data on CD and paper copies for maps and exhibits.
8. Will provide full size work maps to FCDMC for review.
9. Locate Mammoth Park subdivision drawings, or request the drawings.

PEC:
1. Start working on HIS submittal, otherwise waiting for DEA computation of retention volumes.

FCDMC:
1. Decide on date of Public Meeting and send out announcements.
2. Email GIS shape files for Retention Basins to DEA. And Email GIS shape files for Irrigated Lots to DEA.
3. Email correct PB and PC Cards to DEA, or verify previous PB/PC records are valid.
4. Data collection of reports to be provided by FCDMC.

February 2, 2006

1/4

Chandler/Gilbert FDS
Phase 2 and Phase 3 Comment Discussion with City of Chandler
January 13, 2006 Draft Meeting Minutes

Attendees

Draft

Jack Mikelson, P.E.: City of Chandler
Elizabeth Huning, P.E.: City of Chandler
Donald Kirby, P.E.: City of Chandler
Bill Orth: City of Chandler
David Jeffers, P.E.: City of Chandler
Warren White, P.E: City of Chandler
Teri George, P.E: David Evans and Associates
Nathan Beutler: David Evans and Associates
Julie Cox: Flood Control District
Kathryn Gross: Flood Control District

The following is a summary of the items discussed at the January 13, 2006 meeting. The meeting format followed the comments outlined in Chandler's December 22, 2005 review letter.

Summary of Meeting Notes

1. The first item covered involved the datum used in the study and tie-ins to Chandler benchmarks. Mr. Mikelson asked why the study was performed on the NAVD 1988 datum instead of the NGVD 1929 datum as was done in the original study. Ms. Gross stated that all new studies performed by the District are using the NAVD 1988 datum and that it is in response to a future change by FEMA to start using NAVD 1988 on the FIRM panels. Regarding specifically tying into Chandler benchmarks, Ms. Gross stated that there was no scope task to tie specifically to any Chandler control points and asked if any brass caps that were used in the study would also match a Chandler control point. Chandler indicated that no traditional brass caps were used in the City of Chandler's control study performed by Greiner; therefore there should be no common points within the study. Mr. Mikelson was unsure if the City's control was based off the NGVD 1929 datum or something else. Mr. Jeffers stated concern that there was no common points between the two studies

and that this may cause problems in the future for developments in the floodplain who will now have two datums to contend with. Chandler will need to tie-in the benchmarks from the new study to their benchmarks. Ms. Gross stated that CLOMR/LOMRs would have to use the same datum as the study or at least provide a conversion factor. Mr. Mikelson asked if the City of Chandler should consider switching its datum. Ms. Gross replied that that is solely a City of Chandler decision. Ms. Gross informed Chandler that as stated in the City's comments that the conversion factor on Sheet 4 of 7 of Phase 2 was indeed incorrect and will be corrected. Although not discussed in the meeting, one of City's comments regarded the cover sheet and the incorrect datum listed. This too will be corrected in future submittals.

2. The next topic was regarding the study cutoff dates. Mr. Mikelson asked if the two dates mentioned in the modeling and the work maps could be clarified. Ms. George explained that the topography was flown in April 2003 and that is what is reflected on the work maps. She then further explained that the hydrology was based on the landuse condition identified in the December 2002 aerials and any developments that may have been at final plat stage but not breaking ground as of April 2003. She emphasized that the Town of Gilbert and the City of Chandler were relied upon to inform the District/Consultant of those in-process subdivisions. Ms. George indicated that if they get drainage reports that they could potentially go in and modify the hydrology to account for some additional subdivisions beyond the April 2003 cut off date. Ms. Gross then stated that updating the hydrology would only be possible if there was some remaining money in the hydrology task or else change orders would be required to do the work. It was decided that Chandler should provide as many drainage reports they could find and then the District and the Consultant would determine the level of effort it would take to potentially update the hydrology.

3. Discussion of the drainage report collection led into the next topic: Retention Accounting. The discussion applied to both Phases 2 and 3. Chandler was concerned that based on checks of a couple of subdivision drainage reports and comparing the retention volume stated in those reports with the retention volumes used for the sub basins containing those subdivisions there appeared to be some discrepancies. Ms. Gross stated that was most likely due to the retention method applied to the study area. The scope called for three retention basins to be identified and surveyed using rough methods for every square mile of the study area. Ms. George stated that they actually ended up accounting for an average of 8 retention basins per square mile. The differences noted were a product of the approximate method applied in the study versus the specific numbers extracted from the drainage reports. Ms. George said that she had received some drainage reports from Chandler and where she had that information, that information was applied to the retention volume diversion. Ms. Gross stated that if Chandler provides the drainage reports in the watershed, the retention information could be updated. The District/Consultant is to get a digital copy of the sub basin delineations to Mr. White. He in turn will create a shape file of the subdivisions in the study area that were approved after December 2002 but prior

to April 2003 to use in conjunction with the drainage reports. The shape files will contain the retention basin locations as well as development name.

4. Binder maps. Mr. Jeffers expressed concern over what was shown in the ponding worksheets provided in the notebooks and that there appeared to be discrepancies between those sheets and the floodplain delineation work maps. Ms. Gross explained that the worksheets provided in the binder show the maximum extent of the ponding relationship analyzed, not the final floodplain limits. These sheets were provided as additional supporting documentation to identify what portion of the area behind the canal/railroad was analyzed in the ponding relationship. This along with the detailed weir information should help when modifications are made in the future. At this point, the District handed over a copy of the Phase 3 delineation maps since Chandler had noted that their set was missing from the review copy of the report.

5. Arizona Ave. After receiving the maps they were opened to see the extent of flooding along Arizona Avenue. The District explained that the reason no floodplain presently exists along Arizona Avenue was because the Franzoy-Corey study was replacing the Zone A delineations along the canals and railroads in the area. When scoping this study it was noted that portions of Arizona Avenue were higher than the adjacent grade. The Franzoy-Corey work maps identify significant flows and volumes over the railroad in certain locations. These would create a ponding area behind Arizona Avenue. Therefore, it was determined that the effects should be studied as part of this new study. This was in the scope since the beginning. Chandler mentioned that a new subdivision, one specifically at the northeast corner of Arizona Ave and Chandler Heights, is in the platting process at this time and appears to be affected by these new delineations. The District mentioned that determining whether these delineations should go to FEMA could still be discussed but it was in the best interest to regulate the ponding areas since there is ponding potential. Chandler is going to inform the new subdivision of these latest developments. Chandler will let the District know if there are any other developments that may be impacted by these new delineations. The District will be more than happy to attend any meetings to discuss the implications of these new delineations if Chandler wishes to have any more.

6. Discussions were held explaining how the District and their Consultant researched if there were any new developments that were in the LOMR process so that their ground information was used so as to not re-map them back into the floodplain with the new study. Examples of Mammoth Park in the City and San Tan Vista in the County were cited. Chandler mentioned Quail Springs along Eastern Canal at Ocotillo. The District did not recognize the name but said they would go back and make sure it was accounted for in the study.

7. Chandler asked about revisions to ADOT's basin K and the modifications that were necessary for the LOMR for Hamilton Park. District staff, at the meeting, said they were not familiar with that LOMR and would have to go back and look into that data and see if that portion of the floodplain would need to be revised as well. It was discussed that the study did not directly model any portion of the ADOT drainage system but would divert flows out of the model where those flows would intercept

the ADOT drainage system. No floodplains were delineated within the ADOT channel and basin system.

8. Mr. Jeffers commented on how it appeared that the outflows from Phase 2 did not appear to match the inflows to Phase 3. The District and Consultant said they would look into that and correct it. Mr. Jeffers also expressed concern about the magnitude of some of the discharges over the canal. The District stated that some of the discharges were still high. Chandler then asked how they should handle them in terms of their drainage requirements. The District stated that it should be kept in mind that the discharge value represents the flow condition over the canal and that the discharge value essentially changes once it is re-calculated and routed on the other side of the canal. Developments downstream of the canal overtopping locations should take the flows into consideration.

9. Chandler expressed concern that the floodplains are not decreasing as much as they had hoped. The District stated that it did not anticipate that the floodplain would increase or decrease. The study merely was to provide an update to the area. Based on the volumes in both studies, the volumes do decrease but that has just limited the effect on flow over the canals. Water surface elevations can only decrease if significant changes to the volumes occur. Sub-basins where no retention is provided will still see a significant floodplain. Another objective of the study was to update it from the approximately 30 separate hydrologic models into a more manageable and reasonably easier to use collection of models.

10. The District has not formally adopted NOAA 14 at this time and the Consultant was scoped to use NOAA 2. The District mentioned that even the current contracts today are still scoped to use NOAA 2.

11. As the meeting ended it was verified that the Consultant would provide the digital sub basin delineation to Chandler and that Chandler would provide a digital map and list of the subdivisions that fit the timeline criteria as well a pertinent drainage reports. The District encouraged Chandler to continue to provide comments if they had any additional questions and that additional meetings could be set up to discuss any remaining issues.

KICKOFF MEETING AGENDA

Phase 2 Chandler - Gilbert FDS

January 11, 2008

FCDMC
DEA
PEC

* Introduction of attendees.

1. COORDINATION

A. Schedule

1. The notice-to-proceed (NTP) date will be January _____2008.
2. The FEMA submittal package for Phase 1 must be ready and for phase 3 by 06-30-08
3. Phase 2 will be completed before Phase 3 started.

B. Meetings

1. Coordination meetings will be held monthly, verify day and time.
2. Discuss preparation of meeting minutes.

C. Billing Projections

Billing projection will be updated 10 days before the end of each quarter.

D. Monthly Progress Reports

1. To be submitted with each invoice.

E. Monthly Invoices

1. As in Phase 1, submit two copies separately addressed.

F. Insurance Certificates

1. Insurance certificates will be maintained and mailed to District.

F. PUBLIC INFORMATION

1. First public meeting about _____2008, second meeting about_____2008.

2. DATA COLLECTION

Data collection provided by FCDMC.

3. MAPPING

Previously completed.

4. SURVEY

Not anticipated, may be needed, to be determined after DEA completes separate benchmark check for City.

5. HYDROLOGY

Land use revisions. Obtain FCD approval before revising floodplain maps.

6. FLOODPLAIN DELINEATION
Follows HEC-1 models

7. DIGITAL DATA (HIS)

Themes per the scope to be submitted for each Phase after FCDMC approval. Discuss submittal date for Phase 1.

8. DELIVERABLES -- see scope

9. OTHER

Meeting Notes

1/4

Project:	Chandler/Gilbert Floodplain Delineation Study
Project No:	DEA #MARI0000-0040
Date:	March 6, 2003
Notes By:	Greg Jones
Location:	Flood Control District of Maricopa County 2801 West Durango St
Attendees:	Kathryn Gross (KG), FCDMC Tim Murphy (TM), FCDMC Julie Cox (JC), FCDMC John Stock (JS), FCDMC Amir Motamedi (AM), FCDMC Mike Duncan (MDu), FCDMC Marta Dent (MD), FCDMC Sally Stewart (SS), FCDMC Mark Wiener (MW), Gilbert Sam Sherill (SSh), Chandler Peter Jensen (PJ), Chandler Allan Zimmerman (AZ), Chandler Steve Miller (SM), PEC Mike Heaton (MH), PEC Teri George (TG), DEA Tom Lute (TL), DEA Geoff Brownell (GB), DEA Greg Jones (GJ), DEA
Distribution:	Attendees

Items Discussed:

The kick-off meeting was held to discuss scope for the Chandler/Gilbert Floodplain Delineation Study. The minutes have been formatted to follow the meeting agenda provided by KG. Minutes have been taken where discussion supplemented meeting agenda. The following points were discussed and conclusions were made:

1. Introductions

2. Personnel Assignments
   - See agenda.

3. Project Overview
   - KG reiterated the need to maintain conveyance corridors if flows warrant.
   - Re: new floodplain along the diagonal RR and AZ Ave., FCD will get cities/towns input once data is evaluated.
   - Change order would be required if SanTan freeway schedule is delayed.
     - TG indicated FEMA has mechanism to consider SanTan freeway in place if required percent is met or funding is in place.

4. City Concerns
   - City of Chandler
     - AZ Ave problem new to Gilbert reps.
     - KG indicated she knows Chandler wants updated study.
     - KG indicated city is concerned with weiring over roads and canals.

- City getting many questions regarding flow splits at intersections as development increases.
- Need detailed surveys at intersections at mile streets and some ½ mile streets.
- City needs to inform developers about overflow from canal.

- Town of Gilbert
  - Lonnie Frost will be contact for Gilbert.
  - DEA to set up meeting with MW and LF re: Higley ADMP
  - KG asked about Queen Creek wash/basin.
    - MW confirms will go forward.
    - County in process of condemnation of property to establish open space.
    - KG confirms this will not hold up study.
    - Construction will come in phases.
    - Consultants used FIS hydrology.
  - Most of diagonal RR in Gilbert.
    - New zone AE will be added to FIRM.
    - Flow numbers will vary greatly.
  - MW on vacation 3/17-3/24
- DEA to set up meetings with cities to coincide with field visits.
  - DEA planning to meet with Chandler 2 to 4 weeks from now.
- Mesa involvement in project minimal because area of study within City contains County buildings. There are some small areas outside County Complex.

5. Coordination Issues
   - Schedule must be adhered to if possible. Schedule should be updated if necessary.
   - Meeting agenda will be sent to Chandler and Gilbert.
   - DEA will coordinate with PEC, usually on a weekly basis.
     - Possible for KG to attend DEA/PEC coordination meeting.
   - DEA will coordinate with FCD monthly or as needed.
   - KG would like to see sub-basins breakdown in first meeting.
   - Milestone meetings can take place at DEA office.
   - Meetings will move to FCD if FCD personnel other than KG and JC required to attend.
   - Draft of meeting minutes will be provided to attendees within a week of the meeting.
   - DEA invoice style will be different than on past projects.
     - DEA will provide KG a copy of invoice before first billing.
   - Mapping charges may be a possible issue with billing.
     - For billing purposes DEA, will make interim submittals for GIS.
   - KG clarifies billing will be monthly.
     - DEA can set up escrow account or retention account.
     - DEA to contact FCD accounting.
   - PEC invoice will be included with DEA invoice.
     - KG concerned about prime/sub using allocated funds.
     - DEA will use MBE form to separate PEC time on invoice.
   - Public meetings will be held in north and south part of Phase 1 and Phase 2 and one meeting in Phase 3 area.
   - TG indicates meetings will be held before FEMA submittals.
   - MW indicates we can use regional library in north of phase 1 and council chambers or school in south part of phase 1.
   - Evaluations will be given at end of project.

6. Data Collection Issues
   - Previous studies include Chandler-Gilbert FIS, ADMS, and Higley ADMP.
   - Re: GIS. entire study area will be flown, while strip mapping will be prepared.
   - County 2003 aerial map will be available April/May.
   - See FCD for Chandler and Mesa LOMR's.
   - DEA will contact MW at Gilbert re: LOMR.
   - DEA will search for information relevant to study from drainage reports obtained through FCD.
   - DEA will submit list of sources researched in the form of a list, not a formal report, for the data collection task.

7. Topo and Survey Issues
   - DEA will use GDACS as mentioned in scope.
   - ~~GDACS points closer than the 1-mile minimum interval.~~
   - Weirs should be based on highest points
   - TM indicated shots should be taken at top of rail.
   - DEA will shoot road crown whether at centerline or not.
   - MW indicates crown at centerline on most major streets.
   - KG emphasizes to stay within scope.
   - Blind panels will be set this week, flight scheduled for 3-13-03.
   - 1988 NAVD datum will be used for vertical.
   - Chandler could be on a hybrid datum, JS thinks there will be enough ties between Chandler and 1988 datum.
   - KG expressed concerns about future projects in Chandler tying into 1988 datum.

8. Public Information Issues.
   - SS would like input for improvements to current brochure with b/w text on color tri-fold.
   - There are space issues with the brochure template's text.
   - Most attendees expressed brochure had too much text.
   - Can make map bigger.
   - Brochures will be sent to those within strip mapping areas.
   - Cities will defer to FCD regarding brochure content.
   - Timeline in brochure will reflect timeline dates in contract.
   - Text will be reviewed carefully.
   - FCD web-site will contain section pertaining to Study.
   - Info on web-site will go through KG.
   - SS has concerns about keeping public informed of study's progress, stresses need to keep public informed regardless of actual progress.
   - TG stressed the need to show completion date on web-site as the end-of-project date, no phasing dates, and that no revised floodplain boundaries are provided until study complete.
   - There are current studies on FCD web-site.
   - KG would like to see legal ad by 1st week April and brochures distributed later in April.

9. GIS Issues
   - FCD will check DTM from mapping.
   - FCD will check cross sections or sub-out, in addition to DEA checking cross sections..
     - FCD personnel checking should be outside project.
     - Cross sections will not be shared with mapping sub.
   - JS would like to blind panel entire area.
   - JS doesn't want blind panels and aerials to be a bottleneck.
   - DEA will provide numbers, which FCD will check.
   - Cross sections for floodplain can be same as those for mapping.
   - Scope calls for GIS submittal to be in CADD format.
     - DEA will coordinate with PEC to determine format to be used in study.
     - MD recommended using CADD if consultants are more familiar with CADD than GIS.
     - MD discouraged GIS format because FCD GIS specifications are very strict.
     - MD indicated that DEA and PEC can attend FCD CADD seminar, contact Mark Brewer.
   - It was agreed that digital data can be submitted in phases.
   - Hydrology and hydraulics can be submitted separately.
   - MD would like to see data submitted before end of project once there will be no more updates.
     - KG indicated it will speed up process to submit digital data early.

10. Hydrology Issues
    - Storm with greater volume will be used.
      - 24hr storm will most likely produce more volume.
    - FCD will finalize/approve sub-basin delineation.
    - Basins will be divided among 3 phases.
    - Work in each phase will be divided between DEA and PEC.

- KG confirmed that DDMSW will be used.
- KG confirmed that one model for each phase will be used.
- KG would like to use default parameters. If parameters other than default are used, DEA will need to justify/document
- Behavior of ag fields has not been addressed until recently, therefore, assumptions will have to be made.
- Assumptions will have to be justified and documented.
- Tempe study will be complete by 3rd phase of this study.
- Canal modeling will be revisited when overflow numbers are available.
- DEA will be producing text and report.
  - PEC will contribute to report sections relevant to area modeled by PEC.
- It is recommended results be checked against other studies rather than checking against curves.

11. Floodplain Delineation Issues
    - There is a good example of HEC-1 stage/storage discharge relationship in Eastern Canal Study.
    - RAS model can be run before standard checks.
    - Model can be run before cross section approval, but realize cross sections may change.
    - N value report will be more like a memo.
    - Determination of n's will be iterative with field visits documented with photos.
    - There are possible problems with FEMA's Check-RAS because it is oriented toward floodplain/floodway delineation.
      - Check-RAS pushed by FEMA.

12. Deliverables
    - Cities will receive copies of TDN's.
    - Chandler will review at end of study, depending on time.
    - Gilbert will have more time to review and comment.

13. Contract Schedule
    - See agenda.

14. Other Items
    - Correction made regarding reports and drawings
      - All **final** reports and drawings must be sealed.
      - Preliminaries do not require a seal.
    - When plotted, all workmaps must have updated date. At time of submittal to FEMA, workmaps should have the same date.

Please notify me through email with any corrections by 3/14/03.

FCD 2002C023
Chandler/Gilbert Floodplain Delineation Study
Kickoff Meeting

March 6, 2003

Agenda

1. Introductions
2. Personnel Assignments
3. Project Overview
4. City Concerns
5. Coordination Issues
6. Data Collection Issues
7. Mapping and Surveying Issues
8. Public Information Issues
9. GIS Issues
10. Hydrology Issues
11. Floodplain Delineation Issues
12. Contract Schedule
13. Other Items
14. Wrap Up

FCD 2002C023
Chandler/Gilbert Flood Delineation Study
Kickoff Meeting

2/6

March 6, 2003

Agenda

1. ✓ **Introductions**

2. ✓ **Personnel Assignments**

Queen Cr West of Higley (out of area)

Kathryn Gross -	Project Manager
Julie Cox -	Hydrology
TBD by Marta Dent -	GIS
Julie Cox and Kathryn Gross –	Hydraulics/Floodplain Analysis
Sally Stewart –	PIO
John Stock –	Mapping and Surveying

3. ✓ **Project Overview**

- Complete Revision of the existing Gilbert-Chandler FIS (1990, 1992 LOMRs)
- New Hydrology and new Floodplains based on new strip mapping along the railroads and canals
- Freeway will be included in the hydrologic modeling
- Hydrology and floodplains will be developed from east to west
- May delineate completely new floodplains along the SW SPRR- make sure conveyance is being maintained along the railroad
- May delineate completely new floodplains along [AZ Ave] – make sure that ponding locations that may presently exist are identified → Ocotillo South
- Resulting FEMA zones: AH ponds and AE conveyance corridors
- What if the freeway is not built or delayed? → Change Order

4. ✓ **City Concerns**

- City of Chandler Concerns
- Town of Gilbert Concerns
- City of Mesa Concerns (not present)

5. ✓ **Coordination Issues**

Project Schedule

- The Notice to Proceed: March 3, 2003
- FEMA submittal package ready: 550 days
- District review: 120 days within 550 days
- 365 days have been allotted for obtaining FEMA approval.
- The Consultant needs to update the Project Schedule as called for in Task 1.1. **Completion dates must be realistic, and must be met.**

- **THERE WILL BE NO TIME EXTENSIONS. EVERY TASK MUST BE COMPLETED ON TIME.**

Coordination Meetings

- Coordination Meetings: approximately every 4 weeks (can be held by phone)
- Milestone meetings for completion of certain tasks (handled in person)
- DEA responsible for handling the meeting minutes at every meeting and submitting the minutes for approval within one week of the meeting.

Estimated Quarterly Billings

- For budgeting purposes we need an estimate of the total dollar amount that will be invoiced for each quarter (Task 1.3).
- This will probably have to be revised as the project goes along.

Billing and Progress Reports

- Progress reports: submitted 5 days before submittal of monthly invoice
- Progress reports: should show what was completed, what will be worked on the next month, and any problems that have arisen. Sample progress reports can be provided. DEA's previous progress reports are fine.
- Invoices: Will need to show amount of work completed for each task during the month, and the total amount completed so far. DEA are you submitting a different invoice layout for this contract versus what we have seen in the past?
- We can only pay for items that have been completed. We have been way too nice in the past regarding invoices and the amount of work completed. All invoices are now being looked at very closely. If the work isn't 100% done, please don't be billing for 100%. The same can also be said about any other percentage level too.
- MBE/WBE stuff

Legal Ad

- District is responsible for placing the legal ads.

Right of Entry Letter

- District is responsible for notifying the property owners about the survey.
- DEA will request which locations they will need survey letters.

Coordination Meetings With Others

- DEA and PEC are expected to meet with City and Town representatives as well as coordinate information with ADOT
- Field Visits: propose separate field visits between the two cities, the consultants and the District within the next few weeks to discuss city concerns

Public Meetings

- 5 public meetings are called for in the scope. No details have been worked out on the meetings yet.

4/6

- Performance Evaluations
  - Evaluation forms will be provided.

6. ✓ **Data Collection Issues**

- Previous Study Information Higley ADMP
- District GIS information
- Information from the Cities
  - Contact person
  - LOMRs Lynn Thomas
  - Proposed development information
- "Data Collection Report" set-up: Does DEA have any ideas? Otherwise either tabular or bibliography fashion

7. ✓ **Topographic Mapping and Surveying Issues**

- All mapping and survey is supposed to be on 1988 NAVD and 1983 NAD.
- The final mapping scale will be 1"=200 feet, and a contour interval of 2 feet.
- All mapping and survey must be the accuracy requirements called for.
- Permanent survey points need to be established, and will occur at least once per mile.
- Survey along canals, railroads, and roadways: document exact location along highest point.
- DTM comments.
- Time line

8. ✓ **Public Information Issues**

- Initial Project Mailing – Brochure. Done by District
- Website information - What will consultant/District PM need to provide
- Interim information – what PIO will be looking from consultant/District PM
- Final Public Meetings – (5) study results
- After FEMA information

9. ✓ **GIS Issues**

- What format does Consultant want to submit digital data in?
- Training classes, other guidance information GIS branch can provide.
- Topographic mapping and associated information is to be submitted as soon as possible and most definitely before the study is submitted to FEMA.
- District looking into a revised timeline approach regarding submitting the information (submitting GIS data at same stage as hydrology and hydraulic submittals).
- Expected that the Digital deliverables are one and the same as the working versions being submitted for hydrologic and hydraulic review. Make sure all appropriate tolerances etc are turned on in CADD/GIS to avoid open line work etc. Keep all data on appropriate layers from the beginning.
- Please work with our GIS people. To many studies in the past have spent too much time going back and forth because the consultant wasn't working with our GIS people. Priority must be given to getting the GIS completed and approved. In the past we have some foot dragging by the consultants on getting this task completed.

10. Hydrology Issues

- HEC-1 will be used along with the Districts methodology (computer programs).
- The 100-year 6 and 24-hour events will be modeled.
- Watershed breakdown
- Use of WMS, DDMSW
- Subbasin parameters
- Diversion Modeling (Retention and Intersections)
- Agricultural Storage issues
- Inflows
- Canal modeling
- Hydrology TDN issues:
  - How handling multiple consultant analysis in the TDN setup?
  - Listing of the 6 and 24-hour peak discharge at each subbasin and concentration point. A cfs/sq. mi. check can be added to this table.
  - Remember to check hydrologic results with envelop curves and possibly some regression equations or at least comparison to other District studies and document in report as well.
- Comment the model
- Approval Steps

11. Floodplain Delineation Issues

- HEC-1 Storage Relationships will be used for ponded delineations. HEC-RAS will be used for the hydraulic modeling of conveyance corridors.
- Comment the model
- Approval steps
- N value report and method.
- Zone Designations: AH and AE
- Regulatory issues
- The Consultant is to run FEMA's Check-RAS program (?).

↓ Floodplain / Floodway

12. Deliverables

There are three times that deliverables are called for.

1. Prior to FEMA submittal
2. For the FEMA submittal
3. After FEMA approval

Deliverables to the Cities: what and when

11. Contract Schedule

- When can District expect to receive a schedule
- Overall contract milestone discussions

6/6

12. Other Items

- Every drawing must have either the last date it was revised, or the date it was printed on it. Because towards the end of the project minor revisions are impossible to spot.
- Title pages of drawings and reports shall include at a minimum the name of the study, the District's contract number, date last revised (even if minor), name of the consultant(s), consultant's address, consultant's phone number.
- All reports and drawings must be sealed and signed by persons of appropriate registration.
- Please use a clear plastic sheet as the inside cover in all notebooks. If you don't, the first sheet ends up sticking to the notebook, and will eventually end up being ripped out.
- Make generous use of headers and footers in the reports, epically in the hydrology and hydraulics printouts. Items to consider are: contract name & number, consultant's name, print date, and event being modeled.

10. Wrap Up

→ Top of rail

B.4 General Correspondence

DAVID EVANS
AND ASSOCIATES INC.

November 25, 2008

Ms. Kathryn Gross, M.A., CFM
Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, Arizona 85009

RE: Phase 2 – Consolidated Canal TDN Submittal of October 2008

Dear Kathryn:

This letter addresses your comments dated November 10, 2008 regarding the Phase 2, Consolidated Canal TDN submittal of October 2008. DEA and PEC responses are in italics.

We have finished our review of the October submittal and have the following comments.

Volume 1 Comments

1. Should the supporting documentation for the updated areas be included in Volume 1 like they were in Phase 1? Some supporting documentations was found for certain ponds but not all of them.

   DEA: This is a good idea and we may add this information. The project files have been moved twice and the additional supporting documenting has not been located as of the date of this letter. We understand that The District obtained a reduced-size set of the Nozomi documents. Please let us know when those documents are available and your expected shipping date to FEMA.

2141 East Highland Avenue Suite 200 Phoenix Arizona 85016 Telephone: 602.678.5151 Facsimile: 602.678.5155

2. Section 1.5.2 Bullet 1. It is recommended that Bullet 1 be removed from the text. The verification method appears to be a little different than that performed in Phase 1. No comparison to the GCFIS is presented in this section; therefore, the text is unnecessary.

   DEA: Revised.

3. Section 1.5.2 Bullet 2 refers to an analysis of peak flow vs. drainage area. The presented graphs are all for unit discharge. Please remove the reference to peak flow vs. drainage area in the text.

   DEA: Revised.

4. Section 1.5.2, Figure 1.5.2 is not a figure; it is a table, please correct heading. It is recommended to not include a numbered Heading, simply remove "Figure 1.5.2" from the heading text.

   DEA: Revised.

5. Section 2 FEMA Forms:
   - Form 1, Part B, number 4 – This section states that A, AE, AH, and X zones are impacted. AE and A need to be removed from the list as there are no AE or A zones within the study area we are modifying.

   DEA: Revised.

6. Appendix A: It states it is included in the data collection summary but it does not reference where that is located. Please add a sentence stating the data collection summary's location.

   DEA: Appendix A added to final TDN.

7. Appendix B6: The District will provide you with the Public Meeting information.

   DEA: Will add when it becomes available.

8. Appendix B7: The District will include the FEMA submittal letter prior to shipping to FEMA.

   DEA: Will add to our copy when it becomes available.

9. Section 4S.3.1 – In the first paragraph, change 3 ft/sec to 3.5 ft/sec.

   DEA: Revised.

10. Section 4S.5.3, second paragraph – Remove this paragraph discussing the challenges of the original P433+P424.

    DEA: Revised.

11. Section 4S5.3, third paragraph regarding Nozomi – Just call it Nozomi Park that will be fine. Consider changing language from proposed grading to grading plans.

    DEA: Revised.

12. Section 4S5.3 – where is the documentation for the special projects? We will need to discuss this further. (Associated with Volume 1 item 1)

    DEA: See response to Item 1.

13. Section 4S.5.5 – This section should be removed.

    DEA: Revised.

14. Section 4S.5.6 – This section should be removed.

DEA: Revised.

15. Section 4N.3.1 – In the first paragraph change 3 ft/sec to 3.5 ft/sec.

    DEA: Revised.

16. Section 4N.4.3 – In the last sentence, change the reference Appendix DN.5 to DN.4.

    DEA: Revised.

17. 4N.5.3 – Additional clarification is needed for this section.

- If possible, please include the pond ID numbers for reference.
- For the Warner Road pond, expand the discussion to include how this area was modeled in the previous study.

DEA and PEC: Text revised.

18. Section 5S.2 and 5N.2

- Why is text line greyed out? Remove grey.
- For next submittal, include reduced floodplain work maps.

DEA: Text revised and 11 by 17 reduced size workmaps are zee-folded into TDN.

19. Appendix questions:

- Appendix DS.4

    1. P402 – rating table Qs do not match the summary Qs. Can only use rating table to verify 1 of the discharges in the SQ record.
    2. P406S – no station support is provided.
    3. P415 – discharge rating table is missing.
    4. P418 – old discharge rating table using the canal stationing is included. This should be removed.
    5. P427 – discharge rating table should be expanded. Can only use rating table to verify 1 of the discharges in the SQ record.
    6. P432 – discharge rating table is missing.
    7. P433 – discharge rating table should be expanded. Can only use rating table to verify 1 of the discharges in the SQ record.

- Appendix DN.4

    1. P308- the supporting calculation sheet is missing the storage info.

DEA: For all of the above, the noted data in the Appendix is revised. For two ponds, data was removed since there is no 100-year flow out of basin.

20. Models and DSS files:

- For both the 6-hour and 24-hour south models, the SQ record for P420 has an error. The last SQ entry is shifted. The model is assuming it is 1400cfs instead of 140 cfs.
- Hard copy models match digital models.
- DSS files: no comments.

DEA: The model could remain unrevised, since the pond outflow is not in this range. There was a confusing difference in the output footer date and the HEC-1 run date. Both South HEC-1 models were revised and re-run. A CD with the HEC-1 input, output, DDMSW and DSS files is now in the TDN. Although not previously noted, the municipal boundaries were updated to 2008 for the draft final workmaps in September 2008.

Volume 3 Comments

1. Exhibit B (South, Sheet 2 of 2) – The flow path for subbasin 417 is missing from the map. It was shown correctly on the previous map.

   DEA: Revised.

2. Exhibit D (South) – luchanges and the Mammoth Park boundary should not be included on the legend.

   DEA: Revised.

3. Exhibit F – Floodplain work maps

   - Sheet 2
     1. Update P420's water surface elevation information
     2. Add note for Nozomi regarding Special Problem Section.

   DEA: Revised.

   - Sheet 3 – P412 – verify that the correct water surface and outflow and volume are listed on the map. The map is using the 100-yr 24-hr information but the current model actually has the 6-hr model with a higher water surface elevation and outflow discharge.

   DEA: We made a policy decision that the Santan Freeway would be the dividing point for the controlling 6-hour or 24-hour storms. Pond P412 should use the 24-hour data.

- Sheet 3 – P415 - verify that the correct water surface and outflow and volume are listed on the map. The map is using the 100-yr 24-hr information but the current model actually has the 6-hr model with a slightly higher water surface elevation and volume.

DEA: As per the above response, Pond P415 should use the 24-hour data.

- Sheet 4 – Verify the outflow volume listed on the workman for P406S. The model states 49 ac-ft while the map shows 22 ac-ft.

DEA: The 22 acre-feet overtopping volume is from the 6-hour storm, which is the controlling storm for Pond P406S.

- Sheet 6 – Move the note from P308 to P310.

PEC: Revised.

The next submittal should include the above revisions and updates to the floodplain work maps. At that time, you may also submit the copies for FEMA, the Town and the City.

DEA and PEC: Near the end of October 2008 we received an email with floodplain line work comments. The general nature of those comments was asking to redraw the floodplain limits to have a small air space when adjacent to structures not known to be in the floodplain. Those revisions have been made. Other revisions to the TDN are a wrong location description on a FEMA form, and additional letters for Appendix B.4 were added (including this response letter). The District and DEA have agreed that the District will produce the annotated FIRM Panels.. Please let us know when the DEA copies of these panels are available. A CD with the drawing files for the final floodplains is presented with this letter.

Sincerely,

David Evans and Associates, Inc.

Frank Edward Brown

Frank Edward Brown, P.E., CFM

Project Manager

Flood Control District
of Maricopa County

Board of Directors
Fulton Brock, District 1
Don Stapley, District 2
Andrew Kunasek, District 3
Max Wilson, District 4
Mary Rose Wilcox, District 5

www.fcd.maricopa.gov

2801 West Durango Street
Phoenix, Arizona 85009
Phone: 602-506-1501
Fax: 602-506-4601
TT: 602-505-5897

November 10, 2008

Mr. Frank Brown, P.E. CFM
Water Resources Manager
David Evans and Associates
2141 East Highland Avenue, Suite 200
Phoenix, Arizona 85016

RE: Phase 2 – Consolidated Canal TDN Submittal of October 2008

Dear Frank:

We have finished our review of the October submittal and have the following comments.

Volume 1 Comments

1. Should the supporting documentation for the updated areas be included in Volume 1 like they were in Phase 1? Some supporting documentations was found for certain ponds but not all of them.

2. Section 1.5.2 Bullet 1. It is recommended that Bullet 1 be removed from the text. The verification method appears to be a little different than that performed in Phase 1. No comparison to the GCFIS is presented in this section; therefore, the text is unnecessary.

3. Section 1.5.2 Bullet 2 refers to an analysis of peak flow vs. drainage area. The presented graphs are all for unit discharge. Please remove the reference to peak flow vs. drainage area in the text.

4. Section 1.5.2, Figure 1.5.2 is not a figure; it is a table, please correct heading. It is recommended to not include a numbered Heading, simply remove "Figure 1.5.2" from the heading text.

5. Section 2 FEMA Forms:
    - Form 1, Part B, number 4 – This section states that A, AE, AH, and X zones are impacted. AE and A need to be removed from the list as there are no AE or A zones within the study area we are modifying.

6. Appendix A: It states it is included in the data collection summary but it does not reference where that is located. Please add a sentence stating the data collection summary's location.

7. Appendix B6: The District will provide you with the Public Meeting information.

8. Appendix B7: The District will include the FEMA submittal letter prior to shipping to FEMA

Volume 2 Comments

9. Section 4S.3.1 – In the first paragraph, change 3 ft/sec to 3.5 ft/sec.

10. Section 4S.5.3, second paragraph – Remove this paragraph discussing the challenges of the original P433+P424.

11. Section 4S5.3, third paragraph regarding Nozomi – Just call it Nozomi Park that will be fine. Consider changing language from proposed grading to grading plans.

12. Section 4S5.3 – where is the documentation for the special projects? We will need to discuss this further. (Associated with Volume 1 item 1)

13. Section 4S.5.5 – This section should be removed.

14. Section 4S.5.6 – This section should be removed.

15. Section 4N.3.1 – In the first paragraph change 3 ft/sec to 3.5 ft/sec.

16. Section 4N.4.3 – In the last sentence, change the reference Appendix DN.5 to DN.4.

17. 4N.5.3 – Additional clarification is needed for this section.

    - If possible, please include the pond ID numbers for reference.
    - For the Warner Road pond, expand the discussion to include how this area was modeled in the previous study.

18. Section 5S.2 and 5N.2

    - Why is text line greyed out? Remove grey.
    - For next submittal, include reduced floodplain work maps.

Frank Brown

From: Kathryn Gross - FCDX [kag@mail.maricopa.gov]
Sent: Tuesday, September 16, 2008 3:23 PM
To: Frank Brown
Cc: Julie Cox - FCDX
Subject: Nozomi Park
Attachments: Benchmark.pdf; Stage_Storage.pdf; Document.pdf

Frank,

I am starting the process to get you the information for Nozomi. Attached you will find a pdf file excerpt of the hydrology report (cover and hardcopy page from model with storage relationship) as well as two pdf files of snapshots of the Nozomi Plans. I have a set of plans for you here at the office that I will need to get to you. Also, I will be emailing Jeff McBride at Dibble to see if he can get you the proposed grading elevations so you can more easily get them to show on the floodplain exhibit.

<<Benchmark.pdf>> <<Stage_Storage.pdf>> <<Document.pdf>>

Go ahead and start modifying the model. The storage relationship in the Dibble model is in 1929 (Chandler datum). The benchmark pdf shows where there bench mark was. It appears theirs was taken from behind the curb. The point used in our study appears to be from a benchmark in the street near that location (Ocotillo and McQueen). I think that just converting the Dibble elevations to 88 using the conversion factor given on the map should be fine.

Let me know if you have any questions or want to discuss any issues regarding getting Nozomi in the model and on the workmap.

Thanks,

Kathryn

August 14, 2008

Ms. Kathryn Gross, M.A., CFM
Maricopa County Flood Control District
2801 West Durango Street
Phoenix, Arizona 85009

RE: Phase 2 – Consolidated Canal Hydrology Submittal of May 2008

Dear Kathryn:

This letter addresses your comments dated July 1, 2008 regarding the Phase 2, Consolidated Canal Hydrology submittal of May 2008. DEA and PEC responses are in italics.

District Comments

We have finished our review of the May 2008 submittal. Attached are new versions of the North and South watershed 6- and 24-hour models. We have also included red-lined versions of the hard copies to show what changes are/were necessary in the modeling. In order to keep up the project momentum, the District made some of the corrections. Other corrections will need to be performed by your office. Below is a list of the corrections that were made by the District as well as the corrections that still need to be performed. Please make any corrections listed and make sure that you are in agreement with the model changes the District made so we can move forward with the next submittal.

District's Corrections

1. For both watersheds, the District has decided to decrease the amount of irrigated lot storage. Instead of using 2 inches of depth only 1 inch of depth (0.083 ft) is being used for each irrigated lot polygon. The modeling has been updated to reflect the new volumes.

2. The District is still in discussion regarding how the subdivision retention volume should be handled. Based on the results of using the 4 foot depth criteria it appears that the models are not as conservative regarding discharge and volume approaching the floodplain as we would like. Unfortunately, a decision was not rendered at the time this

letter needed to be sent; therefore, further instruction regarding how this issue will be handled will be forthcoming in an addendum letter.

3. Regarding DSS files, the District will be including two DSS files for use from this point forward. These are to be used in both the north and south watershed models. Their use will need to be continued into Phase 3 as well. This resolves an issue that is further discussed below.

DEA: DEA will use the new values to update the HEC-1 models.

PEC: PEC will use the new values to update the HEC-1 models.

North Watershed

6-hour model

1. Regarding KKNOR301, the BA record has been placed back into the model prior to the IN card. Upon making this switch the model reported different values.

2. Regarding the PB/PC records for the first PB region, the BA card has been shifted to above the PB card. Upon making this switch the model reported different values.

3. Regarding 309RET, the DI/DQ information was changed from 100 to 1000.

4. KK314OUT was removed. In the submitted model the DT record was set to 0. Zero will still allow flow to be diverted; therefore, since no retention volume is included for subbasin 314 the KK block was removed.

5. All retention diversions have been updated to reflect only 1" of irrigated lot depth.

PEC: PEC agrees with all the changes for the 6-hr model. The difference in the reported results might be caused by the revision of the retention volumes.

24-hour model

1. Regarding the PB/PC records for the first PB region, the BA card has been shifted to above the PB card. Upon making this switch the model reported different values.

2. Regarding 309RET, the DI/DQ information was changed from 100 to 1000.

3. CP310 was removed so that the P305 hydrograph can remain hanging and the model can match the 6-hour model.

KK314OUT was removed. In the submitted model the DT record was set to 0. Zero will still allow flow to be diverted; therefore, since no retention volume is included for subbasin 314 the KK block was removed.

4. All retention diversions have been updated to reflect only 1" of irrigated lot depth.

PEC: PEC agrees with all the changes for the 24-hr model. The difference in the reported results might be caused by the revision of the retention volumes.
Update: CP310 has been put back to the models (24-hr and 6-hr) since the outflow from P308 would join the local basin runoff before the UPRR.

South Watershed

1. Eastern Canal Overflows. Apparently there was a naming convention switch in the final Phase 1 modeling for the south watershed. Both the 6 and the 24 hour Phase 1 models write out to the same ZW "B" id. Those ids should have been different when a single DSS file is being used. Also all the "B" ids in the ZR cards in the submitted models were different from the phase 1 model ZW "B" ids. The respective "B" ids for each overflow ZW and ZR need to be identical. The District corrected the ZR card "B" ids to match the "B" ids listed in the Phase 1 model. To solve the identical "B" id issue between the 6-hour and 24-hour models, the District has decided that there will be separate 6-hour and 24-hour DSS files.

2. Consolidated Canal Outflow Hydrographs. The "B" ids for the ZW cards are the same between the 6-hour and the 24-hr models. This is no longer a concern due to the use of 2 DSS files being suggested above.

    - DSS406 (CP406), DSS409 (CP409), DSS412 (CP412), DSS424 (CP424), DSS427 (CP427), DSS432 (CP432)

DEA: Agree

6-hour model

1. Removed the old P402 storage relationship commented out with the asterisks from the model.

2. Relocated the following KK retention diversions to immediately after the subbasin instead of after the concentration point.

    - 407
    - 418
    - 422

3. Added the original ponding relationship for P418 back to the model by removing the asterisks. That is still the effective ponding relationship for this pond.

Removed the second P418 relationship from the model as this relationship still reflects the 418/420 combo pond.

4. All retention diversions have been updated to reflect only 1" of irrigated lot depth.

DEA: Agree

24-hour Model

1. Removed the old P402 storage relationship commented out with the asterisks from the model.

2. Added P420 back to the model. Removed the asterisks to do this.

3. Relocated the following KK retention diversions to immediately after the subbasin instead of after the concentration point.

   - 407
   - 418
   - 422

4. Added original ponding relationship for P418 back in the model by removing asterisks. That is still the effective ponding relationship for this pond.

5. Removed the second P418 relationship from the model as this relationship still reflects the 418/420 combo pond.

6. All retention diversions have been updated to reflect only 1" of irrigated lot depth.

DEA: Agree

Corrections/Verifications Needed

North Watershed

1. Retention Diversion Tables will need to be updated to reflect the new values reflected in the model

2. Retention Diversion Table for irrigated lots needs to be updated to the 1" values.

3. Canal overflow/DSS file concern. Please make sure the appropriate "B" ids are used in the ZW and ZR cards between the Phase 1 and Phase 2 models as well as between the Phase 2 and Phase 3 models.

PEC: Agree

6-hour model

1. For Pond 308 the storage relationship needs to be expanded. The model is reporting an "outflow is greater than the maximum outflow in the table" warning. May need to include both the weir to Freestone and the weir for Elliot road in the weir calculation.

2. Otherwise, Ponds 305 and 308 appear to be modeled appropriately. Please make sure that the draft TDN submittal includes "rebuilt" supporting documentation for each pond. (i.e. Freestone Park weir from P305 is included instead of the road data for P308)

3. Removal of CP310 is acceptable.

4. Canal overflow/DSS file concern. Please make sure the appropriate "B" ids are used in the ZW and ZR cards between the Phase 1 and Phase 2 models as well as between the Phase 2 and Phase 3 models.

PEC: PEC will check per FCD's comments and make sure the model works properly. Update: The HEC-1 models show that P305 and P308 would join together as the response to the new retention update. In the new models, the joined pond is named as "P308". CP310 has been put back to the models (24-hr and 6-hr) since the outflow from P308 would join the local basin runoff before the UPRR.

24-hour model

1. For Pond 308 the storage relationship needs to be expanded. The model is reporting an "outflow is greater than the maximum outflow in the table" warning. May need to include both the weir to Freestone and the weir for Elliot road in the weir calculation.

2. Otherwise, Ponds 305 and 308 appear to be modeled appropriately. Please make sure that the draft TDN submittal includes "rebuilt" supporting documentation for each pond. (i.e. Freestone Park weir from P305 is included instead of the road data for P308)

PEC: PEC will check per FCD's comments and make sure the model works properly. Update: The HEC-1 models show that P305 and P308 would join together as the response to the new retention update. In the new models, the joined pond is named as "P308".

South Watershed

1. Retention Diversion Table for irrigated lots needs to be updated to the 1" values.

2. Canal overflow/DSS file concern. Please make sure the appropriate "B" ids are used in the ZW and ZR cards between the Phase 1 and Phase 2 models as well as between the Phase 2 and Phase 3 models.

DEA: Agree

6-hour model

1. P402. Make sure the weir relationship presented in the SQ records is reflected in the supporting documentation.

DEA: DEA will include supporting documentation for the P402 weir presented in the SQ records.

24-hour model

1. P402. Make sure the weir relationship presented in the SQ records is reflected in the supporting documentation.

DEA: DEA will include supporting documentation for the P402 weir presented in the SQ records.

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.

Copy

Frank Edward Brown, P.E., CFM

Project Manager

August 14, 2008

Ms. Kathryn Gross, M.A., CFM
Maricopa County Flood Control District
2801 West Durango Street
Phoenix, Arizona 85009

RE: Phase 2 – Consolidated Canal Hydrology Submittal of May 2008 - Addendum

Dear Kathryn:

This letter addresses your comments dated July 23, 2008 regarding the Phase 2, Consolidated Canal Hydrology submittal of May 2008 - Addendum. DEA and PEC responses are in italics.

District Comments:

The District has decided to modify the assumptions regarding the retention analysis for Phases 2 and 3 of the Chandler Gilbert FDS. Although the District requested that retention basins were to use an assumed depth of 4 feet and a depth of 2 inches on irrigated properties, the modeling results appear under conservative. The District now requests to modify the retention assumptions to reflect an assumed depth of 3 feet for retention basins and one inch of depth for irrigated properties. The District will provide the 3 foot depth calculations we have performed for your review and request that DEA calculate the depth for the retention basins that we do not have information on. Where possible, the District has updated the 6-hour and 24-hour models to reflect the new retention diversion information. These models will be provided to you on cd. Please add your new calculations to these files. Please provide an email to the District stating the costs of the retention diversion revisions and I will go ahead and issue the Release of Optional funds.

DEA: DEA and PEC will use the new values to update the HEC-1 models.

For the next submittal please address the comments presented in the July 1, 2008 letter and update the retention calculations and diversion records and the floodplain workmaps. Along with the updated models, please provide all supporting documentation for the ponding areas and updated workmaps.

DEA: DEA and PEC will use address the comments presented in the July 1, 2008 letter and will provide the above requested items.

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.

Copy
Frank Edward Brown, P.E., CFM

Project Manager

Flood Control District
of Maricopa County

Board of Directors
Fulton Brock, District 1
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1/1

July 23, 2008

Mr. Frank Brown, P.E. CFM
Water Resources Manager
David Evans and Associates
2141 East Highland Avenue, Suite 200
Phoenix, Arizona 85016

RE: Phase 2 – Consolidated Canal Hydrology Submittal of May 2008 - Addendum

Dear Frank:

The District has decided to modify the assumptions regarding the retention analysis for Phases 2 and 3 of the Chandler Gilbert FDS. Although the District requested that retention basins were to use an assumed depth of 4 feet and a depth of 2 inches on irrigated properties, the modeling results appear under conservative. The District now requests to modify the retention assumptions to reflect an assumed depth of 3 feet for retention basins and one inch of depth for irrigated properties. The District will provide the 3 foot depth calculations we have performed for your review and request that DEA calculate the depth for the retention basins that we do not have information on. Where possible, the District has updated the 6-hour and 24-hour models to reflect the new retention diversion information. These models will be provided to you on cd. Please add your new calculations to these files. Please provide an email to the District stating the costs of the retention diversion revisions and I will go ahead and issue the Release of Optional funds.

For the next submittal please address the comments presented in the July 1, 2008 letter and update the retention calculations and diversion records and the floodplain workmaps. Along with the updated models, please provide all supporting documentation for the ponding areas and updated workmaps.

If you have any questions please let me know.

Sincerely,

Kathryn Gross, CFM, M.A.
Project Manager

Flood Control District
of Maricopa County

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1/5

July 1, 2008

Mr. Frank Brown, P.E. CFM
Water Resources Manager
David Evans and Associates
2141 East Highland Avenue, Suite 200
Phoenix, Arizona 85016

RE: Phase 2 – Consolidated Canal Hydrology Submittal of May 2008

Dear Frank:

We have finished our review of the May 2008 submittal. Attached are new versions of the North and South watershed 6- and 24-hour models. We have also included red-lined versions of the hard copies to show what changes are/were necessary in the modeling. In order to keep up the project momentum, the District made some of the corrections. Other corrections will need to be performed by your office. Below is a list of the corrections that were made by the District as well as the corrections that still need to be performed. Please make any corrections listed and make sure that you are in agreement with the model changes the District made so we can move forward with the next submittal.

District's Corrections

1. For both watersheds, the District has decided to decrease the amount of irrigated lot storage. Instead of using 2 inches of depth only 1 inch of depth (0.083 ft) is being used for each irrigated lot polygon. The modeling has been updated to reflect the new volumes.

2. The District is still in discussion regarding how the subdivision retention volume should be handled. Based on the results of using the 4 foot depth criteria it appears that the models are not as conservative regarding discharge and volume approaching the floodplain as we would like. Unfortunately, a decision was not rendered at the time this letter needed to be sent; therefore, further instruction regarding how this issue will be handled will be forthcoming in an addendum letter.

3. Regarding DSS files, the District will be including two DSS files for use from this point forward. These are to be used in both the north and south watershed models. Their use will need to be continued into Phase 3 as well. This resolves an issue that is further discussed below.

North Watershed

6-hour model

1. Regarding KKNOR301, the BA record has been placed back into the model prior to the IN card. Upon making this switch the model reported different values.

2. Regarding the PB/PC records for the first PB region, the BA card has been shifted to above the PB card. Upon making this switch the model reported different values.

3. Regarding 309RET, the DI/DQ information was changed from 100 to 1000.

4. KK314OUT was removed. In the submitted model the DT record was set to 0. Zero will still allow flow to be diverted; therefore, since no retention volume is included for subbasin 314 the KK block was removed.

5. All retention diversions have been updated to reflect only 1" of irrigated lot depth.

24-hour model

1. Regarding the PB/PC records for the first PB region, the BA card has been shifted to above the PB card. Upon making this switch the model reported different values.

2. Regarding 309RET, the DI/DQ information was changed from 100 to 1000.

3. CP310 was removed so that the P305 hydrograph can remain hanging and the model can match the 6-hour model.

4. KK314OUT was removed. In the submitted model the DT record was set to 0. Zero will still allow flow to be diverted; therefore, since no retention volume is included for subbasin 314 the KK block was removed.

5. All retention diversions have been updated to reflect only 1" of irrigated lot depth.

South Watershed

1. Eastern Canal Overflows. Apparently there was a naming convention switch in the final Phase 1 modeling for the south watershed. Both the 6 and the 24 hour Phase 1 models write out to the same ZW "B" id. Those ids should have been different when a single DSS file is being used. Also all the "B" ids in the ZR cards in the submitted models were different from the phase 1 model ZW "B" ids. The respective "B" ids for each overflow ZW and ZR need

to be identical. The District corrected the ZR card "B" ids to match the "B" ids listed in the Phase 1 model. To solve the identical "B" id issue between the 6-hour and 24-hour models, the District has decided that there will be separate 6-hour and 24-hour DSS files.

2. Consolidated Canal Outflow Hydrographs. The "B" ids for the ZW cards are the same between the 6-hour and the 24-hr models. This is no longer a concern due to the use of 2 DSS files being suggested above.

    - DSS406 (CP406), DSS409 (CP409), DSS412 (CP412), DSS424 (CP424), DSS427 (CP427), DSS432 (CP432)

6-hour model

1. Removed the old P402 storage relationship commented out with the asterisks from the model.

2. Relocated the following KK retention diversions to immediately after the subbasin instead of after the concentration point.

    - 407
    - 418
    - 422

3. Added the original ponding relationship for P418 back to the model by removing the asterisks. That is still the effective ponding relationship for this pond.

4. Removed the second P418 relationship from the model as this relationship still reflects the 418/420 combo pond.

5. All retention diversions have been updated to reflect only 1" of irrigated lot depth.

24-hour Model

1. Removed the old P402 storage relationship commented out with the asterisks from the model.

2. Added P420 back to the model. Removed the asterisks to do this.

3. Relocated the following KK retention diversions to immediately after the subbasin instead of after the concentration point.

    - 407
    - 418
    - 422

4. Added original ponding relationship for P418 back in the model by removing asterisks. That is still the effective ponding relationship for this pond.

5. Removed the second P418 relationship from the model as this relationship still reflects the 418/420 combo pond.

6. All retention diversions have been updated to reflect only 1" of irrigated lot depth.

Corrections/Verifications Needed

North Watershed

1. Retention Diversion Tables will need to be updated to reflect the new values reflected in the model

2. Retention Diversion Table for irrigated lots needs to be updated to the 1" values.

3. Canal overflow/DSS file concern. Please make sure the appropriate "B" ids are used in the ZW and ZR cards between the Phase 1 and Phase 2 models as well as between the Phase 2 and Phase 3 models.

6-hour model

1. For Pond 308 the storage relationship needs to be expanded. The model is reporting an "outflow is greater than the maximum outflow in the table" warning. May need to include both the weir to Freestone and the weir for Elliot road in the weir calculation.

2. Otherwise, Ponds 305 and 308 appear to be modeled appropriately. Please make sure that the draft TDN submittal includes "rebuilt" supporting documentation for each pond. (i.e. Freestone Park weir from P305 is included instead of the road data for P308)

3. Removal of CP310 is acceptable.

4. Canal overflow/DSS file concern. Please make sure the appropriate "B" ids are used in the ZW and ZR cards between the Phase 1 and Phase 2 models as well as between the Phase 2 and Phase 3 models.

24-hour model

1. For Pond 308 the storage relationship needs to be expanded. The model is reporting an "outflow is greater than the maximum outflow in the table" warning. May need to include both the weir to Freestone and the weir for Elliot road in the weir calculation.

2. Otherwise, Ponds 305 and 308 appear to be modeled appropriately. Please make sure that the draft TDN submittal includes "rebuilt" supporting documentation for each pond. (i.e. Freestone Park weir from P305 is included instead of the road data for P308)

South Watershed

1. Retention Diversion Table for irrigated lots needs to be updated to the 1" values.

2. Canal overflow/DSS file concern. Please make sure the appropriate "B" ids are used in the ZW and ZR cards between the Phase 1 and Phase 2 models as well as between the Phase 2 and Phase 3 models.

6-hour model

1. P402. Make sure the weir relationship presented in the SQ records is reflected in the supporting documentation.

24-hour model

1. P402. Make sure the weir relationship presented in the SQ records is reflected in the supporting documentation.

There are no more comments at this time.

Sincerely,

Kathryn Gross, CFM M.A.
Project Manager

DAVID EVANS
AND ASSOCIATES INC.

May 30, 2008

Ms. Kathryn Gross, M.A., CFM
Maricopa County Flood Control District
2801 West Durango Street
Phoenix, Arizona 85009

RE: Phase 2 – Consolidated Canal Interim Hydrology Submittal of March 2008 - Addendum

Dear Kathryn:

This letter addresses your comments dated April 18, 2008 regarding the Phase 2, Consolidated Canal Interim Hydrology Addendum submittal. DEA and PEC responses are in italics.

1. Regarding Phase 2 North Ponds 305 and 308 (Kathryn comment #1), flow directions for subbasins 309, 306, 305 and 308 were re-verified. The original FIS directed a portion of what is currently 306 towards the current Pond 305 and directed a portion of what is currently subbasin 309 towards the current Pond 310. Based on the field visit the current flow direction for both these subbasins is fine. The interaction of subbasin 308 to Pond 305 and Pond 308 needs further discussion with PEC. This can be an agenda item for the May progress meeting and will be an issue to resolve in the ponding modification portion of the update.

PEC: Freestone Park retention basin (P305) and the basin immediately to the south (P308) were modeled multiple times. Initially the ponds were modeled consistent with the general modeling approach assuming the storm water generally flows west and then turning south after hitting the bank of the canal. This initial model showed that the Freestone Park basin (P305) and the pond to the south (P308) would be interconnected because water surface elevations for both basins were higher than the weir elevation separating them. A revised model was created, in which the two ponds were modeled as one large pond. This model showed that storm water would fill Freestone Park basin and extend south to Elliot Rd. Ponded storm water would overtop the Consolidated Canal bank and Elliot Rd. The model was later updated using additional retention data. The new model showed that the Freestone Park basin (P305) could contain all of the storm water from the north and east. The storm water reaching sub-basin 308 would pond and eventually reach an elevation where the stormwater would flow north into Freestone Park basin (P305). The final model shows that P305 and P308 will contain all the incoming 100-year storm water runoff. Elliot Rd and the Consolidated Canal bank will not be overtopped.

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2. Regarding Pond 402 (Kathryn comment #3), the Mammoth Park subdivision may not need to be modeled separately from the low density lots north of the subdivision. The corridor between the two land uses most likely will be able to convey any flows leaving the low density lots and flow towards the basins located in the Mammoth Park subdivision. This can be discussed further in the May progress meeting.

   DEA: Mammoth Park, P402, is modeled as one basin. We ignored the first small basin to the east of the main basin because its volume is insignificant when compared to the larger, main basin.

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.

Frank Edward Brown

Frank Edward Brown, P.E., CFM

Project Manager

DAVID EVANS
AND ASSOCIATES INC.

May 30, 2008

Ms. Kathryn Gross, M.A., CFM
Maricopa County Flood Control District
2801 West Durango Street
Phoenix, Arizona 85009

RE: Phase 2 – Consolidated Canal Interim Hydrology Submittal of March 2008

Dear Kathryn:

This letter addresses your comments dated April 16, 2008 regarding the Phase 2, Consolidated Canal Interim Hydrology submittal. DEA and PEC responses are in italics.

Kathryn's Comments

1. Please revisit Phase 2 North schematic. A change was made directing additional flows to Pond 308 instead of Pond 305. This was not discussed prior to modeling as being necessary and only retention numbers were to have been changed in the North model at this time. This will be one location reviewed during the field visit. Additional information will be provided in the addendum comments.

   PEC: The new schematic does not show a clear connection between P308 and P305 since there is no routing involved between the two ponds in the new HEC-1 model. The comment seems to be referring to a previous version of the schematic. The new version eliminated the routing hydrographs 305308 and 308310.

2. Regarding Pond 420, presently, and even more so in the future, there is still a hydraulic separation between Pond 420 and 418 (Nozomi Park location). Please put Pond 420 back in the model in its original form. Regarding P418 more guidance will be provided in the next few weeks when more is known about the Nozomi design timetable.

   DEA: P420 has been put back in the model.

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3. Based on a field visit, Pond402 may need to be split into two ponds. One would receive half of subbasin 402's flows the other would receive the routed 401402 and the remainder of basin 402's flows. This may be the best way to handle the Mammoth Park ponding area. Additional information will be provided in the addendum comments.

   DEA: Mammoth Park, P402, is modeled as one basin. We ignored the first small basin to the east of the main basin because its volume is insignificant when compared to the larger, main basin.

Julie's Comments

1. The final submittal should include documentation for the rating curves, Data Tables, Summary of HEC-1 Ponding Results tables, USGS regression curves for verification, and Unit Discharge checks. See Phase 2 North for example of the unit discharge check.

   DEA: Comments will be addressed in the final submittal.

2. The PC records were incorrectly placed or omitted in both the Phase 2 North and Phase 2 South models. Please see FCDMC memo dated January 25, 2008 for guidance.

   PEC: The PC records for Phase 2 North 6-hour model were modified per the documents PB9.dat and PB10.dat provide by the County. The first KK is to retrieve a hydrograph from the north. DDMSW automatically put the PB/PC records in the first simulation block. This won't make the model go wrong, but it is confusing. We'll remove all unnecessary lines from the hydrograph retrieving block, and put the new PB/PC in the first sub-basin (301) block.

   DEA: The PC records have been corrected per the content and format of the FCDMC memo dated January 25, 2008.

3. There are several ponding areas whose rating curves have been changed from the 2005 to 2008 model. Therefore, new Data Tables and Culvertmaster Reports should be provided. These ponding areas are P402, P406S, P418, and P433.

   DEA: The data is provided for these four ponds, and the TDN to be published will contain this updated data.

4. Please include KM records that explain why P420 was removed or put P420 back in the model.

   DEA: P420 has been put back in the model.

5. Remove EAS219, EAS237, CP413, CP417, 219413, 237417 AND CON418 (DT and DR). Change CP415 HC from 3 to 4.

   DEA: EAS219, EAS237, CP413, CP417, 219413, 237417 and CON418 (DT and DR) have been removed from the model. CP415 HC has been changed from 3 to 4.

6. Change % vegetative cover from 20 to 30% for the Phase 2 South models.

   DEA: Comment disregarded per Julie's email on 5/12/2008.

7. There is a route 406406 in the Phase 2 South models. Please check and change as necessary.

   DEA: Route 406406 represented the routing from 406N to 406S and has been changed to the identifier 406N-S.

Sincerely,

Frank Edward Brown

DAVID EVANS AND ASSOCIATES, INC.

Frank Edward Brown, P.E., CFM

Project Manager

Flood Control District
of Maricopa County

Board of Directors
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1/1

April 18, 2008

Mr. Frank Brown, P.E. CFM
Water Resources Manager
David Evans and Associates
2141 East Highland Avenue, Suite 200
Phoenix, Arizona 85016

RE: Phase 2 – Consolidated Canal Interim Hydrology Submittal of March 2008 - Addendum

Dear Frank:

The following are additional comments from the field visit conducted on April 18, 2008.

1. Regarding Phase 2 North Ponds 305 and 308 (Kathryn comment # 1), flow directions for subbasins 309, 306, 305 and 308 were re-verified. The original FIS directed a portion of what is currently 306 towards the current Pond 305 and directed a portion of what is currently subbasin 309 towards the current Pond 310. Based on the field visit the current flow direction for both these subbasins is fine. The interaction of subbasin 308 to Pond 305 and Pond 308 needs further discussion with PEC. This can be an agenda item for the May progress meeting and will be an issue to resolve in the ponding modification portion of the update.

2. Regarding Pond 402 (Kathryn comment # 3), the Mammoth Park subdivision may not need to be modeled separately from the low density lots north of the subdivision. The corridor between the two land uses most likely will be able to convey any flows leaving the low density lots and flow towards the basins located in the Mammoth Park subdivision. This can be discussed further in the May progress meeting.

Let me know if you have any questions.

Sincerely,

Kathryn Gross, CFM M.A.
Project Manager

Flood Control District
of Maricopa County

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April 16, 2008

Mr. Frank Brown, P.E. CFM
Water Resources Manager
David Evans and Associates
2141 East Highland Avenue, Suite 200
Phoenix, Arizona 85016

RE: Phase 2 - Consolidated Canal Interim Hydrology Submittal of March 2008

Dear Frank:

We have finished our review of the March 2008 submittal and have the following comments. An addendum to these comments will be coming early next week that will clarify and provide further direction on some comments listed below based on a field visit we are taking on Friday.

Kathryn's Comments

1. Please revisit Phase 2 North schematic. A change was made directing additional flows to Pond 308 instead of Pond 305. This was not discussed prior to modeling as being necessary and only retention numbers were to have been changed in the North model at this time. This will be one location reviewed during the field visit. Additional information will be provided in the addendum comments.

2. Regarding Pond 420, presently, and even more so in the future, there is still a hydraulic separation between Pond 420 and 418 (Nozomi Park location). Please put Pond 420 back in the model in its original form. Regarding P418 more guidance will be provided in the next few weeks when more is known about the Nozomi design timetable.

3. Based on a field visit, Pond402 may need to be split into two ponds. One would receive half of subbasin 402's flows the other would receive the routed 401402 and the remainder of basin 402's flows. This may be the best way to handle the Mammoth Park ponding area. Additional information will be provided in the addendum comments.

Julie's Comments

1. The final submittal should include documentation for the rating curves, Data Tables, Summary of HEC-1 Ponding Results tables, USGS regression curves for verification, and Unit Discharge checks. See Phase 2 North for example of the unit discharge check.

2. The PC records were incorrectly placed or omitted in both the Phase 2 North and Phase 2 South models. Please see FCDMC memo dated January 25, 2008 for guidance.

3. There are several ponding areas whose rating curves have been changed from the 2005 to 2008 model. Therefore, new Data Tables and Culvertmaster Reports should be provided. These ponding areas are P402, P406S, P418, and P433.

4. Please include KM records that explain why P420 was removed or put P420 back in the model.

5. Remove EAS219, EAS237, CP413, CP417, 219413, 237417 AND CON418 (DT and DR). Change CP415 HC from 3 to 4.

6. Change % vegetative cover from 20 to 30% for the Phase 2 South models.

7. There is a route 406406 in the Phase 2 South models. Please check and change as necessary.

We have no additional comments. It is hoped these issues can be addressed at or before the May progress meeting. If all items have been addressed by then, at the progress meeting we can kick off ponding modifications and floodplain delineation revisions. Let me know if you have any questions.

Sincerely,

Kathryn Gross, CFM M.A.
Project Manager

March 26, 2008

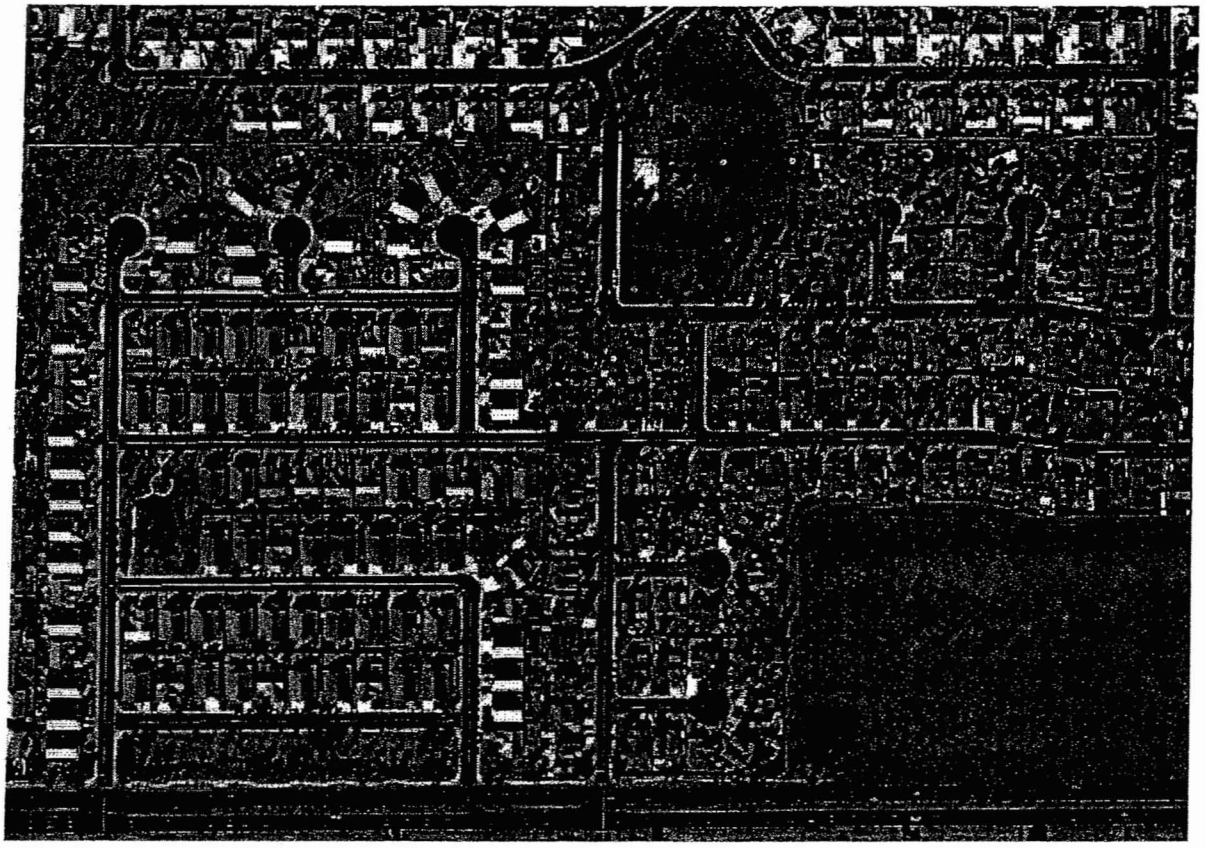
Ms. Kathryn Gross, M.A., CFM
Project Manager
Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, AZ. 85009

DAVID EVANS AND ASSOCIATES INC.

RE: Chandler/Gilbert Floodplain Delineation Study Phase 2 – Consolidated Canal comments from Phase-2 single-notebook submittal from Mike Duncan, comments received October 26, 2005

The following are the comments provided by the District and DEA's response to comments (in italic text).

1. At sub-basin 311, at line 70 of table -- Spring Meadows, the retention volume should be changed from 4.74 to 10.5 acre-feet. The resulting retention total for sub-basin 311 will be 38.24 rather than 32.48 acre-feet. This is based on field measurements that I did. This problem could have been related to the fact that a large retention basin is in two sub-divisions (Spring Meadows Commons and Spring Meadow) as shown here:



PEC Response: *Retention volume revised.*

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2. At sub-basin 312, the total area of the Western Skies Golf community is underestimated by 0.11 sq. mi. (70 acres). Since this community is treated as non-contributing, the BA (basin area) for sub-basin 312 should be 0.70 rather than 0.81 sq. mi.

PEC Response: *Data revised.*

3. Change the HEC-1 structure at P418 and P420. P418 should flow into P420, as P420 has the lower computed water surface and the lower spot elevations within the ponding area.

DEA Response: *Upon review of these two ponds, it was concluded they would be modeled as one pond (P418). This is reflected in the current models and will be verified during the floodplain delineation work (after hydrology approval).*

4. At Exhibit A, the as-printed scale is 1 inch = 1160 ft. It should be corrected to 1 inch = 1000 ft.

DEA Response: *Exhibit A now scales correctly.*

5. At all work maps, the PE stamps will need to be added.

DEA Response: *Done.*

6. At work map 2 of 7, at the lower right, the floodplain extends off the map coverage, to the east. The sheet coverage needs to be shifted or expanded.

DEA Response: *Work map 2 of 7 has been revised.*

7. In one notebook copy, I have freeway-channel-plans at the front of the notebook. Where should they go?

DEA Response: *Please return to DEA. Thank you.*

Sincerely,

Frank Edward Brown

Frank Edward Brown, P.E., CFM
Project Manager

March 26, 2008

Ms. Kathryn Gross, M.A., CFM
Project Manager
Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, AZ. 85009

DAVID EVANS AND ASSOCIATES INC.

The David Evans and Associates' response to the October 24, 2005 comments for the Phase 2 submittal are incorporated below a repeat of the comments. New text is identified as "DEA Response:" or "PEC Response:" and is in italics. Comments are addressed for this interim hydrology submittal. Floodplain comments will follow in the near future once the interim hydrology submittal has been reviewed and approved.

Date: October 24, 2005
To: Michael Duncan, P.E., Floodplain Delineation Branch Manager
Regulatory Division
From: Julie Cox, Senior Hydrologist
Engineering Division
Subject: Comments on July 2005 Chandler-Gilbert FDS Phase 2 Submittal

I have reviewed the DDMSW and HEC-1 models, responses to FCD comments [of 2-4-05], spreadsheets and exhibits. Comments for Phase 2 South are listed first, followed by comments for Phase 2 North.

General [this is presented as background, for an issue that was identified after the FCD comments; these issues have been addressed adequately.]

Of major concern were volumes that ranged from 200-500% higher than was reasonable. H&H identified errors in the rating curves for ponds P412, P416, and P432. I had notified DEA of the issue in a separate email. I checked and the corrections were made. The volume of P412 in the last submittal was 207 acre-ft vs 45 acre-ft in this submittal. The volume at CP418 in the last submittal was 404 acre-ft vs 105 acre-ft in this submittal.

DEA Response: *No response necessary.*

[This is a note from Julie to Mike: **Retention**

I believe you wanted to add specific comments regarding retention. The scope does not specify that retention will be 80-85% effective. However, Section 5.6.3 states that basin efficiency shall be taken into consideration when determining volume to be modeled and the potential for flow passing the inlets.]

DEA Response: *No response necessary.*

2141 East Highland Avenue Suite 200 Phoenix Arizona 85016 Telephone: 602.678.5151 Facsimile: 602.678.5155

Phase 2 South: DEA Responses to FCD Comment Letter dated February 4, 2005

FCD Comment #5: DEA response indicates both the 6-hr and 24-hr models were revised to eliminate the caution messages "data block not found in file". I checked and neither model was revised; the caution messages for 207, 212, 219, 237, 238, and 227 still remain in the models.

DEA Response: *The caution message is generated by the HEC-1 program and comes about when the model reads the DSS file. Contrary to our earlier response, this message cannot be removed. The data and results are not affected by this caution message; therefore the HEC-1 files cannot be revised.*

FCD Comment #11: The Rodeo park [of sub-basin 400] is a non-contributing area. Therefore, the DDMSW files, HEC-1 models, and Exhibits A through E must reflect this. Please make changes and rerun models.

DEA Response: *The appropriate locations have been revised to reflect the non-contribution of the Rodeo Park area within Subbasin 400.*

FCD Comment #16: For route 406409, add FLOW and –1 to columns 2 and 3 of the RS record for the 24-hr model. I checked and only the 6-hr model was changed.

DEA Response: *Route 406409 has been revised for the 24-hour model.*

FCD Comment #36: DEA response contains a typographical error. The elevation is 1224.03' not 1204.03'.

DEA Response: *The elevation is 1224.03' and has been revised.*

FCD Comment #37: The eastern boundary of sub-basin 433 obscures part of the flow path for sub-basin 424. Please move the north/south portion of the sub-basin 424 flow path slightly east to correct this.

DEA Response: *This is a graphic display problem and has been corrected.*

FCD Comment #45: DEA's response states that KK blocks for DSS416 and DSS424 were added to both the 6-hr and 24-hr models. Shouldn't the response say that these KK blocks are no longer needed due to model revisions?

DEA Response: *The KK block for DSS416 was removed and the KK block for DSS424 will be investigated during the floodplain delineation portion of the work.*

FCD Comment #47: DEA's response states that for the 24-hr model, and within the KK block for DSS409, the DR record was corrected from CON406 to CON409. I checked and the DR record was not revised.

DEA Response: *The DR record for DSS409 was revised.*

Phase 2 South: Exhibit B

1. The RET symbols are shown on Sheet 2 of 2. Please remove the symbols. They were not on Exhibit B on the previous submittal. They should only be on Exhibit E.

DEA Response: *Revisions made as commented.*

2. The match line on Sheet 1 was changed from the prior submittal, i.e. the sub-basins and Queen Creek Rd are cut off Sheet 1. Please change the placement of the aerial photo on Sheet 1 so the match lines match.

DEA Response: *This revision has been made.*

Phase 2 South: Exhibit E

3. Add the diversion CON433 to the HEC-1 schematic.

DEA Response: *This will be investigated during the floodplain delineation portion of the work.*

Phase 2 South: Spreadsheet: Summary of HEC-1 Ponding Results

4. Add note to explain what the shaded cells represent. PEC's spreadsheet only shaded the storm results that were used to map the floodplain. DEA's spreadsheet should do the same.

DEA Response: *This correction has been made.*

5. Make corrections to the spreadsheet for P412 (6-hr and 24-hr results) and P415 (6-hr results).

DEA Response: *Revisions made as commented and will be verified during the floodplain delineation work (after hydrology approval).*

Phase 2 South: Spreadsheet: Unit Discharge Check

6. Change "Dischrge" to "Discharge" in the title.

DEA Response: *This revision has been made.*

7. Add data for sub-basins 406N and 406S.

DEA Response: *Revisions made as commented.*

8. Recheck input parameters for sub-basins 406N and 406S. The 6-hr results differ significantly [from the 24-hr results] , perhaps due to higher XKSAT for sub-basin 406S?

DEA Response: *The parameters were checked and a discrepancy was found in the 406N 24-hr Soils data. This was corrected and all other parameters were checked and verified.*

Phase 2 North: PEC Responses to FCD Comment Letter dated February 4, 2005

FCD Comment #7: DEA's response states that route lengths for routes 303305, 315314, 314316, CAN309, and 114309 were checked and corrected. I checked both the 24-hr and 6-hr models, and the route lengths were not changed. I measured the following route lengths listed below. Please change route lengths and rerun models.

- 303305 – 3000 ft
- 315314 – 2250 ft
- 314316 – 3500 ft
- CAN309 – 7250 ft
- 114309 – 8500 ft

PEC Response: *Revised.*

Phase 2 North: Spreadsheet: Summary of HEC-1 Ponding Results

9. Please make [volume] corrections to the spreadsheet for P314 (6-hr and 24-hr peak storage volume results).

PEC Response: *Revised.*

Phase 2 North: Spreadsheet: Unit Discharge Check

10. My QC check of the spreadsheet resulted in an average 6-hr unit discharge of 823 cfs and an average 24-hr unit discharge of 863 cfs. Please check the spreadsheet and revise as necessary.

PEC Response: *Revised.*

Phase 2 North

11. DEA included Culvertmaster printouts as documentation for the ponds in Phase 2 South. Please include documentation for the ponds in Phase 2 North in the next submittal.

PEC Response: *No culvert was modeled for Phase 2 north. Weir flow calculation spreadsheets will be submitted with the floodplain delineation.*

Some bracketed items and comment numbers were added by Mike Duncan in the above.

Sincerely,

Frank Edward Brown

Frank Edward Brown, P.E., CFM

Flood Control District
of Maricopa County

1/1

INTEROFFICE MEMORANDUM

Date: January 25, 2008

To: Kathryn Gross, Project Manager
PPM Division

From: Julie Cox, Senior Hydrologist
Engineering Division

Subject: Chandler/Gilbert FDS Phase 2 – PC records for 100-yr 6-hr HEC-1 models

The HEC-1 models submitted by the consultant have one set of PC records per model. Since we are using PB/PC records to define the rainfall distribution by region, there should be a different set of PC records for each PB region. There are 2 PB regions in the Phase 2 North model and 3 PB regions in the Phase 2 South model.

I developed the PC records using DDMSW Version 2.1.0, which is the same version used to develop data for all of the HEC-1 models.

For each PB region, the consultant needs to paste the appropriate PC records in the rows immediately following the PB records specified in the table below. The "dat" files are electronic attachments to this memo.

HEC-1 MODEL	PB REGION	AREA	DDMSW DAT FILE	PB record
Phase 2 North	1	6.99 sq mi	PB9.dat	2.856 inch
	2	3.04 sq mi	PB10.dat	2.919 inch
Phase 2 South	1	6.37 sq mi	PB6.dat	2.86 inch
	2	5.58 sq mi	PB7.dat	2.87 inch
	3	8.97 sq mi	PB8.dat	2.83 inch

Please stop by, email, or call me at 602-506-8401 with any questions. Thank you.

March 26, 2008

Ms. Kathryn Gross, M.A., CFM
Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, Arizona 85009

RE: Response to Sub-basin Delineation Submittal

Dear Kathryn:

This letter addresses your comments dated October 20, 2003 regarding the Consolidated Canal Watershed Sub-basin Delineation Submittal.

General Discussion

1. It appears that the freeway is not represented in the same fashion as it was on the Eastern Canal hydrology maps. Is there a reason behind this (do not have ADOT's overlay, etc)? If possible please overlay the San Tan Freeway, the basins and the channels in the same manner as they were represented on the Eastern Canal hydrology maps. I am assuming that the freeway should be in the vicinity of sub basins 407, 408, 409 represent the freeway location.

   ***DEA** – The Santan freeway alignment has been incorporated into the sub-basin delineation.*

2. Overall, the delineation appears reasonable with the exception of the missing freeway and our comments are minimal. The following are the specific comments from Julie Cox.

Delineation Comments from Julie Cox

I have completed a review of the maps and have the following comments for the consultants. Feel free to stop by or call me at 506-8401 if you have any questions.

1. Label the Santan Freeway and its associated drainage components, i.e. drainage basins and channels.

   ***DEA** – Santan Freeway and all associated drainage components have been added to the work map.*

2. On the 300 series map, change "Lindsey" to "Lindsay".

***PEC** – addressed.*

3. What is the rationale for the location of concentration points for sub-basins 421, 427, and 428? Evaluate whether the CP for SUB421 could be ½ mile south along Cooper Rd. Evaluate whether the CP for SUB427 could be ½ mile south along Lindsey Rd. Evaluate whether the CP for SUB428 could be 1/3 mile south along Gilbert Rd.

   ***DEA** – The sub-basin ID's have been modified since the October submittal. Sub-basins 421, 427 and 428 are now 422, 428 and 429, respectively. The concentration points for all sub-basins, including 422, 428 and 429 have been field verified and are shown on Exhibit A included in this submittal.*

4. Investigate whether SUB420 and a portion of SUB428 are non-contributing areas.

   ***DEA** – Former SUB420, now SUB421 (adjacent to the Consolidated Canal), is an existing landfill and is considered non-contributing. Other non-contributing areas, including SUB428, 429, were determined based on the volume provided within the sub-basins during the data collection work phase.*

Sincerely,

Copy

Frank Edward Brown, P.E., CFM
Project Manager

December 29, 2005

Ms. Kathryn Gross, M.A., CFM
Senior Hydrologist
Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ. 85009

RE: Phase 2 of the Chandler/Gilbert Floodplain Delineation Study

Dear Ms. Gross:

The following are comments and responses (in italics) regarding the above-referenced floodplain study from the City of Chandler's letter dated 12/22/2005 (Phase 3 comments will be addressed at a later date):

PHASE 2

1. The studies use a different datum than the City datum. Historically, the City's benchmarks have been used for floodplain studies and flood map revisions. Have any of the City benchmarks been checked for correlation to the study datum? In addition, the *Floodplain Delineation Cover Sheet* incorrectly states that the elevations are based upon NGVD29 and *Floodplain Delineation Work Map Sheet 4 of 7* incorrectly states the conversion factor of the elevations in the area.

DEA RESPONSE: *FCDMC will address correlation of City of Chandler benchmarks. Changed cover sheet to state the elevations are based on the NAVD88. The conversion factor on sheet 4 of 7 was checked by Tom Lute, Survey Discipline Leader, and Frank Brown P.E. Michael Duncan of FCDMC asked that the conversion factors be rounded to the tenth so the new conversion factor reads: NGVD29 = NAVD88 – 1.7'.*

2. It is unclear what the data date cutoff is for this study. We recognize that a date had to be used for data collection since this area is growing rapidly, however, here are some of the concerns we noted:
   a. The HEC-1 input data file indicates that land use is based upon an aerial flown in December, 2002. The *Floodplain Delineation Work Map* sheets state that the aerial was flown April, 2003.

DEA RESPONSE: *The Aerial photos from 12/02 were used for Land Use, but the Aerial photos from 4/03 was strip mapping used for delineation.*

   b. It does not appear that all the know retention was accounted for in the drainage area Retention Volume Worksheets. For example, drainage area 408 contains the subdivisions Pecos Aldea, Rio del Verde, and Arizona Estates. Pre-2000 as-builts and drainage reports state that 23.4 acre-feet of retention

was provided. The worksheet estimates 19.6 acre-feet for these areas. Drainage area 409 appears to mistakenly include some retention capacity from Arizona Estates. Drainage reports for Canyon Oaks Estates in this area show 6.6 acre-feet not in the flood zone versus the 2.7 shown in the worksheet. Since the Land Use Map accounts for the Canyon Oaks subdivision as medium density residential, it's retention of 3.3 acre-feet should be considered. These are a few of the discrepancies we noted in a very cursory review. We would suggest that your consultant contact Mr. Don Kirby at (480) 782-3128 or Mr. Jack Mikelson at (480) 782-3120 to review the existing drainage reports on file for the area subdivisions and check the existing retention basin volumes against the calculations.

DEA RESPONSE: *A request for all pertinent Drainage Reports within the City of Chandler was sent to Peter Jensen on February 11, 2004. We received the reports and then requested a few additional reports which were also received. For all other retention basins not in these reports the average depth method was used to calculate the volume of provided retention. The FCD may request Change Order to incorporate additional Report data. Phase 1 includes approximately 208 retention basins for a 36.8 sm watershed for an average of 8.1 retention basins per sm, Phase 2 includes approximately 212 retention basins for a 25.4 sm watershed for an average of 8.4 retention basins per sm, and Phase 3 includes approximately 268 retention basins for a 23.1 sm watershed for an average of 11.6 retention basins per sm . The scope called for 3 retention basins per sm.*

3. The binder worksheets showing the ponding areas do not coincide with the *Floodplain Delineation Work Maps*.

DEA RESPONSE: *The ponding worksheets within the binder show the limits of calculated volume not the actual ponding area. The ponding area would be within this limit of calculated volume.*

Sincerely,

Copy
Frank Edward Brown, P.E., CFM

October 5, 2004

Ms. Kathryn Gross, M.A., CFM
Maricopa County Flood Control District
2801 West Durango Street
Phoenix, Arizona 85009

RE: Phase 2 - Consolidated Canal Watershed Sub-basin Parameter and Flow Path Review – March 2004

Dear Kathryn:

This letter addresses your comments dated March 22, 2004 regarding the Phase 2, Consolidated Canal Watershed Sub-basin Parameters Submittal. DEA and PEC responses are in italics.

We have finished our review of the above submittal, and have the following comments. I am concerned about the amount of corrections needed on this submittal, especially with the land uses. Along with the sub-basins that Tami informed us about, we still found several more sub-basins in both DEA's and PEC's portions of the watershed with discrepancies. Most discrepancies were found simply by comparing the photo background with the reported landuses. Was a different photo base used to determine the land uses or was too much confidence placed on the District's MAG landuse coverage?

DEA & PEC: We were also surprised at the number of comments regarding the land uses. As you have suggested, indeed, too much confidence was placed on the Districts MAG landuse coverage. Again, we apologize for not catching the discrepancies before submitting. We assure you that this sort of oversight will not happen again. A very thorough QC has been performed on the landuse data and we are extremely confident in the accuracy of the data that is to be resubmitted.

There appears to be discrepancies in how schools, dairies, non-contributing areas, golf courses, and ponds and lakes are handled within the watershed. Also, it was noted that the Town of Gilbert offices (sub basin 313) were labeled as "School"; we have recommended listing them as "Commercial." If you feel that the "School" category is a better fit that will be fine as long as the report states what types of facilities were placed in the school category.

DEA & PEC: For consistency, school properties are categorized as SCHOOL. This includes the playground/open space areas, as well as the building and parking facilities on the property. The RTIMP and Vegetation Cover values within DDMSW have been customized per site.

Dairies are categorized as INDUSTRIAL. The RTMP values have been set to 45%, instead of the default value of 55%, to account for the larger areas of exposed ground.

Areas were determined to be Non-Contributing if the area was labeled as such in previous studies or have been determined to be Non-Contributing though field investigation.

Golf courses have been categorized as PARK. Ponds within the golf courses have been categorized as WATER. Lakes within Golf Courses or residential developments have been categorized as WATER, not Non-Contributing.

Areas labeled as PARK, other than golf courses, are municipal parks or large multi-purpose retention basins. Relatively large retention basins within residential areas are labeled OPEN, with customized DTHETA condition values set to Normal, Vegetative Cover values set to 30%, and IA values set to 0.20. These values mimic the Desert Landscaping Land Use Category listed in Table 4.2 of the Drainage Design Manual for Maricopa County, Arizona, Hydrology.

Review Comments from Julie Cox

I have completed a hydrologic review of the March 8, 2004 submittal. My comments and questions are listed below and reference specific exhibits and DDMSW files. Based on development reviews, aerial photos, and field visits, I recommend the following changes. I will be glad to meet with the consultants to discuss my recommendations. "Field verify" refers to the consultants, not FCDMC.

Exhibit A – Drainage Area Boundary Map – North/300 (PEC)

1. Index Map – Change "Lindsey" to "Lindsay".
2. Label the Consolidated Canal.
3. Legend – Change "SUB BASIN" to SUB-BASIN".
4. SUB 303 – Move elevation 1260 so the sub-basin ID number does not obscure it.

Exhibit B – Drainage Flow Path Map – North/300 (PEC)

1. Index Map – Change "Lindsey" to "Lindsay".
2. West of SUB 301 (also SUB 313) – Change "Lindsey" to "Lindsay".
3. SUB 304 - The consultant should field verify the flow path. A flow path from the NEC to the SWC of SUB 304 may be more appropriate.
4. SUB 305 – The consultant should field verify the flow path. A flow path from the *NEC to the SWC of the east half of SUB 305 may be more appropriate.*
5. SUB 313 – The consultant should field verify the flow path. A flow path through the MDR, then north to Warner Rd, then west to the Consolidated Canal may be more appropriate.
6. SUB 315 – The consultant should field verify the flow path. A flow path from the SEC to the NWC of SUB 315 may be more appropriate.

Exhibit C – Soils Map – North/300 (PEC)

1. Change "Lindsey" to "Lindsay".

Exhibit D – Land Use Map – North/300 (PEC)

1. Change "Lindsey" to "Lindsay".
2. Increase the font size and move sub-basin ID numbers 305, 307, 310, 311, and 312 so they are legible.
3. SUB 304 – Label SCHOOL in SUB 304.
4. SUB 305 – Label WATER in SUB 305.
5. SUB 305 – Field verify. It appears that the NWC of SUB 305 is OPEN rather than ROWCROP.
6. SUB 305 – Freestone Park extends further north than is shown on the map. Modify the park boundary to include the additional area.
7. SUB 310 – Label both Gilbert High School and Mesquite Elementary School as SCHOOL.
8. SUB 311 – Field verify. It appears that the east corner of SUB 311 is MDR rather than LDR.
9. SUB 312 – Field verify. It appears that SUB 312 is MDR with the exception of the PARK (Western Skies Golf Club), and a small commercial property in the NWC of the sub-basin.
10. SUB 312 – Within the Western Skies Golf Club, add 3 ponds and label as WATER.
11. SUB 313 – Field verify. It appears that the areas labeled OPEN are COMMERCIAL.
12. SUB 313 – Field verify. It appears that the area labeled SCHOOL is COMMERCIAL.
13. SUB 314 – Field verify. It appears that the area labeled OPEN is COMMERCIAL.

Exhibit B – Drainage Flow Path Map - Sheet 1 of 2 (South/400/DEA)

1. Legend – Change "SUB BASIN" to SUB-BASIN".

   DEA: Addressed.

2. Bold labels for the Eastern Canal, Consolidated Canal, streets, and the Santan Freeway. Enlarge font if necessary so the labels are legible.

   DEA: Addressed.

3. Below the FCDMC label, add "Phase 2 – South, Consolidated Canal Watershed" to be consistent with previous submittals.

   DEA: Addressed.

4. SUB 402 – The consultant should field verify the flow path. A flow path through the development may be more appropriate.

DEA: A possible flow path through the residential development was considered, but determined to be unreasonable after field verification. Any flow entering the residential area is captured in retention facilities within the residential area. No direct flow path could be determined that would convey flow directly from the most upstream NEC of sub-basin 402, an agricultural field, through the residential development, to the SWC concentration point. Also, as a general rule, off-site flow is routed around developments, as was assumed in Phase 1. Therefore, the flow path depicted on Exhibit B was determined to be the most appropriate.

5. SUB 404 – The consultant should field verify the flow path. A flow path from the SEC, through the development, to the NWC of SUB 404 may be more appropriate.

   DEA: Due to the extreme flatness of this area, determining the highest, furthest elevation point from the concentration point can be as good as a guess without detailed mapping. Based on the topographic information available, it was determined that the NEC was the highest, furthest elevation point from the concentration point for Sub-basin 404. As stated in response 4, offsite flow is generally routed around residential developments when a direct flow path can not be determined through the development. Therefore, the flow path depicted on Exhibit B was determined to be the most appropriate.

<u>Exhibit B – Drainage Flow Path Map - Sheet 2 of 2 (South/400/DEA)</u>

1. Legend – Change "SUB BASIN" to "SUB-BASIN".

   DEA: Addressed.

2. Bold labels for the Eastern Canal, Consolidated Canal, and streets. Enlarge font if necessary so the labels are legible.

   DEA: Addressed.

3. Below the FCDMC label, add "Phase 2 – South, Consolidated Canal Watershed" to be consistent with previous submittals.

   DEA: Addressed.

4. SUB 417 – The consultant should field verify the flow path. A flow path from the NEC, through the agricultural fields, to the NWC of SUB 417 may be more appropriate.

   DEA: Due to the extreme flatness of this area, determining flow paths can be as good as a guess without detailed mapping. Tailwater ditches along the downstream end of the field generally intercept runoff generated within agricultural fields, and there is no direct conveyance from one field to another. In

this case, based on the topographic information available, it was determined that the NEC was the highest, furthest elevation point from the concentration point and the flow path depicted on Exhibit B is reasonable.

5. SUB 428 – Verify location of concentration point.

   DEA: The residential development visible on the aerial photos within Sub-basin 428 is Sun Groves, Phase 1. The Drainage Report for Sun Groves Infrastructure Phase 1 was obtained from the City of Chandler. The drainage report states that the ultimate outfall for Phase 1 is located at the NEC of Doral Drive and Lindsay Road, the ½ mile mark along Lindsay, between Riggs Road and Hunt Highway. Therefore, the concentration point for Sub-basin 428 has been moved to this location and the flow path length and low elevation adjusted accordingly.

6. SUB 429 – Verify location of concentration point.

   DEA: The residential development and golf course visible on the aerial photo within Sub-basin 429 is Springfield Lakes. The Drainage Report for Springfield Lakes Golf Course and Mass Grading Plans and Riggs Road improvements was obtained from the City of Chandler. The flow path and concentration point location shown for Sub-basin 429 was derived from this drainage report. Therefore, the concentration point location is correct.

7. *SUB 431 – Verify location of concentration point.*

   DEA: Sub-basin 431 was determined to be non-contributing, except for a small portion at the southwest corner. The retention provided within the residential and golf course area is sufficient enough to store the entire for the 100-year runoff within this area. Therefore, the non-contributing are has been removed from the HEC-1 model. The area at the southwest corner that is contributing was included in Sub-basin 432.

8. SUB 432 – The consultant should field verify the flow path. A flow path through the development may be more appropriate.

   DEA: The residential are was determined to be non-contributing due to the provided retention. The flow path for sub-basin 432 has been revised to reflect this condition.

Exhibit C – Soils Map – South/400 (DEA)

1. East-west labels are upside down. Reverse the labels to be consistent with previous submittals.

   DEA: Addressed.

2. Orient yourself with the north arrow, then rotate the sub-basin ID and soil type labels 90 degrees counterclockwise, from 3 o'clock to 12 o'clock, to be consistent with previous submittals.

   DEA: Addressed.

3. Move street labels (Chandler Heights, Queen Creek, Germann, and Pecos) so they do not obscure soil type labels.

   DEA: Addressed.

4. Increase font size and bold sub-basin ID numbers.

   DEA: Addressed.

5. Change "Santan Freeway" to "Proposed Santan Freeway" to be consistent with previous submittals. Move freeway label south so it is within the freeway corridor.

   DEA: Addressed.

6. Sub-basin ID numbers 400, 403, 404, 405, 407, and 428 are missing from the map. Add these labels.

   DEA: Addressed.

7. Legend – Change "SUB BASIN" to "SUB-BASIN"

   DEA: Addressed.

Exhibit D – Land Use Map – South/400 (DEA)

1. Same as Exhibit C, Item 1.

   DEA: Addressed.

2. Same as Exhibit C, Item 2.

   DEA: Addressed.

3. Move the street labels (Cooper, Ocotillo, Lindsay, and Ray) so they are legible.

   DEA: Addressed.

4. Same as Exhibit C, Item 4.

   DEA: Addressed.

5. Same as Exhibit C, Item 5.

   DEA: Addressed.

6. Increase thickness of sub-basin boundaries so they are not confused with land use boundaries.

   DEA: Addressed.

7. Move sub-basin ID numbers 400, 403, 406, 407, 422, 424, and 428 so they are legible. Consider increasing the font size if it makes the numbers more legible.

   DEA: Addressed.

8. Same as Exhibit C, Item 7.

   DEA: Addressed.

Comments 9 – 25 have been addressed. The appropriate land use designations have been assigned to each area.

*

9. SUB 400 – Field verify. It appears that portions of the areas labeled OPEN are MDR.
10. SUB 402 – Field verify. It appears that the center of the sub-basin is not OPEN. Show appropriate land use.
11. SUB 403 – Field verify. It appears that portions of the areas labeled OPEN are MDR.
12. SUB 404 – Field verify. It appears that the NWC of the sub-basin is not MDR. Show appropriate land use.
13. SUB 405 – Field verify. It appears that the area labeled LDR is MDR.
14. SUB 406 – Field verify. It appears that the center of the sub-basin labeled IND is a SCHOOL.
15. SUB 406 – Field verify. It appears that the center of the sub-basin labeled OPEN is a SCHOOL.
16. SUB 406 – Field verify. It appears that a major portion of the area labeled IND is the Chandler-Gilbert Community College. Label as a SCHOOL.
17. SUB 406 – Add the appropriate land use for the two shapes with no land use shown.
18. SUB 408 – Field verify. It appears that the area labeled ROWCROP is MDR.
19. SUB 409 – Field verify. It appears that the area labeled ROWCROP is MDR.
20. SUB 413 – Field verify. It appears that most of the area labeled ROWCROP is MDR.

21. SUB 413 – Field verify. It appears that the NWC of the sub-basin is OPEN rather than ROWCROP.
22. SUB 414 – Field verify. It appears that portions of the area labeled ROWCROP are OPEN.
23. SUB 414 – Field verify. It appears that the western of the two areas labeled OPEN is ROWCROP.
24. SUB 419 – Field verify. It appears that the area labeled MDR is IND (dairy).
25. SUB 419 – Field verify. It appears that the SEC of the sub-basin is IND rather than ROWCROP.

*

26. SUB 419 – Field verify. It appears that the area labeled LDR may be MDR.

DEA: The residential are shown on the aerial photo within Sub-basin 419 is Whitewing at Krueger. According to the Final Plat of Whitewing at Krueger, obtained from the Maricopa County Recorder website, the average lot size for this development is 19,599 ft^2. Therefore, the area is labeled LDR.

27. SUB 420 – Field verify. It appears that the area labeled LDR is MDR.

DEA: The area was changed to MDR. According to the Maricopa County parcel data, the SWC of Sub-basin 420 is intended for commercial development. Therefore, this area is labeled COMM.

28. SUB 421 – Since the entire sub-basin is non-contributing area, remove the sub-basin ID 421 and do not include sub-basin parameters, routing, etc in the model for this area.

DEA: Parameters for this Sub-basin were removed from the DDMSW data base.

29. SUB 422 – Only 3 of 5 ponds were labeled as non-contributing. The consultant should show all 5 ponds.

DEA: All 5 ponds are labeled Non-Contributing.

Comments 30 – 37 have been addressed. The appropriate land use designations have been assigned to each area.

*

30. SUB 422 – Field verify. It appears that the area labeled OPEN is MDR.
31. SUB 423 – Field verify. It appears that the NEC of SUB 423 is MDR rather than OPEN.
32. SUB 423 – Field verify. It appears that the ROWCROP east of the dairy is MDR.

33. SUB 423 – Field verify the MDR land use or identify a land use for the existing palm farm.
34. SUB 423 – Field verify. It appears that a portion of the MDR (on Chandler Heights Road) is SCHOOL.
35. SUB 424 – Field verify. It appears that 75% of the area labeled ROWCROP is MDR.
36. SUB 425 – Field verify. It appears that the NEC of SUB 425 is LDR rather than OPEN.
37. SUB 425 – Field verify. It appears that the NWC of SUB 425 is VLDR rather than MDR.

*

38. SUB 426 – Field verify. It appears that the SEC of SUB 426 (Riggs Country Estates) is either LDR or MDR.

DEA: The residential are shown on the aerial photo within Sub-basin 426 is Riggs Country Estates. According to the Final Plat of Riggs Country Estates, obtained from the Maricopa County Recorder website, all Lot sizes are 18,000 ft^2 or greater. Therefore, the area is labeled LDR.

Comments 39 – 49 have been addressed. The appropriate land use designations have been assigned to each area.

*

39. SUB 427 – Field verify. It appears that most of the area labeled LDR is MDR.
40. SUB 428 – Field verify. It appears that the NWC of SUB 428 is OPEN rather than ROWCROP.
41. SUB 428 – Change unknown symbol in the top center of SUB 428 to MDR symbol.
42. SUB 428 – Field verify. It appears that the area labeled OPEN is MDR.
43. SUB 429 – Be consistent when labeling golf courses. Within SUB 431, the golf courses are labeled PARK. Within SUB 429, label the Lone Tree Golf Club as PARK.
44. SUB 429 – Within the Lone Tree Golf Club, add ponds and label as WATER.
45. SUB 429 – Field verify. It appears that both the NEC and the NWC of SUB 429 are OPEN rather than ROWCROP.
46. SUB 429 – It appears that the southern area labeled ROWCROP is MDR.
47. SUB 430 – Field verify. It appears that the area labeled OPEN is PARK, and should be moved south to the appropriate location.
48. SUB 430 – Label SCHOOL in SUB 430.
49. SUB 431 – Within the Springfield and Sunbird Golf Resorts, add ponds and label as WATER.

*

50. SUB 431 – It appears that this sub-basin could be split into two sub-basins, east and west. The flow paths may differ, and may outfall in different directions.

DEA: The north half of Sub-basin 431 was determined to be non-contributing due to the provided retention within the sub-division and was removed from the HEC-1 model.

51. SUB 432 – It appears that the area labeled ROWCROP will be MDR.

DEA: Addressed.

DDMSW Parameters

1. Change parameters based on above comments.

DEA: Addressed.

2. Change default parameters to custom values as appropriate. For example RTIMP for schools is typically 30 to 70%. Why did the consultant use RTIMP = 5% for all schools?

DEA: Addressed.

3. I agree with the point rainfall specified, i.e. 3.45 inches for a 100-yr 24-hr event, and 3.0 inches for a 100-yr 6-hr event.

DEA: Delighted that we are in agreement.

Based on our responses listed above, all of your comments should be addressed. If you should have any questions or need additional information regarding the above comments, please feel free to contact me at 602.678-5151.

Sincerely,

Copy

Tami Norton, E.I.T., CFM
Water Resources Designer

CC: Teri George, P.E., CFM
Project Manager

July 13, 2005

Ms. Kathryn Gross, M.A., CFM
Maricopa County Flood Control District
2801 West Durango Street
Phoenix, Arizona 85009

RE: Phase 2 - Consolidated Canal Watershed Hydrology and Storage Relationship Review
October 2004 Submittal

Dear Kathryn:

This letter addresses your comments dated February 4, 2005 regarding the Phase 2, Consolidated Canal Watershed Hydrology and Storage Relationship submittal. DEA and PEC responses are in italics.

We have finished our review of the October 2004 submittal and have the following comments. Comments are organized into General Discussion, comments from myself, and comments from Julie Cox.

General Discussion

The following are some general concerns and observations regarding the submittal.

1. DDMSW files: Verify the DDMSW projects reflect the study name and area.

DEA & PEC: OK.

2. HEC-1 models: Verify the hydrology models reflect the study name and area.

DEA & PEC: OK.

3. DSS files: Only one DSS file should be run with the models. It is CGFDS.DSS. All the 24-hr and 6-hr hydrographs are contained in this file. All phases will use this DSS file. To remove the K.DSS issue the model should be run outside of DDMSW with the CGFDS.DSS file. If this poses a problem please contact me so that we can work out an alternative method.

DEA & PEC: Will call CGFDSp2.dss for both the north and south.

4. Concentrated flow differences between the Northern modeling and Southern modeling. The 400 concentration points have flows more in the range that was expected. The 300 concentration points typically have concentrated flows of almost 200-400 cfs higher in some locations. The areas appear to be mostly developed. Could retention be verified in both watersheds? This could lead to expanded floodplain limits.

DEA & PEC: Phase 2 North consists entirely of developed areas, whereas Phase 2 South has some areas of undeveloped agriculture. For developed areas the unit area discharge should be higher (before retention diversion). Therefore, flows in the North area should result in higher concentrated flows than flows in the South.

5. Please make sure that KO 3 are added to all ponds and pond diversion records to aid in the understanding of how flow volumes are being distributed.

DEA & PEC: KO cards were added to all Ponds and Pond diversion records.

6. The draft floodplain delineation work maps and the draft TDN should be included with the next submittal. Three sets of the TDN should be provided so that we can allow the Town of Gilbert and the City of Chandler to review the methods and results.

DEA: As discussed with Kathryn, 3 copies of the work maps and analysis are being submitted. It was found during Phase 1 that Chandler and Gilbert did not review the TDN. Work maps and, if needed for clarification, the analysis was what Chandler and Gilbert reviewed.

7. With the next submittal the District will start its coordination efforts with the Town of Gilbert and City of Chandler to determine what subdivisions are proposed and how far in the process they are to determine their impact on our study. Presently only one area is known where additional coordination is needed and some model modifications may be necessary (Pond 432).

DEA: Santan Vista was incorporated into the HEC-1 modeling. The Land use type was changed from ROWCROP to MDR, and the P432 storage data reflects the new retention basin that is in place. The TDN will include a detailed write-up of the sub-basin in the special problems section.

<u>Review Comments from Kathryn Gross</u>

1. Regarding sub basins 410, 411, and 412, the concentration points for these sub basins all occur along the San Tan alignment but are not incorporated in the San Tan drainage. In Phase 1 the sub basins south of the San Tan Freeway were incorporated into the San Tan drainage. Is there documentation that ADOT is not going to accept flows along the freeway in this area?

DEA: The lastest plan and profile sheets for this section of the Santan Freeway and it's drainage facilities were provided by J2 Engineering, the consultant for ADOT. These sheets follow the Initial Drainage Report concepts for the Santan Freeway. Attached are the plan and profile sheets for this section. These plan and profile sheets will be included for reference in the TDN.

2. Pond 416. Consider routing flows from 416 to 415 and revising the 415 ponding area to include the area of pond 416. Pond 416 presently has a peak volume of 0 acre-feet and spills 10 cfs over the canal.

DEA: Flow from CP416 is routed to CP415. P416 and P415 have been combined and labeled P415 in the HEC-1.

3. Could the 427 concentration point be shifted to the original GCFIS concentration point along the canal?

DEA: Sub-basin 427 has been developed since the previous study. The subdivision, Paseo Crossings, has provided compensatory storage along the Consolidated Canal. According to the canal bank survey and the current grading, the low point, CP427, is located as shown on Exhibits A and B..

4. Regarding Pond 432, the subdivision San Tan Vista is in the process of submitting its CLOMR and has already begun grading. It may be necessary to use the grading from their plan to update the storage relationship and cite their FEMA Case number so that we are not mapping protected properties back into the floodplain.

DEA: The storage relationship has been updated to reflect the SanTan Vista Unit 3 Floodplain Volume Computations report.

5. On PEC's schematic, Are the "to306" and "304306" labels in the right place?

PEC: The labels are in the right places.

6. On PEC's ponding documentation spreadsheet. It does not appear the stationing used in the cross-sections matches the stationing used on the Limit of Calculated Volume maps. Please verify.

PEC: Spreadsheet was revised.

Model Review Comments from Julie Cox

I have completed a hydrologic review of the DDMSW data, HEC-1 models, spreadsheets, Exhibits A-E, and DEA's response letter to the initial Phase 2 comments. My comments and questions are listed below. I will be glad to meet with the consultants to discuss my recommendations.

The comments are divided into DEA, South, 400 sub-basins and PEC, North, 300 sub-basins. Comments pertaining to the DEA portions are first, and are followed by comments pertaining to the PEC portions.

DEA/South/400 sub-basins

1. The electronic copies of both the 6-hr and 24-hr models did not run. There are floating point errors that need to be fixed in order to generate model output.

DEA: Fixed

2. Both the 6-hr and 24-hr models have error messages "Too many hydrographs. Combine more often." Combine and add dummy diverts as necessary to eliminate the hanging hydrographs.

DEA: Combined Hydrographs.

3. The 6-hr DDMSW defaulted to 1.5 hrs for 21 of the 34 sub-basins. Kb values appear to be inappropriate. Change Kb to Min for Commercial, Industrial, Residential, Park, Golf Course, etc. land uses. Change Kb to Low for agricultural land uses.

DEA: Changed.

4. The 24-hr DDMSW defaulted to 1.5 hrs for 17 of the 34 sub-basins. Kb values appear to be inappropriate. Change Kb to Min for Commercial, Industrial, Residential, Park, Golf Course, etc. land uses. Change Kb to Low for agricultural land uses.

DEA: Changed.

5. Both the 6-hr and 24-hr models have caution messages "data block not found in file", for 207, 212, 219, 237, 238, and 227. Explain and make revisions as necessary.

DEA: DSS file issue. Revised.

6. Both the 6-hr and 24-hr models have warning messages, "modified puls routing unstable". P406, P409, and P420 are outside of the range; however, P416 is within the range. Explain and make revisions as necessary.

DEA: The warning messages are caused by the geometry of the routing channel cross sections. An abrupt change on the cross section (i.e. The channel wall suddenly becomes nearly vertical or nearly horizontal, etc.) may make it difficult for HEC-1 to find an appropriate stage for a certain flow. Most likely, this would not affect the modeling results. We checked our HEC-1 outputs. They appear reasonable.

7. The 24-hr model has a warning message "Excess at ponding less than zero for period. Excess set to zero." Explain and make revisions as necessary.

DEA: This warning occurs for Sub-basin 400. All sub-basin data was verified, and no errors were found. No explanation for this particular warning was found. Possibly has something to do with high PSIF value for this sub-basin.

8. The 24-hr DDMSW shows velocities of 31.63, 22.09, and 16.26 fps for sub-basins 402, 424, and 432. Explain and make revisions as necessary.

DEA: Revised

9. For PB Region 1, change PB to 2.862.

DEA: Changed to 2.86.

10. For PB Region 3, change ID record on first page to 2.832.

DEA: Changed to 2.83.

11. Investigate whether the Rodeo Park portion of sub-basin 400 is non-contributing.

DEA: Confirmed non-contributing by site visit.

12. For the KK block CP401, change the HC record from 4 to 3.

DEA: Changed

13. For the KK block CP402, change the HC record from 3 to 4.

DEA: Due to revised model HC record is now 3.

14. For P406 in the 6-hr model, move the SV record 37.46 so it is aligned properly.

DEA: Changed

15. Check routes for inappropriate routing times and revise NSTPS as necessary to achieve reasonable results, i.e. 403404, 403401, 212407, 410411, 219413, 413414, 417418, 238418, and 422423.

DEA: The n-steps are calculated based on a velocity 3.5 ft/sec, as agreed upon during scoping. No n-steps were changed.

16. For route 406409, add FLOW and –1 to columns 2 and 3 of the RS record, for both the 6-hr and 24-hr models.

DEA: Added.

17. Add route 416415 to both the 6-hr and 24-hr models.

DEA: Not needed. Pond to pond dumping

18. There are several peak flows of zero, i.e. 400, 400401, to402, D400, D400R, FRM400, 400402, 405, 405406, 420, 427, D427, to433 that appear to result from large sub-basin retention volumes. The retention volumes appear high for sub-basins 400, 405, 413, 420, and 427. Please check and revise input as necessary.

    - 400 – 74 ac-ft – 0.56 sq mi
    - 405 – 58 ac-ft – 0.53 sq mi
    - 413 – 53 ac-ft – 0.34 sq mi
    - 420 – 47 ac-ft – 0.50 sq mi

- 427 – 24 ac-ft – 0.32 sq mi

DEA: Retention volumes were calculated based on the average depth method discussed, reviewed and agreed upon by the District. Sub-division drainage report volumes were used when drainage reports were available. Additional explanation and supporting documentation will be provided in the TDN.

19. Based on the "Retention Volumes Spreadsheet", add retention for sub-basins 413 (52.3 af) and 424 (16.6 af) to both the 6-hr and 24-hr models.

DEA: Our intial HEC-1 run included sub-basin 413, which resulted in zero runoff from the sub-basin. This is due to the large amount of retention volume available within the sub-basin, which is in excess of the 100-yr, 24-hr volume. Therefore, Sub-basin 413 is non-contributing.

As noted in the Retention Volumes Spreadsheet, the retention for 424 is part of P433.

20. Please submit documentation for retention, i.e. maps with basin footprints.

DEA: Documentation will be provided with TDN submittal. GIS data was provided to Kathryn on 5/20/05 for review. Kathryn approved the methodology on 6/1/05. See attached email correspondence.

21. D404 and D408 are on the Intersection Analysis spreadsheet but are not included in either the 6-hr or 24-hr model. Add diversions to both models.

DEA: D408 removed from spreadsheet. D404 added to both models.

22. For KK block D427, change DI/DQ records to from 1000 to 10,000.

DEA: Not necessary, but done as requested.

23. For both the 6-hr and 24-hr model input data, revise the KM records associated with the KK blocks as listed below:

    - CP401 – combine 400401, 403401, SUB401

    DEA: Due to revised model CP401 combines D400R, 403401, SUB401, and 404401.

    - CP402 – combine SUB402, 400402, 401402, 404402

    DEA: Due to revised model CP402 combines 400402, 401402, SUB402.

    - CP406 – combine SUB406, 402406, 405406

    DEA: Due to revised model SUB406 was divided into two sub-basins so combinations are a little different than requested.

    - CP415 – combine SUB415, 416415, 414415

    DEA: Due to revised model CP415 combines SUB415, SUB416, 414415

- CP418 – combine SUB418, P415, 417418, P420, 238418

DEA: Revised

24. Pond relationships were reviewed and appear reasonable.

25. I suggest combining P424 and P433. The retention system is part of the same subdivision, and there is excess volume in P433 that P424 can connect to.

DEA: Combined.

26. A comparison of the ponds (see Summary of HEC-1 Ponding Results) for both the 6-hr and 24-hr models shows that the maximum stage for the 6-hr models should be used to map the floodplain for P402, P406, P412, and P416.

DEA: As with Phase 1, the storm that resulted in higher values for peak Q on average for a PB region was selected for Floodplain mapping.

27. P409 Data Table – Change legend in weir section from 6-hr to 24-hr WSEL.

DEA: Revised.

28. P412 Data Table – Change legend in weir section from 24-hr to 6-hr WSEL, change WSEL to 1231.32', and change roadway discharge from 140 cfs to 148 cfs.

DEA: As with Phase 1, the storm that resulted in higher values for peak Q on average for a PB region was selected for Floodplain mapping. Due to revised model the WSEL is 1232.21' and the discharge is 176 cfs.

29. P415 Data Table – Change WSEL to 1230.77'.

DEA: Changed to 1230.58' due to revised model.

30. P416 Data Table – Change WSEL to 1229.65'.

DEA: P416 was removed and is now combined with P415.

31. P420 Data Table – Change WSEL to 1228.58'.

DEA: Changed to 1228.63' due to revised model.

32. P427 Data Table – At 1223 ft, change Q canal from 3951 to 3851 cfs.

DEA: Revised.

33. P427 Data Table – Add legend to the graph.

DEA: Revised.

34. P432 Data Table – At 1219 ft, change Q railroad bridge from 155.92 to 227.91 cfs.

DEA: Revised.

35. P432 Data Table – Add WSEL of 1218.38' to the graph.

DEA: Due to revised model the WSEL is now 1212.56'.

36. P433 Data Table – Add WSEL of 1220.66' to the graph.

DEA: Due to revised model the WSEL is now 1204.03'.

37. Eleven of the sub-basins on the Drainage Flow Path Map (Exhibit B) have no flow path shown and/or a partial flow path shown. Please revise the flow paths for sub-basins 401, 406, 407, 409, 417, 420, 422, 423, 424, 426, and 427.

DEA: Flow paths for all sub-basins are now shown on the Exhibit.

38. Add symbol for concentration point 433 to Exhibit B.

DEA: Revised.

39. Add retention symbols for sub-basins 413 and 424 to the HEC-1 Schematic (Exhibit E).

DEA: As explained for comment #19, Sub-basin 413 was determined to be non-contributing, and therefore not included in the HEC-1 model. The retention calculations for this sub-basin are included in the spreadsheet for reference. Volume is not diverted out of sub-basin 424 because is included in P433 storage relationship.

40. Add route symbol for 416415 to Exhibit E.

DEA: No routing due to revisions made to model based on comment #2 by Kathryn.

41. Please submit canal profiles to document the locations of canal breakouts.

DEA: Out of scope. Weir cross sections show profiles of canal and station where breakout will occur.

42. Please submit data to verify that portions of sub-basins 413, 428, 431, and 432 are non-contributing areas.

DEA: As explained in comment #19, Sub-basin 413 was determined to be non-contributing. The initial HEC-1 run included the entire areas for sub-basins 428, 431 and 432. These sub-basin all have residential areas located near the upstream side of the sub-basin. The retention volume provided in these sub-basins was excess 100-yr, 24-hr volume, giving zero runoff for the sub-basin. This was not a realistic result, as runoff from areas downstream of the sub-divisions cannot get to the retention facilities within the residential areas. Therefore, the residential areas were removed from the Sub-basin data and labeled non-contributing.

43. Diversions were reviewed and appear reasonable.

44. Add the diversion CON409 to the HEC-1 Schematic (Exhibit E).

DEA: Added.

45. For both the 6-hr and 24-hr models, add KK blocks for DSS416 and DSS424 to retrieve CON416 and CON424.

DEA: Added.

46. The DI and DQ records are identical for the diversions D406 and D409. Check and revise DI/DQ records for D409.

DEA: Revised.

47. Currently, the 24-hr model output shows the peak flow and time to peak incorrectly for the retrieval of CON409. The peak flow should be 113 cfs and the time to peak should be 13.92 hrs. Within the KK block for DSS409, change the DR record to CON409.

DEA: Revised.

48. The 24-hr model input data has a KK block named DSS420. Change this to DSS418.

DEA: Revised.

49. Both the 6-hr and 24-hr model input data have KK blocks named DSS418 and DSS427. Please change the associated KM records from "Retrieve hydrograph for overflow from sub-basin 412" to the appropriate sub-basin 418 and 427.

DEA: Revised.

50. Add table for unit discharge (cfs/sq mi) at the sub-basin prior to retention.

DEA: Added.

51. Provide regional equation envelope curves with the results plotted to verify all of the analyses. Use DDMSW's Hydrology Graphing Feature for Unit Discharge. Graphs should include USGS, Boughton, and Malvick envelope curves. Include in the TDN and discuss results, particularly any outliers. Typically, 100-yr results should plot below Boughton, slightly below USGS, and at or higher than Malvick.

DEA: Provided. The results are within the typical range for the Boughton and USGS curves. The results plot generally below the Malvick curve due to flat slopes within the watershed and the retention diversions.

52. The land use symbols used for Exhibit D are different for Phase 2 South and Phase 2 North. Evaluate using other symbols so the symbols for Phase 2 South and Phase 2 North are identical.

DEA: All symbols are the same.

53. There appear to be both reprographics and paper quality issues with Phase 2 South. Please have the consultant submit all exhibits on the same paper used for Exhibit B (paper quality). Exhibit D, in particular, has land use symbols that are so faint they are barely legible. I am concerned that copies will be illegible, particularly for the IND, LDR, MDR, MFR, non-contributing, and PARK land uses (reprographics). Note that Phase 3 South used the same land use symbols but the Phase 3 South Exhibit D is legible.

DEA: All exhibits are printed on the same paper used for Exhibit B.

54. Please ensure that the land use symbols are the same for Phases 1, 2, and 3.

DEA: They are now consistent.

PEC/North/300 sub-basins

1. PEC DDMSW sub-basin parameters appear reasonable.

2. Both the PEC 100-yr 6-hr and 100-yr 24-hr models run.

3. There are no error messages in either the 6-hr or 24-hr models.

4. Run both the 6-hr and 24-hr models with an IO of 3, or use KO cards like DEA did for Phase 2 South.

PEC: OK.

5. Both the 6-hr and 24-hr models have warning messages, "modified puls routing unstable". Discharges for some routes (302304, 302SOU, 304306) are outside of the range; however, 309307 is within the range. Check all warning messages, explain and make revisions as necessary.

PEC: The warning messages are caused by the geometry of the routing channel cross sections. An abrupt change on the cross section (i.e. The channel wall suddenly becomes nearly vertical or nearly horizontal, etc.) may make it difficult for HEC-1 to find an appropriate stage for a certain flow. Most likely, this would not affect the modeling results. We checked our HEC-1 outputs. They appear reasonable.

6. For route 309307, the NSTP of 2 is inappropriate, i.e. 4.42 hours to travel 1320 ft. I suggest changing NSTPS to 5.

PEC: OK.

7. Check route lengths for routes 303305, 315314, 314316, CAN309, and 114309 to ensure correct route lengths are used.

PEC: Checked and corrected.

8. Both the 6-hr and 24-hr models have numerous caution messages "data block not found in file". Explain and make revisions as necessary.

PEC: When we try to retrieve a hydrograph from a DSS file, this message appears. The reason is not clear yet. It may be because of the compatibility of the DSS format and the version of the HEC-1 program. We checked the hydrographs before and after being retrieved by HEC-1. The hydrographs were the same in both instances.

9. Each of the 6-hr and 24-hr models has 3 warning messages "RD TIMS MISSING FLOW". Explain and make revisions as necessary.

PEC: See above.

10. For the DT record 316RET in both the 6-hr and 24-hr models, change from 11.69 to 18.82 ac-ft, based on the "Retention Diversion Calculations Spreadsheet".

PEC: The total retention volume is 20+ AF for SB316. But there is 10+ AF is located in the potential ponding area. We use the rest of the retention volume on HEC-1 for the "retention diversion".

11. "Retention Diversion Calculations Spreadsheet" - Change the total retention for sub-basin 316 from 23.12 to 18.82 ac-ft.

PEC: Will be changed to 11.69.

12. "Retention Diversion Calculations Spreadsheet" – Add documentation for 32.78 ac-ft retention for sub-basin 310 which is in both the 6-hr and 24-hr models.

PEC: OK.

13. Please submit documentation for retention, i.e. maps with basin footprints.

PEC: OK.

14. "Summary of HEC-1 Ponding Results Spreadsheet". Correct the maximum stage for P301 and P314. Correct the time of maximum stage for P301 and P305. Correct peak inflow for P305. Correct the time to peak outflow for P313.

PEC: OK.

15. For P305, the Data Table shows SE is 1242.72 ft, but both the 6-hr and 24-hr models show SE is 1243.72 ft. Revise as necessary.

PEC: OK.

16. For P311, the Data Table shows SV is 11.60 ac-ft, but both the 6-hr and 24-hr models show SV is 11.66 ac-ft. Revise as necessary.

PEC: OK.

17. On Exhibit B (Drainage Flow Path Map), move the Gilbert Road label ½ mile west to Gilbert Road.

PEC: OK.

18. Please submit canal profiles to document the locations of canal breakouts.

PEC: Out of scope. Weir cross sections show profiles of canal and station where breakout will occur.

19. Add table for unit discharge (cfs/sq mi) at the sub-basin prior to retention.

PEC: OK.

20. Provide regional equation envelope curves with the results plotted to verify all of the analyses. Use DDMSW's Hydrology Graphing Feature for Unit Discharge. Graphs should include USGS, Boughton, and Malvick envelope curves. Include in the TDN and discuss results, particularly any outliers. Typically, 100-yr results should plot below Boughton, slightly below USGS, and at or higher than Malvick.

PEC: OK.

Sincerely,

Tami Norton, E.I.T, CFM
Project Engineer

Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, Arizona 85009-6399
(602) 506-1501
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1/1

DATE: May 6, 2003

MEMO TO: Teri George, P.E.

FROM: Kathryn Gross KAG

SUBJECT: April 10 2003 Consolidated Canal Field Notes

The following are the notes I attempted to take as we drove along Consolidated Canal:

1. Consolidated Canal South of Ray Road: small tailwater ditch approx 4 ft wide. Half a mile south of Ray the tailwater ditch ends and an east-west wall (no openings) continues all the way to the canal right-of-way. This most likely will act as a barrier and a potential pond location.

2. Consolidated Canal South of Cooper: retention basin along canal for a church.

3. Consolidated Canal South of Pecos: beginning of the Paseo Project; linear retention basin along the canal associated with the Canyon Oaks development. At the freeway alignment the floodplain widens again across agricultural fields.

4. Consolidated Canal and Germann: Chandler airport. retention basins, runway, and potentially some hangars within the floodplain.

5. Consolidated Canal and Queen Creek: elevated embankment at the canal and roadway. This is the landfill site. Flows delineated down McQueen road in current FIS. Canal no longer concrete lined starting at the landfill.

6. Consolidated Canal and Ocotillo: linear basin along canal.

7. Consolidated Canal north of Riggs: Rockwood and Paseo Crossing with linear basins along canal.

8. Consolidated Canal south of Riggs: no floodplain present until half a mile to the south. Did not note if location is presently under development or agricultural fields.

9. Railroad and Hunt Highway: ponding area located within platted subdivision San Tan Vista. There is a channel along the south side of Hunt Highway that drains to the northeast corner of Hunt Highway and the railroad by means of a culvert at the railroad crossing.

10. Consolidated Canal between the Railroad and Hunt Highway: small ditch by this point, no real embankment. Flows appear to be able to enter the canal freely.

B.5 Contract Documents

EXHIBIT A

SCOPE OF WORK

CONTRACT 2002C023

Chandler/Gilbert Floodplain Delineation Study

EXHIBIT A

SCOPE OF WORK

CONTRACT FCD 2002C023

Chandler/Gilbert Floodplain Delineation Study

GENERAL

The floodplain delineation re-study consists of approximately eleven (11) linear miles along Eastern Canal between Baseline Road and Hunt Highway; approximately eleven (11) linear miles along Consolidated Canal between Baseline Road and Hunt Highway; approximately six (6) linear miles along the Southern Pacific Railroad (SPRR) between US 60 and the Roosevelt Water Conservation District Canal (RWCD); approximately twelve (12) linear miles along the Southern Pacific Railroad (SPRR) between US 60 and Hunt Highway; and approximately six (6) linear miles along the raised portion of State Route 87 between US 60 and Hunt Highway.

The project consists of topographic mapping, development of the 100-year hydrology for the 6- and 24-hour rainfall events, and the delineation of the 100-year floodplains along the canals and railroads located within unincorporated Maricopa County as well as the City of Chandler, Town of Gilbert, and City of Mesa. The CONSULTANT shall also include the proposed San Tan Freeway in the base model. The watershed encompasses approximately ninety-five (95) square miles and consists of approximately forty-six (46) total linear miles of floodplain delineations. The limits of the project are as shown on attached Exhibit A1. For this study the CONSULTANT will develop all the necessary topographic data to delineate the floodplain. In order to do the watershed modeling required for this study, the CONSULTANT may have to develop additional topographic data outside the area being delineated. The CONSULTANT will develop the hydrology for the contributing watershed using the U.S. Army Corps of Engineer's HEC -1 computer model, and the floodplain delineations using their HEC-RAS computer model. The CONSULTANT must use sound engineering judgement in the development of the hydrologic and hydraulic models. The CONSULTANT must analyze the results of the models carefully and make refinements to the input parameters in order to obtain the most realistic results. All work must meet Arizona Department of Water Resources (ADWR) and Federal Emergency Management Agency (FEMA) requirements for floodplain delineations. Prior to the finalization of this contract, FEMA and the DISTRICT must review and accept the results of this study, and all items called for in this Scope of Work must be delivered to the DISTRICT.

All work must be completed within nine hundred ten (910) days from the Notice to Proceed (NTP). The FEMA submittal package must be completed within five hundred fifty (550) days (which includes at least one hundred twenty (120) days for DISTRICT reviews). The remaining three hundred sixty (360) days is allotted for obtaining FEMA approval, and the completion of those tasks called for after FEMA approval is obtained.

TASK 1 - COORDINATION

1.1 Within fourteen (14) days of the NTP, the CONSULTANT will submit a project schedule to the DISTRICT's Project Manager showing coordination meetings and completion dates for each task identified in the scope of work (SOW). The CONSULTANT will update this project schedule when appropriate.

1.2 The CONSULTANT will participate in regular coordination meetings (at least every four [4] weeks) with the DISTRICT's Project Manager and in milestone coordination meetings in the development of the hydrologic and hydraulic analyses. The CONSULTANT is responsible for the minutes of any meetings. Coordination and milestone meetings should be combined whenever possible.

1.3 The CONSULTANT will submit an estimate of the monthly billing within fourteen (14) days of the NTP. Thereafter, this estimate will be updated and submitted to the DISTRICT's project manager at least ten (10) days before the end of each quarter.

1.4 The CONSULTANT will submit monthly progress reports at least five (5) days before submittal of monthly invoices. The report shall be brief and should be no longer than two (2) typed pages. At a minimum, the monthly report shall contain the following:

a. A description of the work accomplished by task during the reporting month.
b. Percent (%) completed for the month and percent (%) cumulative completed for each task.
c. A brief description of the work to be accomplished in the month following, and
d. A description of any problems encountered.

1.5 The DISTRICT is responsible for placing the legal advertising at the beginning of the study and of notifying the public of the study. The advertisement will be run in a widely circulated newspaper twice, with approximately one (1) week between runs. The advertisement will also run twice in a local newspaper that serves the area being studied. After the newspapers run the advertisement, the DISTRICT will supply the CONSULTANT with the original affidavit of publication from each newspaper for each day that the advertisement ran for placement in the TDN.

1.6 The DISTRICT will notify property-owners by mail to obtain any necessary Rights-of-Entry at the request of the CONSULTANT within the study area. The DISTRICT will provide the CONSULTANT with a list of all the property owners notified and a copy of the Rights-of-Entry letter.

1.7 The CONSULTANT will meet with officials from the DISTRICT, the cities, the county and state transportation departments. The purpose of this meeting is to identify local flooding problems and obtain information on current and planned public works projects, channel modifications, storm-drainage systems, development, and corporate limits.

1.8 The DISTRICT will prepare and mail a project flyer to individuals within the existing floodplain. This flyer will be mailed to announce the beginning of the study and inform them of its purpose and scope.

1.9 The CONSULTANT will attend five (5) public meetings in conjunction with this study. The meetings will be to inform the public and obtain public comment on the study results and shall take place prior to the submittal of the final report to FEMA. The DISTRICT will be responsible for the preparation of the graphic displays for these meetings. At least one (1) representative from the CONSULTANT will attend each of the meetings. The CONSULTANT will respond to the public's comments and make revisions to the study if necessary.

1.10 CONSULTANT/DISTRICT Performance Evaluations will be performed. An informal evaluation will be performed at the completion of the hydrologic analysis. A formal evaluation will be performed at the completion of the project upon receipt of all deliverables.

TASK 2 - DATA COLLECTION

2.1 The CONSULTANT will collect and review pertinent data from the DISTRICT and other outside sources. Data to be collected will include previous flood hazard reports and hydrology for the study area; existing topographic mapping; historical flooding information; as-built plans for existing structures; FEMA Flood Hazard Boundary Maps and any Letters of Map Amendment and/or Revisions, and other pertinent information. The DISTRICT will provide the CONSULTANT with any pertinent data from the DISTRICT's GIS database for use in the analysis.

2.2 A data collection summary will be submitted to the DISTRICT for information purposes. A preliminary draft is due within one hundred twenty (120) days of the NTP. The final will be included in Appendix A of the Technical Data Notebook.

TASK 3 - TOPOGRAPHIC MAPPING

3.1 The CONSULTANT as part of this contract shall retain an aerial survey subcontractor. The CONSULTANT will coordinate all the aerial surveying work with the aerial surveying subcontractor to ensure that the specifications of the aerial surveying work are met. The CONSULTANT is responsible for ensuring that the topographic mapping completely covers the area of delineation. The accuracy of the mapping and quality control on surveys will be per FEMA's Guidelines and Specifications for Flood Hazard Mapping Partners, February 2002.

3.2 Digital contour and planimetric data for this study will be developed and delivered according to the DISTRICT's C.A.D.D. Data Delivery Specifications Rev. 1.0 January 2000.

3.3 The aerial survey subcontractor will fly the entire watershed (approximately 96 sq. mi.) bounded by US 60 on the north, Hunt Highway on the south, Arizona Avenue on the west and the RWCD canal on the east using aerial GPS methods. *(See Exhibit A2.)*

3.4 The aerial survey subcontractor shall use a Digital Terrain Model to develop topographic mapping with a contour interval of two (2) feet, and horizontal scale of one (1) inch = 200 feet, with spot elevations for the strips identified along the Eastern Canal, Consolidated Canal, the NW-SE trending SPRR between US 60 and the RWCD Canal, and the SPRR/Arizona Ave corridor (see Exhibit A2). Along with the DTM, the planimetrics to be provided for the mapped area are roadways, culverts, building footprints (greater than 1,000 sq. ft.), canals, and railroads.

3.5 Ground Control:

a. Survey control will be on the Arizona Coordinate System Central Zone 1983 North American Datum (NAD), horizontally; and the North American Vertical Datum 1988 (NAVD 88), vertically.

b. The CONSULTANT shall systematically set panel points and establish horizontal and vertical control throughout the areas to be mapped for use in compilation by the aerial survey contractor. Field control will be sufficient to readily allow for compilation of maps by the aerial survey contractor at the desired map scale and contour interval, and will be based on the North American Vertical Datum 1988 (NAVD 88). The CONSULTANT will provide a conversion factor to the National Geodetic Vertical Datum 1929 (NGVD 29), including documentation of how it was derived, to allow comparison of NAVD 88 elevations to NGVD 29 elevations. The documentation on the conversion factor will be included in the Technical Data Notebook.

c. The horizontal and vertical control points shall be located and marked by the CONSULTANT. The controls for the aerial mapping will be in sufficient numbers and will be in locations that will be compatible with the accuracy of the mapping requirements. Section corners, quarter corners, mid-section points, and GDACS points will be used for control points wherever possible.

d. In addition to the aerial targets required for the photogrammetry, additional "blind" aerial targets shall be set, spaced uniformly throughout the project area, and both horizontal and vertical values established. The number of additional aerial targets will be **one per linear mile of reach to be mapped.** The AERIAL MAPPING SUBCONTRACTOR will not be provided with the surveyed elevations and coordinates at these additional targets. The AERIAL MAPPING SUBCONTRACTOR shall provide, to the DISTRICT, the elevation and coordinates of these blind targets, with one hundred percent (100%) of the points meeting the accuracy requirements established in FEMA's Guidelines and Specifications for Flood Hazard Mapping Partners, February 2002 for the required project accuracy prior to proceeding with the topographic mapping.

e. All aerial target materials are to be removed following completion of the topographic mapping. The actual markers will be set flush and be of a permanent nature.

f. Where applicable, control points from surrounding studies will be incorporated into the ground control for the existing study.

TASK 4 - FIELD SURVEY

4.1 The CONSULTANT will prepare topographic mapping with a contour interval of two (2) feet and a horizontal scale of one (1) inch = 200 feet, with spot elevations on all section line and mid-section line roads, for all floodplain/floodway delineation areas.

4.2 Ground Control for Floodplain Delineations:

4.2.1 All topographic mapping and survey work will meet or exceed current FEMA minimum criteria as defined in FEMA's Guidelines and Specifications for Flood Hazard Mapping Partners, February 2002. This includes, but is not limited to: the establishment of "permanent" elevation reference marks (ERMs); field control; and verification of profiles by the ground survey profile procedure.

4.2.2 Obtain GDACS points and use data to establish ERMS.

4.2.3 Horizontal and Vertical Control: Systematically set panel points and establish horizontal and vertical control throughout the area to be mapped for use in compilation by the aerial survey contractor. Field control shall be sufficient, at least one (1) "permanent" point per mile, such point(s) being used as Elevation Reference Marks (ERMs). Surveys will be based on the North American Vertical Datum of 1988 (NAVD 88), per FEMA guidelines. The CONSULTANT will provide a conversion factor, including documentation of how it was derived, to allow comparison of NAVD 88 elevations to National Geodetic Vertical Datum of 1929 (NGVD 29) elevations. The documentation on the conversion factor will be included in the Technical Data Notebook. "Permanent" survey points will consist of existing monuments, such as brass caps or similar survey monuments. Where additional monuments are needed, survey markers conforming to Maricopa Association of Governments (MAG) Uniform Standard Detail for Public Works Construction, detail 120-1, Type C, shall be placed two (2) inches +/- above grade, and topped with a brass cap.

Elevation Reference Marks will be labeled on available maps and described so that they can be easily located in the field.

4.2.4 All aerial target materials are to be removed following completion of the topographic mapping. The actual markers will be set flush and be of a permanent nature.

4.3 The CONSULTANT shall verify the accuracy of the mapping by the procedures called for in FEMA's Guidelines and Specifications for Flood Hazard Mapping Partners or other methods approved by FEMA. This shall include the verification of cross sections used in the floodplain delineation.

4.4 Field surveys of bridges, culverts, and hydraulic structures are to be obtained by the CONSULTANT when as-built plans are not available or when changes significant to the HEC-RAS modeling, such as sedimentation, have occurred since the date of the as-built plan. This information should be reduced and compiled into an 11"x 17" (maximum size) drawing for inclusion in the final report. The information presented in the drawing should be in a format appropriate for use in the HEC-RAS model. Field surveys of bridges, culverts, hydraulic structures, and routing reaches must also be obtained where necessary for proper hydrologic modeling. It may be necessary to field survey some structures since the as-built plans may not be on the same datum as the study.

4.4.1 **OPTIONAL ITEM** – The CONSULTANT may be authorized to survey additional structures or roadways if field investigations identify more structures than the original task authorizes (50 structures) or if modifications to certain structures and roadways require re-survey for proper hydraulic analysis. **This OPTIONAL TASK is not authorized with the Notice to Proceed; it may be authorized in writing by the DISTRICT based upon specific need as determined by the DISTRICT during the contract period.**

4.5 Additional road/canal and road/railroad profiles and cross-section work supporting the delineations will be conducted by GPS RTK methods and will meet or exceed the technical requirements of the aerial mapping.

4.6 Copies of the survey field books and office calculations must be included in the Technical Data Notebooks. If DISTRICT approval is obtained, this information can be submitted separately.

TASK 5 - HYDROLOGY

5.1 The hydrologic study of the watershed will be delivered to the DISTRICT under separate cover from the hydraulic analysis. The CONSULTANT shall use the U.S. Army Corps of Engineers computer program HEC-1, 1997 Version 4.1 to develop a hydrologic model for the area. The latest version of the DISTRICT's DDMSW software should be used to develop subbasin and routing parameters. Using appropriate hydrologic judgement, sub-basins are to be identified that provide reasonable depiction of the watershed condition. The sub-basins must be as homogeneous as possible, using watershed area, watershed type (mountainous and flat lands or urban and undeveloped areas), and time of concentration as criteria. Sub-basin break-downs will be done in sufficient detail to provide peak discharges at structures, major road crossings, confluences, and any other control feature located along the canals and railroads being studied. An appropriate time step and number of ordinates is to be selected that allows for complete calculation of the flood hydrograph without sacrificing resolution of the flood peak.

5.1.1 The peak discharges for the 100-year 6- and 24-hour storms will be developed.

5.1.2 The base hydrology model will be developed as if the San Tan Freeway is in place.

5.2 The Drainage Design Manual for Maricopa County, Volume I, Hydrology, Revision January 1995 shall be used. A computer program, DDMSW, may also be used in conjunction with the manual. The specific hydrologic techniques to be used in this study are:

a. Rainfall Depth: Point precipitation values will be determined using the information and procedures described in the Drainage Design Manual for Maricopa County, Volume I, Hydrology (1995).

b. Rainfall Distribution: Peak discharges and peak volumes for the 100- year 6-hour storm will be estimated using the DISTRICT's Distribution(s). Peak discharges and peak volumes for the 100-year 24-hour storm will be estimated using the SCS Type II rainfall distribution.

c. Areal Reduction: The point precipitation values will be areally reduced for critical concentration areas. Modifications to the original methodologies (Areal reduction for the 6-hour rainfall duration will be applied using the curves in the Drainage Design Manual for Maricopa County, Volume I, Hydrology (1995). NOAA HYDRO-40 will be used with the 24-hour rainfall reduction) will be necessary due to watershed constraints. The modified methods will need to be approved by the DISTRICT prior to application in the modeling.

d. Rainfall Excess: The Green and Ampt methodology will be used for estimating the rainfall losses.

e. Unit Hydrograph: The Clark and S-Graph method should be used following the procedures outlined in the Drainage Design Manual for Maricopa County, Volume I, Hydrology (1995). The choices in methodology will be to the discretion of the CONSULTANT, with consent from the DISTRICT.

f. Time of Concentration and S-Graph Lag Equation: The Papadakis method should be used with the Clark unit hydrograph, along with the DDMSW computer program, to determine the time of concentration. If this method results in unsuitable times of concentration, other method(s) must be used and compared for the most realistic result. The S-graph lag equation, along with the DDMSW computer program, should be used with the appropriate S-graph (Phoenix mountain or Phoenix Valley).

g. Channel Routing: Channel routing will be accomplished using the methods in the Drainage Design Manual for Maricopa County, Volume I, Hydrology (1995). The choice of methodology will be at the discretion of the CONSULTANT, with consent from the DISTRICT. Average cross sections will be developed using the available mapping and field reconnaissance data. Sufficient field cross sections will be taken to ensure that routing reaches are reasonable and representative of field conditions. The HEC-1 routing parameters for the reaches modeled using HEC-RAS will be adjusted after the HEC-RAS cross sections are available. The resulting velocities and depths, for all reaches, must be assessed for realistic values.

h. Reservoir Routing: Detailed analysis of structures and ponding areas will be accomplished using the Modified Puls reservoir routing option of HEC-1. Stage versus discharge tables for hydraulic structures will be estimated using appropriate hydraulic methodology.

5.3 The DISTRICT will provide appropriate references to facilitate parameter estimation.

5.4 The CONSULTANT shall clearly identify and incorporate appropriate comments in the hydrologic model.

5.5 The CONSULTANT shall include all inflows into the watershed in and along Eastern Canal, Consolidated Canal, the UPRR, and the outflow from Heritage Park on the north side of US 60. The DISTRICT will provide DSS files to the CONSULTANT for incorporation into their models.

5.6 Retention volume shall be accounted for in the modeling.

5.6.1 The CONSULTANT shall identify and survey, using rough methods, up to three major retention basins per subbasin (approx 1 sq. mi.). The method of survey to be used is rod and hand level. No detailed survey is required.

5.6.2 Retention volume shall be modeled using diversion records.

5.6.3 Basin efficiency shall be taken into consideration when determining volume to be modeled and the potential for flow passing the inlets.

5.7 **OPTIONAL TASK** - Significant storm drain systems between subbasins shall be modeled using diversion records. Diversion discharges will be based on simple pipe capacity calculations at controlling sections of the storm drain at or above the subbasin outlet. **This OPTIONAL TASK is not authorized with the Notice to Proceed; it may be authorized in writing by the DISTRICT based upon specific need as determined by the DISTRICT during the contract period.**

5.8 Major Street intersection diversions will be developed using slope-area methods. Areas will be derived from typical street sections. Slopes will be derived from the ten (10) foot topography provided to the CONSULTANT from the DISTRICT.

5.9 The CONSULTANT shall identify and model all hydraulic controls along the canals and railroads within the study area. The location of all control points will be identified on a map and submitted to the DISTRICT for approval.

5.10 Stage/Storage/Discharge relationships will need to be developed at all critical locations along the canals and railroads. Detailed analysis of structures and ponding areas shall be accomplished using the Modified Puls reservoir routing option within HEC-1. Stage/Storage/Discharge tables for hydraulic structures shall be estimated using appropriate hydraulic methodologies approved by the DISTRICT.

5.10.1 The existing canal elevation shall be used when developing the Stage/Storage/Discharge relationships.

5.10.2 The canal will be assumed to be operating at full capacity.

5.10.3 Openings, such as railroad trestles, should be included in the storage relationship.

5.10.4 Any flows in excess of the Stage/Storage/Discharge relationship at the canals and railroads shall be diverted either into the next westerly subbasin or out of the model.

5.11 **OPTIONAL TASK** - If the analysis warrants the CONSULTANT shall incorporate the canal routing/capacity information for use with the ponding overflows. The routing and capacity information will be taken directly from the original Gilbert-Chandler FIS models. The DISTRICT will provide the canal information locations to the CONSULTANT. **This OPTIONAL TASK is**

not authorized with the Notice to Proceed; it may be authorized in writing by the DISTRICT based upon specific need as determined by the DISTRICT during the contract period.

5.12 All calculations, or assumptions used in developing sub-basin and routing parameters shall be documented and made a part of the appendix for the hydrology report. Field surveys may need to be taken for HEC-1 modeling purposes.

5.13 Output of the computer model must be reviewed to see if the peak flows and volumes are realistic. Adjustments to input for obtaining the most realistic results are normal to the scope.

5.14 Every attempt must be made to recover historic stream gage and flooding data, and use it to compare with the results obtained by the hydrologic model. Where gage data is unavailable, the CONSULTANT shall compare the study results to the results of adjacent studies. Major differences must be discussed in the final report.

5.15 The CONSULTANT is required to obtain the approval of the DISTRICT at each of the following steps:

a. Subbasin boundaries
b. Soil maps, watershed boundary maps, land use maps and HEC-1 parameter estimation
c. HEC-1 flow diagram and input parameters
b. Locations of hydraulic barriers
c. HEC-1 results

5.16 The CONSULTANT will attend two (2) field trips with DISTRICT staff. One (1) field trip at the start of the project to scope out the critical points of the watershed and problem areas and the second field trip may be scheduled at the end of the modeling for verification of the results.

5.17 The CONSULTANT shall meet with the DISTRICT as necessary to discuss critical modeling issues and to address review comments. These meetings are to be combined with progress meetings when possible.

5.18 The Hydrologic Report

5.18.1 The findings of the hydrologic study will be presented in Section 3 of the Technical Data Notebook and will be prepared in accordance with ADWR State Standards Attachment 1-97 (SSA 1-97). The report will be organized as specified by the DISTRICT, following SSA 1-97 format.

5.18.2 Tables and Figures for the appendices:

a. Topographic base map(s) showing the sub-basins, routing reaches, Tc flow paths or lag flow paths, major man-made structures, and references (i.e., street names, Township, Range, Section, etc.) at a scale of one (1) inch = 2000 feet.
b. Soils map(s) at the same scale as the base map (with References).
c. Land use map(s) at the same scale as above (with References).
d. Schematic map for the HEC-1 showing the topography, sub-basins (area, Tc), the flow paths, the routing reaches (length, slope, friction, width, velocities, transmission losses, etc.), order of combining the hydrographs, channel, pipe or culvert dimensions (where

appropriate). On the final version of the HEC-1 schematic include peak discharges at major concentration points.

e. Pertinent data on all the structures in the watershed (such as spillway elevation, rating curves, etc.).

f. One set of study maps (i.e., sub-basin boundary maps, flow path maps, soils maps, land use maps) to be folded and delivered in a binder.

5.19 Hydrology CADD submittal. It is recommended that the Hydrology CADD deliverables be submitted to the DISTRICT when the Hydrology Report is approved. The line work used to develop the hydrology maps should be the basis, if not the same, for the CADD deliverables. Specific hydrology deliverables are listed in Task 7.

5.20 Specific deviations from this hydrologic scope shall not be undertaken without the specific written concurrence from the DISTRICT.

TASK 6 - FLOODPLAIN DELINEATION

6.1 Floodplain delineations must be obtained using the U.S. Army Corps of Engineers latest release of HEC-RAS and methodology acceptable to FEMA. The CONSULTANT will prepare the study using the guidelines established in FEMA's Guidelines and Specifications for Flood Hazard Mapping Partners, February 2002, and FIA Document 12, Appeals, Revisions, and Amendments to Flood Insurance Maps, December 1993.

6.2 The delineation work shall meet requirements for floodplain delineations as prescribed by FEMA and the Arizona Department of Water Resources.

6.3 The delineation study shall be based on the final results of the hydrologic study as directed by the DISTRICT.

6.4 The CONSULTANT is to make refinements to both the HEC-1 and HEC-RAS models based on review of the model results by the DISTRICT, ADWR, FEMA, and FEMA's Technical Evaluation Contractor. The CONSULTANT shall review the HEC-1 and HEC-RAS model results for reasonableness. Adjustments to the input parameters for obtaining the most realistic results are normal to the scope.

6.5 Ponding areas identified as floodplains shall be analyzed using the HEC-1 model and the CONSULTANT shall provide the DISTRICT with the water surface elevations for these ponding areas and identify them as Zone AH.

6.6 If appropriate, the CONSULTANT will delineate up to 14 miles of conveyance areas between the ponding areas with water surface elevations, BFE's and identify these delineations as Zone AE. **OPTIONAL** -- The CONSULTANT may be authorized to delineate an additional 14 miles if the hydrology warrants. Authorization of this Optional Task will also allow the concurrent release of funds to support the review of this additional data (Task 6.7). **This OPTIONAL TASK is not authorized with the Notice to Proceed; it may be authorized in writing by the DISTRICT based upon specific need as determined by the DISTRICT during the contract period.**

6.6.2 Field Reconnaissance

6.6.2.1 The CONSULTANT will conduct a field reconnaissance of the full study reach. This will include observation of channel and floodplain conditions for estimating Manning's "n" values; photographic documentation of floodplain characteristics; determination of channel bank stations; observation of possible overflow areas; inspection of levees or other flood control structures; and measurement of bridge dimensions.

6.6.2.2 Manning's "n" values are to be determined using the methodology in the USGS report, Estimated Manning's Roughness Coefficients for Stream Channels and Flood Plains in Maricopa County, Arizona, April 1991. Copies of the report are available through the DISTRICT.

6.6.2.3 A draft report on the field reconnaissance will be submitted to the DISTRICT for review and approval prior to beginning the HEC-RAS modeling. The report will present the determination of channel and overbank "n" values using captioned color photographs or color photocopies. The report will also discuss floodplain conditions affecting the delineation, describe structures and obstructions, and provide color photos or photocopies of major hydraulic structures. Photo locations, structures, and "n" values will be displayed on reduced scale mapping and included in the Final Report.

6.6.3 Cross Sections

6.6.3.1 The location and alignment of cross sections and channel centerline will be submitted for the DISTRICT's review and approval before digitizing the cross section data. Cross section stationing will be from left to right looking downstream with the thalweg as station 10,000. Cross sections will be spaced approximately every five hundred (500) feet, unless geographic or structural constraints dictate otherwise, and will extend the full width of the area inundated by 100-year floodwaters. Identification of cross sections will be in river miles, increasing upstream. The stationing will tie into the specified river mile of the existing FEMA studies. The cross section may need to be reoriented or altered after running the HEC-RAS model to ensure that they are perpendicular to flow per FEMA criteria. Cross sections developed by the HEC-RAS interpolation feature are not to be used.

6.6.3.2 All cross-section plots will show water surface profiles, ineffective flow areas, "n" values, encroachments, channel stationing and other pertinent information. All plots are to be accompanied by a legend. These plots should be available at all reviews.

6.6.4 Bridges and culverts must be modeled according to HEC-RAS modeling requirements for the selected routine. Where multiple bridges occur, each bridge will be modeled separately.

6.6.5 Side weirs will be modeled in HEC-RAS where the hydraulics indicates water surface elevations are above the canal bank. The results will be input back into the hydrology model.

6.7 The CONSULTANT must obtain DISTRICT approval at each of the following steps:

a. Ponded floodplain delineation.
b. Field reconnaissance report and estimation of Manning's "n" values for conveyance corridors.
c. Alignment of the cross sections and channel centerline for conveyance corridors.
d. Conveyance corridor floodplain delineation.

If the Optional Task of 6.6 is authorized, additional approvals as shown in Task 6.7 will be necessary. **This OPTIONAL TASK is not authorized with the Notice to Proceed; it may be authorized in writing by the DISTRICT based upon specific need as determined by the DISTRICT during the contract period.**

6.8 Flood zones must be determined according to FEMA criteria and clearly labeled on the final drawings.

6.9 The findings of the floodplain delineation study will be presented in Section 4 of the Technical Data Notebook and will be prepared in accordance with ADWR State Standards Attachment 1-97 (SSA 1-97). The report will be organized as specified by the DISTRICT standards, following SSA 1-97 format.

6.10 The CONSULTANT shall fill out all the forms required by FEMA for the submittal of a Floodplain Delineation Study.

6.11 Hydraulics CADD submittal. It is recommended that the Hydraulics CADD deliverables be submitted to the DISTRICT when Section 4 of the TDN is approved. The line work used to develop the floodplain workmaps should be the basis, if not the same, for the CADD deliverables. Specific hydraulics deliverables are listed in Task 7.

TASK 7 – DIGITAL DATA

7.1 Digital data shall be delivered in a CADD standard binary DXF format from either AutoCAD or MicroStation outlined in the DISTRICT's "CADD Data Delivery Specifications Rev 1.0 January 2000" and will be prepared in conformance with the above standards. The following themes are generally used for the data developed for Floodplain Delineation Studies. However, for this study there may not be data for every theme identified here, or the CONSULTANT might develop data for themes not listed here. Therefore, only those themes for which there is data need to be completed. If the CONSULTANT has data that does not fit one of the themes listed here, the DISTRICT's Project Manager shall be contacted to determine the appropriate theme for that data.

a. NDXPRJ (FCD Project Map Index)
b. PRJ (Project Boundaries)
c. CARTO (Cartographic Features) (separate submittals for Mapping and Flood Delineation)
d. CORNERS (if any)
e. CTRL (Miscellaneous Control Survey Points)
f. LNDUSECUR and LNDUSEFUT (Current and future Land Use, if not provided by the DISTRICT)
g. STRCT (Structure)
h. DQ (Data Quality)

i. PRJ (Project Identification)
j. FPCTLFCD (FCD Reference Marks)
k. FPSRFFCD (Floodplain FCD Water Surface Elevation)
l. FPXFCD (Floodplain FCD Cross Section)
m. FPZNFCD (Floodplain FCD Zone)
n. FPBLN (Floodplain Baseline Route System)
o. CNL (Canal System, if any)
p. RR (Railroad System, if any)
q. STRTDTL (Street Detail)
r. ELV (Elevation (Land))
s. SOIL (Soil Type Area, if not provided by FCD)
t. DRNBSN (Drainage Sub-basin Area)
u. CULVERTS (if any)
v. PRJDAT (project identification)
w. DRNPTH (Drainage Path)
x. LAKE (if any)
y. RIVER (if any)

TASK 8 - DELIVERABLES

8.1 Prior to FEMA Submittal: The CONSULTANT will deliver the following items to the DISTRICT before delivering the FEMA submittal package:

8.1.1 Copies of the Original Affidavits of Publication of the legal advertisements to be included in the Technical Data Notebook.

8.1.2 One (1) complete set of 9" X 9" contact prints of the aerial stereo photographs sequentially numbered and catalogued. **An exhibit showing the flight path shall also be included.**

8.1.3 All topographic and related data for the DISTRICT's Hydrologic Information System that is not subject to change during FEMA's review should be submitted at this time. The Digital Terrain Model and related data should also be submitted at this time.

8.1.4 If bound separately from the Technical Data Notebook, three (3) copies of the field survey notes and office calculations.

8.2 Submittal to Local Jurisdictions: Once the DISTRICT has approved the preliminary Technical Data Notebook the CONSULTANT shall provide copies to the local jurisdiction for their review and comments. The CONSULTANT shall address the comments from the local jurisdictions through the DISTRICT.

8.3 FEMA Submittal: The CONSULTANT will submit the following items to the DISTRICT for review by FEMA and any other appropriate governmental agency. All of the following products are considered deliverables for the FEMA submittal:

8.3.1 Two (2) complete sets of blackline topographic base maps with the floodplain delineations shown. All drawings will be signed and sealed by persons of appropriate professional registration(s). Each registrant will provide a specific statement as to what service they performed.

8.3.2 Two (2) complete copies of the Technical Data Notebook, including HEC-1 and HEC-RAS input/output files on cd. The Technical Data Notebook will be prepared in accordance with ADWR State Standards Attachment 1-97 (SSA 1-97). The notebook will be organized as specified by the DISTRICT, following SSA 1-97 format.

8.3.3 Two (2) copies of the current FIRM panels showing the proposed delineation.

8.4 Final Submittal: The following products are considered deliverables for the final submittal to the DISTRICT after FEMA approval is issued:

8.4.1 One (1) complete set of mylars and four (4) complete sets of sealed blackline topographic base maps with the floodplain delineations shown. All drawings will be signed and sealed by persons of appropriate professional registration(s). Each registrant will provide a specific statement as to what service they performed.

8.4.2 All remaining hydrologic and floodplain delineation data in conformance with the DISTRICT's HIS Specifications.

8.4.3 Four (4) complete copies of the Technical Data Notebook including HEC-1 and HEC-RAS input/output files on cd. The Technical Data Notebook will be prepared in accordance with ADWR State Standards Attachment 1-97 (SSA 1-97). The notebook will be organized as specified by the DISTRICT, following SSA 1-97 format. This submittal of the Technical Data Notebook shall include any correspondence and/or meeting minutes with the reviewing agencies and shall reflect any revisions required by those reviewing agencies. Revisions may include, but are not limited to, modifications to the delineation maps, the HEC-1 model, the HEC-RAS model, and/or the Final Report.

8.4.4 Four (4) sets of cds containing the complete TDN submittal in pdf format.

EXHIBIT A1
CHANDLER/GILBERT FLOODPLAIN DELINEATION STUDY

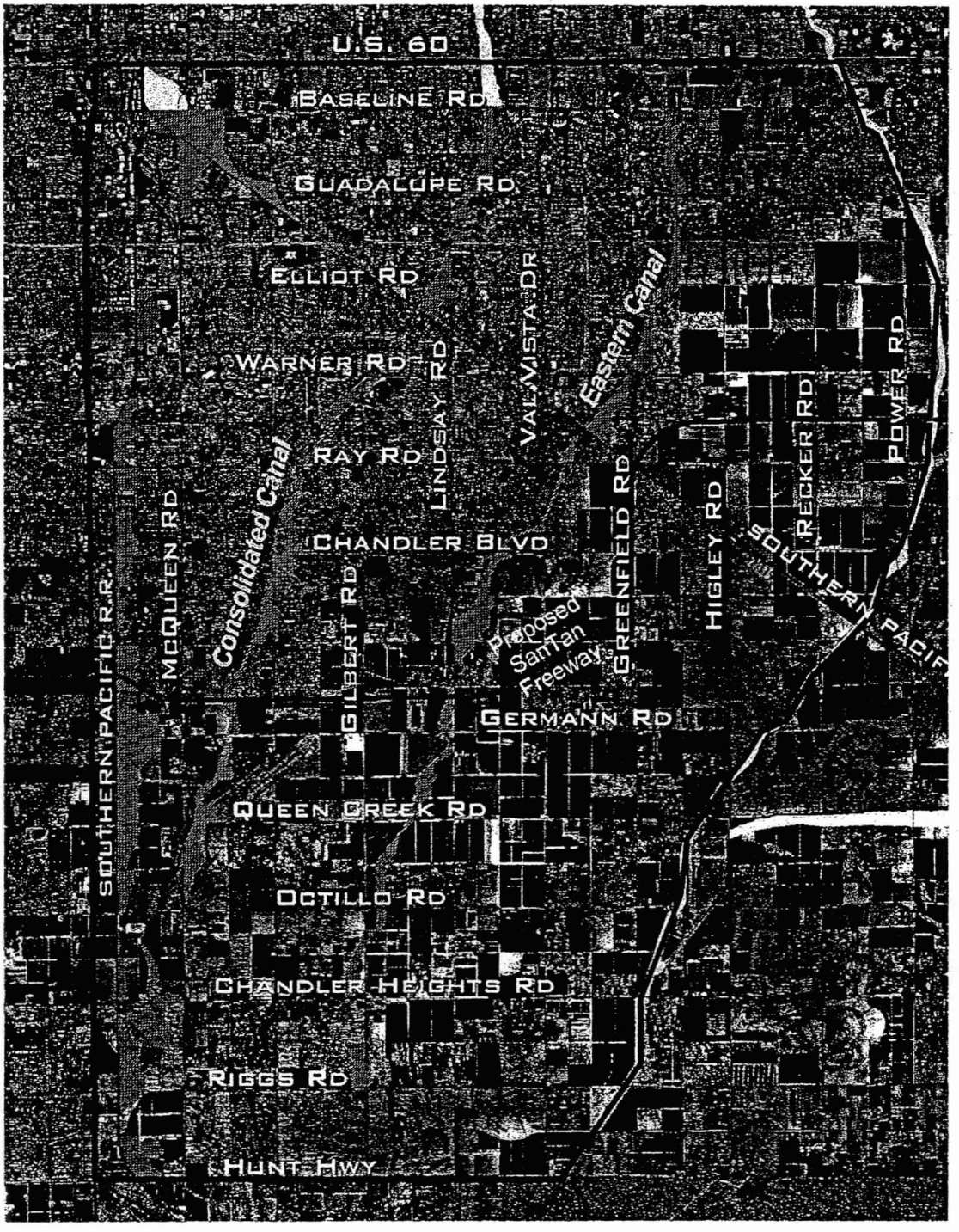
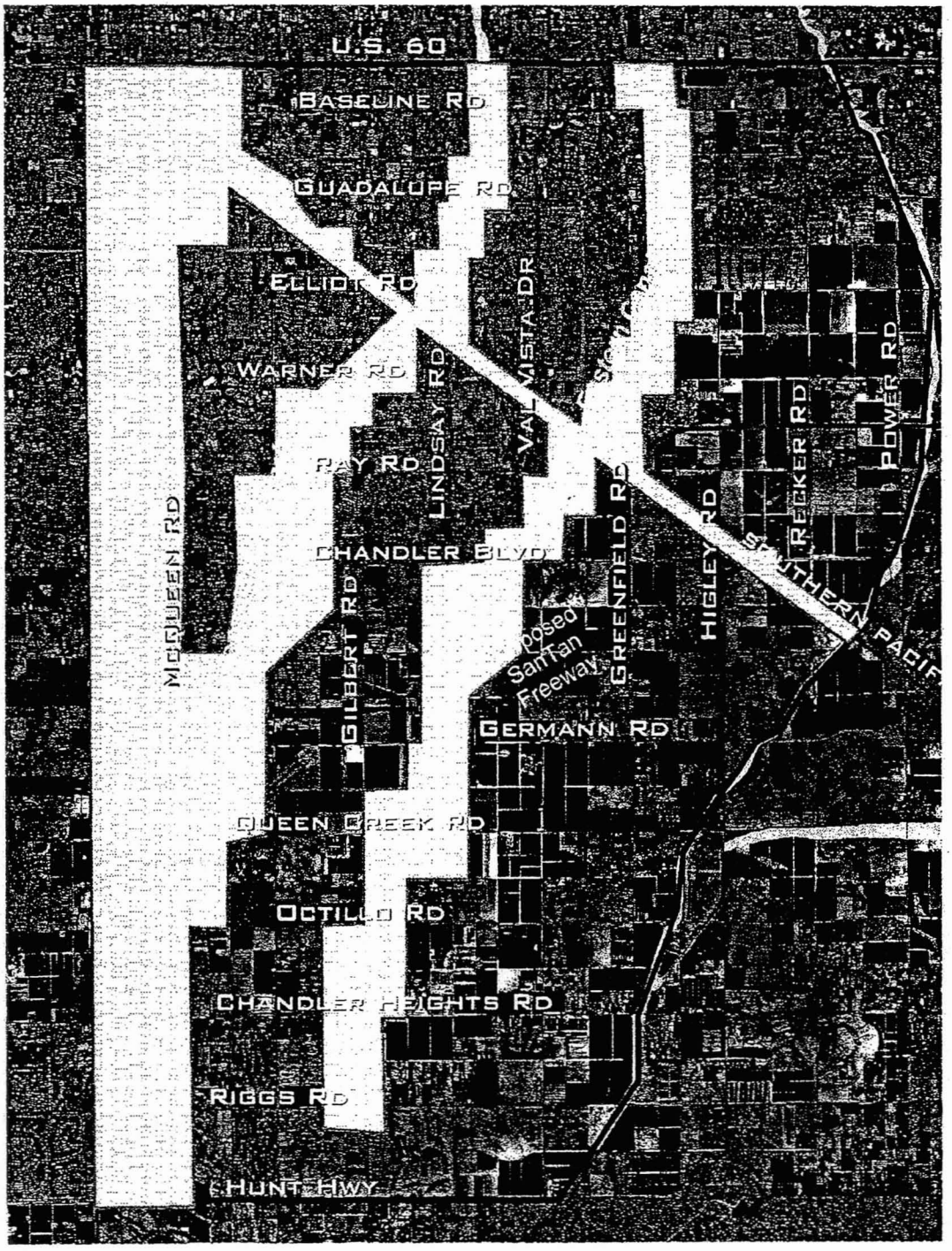


EXHIBIT A2
Chandler/Gilbert Area FDS Mapping limits exhibit



B.6 Public Notification

Chandler-Gilbert Floodplain Delineation

Phase 2 Consolidated Canal

Floodplain Management

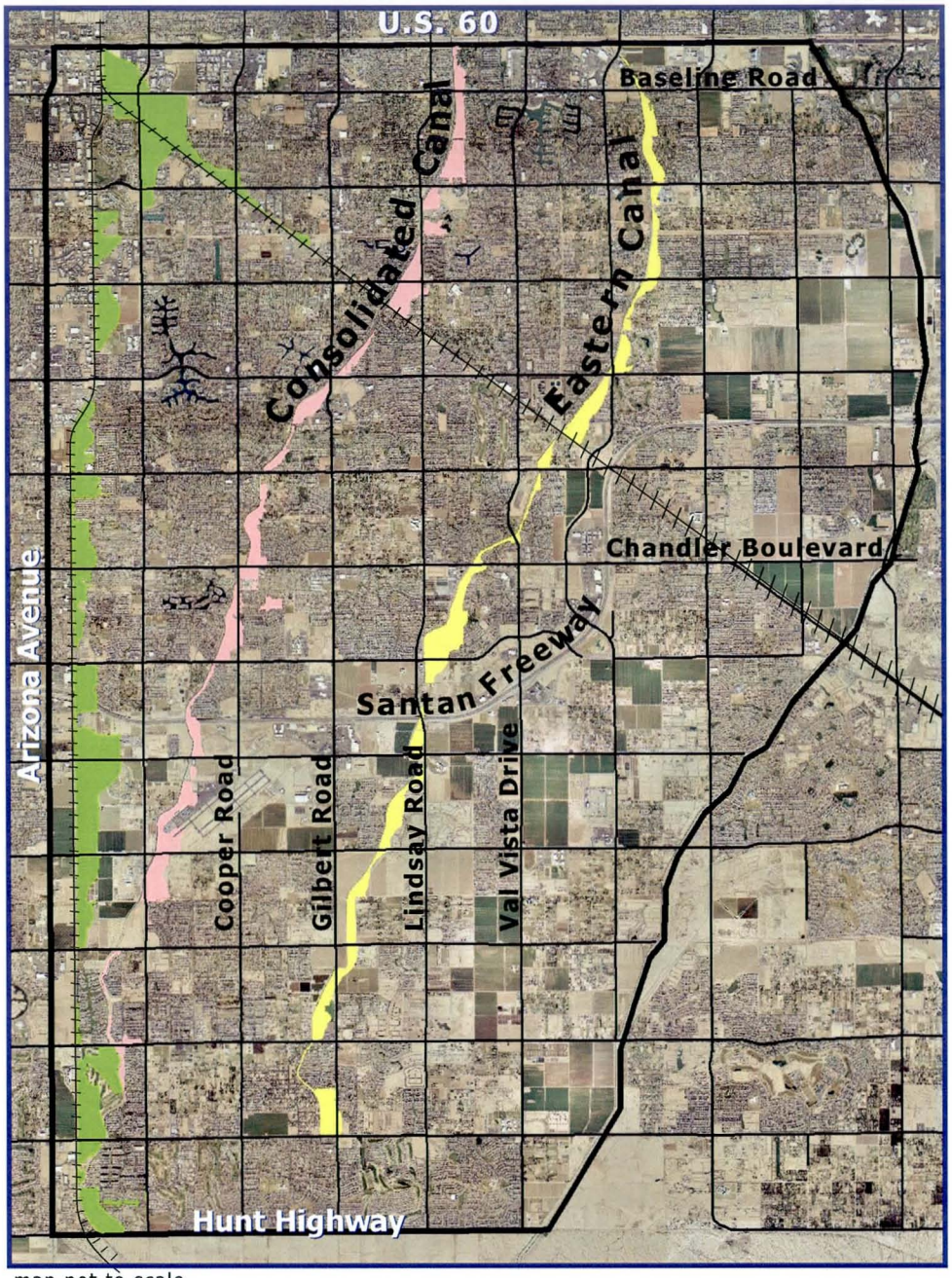
The Flood Control District of Maricopa County (District), Town of Gilbert (Town), and City of Chandler (City) invite all interested people to attend an open house presenting the results of the updated floodplain\floodway delineation performed along the Consolidated Canal as part of the Chandler-Gilbert Floodplain Delineation Study.

Exhibits of the updated floodplain delineation will be on display and representatives from the District, Town, City, and project team will be available to discuss the study and answer your questions.

This portion of the study re-evaluated the floodplain delineation along the Consolidated Canal. The study involved topographic mapping, hydrologic and hydraulic analysis of approximately 11 linear miles along the Canal.

The Chandler Gilbert Floodplain Delineation Study is composed of three Phases (see map); the first phase revised the floodplains along the Eastern Canal, the second phase revises the floodplains along the Consolidated Canal and is the focus of this public meeting, the third phase will revise the floodplain along the two railroads in the western portion of the study area.

When the study is completed, the results will be sent to the Federal Emergency Management Agency (FEMA) for approval and adoption, which typically takes approximately one year. FEMA uses these studies to update the Flood Insurance Rate Maps for the National Flood Insurance Program. In the interim the District and other jurisdictions will use the data as the "best available information" for floodplain management.



map not to scale

Study Boundary

Phase 1 Existing Floodplains

Phase 2 Existing Floodplains

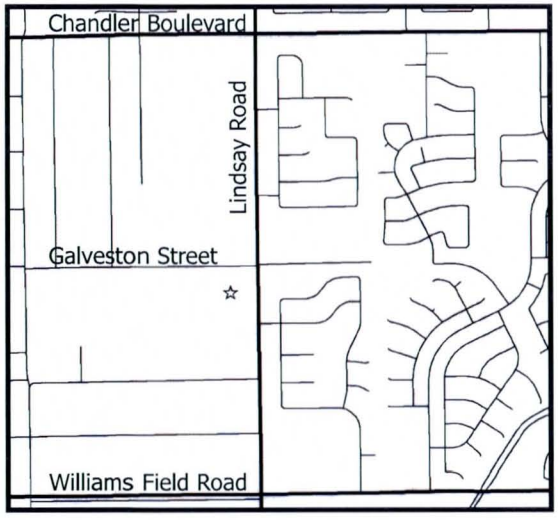
Phase 3 Existing Floodplains

Floodplain Management

The floodplains in this study are managed by two jurisdictions. The District manages floodplains located within unincorporated Maricopa County, the City of Chandler and the City of Mesa. The Town of Gilbert manages floodplains within the Town. All jurisdictions were given the opportunity to comment on the District's findings.

Open House

6:00–7:30PM
Thursday, September 25, 2008
South Valley Junior High Library
2034 S. Lindsay Road, Gilbert



For More Information:

Kathryn Gross
Project Manager
Flood Control District of Maricopa County
(602) 506-4837
kag@mail.maricopa.gov

Flood Control District of Maricopa County
2801 West Durango Street
Phoenix Arizona 85009

September 2008

Chandler/Gilbert Floodplain Delineation Study

Phase 2 Consolidated Canal

Open House

ANNOUNCEMENT

Maricopa County Supervisor:
Fulton Brock, District 1
Don Stapley, District 2

www.fcd.maricopa.gov

Mountain Grill, 3435
vd., Chandler. $70.
firebirdsrestaurants.com.

working Mixer: 5:30-7 p.m.
rking group Women in
xer. La Bocca Urban
e Bar, 699 S. Mill Ave.,
e for ASU Alumni
embers. 480-967-5244.
izzeria.com/.

h: 7:30 p.m. Friday, 1:30 p.m.
17-18. Teams of two compete
ch grape juice they can make
by stomping grapes. Event
, food, games and inflatables
lay times are 1:30 and 7 p.m.
ggested. Kokopelli Winery
Boston St., Chandler.
480-792-6927.
winery.com/.

es Pajama Party: 9 a.m.-
ids 12 and younger are
brate National Pajama Month
ir pajamas to Sweet Toma-
ey will receive a free meal
ase of an adult meal. Sweet
8 S. Power Road, Gilbert.
ad, Phoenix. 1410 E. Southern
ww.sweettomatoes.com.

Flood Control District of Maricopa County
Chandler-Gilbert Floodplain Delineation Study
OPEN HOUSE

Thursday, Sept. 25 • 6:00-7:30 p.m.
South Valley Junior High
2034 S. Lindsay Road, Gilbert

Flood Control District of Maricopa County

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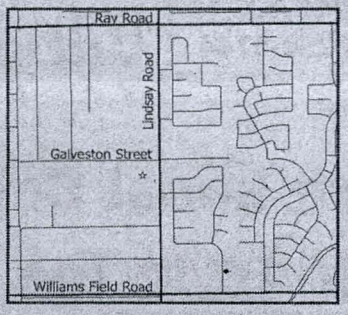

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For more information regarding the study results, please contact the project manager:
Kathryn Gross, CFM M.A. • Project Manager
(602)506-4837
kag@mail.maricopa.gov

Requests for hearing assistance (sign-language interpreter, listening devices, alternative - format materials) require 72-hour notice and can be made by calling Nicole Scheider at (602) 506-6762. Additional reasonable accommodations will be made if possible and if given 72-hour notice.

Shadowlands: 7-10 p.m. Sundays, Thursdays, 7-11 p.m. Fridays and Saturdays, Sept. 26 through Nov. 1. Choose your own path as you go through three interactive haunted houses known as the Revenant, the Chamber and the Wrath. Times for opening night are 7-10 p.m. and Halloween times are 7 [redacted]-2 a.m. Fiesta Mall, 1445 W. Southern [redacted] Mesa. $18; $15 online in advance. 480-833-4121. www.azshadowlands.com.

We Won't Pay! We Won't Pay!: Thursdays through Sundays, Sept. 26 through Oct. 5. A comedy that shows what happens when the high price of food forces people to take extreme, and humorous, measures. 7:30 p.m. Sept. 26-27 and Oct. 2-4. 2 p.m. Sept. 28 and Oct. 5. ASU Lyceum Theatre, 901 S. Forest Mall, Tempe. $7-$22. 480-965-6447. theatrefilm.asu.edu/.

Ballet Under the Stars: 7 p.m. Audiences bring picnic dinners and blankets or lawn chairs, and enjoy a family-friendly performance by Ballet Arizona. Tempe Center for the Arts, 700 W. Rio Salado Parkway, Tempe. Free. 480-350-2822. www.tempe.gov/tca.

SATURDAY

Kids 4 Life: 4-6 p.m. A musical experience created by Body Positive that teaches lessons about diversity, making healthful choices, tolerance and respect, through the music of Tom Chapin. Chandler Center for the Arts, 250 N. Arizona Ave., Chandler. $7-$75. 602-307-5330, ext. 2242. www.bodypositive.org.

[redacted]berfest: 5-11 p.m. The Oktoberfest festival features live polka bands, a beer maid contest, vendors and a beer garden. Capital Down and Guys That Rock also perform. For age 21 and older. Santan Brewing Company, 8 S. San Marcos Plaza, Chandler. $20 for entrance to beer garden. 480-917-8700. www.santanbrewing.com.

Desert Thunder Old-Fashioned Community Picnic: 10 a.m.-3 p.m. The picnic includes food, bounce houses, prizes, a cake walk, eating contests, a hayride and raffles. Bring non-perishable food items to donate to the Thanksgiving food drive. Jefferson Park, 306 S. Jefferson, Mesa. Free. 480-835-5600. www.cityofmesa.org/parksrec/Parks/jefferson_park.asp.

Desert Photography Hike: 8-9:30 a.m. Capture the Sonoran Desert with a camera. Hike about 2 miles on the Moonlight Trail. Bring water, proper hiking attire, sunscreen and a camera. San Tan Mountain Park, 6533 W. Phillips Road, Queen Creek. $6 per vehicle. 602-655-5554. www.maricopa.gov/parks/santan.

SUNDAY

East Valley Bridal Affair: 11 a.m.-4 p.m. [redacted]res two fashion shows, live performances, hourly prizes as well as a cruise giveaway. More than 90 vendors will be available. Windemere Hotel and Conference Center, 5750 E. Main St., Mesa. Free. 480-899-9942. www.eastvalleybridalaffair.com.

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Chandler-Gilbert Floodplain Delineation Study
OPEN HOUSE

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2034 S. Lindsay Road, Gilbert

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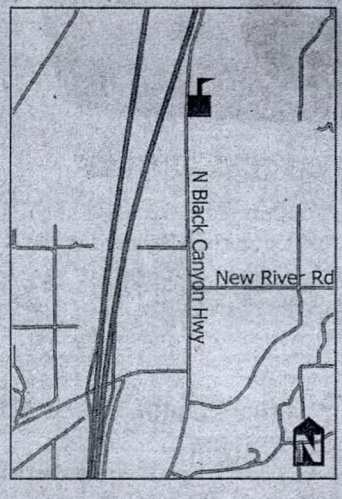

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(602)506-4837
kag@mail.maricopa.gov

Count	Tax Address 1	Tax City	Tax State	Tax Zip
26				
1	1 NORTH FIELD CT	LAKE FOREST	IL	600454810
1	1 S SILVERADO ST	GILBERT	AZ	852961158
1	10 S RIATA DR	GILBERT	AZ	852961144
1	100 N HERITAGE DR	GILBERT	AZ	852345917
1	1000 E SCOTT AVE	GILBERT	AZ	852348751
1	1001 N NIELSON ST	GILBERT	AZ	852343346
1	1002 E DOUGLAS AVE	GILBERT	AZ	852343583
1	1002 E PRINCETON AVE	GILBERT	AZ	852348749
1	1002 N SAINT ELENA ST	GILBERT	AZ	852343593
1	1003 E PRINCETON AVE	GILBERT	AZ	852348750
1	1003 E SCOTT AVE	GILBERT	AZ	852348752
1	1006 E SCOTT AVE	GILBERT	AZ	852348751
1	1008 E IRIS DR	CHANDLER	AZ	852492414
1	1008 E PRINCETON AVE	GILBERT	AZ	852348749
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1	1009 E HARVARD AVE	GILBERT	AZ	852343529
1	1009 E SCOTT AVE	GILBERT	AZ	852348752
1	1009 N SAINT ELENA ST	GILBERT	AZ	852343596
1	101 S HONEYSUCKLE LN	GILBERT	AZ	852961125
2	101 S LINDSAY RD	GILBERT	AZ	852961133
1	101 S PARK GROVE CT	GILBERT	AZ	852961143
1	101 S SILVERADO ST	GILBERT	AZ	852961161
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1	1010 E HARVARD AVE	GILBERT	AZ	852343528
1	1010 N SAINT ELENA ST	GILBERT	AZ	852343594
1	1011 E REDWOOD DR	CHANDLER	AZ	852492425
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1	1026 E STANFORD AVE	GILBERT	AZ	852343582
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1	1110 E JUANITA AVE	GILBERT	AZ	852343530
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1	1110 N SAINT ELENA ST	GILBERT	AZ	852343587
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1	1125 E PRINCETON AVE	GILBERT	AZ	852343599
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1	1126 E SAN ANGELO AVE	GILBERT	AZ	852343532
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1	114 S 130TH PL	CHANDLER	AZ	852255913
1	1141 E ENCINAS AVE	GILBERT	AZ	85234
1	1141 E HARVARD AVE	GILBERT	AZ	852343598
1	1141 E JUANITA AVE	GILBERT	AZ	852343531
1	1141 E PRINCETON AVE	GILBERT	AZ	852343599
1	1141 E SAN ANGELO AVE	GILBERT	AZ	852343535
1	1141 E SAN PEDRO AVE	GILBERT	AZ	852343539
1	1141 E SAN REMO AVE	GILBERT	AZ	852343552
1	1141 N NIELSON ST	GILBERT	AZ	852342324
1	11417 E STARKEY CIR	MESA	AZ	852127110
1	1142 E ENCINAS AVE	GILBERT	AZ	852343588
1	1142 E HARVARD AVE	GILBERT	AZ	852343597
1	1142 E JUANITA AVE	GILBERT	AZ	852343530
1	1142 E SAN ANGELO AVE	GILBERT	AZ	852343534
1	1142 E SAN REMO AVE	GILBERT	AZ	852343500
1	1142 E SCOTT AVE	GILBERT	AZ	852343501
1	1142 E STANFORD AVE	GILBERT	AZ	852343591
1	1142 N SAINT ELENA ST	GILBERT	AZ	852343587
1	1145 E CONCORDA DR	TEMPE	AZ	85282
1	1148 E DESERT CT	GILBERT	AZ	852342524
1	1149 E DOUGLAS AVE	GILBERT	AZ	852348701
1	1149 E ENCINAS AVE	GILBERT	AZ	852343589
1	1149 E HARVARD AVE	GILBERT	AZ	852343598
1	1149 E JUANITA AVE	GILBERT	AZ	852343531
1	1149 E PRINCETON AVE	GILBERT	AZ	852343599
1	1149 E SAN ANGELO AVE	GILBERT	AZ	852343535
1	1149 E SAN PEDRO AVE	GILBERT	AZ	85234

1	1149 E SAN REMO AVE	GILBERT	AZ	852343552
1	1149 E STANFORD AVE	GILBERT	AZ	852343592
1	1149 N NIELSON ST	GILBERT	AZ	852342324
1	1150 E DOUGLAS AVE	GILBERT	AZ	852348700
1	1150 E ENCINAS AVE	GILBERT	AZ	852343588
1	1150 E HARVARD AVE	GILBERT	AZ	852343597
1	1150 E INDIGO DR	CHANDLER	AZ	852492547
1	1150 E JUANITA AVE	GILBERT	AZ	852343530
1	1150 E PRINCETON AVE	GILBERT	AZ	852343504
1	1150 E SAN PEDRO AVE	GILBERT	AZ	852343538
1	1150 E SAN REMO AVE	GILBERT	AZ	852343500
1	1150 E STANFORD AVE	GILBERT	AZ	852343591
1	1150 N SAINT ELENA ST	GILBERT	AZ	852343587
1	1150 W GROVE PKWY STE 105	TEMPE	AZ	852834474
1	1151 E DESERT CT	GILBERT	AZ	852342524
1	11511 E SAN TAN CT	CHANDLER	AZ	852494542
1	11518 E CHESNUT CT	CHANDLER	AZ	852494540
1	11523 E CHESTNUT CT	CHANDLER	AZ	852494540
1	11523 E SAN TAN CT	CHANDLER	AZ	852494542
1	11530 E CHESTNUT CT	CHANDLER	AZ	852494540
1	11530 E FLINTLOCK CT	CHANDLER	AZ	852494538
1	11535 E CHESTNUT CT	CHANDLER	AZ	852494540
1	11535 E FLINTOCK CT	CHANDLER	AZ	852494538
1	11535 E SAN TAN CT	CHANDLER	AZ	852494542
1	11542 E CHESTNUT CT	CHANDLER	AZ	852494540
1	11542 E FLINTLOCK CT	CHANDLER	AZ	852494538
1	1157 E DOUGLAS AVE	GILBERT	AZ	852348701
1	1157 E ENCINAS AVE	GILBERT	AZ	852343589
1	1157 E HARVARD AVE	GILBERT	AZ	852343598
1	1157 E JUANITA AVE	GILBERT	AZ	852343531
1	1157 E PRINCETON AVE	GILBERT	AZ	852343599
1	1157 E SAN ANGELO AVE	GILBERT	AZ	852343535
1	1157 E SAN PEDRO AVE	GILBERT	AZ	852343539
1	1157 E SAN REMO AVE	GILBERT	AZ	852343552
1	1157 N NIELSON ST	GILBERT	AZ	852342324
1	1158 E DOUGLAS AVE	GILBERT	AZ	852348700
1	1158 E ENCINAS AVE	GILBERT	AZ	852343588

1	1158 E JUANITA AVE	GILBERT	AZ	852343530
1	1158 E MELODY CT	GILBERT	AZ	852342522
1	1158 E PRINCETON AVE	GILBERT	AZ	852343504
1	1158 E SAN ANGELO AVE	GILBERT	AZ	852343534
1	1158 E SAN REMO AVE	GILBERT	AZ	852343500
1	1158 E SCOTT AVE	GILBERT	AZ	852343501
1	1158 E STANFORD AVE	GILBERT	AZ	852343591
1	1158 N SAINT ELENA ST	GILBERT	AZ	852343587
1	116 S COTTONWOOD ST	CHANDLER	AZ	852255815
1	116 S EUCALYPTUS PL	CHANDLER	AZ	852255885
1	1160 E INDIGO DR	CHANDLER	AZ	852492547
1	11603 E BELLFLOWER DR	CHANDLER	AZ	852494526
1	11603 E CHESTNUT CT	CHANDLER	AZ	852494541
1	11603 E FLINTLOCK CT	CHANDLER	AZ	852494539
1	11603 E SAN TAN CT	CHANDLER	AZ	852494543
1	11604 E STARFLOWER DR	CHANDLER	AZ	852494358
1	11606 E CHESTNUT CT	CHANDLER	AZ	852494541
1	11606 E FLINTLOCK CT	CHANDLER	AZ	852494539
1	11611 E BELLFLOWER DR	CHANDLER	AZ	852494526
1	11612 E STARFLOWER DR	CHANDLER	AZ	852494358
1	11615 E CHESTNUT CT	CHANDLER	AZ	852494541
1	11615 E FLINTLOCK CT	CHANDLER	AZ	85249
1	11615 E SAN TAN CT	CHANDLER	AZ	852494543
1	11616 E BELLFLOWER DR	CHANDLER	AZ	852494525
1	11618 E CHESTNUT CT	CHANDLER	AZ	852494541
1	11618 E FLINTLOCK CT	CHANDLER	AZ	852494539
1	11619 E BELLFLOWER DR	CHANDLER	AZ	852494526
1	11620 E STARFLOWER DR	CHANDLER	AZ	852494358
1	11623 E STARFLOWER	CHANDLER	AZ	852494396
1	11624 E BELLFLOWER DR	CHANDLER	AZ	852494525
1	11627 E BELLFLOWER DR	CHANDLER	AZ	852494526
1	11627 E CHESTNUT CT	CHANDLER	AZ	852494541
1	11627 E FLINTLOCK CT	CHANDLER	AZ	852494539
1	11627 E SAN TAN CT	CHANDLER	AZ	852494543
1	11630 E CHESTNUT CT	CHANDLER	AZ	852494541
1	11630 E FINTLOCK CT	CHANDLER	AZ	85249
1	11631 E STARFLOWER DR	CHANDLER	AZ	852494396

1	11635 E BELLFLOWER DR	CHANDLER	AZ	852494526
1	11636 E NAVAJO DR	CHANDLER	AZ	852494202
1	11636 E STARFLOWER DR	CHANDLER	AZ	852494358
1	11639 E CHESTNUT CT	CHANDLER	AZ	852494541
2	11639 E FLINTLOCK CT	CHANDLER	AZ	852494539
1	11639 E NAVAJO DR	CHANDLER	AZ	852494203
1	11639 E SAN TAN CT	CHANDLER	AZ	852494543
1	11639 E STARFLOWER DR	CHANDLER	AZ	852494396
1	11642 E CHESTNUT CT	CHANDLER	AZ	852494541
1	11642 E SAN TAN CT	CHANDLER	AZ	852494543
1	11644 E NAVAJO DR	CHANDLER	AZ	852494202
1	11647 E NAVAJO DR	CHANDLER	AZ	852494203
1	1165 E PRINCETON AVE	GILBERT	AZ	852343599
1	1165 N NIELSON ST	GILBERT	AZ	852342324
1	1166 E PRINCETON AVE	GILBERT	AZ	852343504
1	117 S HONEYSUCKLE LN	GILBERT	AZ	852961125
1	117 S PARK GROVE CT	GILBERT	AZ	852961143
1	117 S RIATA DR	GILBERT	AZ	852961147
1	117 S SILVERADO ST	GILBERT	AZ	852961161
1	1170 E INDIGO DR	CHANDLER	AZ	852492547
1	11706 E STARFLOWER DR	CHANDLER	AZ	852494523
1	11709 E NAVAJO DR	CHANDLER	AZ	852494242
1	11709 E STARFLOWER DR	CHANDLER	AZ	852494524
1	1171 E DESERT CT	GILBERT	AZ	852342524
1	11713 E BELLFLOWER DR	CHANDLER	AZ	852494528
1	11714 E NAVAJO DR	CHANDLER	AZ	852494208
1	11714 E STARFLOWER DR	CHANDLER	AZ	852494523
1	11717 E NAVAJO DR	CHANDLER	AZ	852494242
1	11717 E STARFLOWER DR	CHANDLER	AZ	852494524
1	11722 E NAVAJO DR	CHANDLER	AZ	852494208
1	11722 E STARFLOWER DR	CHANDLER	AZ	852494523
1	11725 E NAVAJO DR	CHANDLER	AZ	852494242
2	11725 E STARFLOWER DR	CHANDLER	AZ	852494524
1	11733 E STARFLOWER DR	CHANDLER	AZ	852494524
2	11744 E HUNT HWY	CHANDLER	AZ	852494201
1	1176 W RAWHIDE	GLENDALE	AZ	852335275
1	118 N COTTONWOOD ST	CHANDLER	AZ	852255810

1	118 N HERITAGE DR	GILBERT	AZ	852345917
1	118 S 130TH PL	CHANDLER	AZ	852255913
1	118 S HONEYSUCKLE LN	GILBERT	AZ	852961124
1	118 S MARINER CT	GILBERT	AZ	852345607
1	118 S PARK GROVE CT	GILBERT	AZ	852961142
1	118 S RIATA DR	GILBERT	AZ	852961146
1	118 TRUMBULL ST	SAN FRANCISCO	CA	941121653
1	1180 E MELODY CT	GILBERT	AZ	852342522
1	1181 E MELODY CT	GILBERT	AZ	852342522
2	119 N GILBERT RD	GILBERT	AZ	852345769
2	1190 NADINE DR	CAMPBELL	CA	950081724
1	120 S COTTONWOOD ST	CHANDLER	AZ	852255888
1	120 S EUCALYPTUS PL	CHANDLER	AZ	852255886
1	1201 E PRINCETON AVE	GILBERT	AZ	85234
1	1201 E SAN REMO AVE	GILBERT	AZ	852343607
1	1201 E SEA BREEZE DR	GILBERT	AZ	852342637
1	1202 E JUANITA AVE	GILBERT	AZ	852343600
1	1202 N SAILORS WAY	GILBERT	AZ	852345419
1	1207 E PRINCETON AVE	GILBERT	AZ	852343675
1	1207 E SAN REMO AVE	GILBERT	AZ	852343607
1	1210 N SAILORS WAY	GILBERT	AZ	852345419
1	1211 W BADILLO ST APT 3	COVINA	CA	917224189
2	1212 NEW YORK AVE NW STE 900	WASHINGTON	DC	200056600
1	1213 E PRINCETON AVE	GILBERT	AZ	852343675
1	1217 VIA ROMERO	PALOS VERDES ESTATES	CA	90274
1	1218 N SAILORS WAY	GILBERT	AZ	852345419
1	1219 E DOUGLAS AVE	GILBERT	AZ	852343663
1	1219 E HARVARD AVE	GILBERT	AZ	852343681
1	1219 E SAN REMO AVE	GILBERT	AZ	852343607
1	1219 E SCOTT AVE	GILBERT	AZ	852343669
1	122 N COTTONWOOD ST	CHANDLER	AZ	85225
1	1220 E DOUGLAS AVE	GILBERT	AZ	852343662
1	1220 E HARVARD AVE	GILBERT	AZ	852343680
1	1220 E SCOTT AVE	GILBERT	AZ	852343668
1	1220 S PUEBLO CT	GILBERT	AZ	852338343
1	1225 E DOUGLAS AVE	GILBERT	AZ	852343663
1	1225 E HARVARD AVE	GILBERT	AZ	852343681

1	1225 E SAN REMO AVE	GILBERT	AZ	852343607
1	1226 E DOUGLAS AVE	GILBERT	AZ	852343662
1	1226 N SAILORS WAY	GILBERT	AZ	852342618
1	1231 E SAN REMO AVE	GILBERT	AZ	852343607
1	1232 E HARVARD AVE	GILBERT	AZ	852343680
1	1234 N SAILORS WAY	GILBERT	AZ	852342618
1	12344 E WILDHORSE PL	CHANDLER	AZ	852491008
1	1236 S PUEBLO CT	GILBERT	AZ	852338343
1	124 N HERITAGE DR	GILBERT	AZ	852345917
1	124 S EUCALYPTUS PL	CHANDLER	AZ	85225
1	1242 N SAILORS WAY	GILBERT	AZ	852342618
1	125 E COMMONWEALTH AVE	CHANDLER	AZ	852255877
1	125 S HONEYSUCKLE LN	GILBERT	AZ	852961125
1	125 S PARK GROVE CT	GILBERT	AZ	852961143
1	125 S SALT CEDAR PL	CHANDLER	AZ	852255818
1	1250 E HARVARD AVE	GILBERT	AZ	852343653
1	1250 N SAILORS WAY	GILBERT	AZ	852342618
1	1250 S PUEBLO CT	GILBERT	AZ	852338343
1	1256 S CHOLLA ST	GILBERT	AZ	852338335
1	1258 N SAILORS WAY	GILBERT	AZ	852342618
1	126 N COTTONWOOD ST	CHANDLER	AZ	85225
1	1264 S CHOLLA ST	GILBERT	AZ	852338335
1	12663 LIDO WAY	SARATOGA	CA	950703139
1	1272 S CHOLLA ST	GILBERT	AZ	852338335
1	128 S COTTONWOOD ST	CHANDLER	AZ	852255888
1	128 S EUCALYPTUS PL	CHANDLER	AZ	852255886
1	1280 S CHOLLA ST	GILBERT	AZ	852338335
1	1288 E ELI CT	GILBERT	AZ	852965404
1	1288 S CHOLLA ST	GILBERT	AZ	852338335
1	129 S SALT CEDAR PL	CHANDLER	AZ	852255818
1	12928 E GALVESTON ST	GILBERT	AZ	852338812
1	1295 N ASH ST APT 915	GILBERT	AZ	852332782
1	1296 S CHOLLA ST	GILBERT	AZ	852338335
1	130 N HERITAGE DR	GILBERT	AZ	852345917
1	1300 W WARNER RD APT 2078	GILBERT	AZ	852337033
1	13006 E GALVESTON ST	GILBERT	AZ	852338814
1	13016 E GALVESTON ST	GILBERT	AZ	852338814

1	1302 N SAILORS WAY	GILBERT	AZ	852342620
1	13020 E GALVESTON ST	GILBERT	AZ	852338814
1	1304 S CHOLLA ST	GILBERT	AZ	852338336
1	1310 N SAILORS WAY	GILBERT	AZ	852342620
1	1312 S CHOLLA ST	GILBERT	AZ	852338336
1	1318 N SAILORS WAY	GILBERT	AZ	852342620
1	132 S COTTONWOOD ST	CHANDLER	AZ	852255888
1	132 S EUCALYPTUS PL	CHANDLER	AZ	852255886
1	1320 S CHOLLA ST	GILBERT	AZ	852338357
1	13200 S GILBERT RD	GILBERT	AZ	852964014
1	1321 E MESQUITE ST	GILBERT	AZ	852961905
1	1326 N SAILORS WAY	GILBERT	AZ	852342620
1	1328 S CHOLLA ST	GILBERT	AZ	852338357
1	133 N HONEYSUCKLE LN	GILBERT	AZ	852345891
1	133 S SALT CEDAR	CHANDLER	AZ	85225
1	1334 N SAILORS WAY	GILBERT	AZ	852342620
1	1336 S CHOLLA PL	GILBERT	AZ	852338357
1	1339 E PEPPER PL	MESA	AZ	852038942
1	1342 N SAILORS WAY	GILBERT	AZ	852342622
1	1344 S CHOLLA ST	GILBERT	AZ	852338357
1	1348 W WAYNE CT	ANTHEM	AZ	850863920
1	1350 38TH AVE APT 4	SAN FRANCISCO	CA	941221375
1	1350 N SAILORS WAY	GILBERT	AZ	852342622
1	1352 S CHOLLA ST	GILBERT	AZ	852338357
1	13535 PORTOFINO CT	CHINO HILLS	CA	917091467
1	1358 N SAILORS WY	GILBERT	AZ	852342622
1	136 N HERITAGE DR	GILBERT	AZ	852345917
1	136 S EUCALYPTUS PL	CHANDLER	AZ	852255886
1	1360 S CHOLLA ST	GILBERT	AZ	852338357
1	1368 S CHOLLA ST	GILBERT	AZ	852338357
1	137 S SALT CEDAR PL	CHANDLER	AZ	852255818
1	1371 OAKLAND BLVD STE 200	WALNUT CREEK	CA	945968408
1	1376 S CHOLLA ST	GILBERT	AZ	852338357
1	138106 CLATSOP WAY	SAN DIEGO	CA	92129
1	13834 VIA ALTO CT	SARATOGA	CA	950705259
1	140 E WARNER RD	GILBERT	AZ	852962974
1	1402 NORTH SAILORS WAY	GILBERT	AZ	852342624

1	1409 N MISSION COVE LN	GILBERT	AZ	852342671
1	1410 N SAILORS WAY	GILBERT	AZ	852342624
1	14126 S 131ST ST	GILBERT	AZ	852338604
1	14134 S 131ST ST	GILBERT	AZ	852338604
1	14145 N 92TH ST NO 2103	SCOTTSDALE	AZ	852343717
1	1417 E OXFORD LN	GILBERT	AZ	852964945
1	1418 N SAILORS WAY	GILBERT	AZ	852345422
1	1419 E CINDY ST	CHANDLER	AZ	852255408
1	142 N HERITAGE DR	GILBERT	AZ	852345917
1	1420 E PALOMINO DR	TEMPE	AZ	852842451
1	14216 S 131ST ST	GILBERT	AZ	852338602
1	14218 S 131ST ST	GILBERT	AZ	852338602
1	14220 S 131ST ST	GILBERT	AZ	852338602
1	14222 S 131ST ST	CHANDLER	AZ	85224
1	14226 S 131ST ST	GILBERT	AZ	852338602
1	14241 E WILLIAMS FIELD RD	GILBERT	AZ	852965323
1	14248 S 131ST ST	GILBERT	AZ	852338602
1	1426 N SAILORS WAY	GILBERT	AZ	852345422
2	1428 E CHICAGO CIR	CHANDLER	AZ	852255440
1	143 W LOUIS WAY	TEMPE	AZ	852841335
1	1430 S PUEBLO ST	GILBERT	AZ	852338546
1	1434 N SAILORS WAY	GILBERT	AZ	852345422
1	1438 S CHOLLA ST	GILBERT	AZ	852338502
1	1440 S PUEBLO ST	GILBERT	AZ	852338546
1	14402 S 131ST ST	GILBERT	AZ	852338806
1	14405 S 131ST ST	GILBERT	AZ	852338807
1	14408 S 131ST ST	GILBERT	AZ	852338806
1	1442 N SAILORS WAY	GILBERT	AZ	852345422
1	14428 S 131ST ST	GILBERT	AZ	852338806
1	14434 S 131ST ST	GILBERT	AZ	852338806
2	14440 S 131ST ST	GILBERT	AZ	852338806
1	14445 E ELGIN ST	GILBERT	AZ	852961686
1	1446 S CHOLLA ST	GILBERT	AZ	852338502
1	145 N HONEYSUCKLE LN	GILBERT	AZ	852345891
1	1450 N SAILORS WAY	GILBERT	AZ	852345422
1	1450 S PUEBLO ST	GILBERT	AZ	852338547
1	1454 S CHOLLA ST	GILBERT	AZ	852338502

1	14542 JEFFERSON ST	OMAHA	NE	681373968
1	1455 S CHOLLA ST	GILBERT	AZ	852338503
1	1458 N SAILORS WAY	GILBERT	AZ	852345422
1	1460 S PUEBLO ST	GILBERT	AZ	852338547
1	1460 S VELERO PL	CHANDLER	AZ	852491177
1	14602 S 131ST ST	GILBERT	AZ	852338808
1	14604 S 130TH ST	GILBERT	AZ	852338800
1	1462 S CHOLLA ST	GILBERT	AZ	852338502
1	14622 S 131ST ST	GILBERT	AZ	852338808
1	14628 S 130TH ST	CHANDLER	AZ	85249
1	14632 S 131ST ST	GILBERT	AZ	852338808
1	147 ROCK HARBOR LN	FOSTER CITY	CA	944043599
1	1470 S CHOLLA ST	GILBERT	AZ	852338502
1	1470 S VALERO PL	CHANDLER	AZ	852491177
1	1478 S CHOLLA ST	GILBERT	AZ	852338502
1	1479 S CHOLLA ST	GILBERT	AZ	852338504
1	148 N HERITAGE DR	GILBERT	AZ	852345975
1	1480 S VELERO PL	CHANDLER	AZ	852491177
1	14823 S 20TH PL	PHOENIX	AZ	850484333
1	1486 S CHOLLA ST	GILBERT	AZ	852338502
1	1487 S CHOLLA ST	GILBERT	AZ	852338504
1	1490 S VELERO PL	CHANDLER	AZ	852491177
1	1494 S CHOLLA ST	GILBERT	AZ	852338502
1	1495 S CHOLLA ST	GILBERT	AZ	852338504
1	1495 S PINE ST	GILBERT	AZ	852338563
1	1502 S CHOLLA ST	GILBERT	AZ	852338559
1	1502 S PINE ST	GILBERT	AZ	852338564
1	1503 S CHOLLA ST	GILBERT	AZ	852338560
1	1505 S PINE ST	GILBERT	AZ	852338565
1	1510 S CHOLLA ST	GILBERT	AZ	852338559
1	1515 S CHOLLA ST	GILBERT	AZ	852338560
1	1515 S PINE ST	GILBERT	AZ	852338565
3	15160 N HAYDEN RD STE 200	SCOTTSDALE	AZ	852602585
1	1518 S CHOLLA ST	GILBERT	AZ	852338559
1	152 N HONEYSUCKLE LN	GILBERT	AZ	852345892
1	1520 S VELERO PL	CHANDLER	AZ	852491178
1	1521 N PROJECT DR	TEMPE	AZ	852811206

1	1522 S PINE ST	GILBERT	AZ	852338564
1	1523 S CHOLLA ST	GILBERT	AZ	852338560
1	15245 E SUNDOWN DR	FOUNTAIN HILLS	AZ	85268
1	1525 S PINE ST	GILBERT	AZ	852338565
1	1526 S CHOLLA ST	GILBERT	AZ	852338559
1	1530 S VELERO PL	CHANDLER	AZ	852491178
1	1534 S CHOLLA ST	GILBERT	AZ	852338559
1	154 N HERITAGE DR	GILBERT	AZ	852345975
1	1540 S VELERO PL	CHANDLER	AZ	852491178
1	1542 S CHOLLA ST	GILBERT	AZ	852338559
1	1550 S CHOLLA ST	GILBERT	AZ	852338559
1	15629 36TH AVE SE	BOTHELL	WA	980124744
1	157 N HONEYSUCKLE LN	GILBERT	AZ	852345891
1	1572 W MEAD CT	CHANDLER	AZ	852485429
1	1580 E WESSON DR	CHANDLER	AZ	852491179
1	1589 E BERETTA PL	CHANDLER	AZ	852491152
1	160 N HERITAGE DR	GILBERT	AZ	852345975
1	1600 MAPLE AVE	LISLE	IL	605324183
1	1618 E BERETTA PL	CHANDLER	AZ	852491153
1	1627 E HAWKEN PL	CHANDLER	AZ	852491170
1	1629 N TAMARISK DR	CHANDLER	AZ	852248358
1	1637 E HAWKEN PL	CHANDLER	AZ	852491170
1	164 N HONEYSUCKLE LN	GILBERT	AZ	852345892
1	1646 E HAWKEN PL	CHANDLER	AZ	852491169
1	1653 W PEPPER PL	MESA	AZ	852016906
1	1656 E HAWKEN PL	CHANDLER	AZ	852491169
1	166 N HERITAGE DR	GILBERT	AZ	852345975
2	16670 SE KINGSRIDGE CT	MILWAUKIE	OR	972675224
1	1676 E HAWKEN PL	CHANDLER	AZ	852491169
1	169 N HONEYSUCKLE LN	GILBERT	AZ	852345891
1	1696 E HAWKEN PL	CHANDLER	AZ	852491169
1	17 S RIATA DR	GILBERT	AZ	852961145
1	17 S SILVERADO ST	GILBERT	AZ	852961159
1	1707 N ASHBROOK CIR	MESA	AZ	852133414
1	1713 S ROME ST	GILBERT	AZ	852965104
1	1714 E BRANHAM LN	PHOENIX	AZ	850426874
1	1716 E HAWKEN PL	CHANDLER	AZ	852491172

1	1716 W DESERT LN	GILBERT	AZ	852331710
1	172 N HERITAGE DR	GILBERT	AZ	852345975
1	1720 E WOODSMAN PL	CHANDLER	AZ	852491093
1	1721 E WOODSMAN PL	CHANDLER	AZ	852491094
1	1728 CALLE CAMPANA	ROSEVILLE	CA	957476874
1	1732 E FLINTLOCK WY	CHANDLER	AZ	85249
1	1733 E FLINTLOCK WAY	CHANDLER	AZ	852491166
1	1745 E WINCHESTER PL	CHANDLER	AZ	852491086
1	1745 S ALMA SCHOOL RD STE 230	MESA	AZ	852103013
1	1750 E WOODSMAN PL	CHANDLER	AZ	852491093
1	1751 E WOODSMAN PL	CHANDLER	AZ	852491094
1	1753 E WINCHESTER PL	CHANDLER	AZ	852491086
1	1759 E DERRINGER WAY	CHANDLER	AZ	852491426
1	176 N HONEYSUCKLE LN	GILBERT	AZ	852345892
1	1760 SCOTTSDALE	BEAUMONT	CA	922238554
1	1774 E WINCHESTER PL	CHANDLER	AZ	85249
1	1779 E DERRINGER WAY	CHANDLER	AZ	852491426
1	178 N HERITAGE DR	GILBERT	AZ	852345975
1	1780 E DERRINGER WAY	CHANDLER	AZ	852491425
1	179 W IRONWOOD DR	CHANDLER	AZ	852256624
1	1795 2ND AVE	WALNUT CREEK	CA	945972646
1	1799 E DERRINGER WAY	CHANDLER	AZ	852491426
1	18 S RIATA DR	GILBERT	AZ	852961144
1	18 S SILVERADO ST	GILBERT	AZ	852961157
1	18034 JAY CT	LAKEVILLE	MN	550446400
1	181 E LOWELL AVE	GILBERT	AZ	852961557
1	1810 S YUCCA	MESA	AZ	852025748
1	1825 E CYPRESS TREE DR	GILBERT	AZ	852344941
1	1830 E INDIGO DR	CHANDLER	AZ	852492276
1	1833 E CYPRESS TREE DR	GILBERT	AZ	852344941
1	184 N HERITAGE DR	GILBERT	AZ	852345975
1	18440 E PURPLE SAGE DR	QUEEN CREEK	AZ	852423624
1	1862 W CANARY WAY	CHANDLER	AZ	852488038
1	1877 E MINERAL RD	GILBERT	AZ	852348215
1	1891 E SAGITTARIUS PL	CHANDLER	AZ	852493753
1	1900 W CHANDLER BLVD STE 15 314	CHANDLER	AZ	852248632
1	1905 E 450 S	JONESBORO	IN	469381059

1	19247 N 78TH LN	GLENDALE	AZ	853086132
1	1940 S TALBOT CIR	MESA	AZ	852097055
1	19521 E CAMINA PLATA	QUEEN CREEK	AZ	852429727
1	20 S COOPER DR	CHANDLER	AZ	852245820
6	200 W COMMONWEALTH AVE	CHANDLER	AZ	852257943
1	2000 E CHICAGO ST	CHANDLER	AZ	852255803
1	2001 E FRYE RD	CHANDLER	AZ	852255843
1	2002 E BOSTON ST	CHANDLER	AZ	852255828
1	2002 E BUTLER ST	CHANDLER	AZ	852255832
1	2003 E BUTLER ST	CHANDLER	AZ	852255831
1	2003 E CINDY ST	CHANDLER	AZ	852255804
1	2004 E BOSTON ST	CHANDLER	AZ	852255828
1	2004 E CHICAGO ST	CHANDLER	AZ	852255803
1	2004 E CINDY ST	CHANDLER	AZ	852255805
1	2005 E BOSTON ST	CHANDLER	AZ	852255827
1	2005 E CHICAGO ST	CHANDLER	AZ	852255802
1	2005 E FRYE RD	CHANDLER	AZ	852255843
1	2006 E BUTLER ST	CHANDLER	AZ	852255832
1	2006 E FRYE RD	CHANDLER	AZ	852255844
1	2007 E CINDY ST	CHANDLER	AZ	852255804
1	2008 E BOSTON ST	CHANDLER	AZ	852255828
1	2008 E CHICAGO ST	CHANDLER	AZ	852255803
1	2008 E CINDY ST	CHANDLER	AZ	852255805
1	2009 E BOSTON ST	CHANDLER	AZ	852255827
1	2009 E CHICAGO ST	CHANDLER	AZ	852255802
1	2009 E FRYE RD	CHANDLER	AZ	852255843
1	201 N CENTRAL AVE STE 2200	PHOENIX	AZ	850040073
1	201 N HONEYSUCKLE LN	GILBERT	AZ	852345889
1	201 S 132ND ST	CHANDLER	AZ	852256023
1	201 S COTTONWOOD ST	CHANDLER	AZ	852255813
1	2010 E FRYE RD	CHANDLER	AZ	85225
1	2011 E BUTLER ST	CHANDLER	AZ	852255831
1	2011 E CINDY ST	CHANDLER	AZ	852255804
1	2012 E BOSTON ST	CHANDLER	AZ	852255828
1	2012 E CHICAGO ST	CHANDLER	AZ	852255803
1	2012 E CINDY ST	CHANDLER	AZ	852255805
1	2013 E BOSTON ST	CHANDLER	AZ	852255827

1	2013 E FRYE RD	CHANDLER	AZ	852255843
1	2013 E MORELOS ST	CHANDLER	AZ	852252373
1	2014 E BUTLER ST	CHANDLER	AZ	852255832
1	2014 E FRYE RD	CHANDLER	AZ	852255844
1	2015 E BUTLER ST APT 2122	CHANDLER	AZ	852255831
1	2016 E CHICAGO ST	CHANDLER	AZ	852255803
1	2016 E CINDY ST	CHANDLER	AZ	852255805
1	2017 E FRYE RD	CHANDLER	AZ	852255843
1	2018 E BUTLER ST	CHANDLER	AZ	852255832
1	2018 E FRYE RD	CHANDLER	AZ	852255844
1	2019 E BUTLER ST	CHANDLER	AZ	852255831
1	2019 E CINDY ST	CHANDLER	AZ	852255804
1	202 N HONEYSUCKLE LN	GILBERT	AZ	852345890
1	202 S EUCALYPTUS PL	CHANDLER	AZ	852255806
1	2020 E BOSTON ST	CHANDLER	AZ	852255879
1	2020 E CHICAGO ST	CHANDLER	AZ	852255803
1	2020 E CINDY ST	CHANDLER	AZ	852255805
1	2021 E BOSTON ST	CHANDLER	AZ	852255881
2	2021 E CHICAGO ST	CHANDLER	AZ	852255802
1	2021 E FRYE RD	CHANDLER	AZ	852255843
3	2021 SHIPWAY LANE	NEWPORT BEACH	CA	92660
1	2022 E BUTLER ST	CHANDLER	AZ	852255832
1	2022 E FRYE RD	CHANDLER	AZ	852255844
1	2023 E BUTLER ST	CHANDLER	AZ	852255831
1	2023 E CATHEDRAL ROCK DR	PHOENIX	AZ	850489579
1	2023 E CINDY ST	CHANDLER	AZ	852255804
1	2024 E BOSTON ST	CHANDLER	AZ	852255879
1	2024 E CHICAGO ST	CHANDLER	AZ	852255882
1	2024 E CINDY ST	CHANDLER	AZ	852255805
1	2025 E BOSTON ST	CHANDLER	AZ	852255881
1	2025 E CHICAGO ST	CHANDLER	AZ	852255802
1	2025 E FRYE RD	CHANDLER	AZ	852255843
1	2025 S AIRPARK BLVD	CHANDLER	AZ	85249
1	2026 E BUTLER ST	CHANDLER	AZ	852255883
1	2026 E FRYE RD	CHANDLER	AZ	852255844
1	2027 E BUTLER ST	CHANDLER	AZ	852255884
1	2029 E FRYE RD	CHANDLER	AZ	852255843

1	203 S 132ND ST	CHANDLER	AZ	852256023
1	2030 E WHITTEN ST	CHANDLER	AZ	852252820
1	2031 E FAIRVIEW ST	CHANDLER	AZ	852252318
1	2033 E FRYE RD	CHANDLER	AZ	852255843
1	2033 E KEMPTON RD	CHANDLER	AZ	852252346
1	2034 CALE LEANDRO	SAN DIMAS	CA	91773
1	204 N HERITAGE DR	GILBERT	AZ	852345918
1	20418 N 33RD AVE	PHOENIX	AZ	850273062
1	2046 E SIERRA MADRE AVE	GILBERT	AZ	852961518
1	205 S 132ND ST	CHANDLER	AZ	852256023
1	205 S COTTONWOOD ST	CHANDLER	AZ	852255813
1	2050 E WHITTEN ST	CHANDLER	AZ	852252820
1	2051 E WHITTEN ST	CHANDLER	AZ	852252822
1	2053 E KEMPTON RD	CHANDLER	AZ	852252346
1	206 S EUCALYPTUS PL	CHANDLER	AZ	852255806
1	2064 E OAKLAND ST	CHANDLER	AZ	852254184
1	207 N HONEYSUCKLE LN	GILBERT	AZ	852345889
1	207 S 132ND ST	CHANDLER	AZ	852256023
1	2071 E WHITTEN ST	CHANDLER	AZ	852252822
1	2074 E LONGHORN PL	CHANDLER	AZ	852491251
1	2074 E OAKLAND ST	CHANDLER	AZ	852254184
1	2075 E OAKLAND ST	CHANDLER	AZ	852254185
1	208 N HONEYSUCKLE LN	GILBERT	AZ	852345890
1	2082 E CARLA VISTA PL	CHANDLER	AZ	852254249
1	2084 E OAKLAND ST	CHANDLER	AZ	852254184
1	2085 E COUNTY DOWN DR	CHANDLER	AZ	852494610
1	2085 E OAKLAND ST	CHANDLER	AZ	852254185
1	209 S 132ND ST	CHANDLER	AZ	85225
1	209 S COTTONWOOD ST	CHANDLER	AZ	852255813
1	2092 E CARLA VISTA PL	CHANDLER	AZ	852254249
1	2093 E CARLA VISTA PL	CHANDLER	AZ	852254250
1	2094 E OAKLAND ST	CHANDLER	AZ	852254184
1	2095 E OAKLAND ST	CHANDLER	AZ	852254185
1	210 N HERITAGE DR	GILBERT	AZ	852345918
1	210 S COOPER DR	CHANDLER	AZ	85225
1	210 S EUCALYPTUS PL	CHANDLER	AZ	852255806
1	2100 E AUGUSTA AVE	CHANDLER	AZ	852494193

1	2100 E CHICAGO ST	CHANDLER	AZ	852255834
1	2100 E HULET DR	CHANDLER	AZ	852254189
1	2101 E BUTLER ST	CHANDLER	AZ	852255829
1	2101 E CHICAGO ST	CHANDLER	AZ	852255833
1	2102 E CARLA VISTA PL	CHANDLER	AZ	852254251
1	2102 E FRYE RD	CHANDLER	AZ	852255842
1	2103 E BOSTON ST	CHANDLER	AZ	852255825
1	2103 W FRYE RD	CHANDLER	AZ	85224
1	21032 CAROB LN	MISSION VIEJO	CA	926916626
1	2104 E BOSTON ST	CHANDLER	AZ	852255826
1	2104 E CHICAGO ST	CHANDLER	AZ	852255834
1	2105 E BUTLER ST	CHANDLER	AZ	852255829
1	2105 E CINDY ST	CHANDLER	AZ	852255837
1	2105 E GALVESTON ST	CHANDLER	AZ	852254002
1	2105 E OAKLAND ST	CHANDLER	AZ	852254187
1	2106 E CINDY ST	CHANDLER	AZ	852255838
1	2106 E FRYE RD	CHANDLER	AZ	852255842
1	2107 E FRYE RD	CHANDLER	AZ	852255841
1	2107 W BOSTON ST	CHANDLER	AZ	852246119
1	2108 E BOSTON ST	CHANDLER	AZ	852255880
1	2108 W CHICAGO ST	CHANDLER	AZ	852246126
1	2109 E BUTLER ST	CHANDLER	AZ	852255829
1	2109 E CINDY ST	CHANDLER	AZ	852255837
1	211 E ARABIAN DR	GILBERT	AZ	85296
1	211 S 132ND ST	CHANDLER	AZ	852256023
1	2110 E CINDY ST	CHANDLER	AZ	852255838
1	2110 E HULET DR	CHANDLER	AZ	852254189
1	2111 E BOSTON ST	CHANDLER	AZ	852255825
1	2111 E FRYE RD	CHANDLER	AZ	852255841
1	2113 E CARLA VISTA PL	CHANDLER	AZ	852254253
1	2113 E CHICAGO ST	CHANDLER	AZ	852255833
1	2113 W CINDY ST	CHANDLER	AZ	852246127
1	2114 W CINDY ST	CHANDLER	AZ	852246127
1	2115 E FRYE RD	CHANDLER	AZ	852255841
1	2116 E BOSTON ST	CHANDLER	AZ	852255880
1	2117 E CINDY ST	CHANDLER	AZ	852255889
1	2118 E FRYE RD	CHANDLER	AZ	852255842

1	2118 W CINDY ST	CHANDLER	AZ	852246127
1	2119 E BOSTON ST	CHANDLER	AZ	852255825
1	2119 E FRYE RD	CHANDLER	AZ	852255841
1	2120 E HULET DR	CHANDLER	AZ	852254189
1	2121 E CINDY ST	CHANDLER	AZ	852255889
1	2121 E HULET DR	CHANDLER	AZ	852254190
1	2122 E CARLA VISTA PL	CHANDLER	AZ	852254252
1	2122 E CINDY ST	CHANDLER	AZ	852255838
1	2122 E FRYE RD	CHANDLER	AZ	852255800
1	2123 E BOSTON ST	CHANDLER	AZ	852255847
1	2123 E CARLA VISTA PL	CHANDLER	AZ	852254253
1	2123 E FRYE RD	CHANDLER	AZ	852255841
1	2124 E BOSTON ST	CHANDLER	AZ	852255880
1	2125 E CINDY ST	CHANDLER	AZ	852255889
1	2125 E OAKLAND ST	CHANDLER	AZ	852254188
1	2127 E BOSTON ST	CHANDLER	AZ	852255847
1	2128 E BOSTON ST	CHANDLER	AZ	852255880
1	213 N HONEYSUCKLE LN	GILBERT	AZ	852345889
1	213 S 132ND ST	CHANDLER	AZ	852256023
1	2130 E HULET DR	CHANDLER	AZ	852254189
1	2131 E BOSTON ST	CHANDLER	AZ	852255847
1	2131 E HULET DR	CHANDLER	AZ	852254190
1	2132 E BOSTON ST	CHANDLER	AZ	852255880
1	2132 E CALLE VISTA PL	CHANDLER	AZ	85225
1	2133 E CARLA VISTA PL	CHANDLER	AZ	852254253
1	2135 E BOSTON ST	CHANDLER	AZ	852255822
1	2135 E OAKLAND ST	CHANDLER	AZ	852254188
1	214 N HONEYSUCKLE LN	GILBERT	AZ	852345890
1	214 S EUCALYPTUS PL	CHANDLER	AZ	852255806
1	2140 E BOSTON ST	CHANDLER	AZ	852255821
1	2140 E HULET DR	CHANDLER	AZ	852254189
1	2141 E HULET DR	CHANDLER	AZ	852254190
1	2142 E CARLA VISTA PL	CHANDLER	AZ	852254252
1	2143 E CARLA VISTA PL	CHANDLER	AZ	852254253
1	2144 E OAKLAND ST	CHANDLER	AZ	852254186
1	2145 E OAKLAND ST	CHANDLER	AZ	852254188
1	2147 NEWHALL ST APT 127	SANTA CLARA	CA	950505888

1	215 S 132ND ST	CHANDLER	AZ	852256023
1	215 S POWER RD STE 105	MESA	AZ	852065236
1	2150 E HULET DR	CHANDLER	AZ	852254189
1	2152 E CARLA VISA PL	CHANDLER	AZ	85225
1	2153 E CARLA VISTA PL	CHANDLER	AZ	852254253
1	2155 E OAKLAND ST	CHANDLER	AZ	852254188
1	216 N HERITAGE DR	GILBERT	AZ	852345918
1	2160 E HULET DR	CHANDLER	AZ	852254189
1	2162 E CARLA VISTA PL	CHANDLER	AZ	852254252
1	2163 E CARLA VISTA PL	CHANDLER	AZ	852254254
1	2164 E OAKLAND ST	CHANDLER	AZ	852254186
1	2165 E OAKLAND ST	CHANDLER	AZ	852254188
1	217 S 132ND ST	CHANDLER	AZ	852256023
1	2170 E HULET DR	CHANDLER	AZ	852254189
1	2172 E CARLA VISTA PL	CHANDLER	AZ	852254252
1	2173 E CARLA VISTA PL	CHANDLER	AZ	852254254
1	2174 E OAKLAND ST	CHANDLER	AZ	852254186
1	2175 E OAKLAND ST	CHANDLER	AZ	852254188
1	2176 LAGUNA RD	SANTA ROSA	CA	954013725
1	21775 E TWIN ACRES DR	QUEEN CREEK	AZ	852429040
1	218 E PALOMINO CT	GILBERT	AZ	852962828
1	218 E SAGEBRUSH ST	GILBERT	AZ	852962225
1	2183 E HULET DR	CHANDLER	AZ	85225
1	219 E PALOMINO CT	GILBERT	AZ	852962829
1	219 E PINTO CT	GILBERT	AZ	852962821
1	219 E SAGEBRUSH ST	GILBERT	AZ	852962226
1	219 N HONEYSUCKLE LN	GILBERT	AZ	852345889
1	219 S 132ND ST	CHANDLER	AZ	852256023
1	220 E APPALOOSA CT	GILBERT	AZ	852962824
1	220 E ARABIAN DR	GILBERT	AZ	852962816
1	220 E CATCLAW CT	GILBERT	AZ	852962232
1	220 N HONEYSUCKLE LN	GILBERT	AZ	852345890
1	2200 E CINDY ST	CHANDLER	AZ	852255836
1	2202 E FRYE RD	CHANDLER	AZ	852255840
1	2205 E CINDY ST	CHANDLER	AZ	852255835
2	2205 E GALVESTON ST	CHANDLER	AZ	852254000
1	2206 E FRYE RD	CHANDLER	AZ	852255840

1	2206 E TOLEDO PL	CHANDLER	AZ	852254130
1	2208 E CINDY ST	CHANDLER	AZ	852255836
1	2209 E FRYE RD	CHANDLER	AZ	85225
1	221 E APPALOOSA CT	GILBERT	AZ	852962825
1	221 N COTTONWOOD ST	CHANDLER	AZ	852254192
1	2210 E FRYE RD	CHANDLER	AZ	852255840
1	2213 E FRYE RD	CHANDLER	AZ	852255839
1	2214 E FRYE RD	CHANDLER	AZ	852255840
1	2217 E CINDY ST	CHANDLER	AZ	852255835
1	2217 E FRYE RD	CHANDLER	AZ	852255839
1	2218 E FRYE RD	CHANDLER	AZ	852255840
1	222 S EUCALYPTUS PL	CHANDLER	AZ	852255806
1	2221 E CINDY ST	CHANDLER	AZ	852255835
1	2221 E FRYE RD	CHANDLER	AZ	852255839
1	2222 E FRYE RD	CHANDLER	AZ	852255840
1	2223 E CANYON PL	CHANDLER	AZ	85249
1	2225 E CINDY ST	CHANDLER	AZ	852255835
1	2225 E GALVESTON ST	CHANDLER	AZ	852254000
1	2226 E FRYE RD	CHANDLER	AZ	852255840
1	2226 E TOLEDO PL	CHANDLER	AZ	852254130
1	2229 E CINDY ST	CHANDLER	AZ	852255835
1	2234 E FRYE RD	CHANDLER	AZ	852255840
1	22351 S SOSSAMAN RD	QUEEN CREEK	AZ	852428825
1	2240 E CARLA VISTA PL	CHANDLER	AZ	852254040
1	2241 E CARLA VISTA PL	CHANDLER	AZ	852254042
1	2242 E HULET DR	CHANDLER	AZ	852254008
1	2245 E OAKLAND ST	CHANDLER	AZ	852254047
1	2246 E TOLEDO PL	CHANDLER	AZ	852254109
1	2249 E SANTA CRUZ DR	GILBERT	AZ	852342839
1	225 N HONEYSUCKLE LN	GILBERT	AZ	852345889
1	226 S EUCALYPTUS PL	CHANDLER	AZ	852255806
1	2260 E BINNER DR	CHANDLER	AZ	852254105
1	2261 E BINNER DR	CHANDLER	AZ	852254107
1	2267 E TOLEDO PL	CHANDLER	AZ	852254110
1	228 E PALOMINO CT	GILBERT	AZ	852962828
1	228 E PINTO CT	GILBERT	AZ	852962820
1	228 E SAGEBRUSH ST	GILBERT	AZ	852962225

1	228 N HERITAGE DR	GILBERT	AZ	852345966
1	228 W ASPEN AVE	GILBERT	AZ	852333902
1	2280 E BINNER DR	CHANDLER	AZ	852254105
1	2281 E BINNER DR	CHANDLER	AZ	852254107
1	2286 E TOLEDO PL	CHANDLER	AZ	852254109
1	2287 E TOLEDO PL	CHANDLER	AZ	852254110
1	229 E PINTO CT	GILBERT	AZ	852962821
1	229 E SAGEBRUSH ST	GILBERT	AZ	852962226
1	230 E APPALOOSA CT	GILBERT	AZ	852962824
1	230 E ARABIAN DR	GILBERT	AZ	852962816
1	230 E CATCLAW CT	GILBERT	AZ	852962232
1	2300 E BINNER DR	CHANDLER	AZ	852254106
1	2300 E COMMONWEALTH AVE	CHANDLER	AZ	852255904
1	2300 E FRYE RD	CHANDLER	AZ	852255926
1	2301 E BINNER DR	CHANDLER	AZ	852254108
1	2304 E FRYE RD	CHANDLER	AZ	852255926
1	2305 E FOLLEY ST	CHANDLER	AZ	852255894
1	2306 E FRYE RD	CHANDLER	AZ	852255926
1	2306 E TOLEDO PL	CHANDLER	AZ	852254122
1	2307 E TOLEDO PL	CHANDLER	AZ	852254124
1	2308 E FRYE RD	CHANDLER	AZ	852255926
1	2309 E FOLLEY ST	CHANDLER	AZ	852255894
1	231 E APPALOOSA CT	GILBERT	AZ	852962825
1	231 E ARABIAN DR	GILBERT	AZ	852962817
1	231 E CATCLAW CT	GILBERT	AZ	852962232
1	231 N COTTONWOOD ST	CHANDLER	AZ	852254192
1	231 N HONEYSUCKLE LN	GILBERT	AZ	852345889
1	2310 E FOLLEY ST	CHANDLER	AZ	852255893
1	2310 E FRYE RD	CHANDLER	AZ	852255926
1	2310 N POMEROY CIR	MESA	AZ	852011410
2	2310 W DEL CAMPO CIR	MESA	AZ	852022600
1	2313 E FOLLEY ST	CHANDLER	AZ	852255894
1	2314 E FOLLEY ST	CHANDLER	AZ	852255893
1	2317 E FOLLEY ST	CHANDLER	AZ	852255894
1	2318 E FOLLEY ST	CHANDLER	AZ	85225
1	2322 E FOLLY ST	CHANDLER	AZ	852255893
1	2325 E FOLLEY ST	CHANDLER	AZ	852255894

1	2326 E BALSAM DR	CHANDLER	AZ	852492343
1	2326 E FOLLEY ST	CHANDLER	AZ	852255893
1	2330 E FOLLEY ST	CHANDLER	AZ	852255893
1	2333 E FOLLEY ST	CHANDLER	AZ	852255894
1	2334 E FOLLEY ST	CHANDLER	AZ	852255893
1	23340 LYNHAM PL	VALENCIA	CA	913541921
1	2337 E FOLLEY ST	CHANDLER	AZ	852255894
1	2338 E FOLLEY ST	CHANDLER	AZ	852255893
1	234 N CONCORD ST	GILBERT	AZ	852345963
1	234 N HERITAGE DR	GILBERT	AZ	852345966
1	2341 E FOLLEY ST	CHANDLER	AZ	852255894
1	2342 E FOLLEY ST	CHANDLER	AZ	852255893
1	2345 E FOLLEY ST	CHANDLER	AZ	852255894
1	2345 E HERMOSA VISTA DR	MESA	AZ	852132220
1	2345 S ALMA SCHOOL RD STE 210	MESA	AZ	852104014
1	2348 N 24TH ST	MESA	AZ	852132247
1	238 E PALOMINO CT	GILBERT	AZ	85296
1	238 E PINTO CT	GILBERT	AZ	852962820
1	238 E SAGEBRUSH ST	GILBERT	AZ	852962225
1	239 E PALOMINO CT	GILBERT	AZ	852962829
1	239 E PINTO CT	GILBERT	AZ	852962821
1	24 ELDA DR	SAN RAFAEL	CA	94903
1	24 N COLONIAL DR	GILBERT	AZ	852345919
1	240 E ARABIAN DR	GILBERT	AZ	852962816
1	240 N CONCORD ST	GILBERT	AZ	852345963
1	240 N HERITAGE DR	GILBERT	AZ	852345966
1	241 E APPALOOSA CT	GILBERT	AZ	852962825
1	241 E ARABIAN DR	GILBERT	AZ	852962817
1	241 E CATCLAW CT	GILBERT	AZ	852962232
1	241 N COTTONWOOD ST	CHANDLER	AZ	852254192
1	24111 S AGATE DR	SUN LAKES	AZ	852480872
1	2420 E GERONIMO ST	CHANDLER	AZ	852252341
1	244 E CATCLAW CT	GILBERT	AZ	852962232
1	2450 N ROSE	MESA	AZ	852131420
1	246 E SAGEBRUSH ST	GILBERT	AZ	852962225
1	246 N CONDORD ST	GILBERT	AZ	85234
1	246 N HERITAGE DR	GILBERT	AZ	852345966

1	2461 W MARLIN DR	CHANDLER	AZ	85248
1	24636 VESTA	MISSION VIEJO	CA	926914718
2	2475 S AIRPORT BLVD	CHANDLER	AZ	852491719
1	248 E PALOMINO CT	GILBERT	AZ	852962828
1	248 E PINTO CT	GILBERT	AZ	852962820
1	249 E PALOMINO CT	GILBERT	AZ	852962829
1	249 E PINTO CT	GILBERT	AZ	852962821
1	25 S RIATA DR	GILBERT	AZ	852961145
1	25 S SILVERADO ST	GILBERT	AZ	852961159
1	250 E APPALOOSA CT	GILBERT	AZ	852962824
1	250 E ARABIAN DR	GILBERT	AZ	852962816
1	251 E APPALOOSA CT	GILBERT	AZ	852962825
1	251 E ARABIAN DR	GILBERT	AZ	852962817
1	251 E CATCLAW CT	GILBERT	AZ	852962232
1	256 E STRAWBERRY DR	MILL VALLEY	CA	949412507
1	258 E PALOMINO CT	GILBERT	AZ	852962828
1	258 E PINTO CT	GILBERT	AZ	852962820
1	258 E SAGEBRUSH ST	GILBERT	AZ	852962225
1	25803 NE 1ST PL	SAMMAMISH	WA	980743480
1	259 E PALOMINO CT	GILBERT	AZ	852962829
1	259 E PINTO CT	GILBERT	AZ	852962821
1	26 S RIATA DR	GILBERT	AZ	852961144
1	26 S SILVERADO ST	GILBERT	AZ	852961157
1	260 E APPALOOSA CT	GILBERT	AZ	852962824
1	260 E ARABIAN DR	GILBERT	AZ	852962816
1	260 SIMONTON CREST DR	LAWRENCEVILLE	GA	30045
1	261 E APPALOOSA CT	GILBERT	AZ	852962825
1	261 E ARABIAN DR	GILBERT	AZ	852962817
1	26304 S 116TH ST	CHANDLER	AZ	852494534
1	26307 S 116TH ST	CHANDLER	AZ	85249
1	26310 S 116TH ST	CHANDLER	AZ	85249
1	26313 S 1116TH ST	CHANDLER	AZ	85249
1	26316 S 116TH ST	CHANDLER	AZ	852494534
1	2640 E BROOKS ST	GILBERT	AZ	852968849
1	26422 S 116TH ST	CHANDLER	AZ	852494536
1	26425 S 116TH ST	CHANDLER	AZ	852494537
1	26428 S 116TH ST	CHANDLER	AZ	852494536

4	26546 N ALMA SCHOOL RD STE 100	SCOTTSDALE	AZ	852558094
1	26606 S 116TH ST	CHANDLER	AZ	852494532
1	26614 S 116TH ST	CHANDLER	AZ	852494533
1	26615 S 118TH ST	CHANDLER	AZ	852494531
1	26622 S 116TH ST	CHANDLER	AZ	852494533
1	26623 S 118TH ST	CHANDLER	AZ	852494531
1	26628 S BRANCHWOOD CT	SUN LAKES	AZ	852489250
1	26631 S 118TH ST	CHANDLER	AZ	852494531
1	268 E SAGEBRUSH ST	GILBERT	AZ	852962225
1	2680 S LOS ALTOS DR	CHANDLER	AZ	852487948
1	269 E SAGEBRUSH ST	GILBERT	AZ	852962227
1	270 E APPALOOSA CT	GILBERT	AZ	852962824
1	271 E APPALOOSA CT	GILBERT	AZ	852962825
1	271 N COTTONWOOD ST	CHANDLER	AZ	852254193
1	278 E SAGEBRUSH ST	GILBERT	AZ	852962225
1	279 E SAGEBRUSH ST	GILBERT	AZ	852962227
1	279 W DESERT AVE	GILBERT	AZ	852332135
1	28 HOLLAND AVE	ELMONT	NY	110031633
4	2801 N TENYA WY STE C	LAS VEGAS	NV	891281400
1	281 N COTTONWOOD ST	CHANDLER	AZ	852254193
1	282 N ASHLEY DR	CHANDLER	AZ	852254126
1	2820 E ESTRELLA CT	GILBERT	AZ	852968893
1	28382 LA CALETA	MISSION VIEJO	CA	926921312
1	288 E SAGEBRUSH ST	GILBERT	AZ	852962225
1	289 E SAGEBRUSH ST	GILBERT	AZ	852962227
1	2890 HAY LOFT WAY	MORGAN HILL	CA	950373918
1	29 LISBON AVE SOUTHEAST	RIO RANCHO	NM	871242616
1	29018 NEWPORT RD	TEMECULA	CA	925915592
1	291 N COTTONWOOD ST	CHANDLER	AZ	852254193
1	2914 W VILLA THERESA DR	PHOENIX	AZ	850531118
1	292 N ASHLEY DR	CHANDLER	AZ	852254126
1	2955 E MAHOGANY PL	CHANDLER	AZ	85249
1	2964 AVENIDA CIRUELA	CARLSBAD	CA	920096983
1	30 N COLONIAL DR	GILBERT	AZ	852345919
1	300 S COTTONWOOD ST	CHANDLER	AZ	852255812
1	3001 E BASELINE RD	GILBERT	AZ	852342521
2	3001 E CAMELBACK RD STE 130	PHOENIX	AZ	850164400

1	3001 S 35TH ST STE 4	PHOENIX	AZ	850347233
1	3005 E BASELINE RD	GILBERT	AZ	852342521
1	3006 S ARTESIA ST	SANTA ANA	CA	927046102
1	301 N COTTONWOOD ST	CHANDLER	AZ	852254194
8	301 WEST JEFFERSON ST	PHOENIX	AZ	85003
1	3011 E BASELINE RD	GILBERT	AZ	852342521
1	3017 E BASELINE RD	GILBERT	AZ	852342521
1	302 N ASHLEY DR	CHANDLER	AZ	852254127
1	3023 S CARRIAGE LN	MESA	AZ	852027813
1	304 S COTTONWOOD ST	CHANDLER	AZ	852255812
1	3045 E BASELINE RD	GILBERT	AZ	852342521
2	3048 E BASELINE RD STE 102	MESA	AZ	852047287
1	3048 E BASELINE RD STE 108	MESA	AZ	852047287
1	306 S WASHINGTON ST	WATERTOWN	WI	530944318
1	307 BROOKTREE CT	HAYWARD	CA	945446664
1	308 S COTTONWOOD ST	CHANDLER	AZ	852255812
1	31 VARSITY ESTATES PARK NW			
1	31 VIRGINIA AVE	NORTH ATTLEBORO	MA	02763
1	311 N COTTONWOOD ST	CHANDLER	AZ	852254194
1	312 N ASHLEY DR	CHANDLER	AZ	852254127
1	312 S COTTONWOOD ST	CHANDLER	AZ	852255812
1	3161 E GLENROSA AVE	PHOENIX	AZ	850165866
1	3164 E DESERT FLOWER LN	PHOENIX	AZ	850488330
1	317 WATERFORD CT	CRANBERRY TOWNSHIP	PA	16066
1	3185 E WINGED FOOT DR	CHANDLER	AZ	852499141
1	321 N COTTONWOOD ST	CHANDLER	AZ	852254194
1	322 N ASHLEY DR	CHANDLER	AZ	852254127
1	324 E ARABIAN DR	GILBERT	AZ	852962818
1	324 E SAGEBRUSH ST	GILBERT	AZ	852962228
1	325 E SAGEBRUSH ST	GILBERT	AZ	852962230
1	3250 N SAN MARCOS PL	CHANDLER	AZ	852257789
1	33 S RIATA DR	GILBERT	AZ	852961145
1	33 S SILVERADO ST	GILBERT	AZ	852961159
1	3302 E STANFORD AVE	GILBERT	AZ	852342150
1	331 N COTTONWOOD ST	CHANDLER	AZ	852254194
1	331 W GAIL DR	GILBERT	AZ	852338509
1	332 E ARABIAN DR	GILBERT	AZ	852962818

1	332 N ASHLEY DR	CHANDLER	AZ	852254135
1	333 E ARABIAN DR	GILBERT	AZ	852962819
1	333 S COOPER RD	CHANDLER	AZ	85225
1	334 E SAGEBRUSH ST	GILBERT	AZ	852962228
1	335 E SAGEBRUSH ST	GILBERT	AZ	852962230
1	337 E PALOMINO CT	GILBERT	AZ	852962831
1	337 E SARATOGA CT	GILBERT	AZ	852962236
1	338 E PALOMINO CT	GILBERT	AZ	852962830
1	338 E SARATOGA CT	GILBERT	AZ	852962235
1	3393 IVAN WAY	MOUNTAIN VIEW	CA	940404534
1	34 S RIATA DR	GILBERT	AZ	852961144
1	340 E ARABIAN DR	GILBERT	AZ	852962818
1	340 E CATCLAW CT	GILBERT	AZ	852962233
1	341 E ARABIAN DR	GILBERT	AZ	852962819
1	341 E CATCLAW CT	GILBERT	AZ	852962234
1	341 N COTTONWOOD ST	CHANDLER	AZ	852254195
1	341 W GAIL DR	GILBERT	AZ	852338509
1	342 N ASHLEY DR	CHANDLER	AZ	852254135
1	3425 E TARA DR	SPOKANE	WA	992237203
1	3439 BARRY AVE	LOS ANGELES	CA	900662001
1	344 E SAGEBRUSH ST	GILBERT	AZ	852962228
1	345 E PALOMINO CT	GILBERT	AZ	852962831
1	345 E PINTO CT	GILBERT	AZ	852962823
1	345 E SARATOGA COURT	GILBERT	AZ	852342236
1	346 E PALOMINO CT	GILBERT	AZ	852962830
1	346 E PINTO CT	GILBERT	AZ	852962822
1	34769 COMSTOCK CMN	FREMONT	CA	945552819
1	348 E APPALOOSA CT	GILBERT	AZ	852962826
1	348 E ARABIAN DR	GILBERT	AZ	852962818
1	348 E CATCLAW CT	GILBERT	AZ	852962233
1	349 E CATCLAW CT	GILBERT	AZ	852962234
1	3502 S SENATE PL	CHANDLER	AZ	852492623
1	351 N COTTONWOOD ST	CHANDLER	AZ	852254195
1	351 W GAIL DR	GILBERT	AZ	852338509
1	352 N ASHLEY DR	CHANDLER	AZ	852254135
1	3520 S SPRING DR	CHANDLER	AZ	852492626
1	3521 S JESSE ST	CHANDLER	AZ	852492569

1	3522 S CROSSCREEK DR	CHANDLER	AZ	852492531
1	353 E PALOMINO CT	GILBERT	AZ	852962831
1	353 E PINTO CT	GILBERT	AZ	852962823
1	353 E SARATOGA CT	GILBERT	AZ	852962236
1	3530 S SPRINGS DR	CHANDLER	AZ	852492626
1	354 E PALOMINO CT	GILBERT	AZ	852962830
1	354 E PINTO CT	GILBERT	AZ	852962822
1	354 E SAGEBRUSH ST	GILBERT	AZ	852962228
1	354 E SARATOGA CT	GILBERT	AZ	852962235
1	3540 S SPRINGS DR	CHANDLER	AZ	852492626
1	355 E SAGEBRUSH ST	GILBERT	AZ	852962230
1	3550 S SPRINGS DR	CHANDLER	AZ	852492626
1	356 E APPALOOSA CT	GILBERT	AZ	852962826
1	356 E ARABIAN DR	GILBERT	AZ	852962818
1	356 E CATCLAW CT	GILBERT	AZ	852962233
1	3560 S SPRINGS DR	CHANDLER	AZ	852492626
1	357 E APPALOOSA CT	GILBERT	AZ	852962827
1	357 E ARABIAN DR	GILBERT	AZ	852962819
1	357 E CATCLAW CT	GILBERT	AZ	852962234
1	358 S JARED DR	GILBERT	AZ	852961708
1	36 N COLONIAL DR	GILBERT	AZ	852345919
1	360 W GAIL DR	GILBERT	AZ	852338508
1	3600 S SPRINGS DR	CHANDLER	AZ	852492627
1	361 E PINTO CT	GILBERT	AZ	852962823
1	361 E SARATOGA CT	GILBERT	AZ	852962236
1	361 W GAIL DR	GILBERT	AZ	852338509
1	3610 S SPRINGS DR	CHANDLER	AZ	852492627
1	3613 E WASHINGTON AVE	GILBERT	AZ	852344333
1	362 E PALOMINO CT	GILBERT	AZ	852962830
1	362 E PINTO CT	GILBERT	AZ	852962822
1	362 N ASHLEY DR	CHANDLER	AZ	852254135
1	3620 S SPRINGS DR	CHANDLER	AZ	852492627
1	363 W BAYLOR LN	GILBERT	AZ	852338361
1	3630 S SPRINGS DR	CHANDLER	AZ	852492627
1	364 E APPALOOSA CT	GILBERT	AZ	852962826
1	364 E ARABIAN DR	GILBERT	AZ	852962818
1	364 E CATCLAW CT	GILBERT	AZ	852962233

1	364 E SAGEBRUSH ST	GILBERT	AZ	852962228
1	3640 S SPRINGS DR	CHANDLER	AZ	852492627
1	365 E APPALOOSA CT	GILBERT	AZ	852962827
1	365 E ARABIAN DR	GILBERT	AZ	852962819
1	365 E CATCLAW CT	GILBERT	AZ	852962234
1	3650 S SPRINGS DR	CHANDLER	AZ	85249
1	369 E PALOMINO CT	GILBERT	AZ	852962831
1	369 E PINTO CT	GILBERT	AZ	852962823
1	37 S LINDSAY RD	GILBERT	AZ	852961131
1	370 E PALOMINO CT	GILBERT	AZ	852962830
1	370 W GAIL DR	GILBERT	AZ	852338508
1	371 N COTTONWOOD ST	CHANDLER	AZ	85225
1	372 E APPALOOSA CT	GILBERT	AZ	852962826
1	372 E ARABIAN DR	GILBERT	AZ	852962818
1	372 E CATCLAW CT	CHANDLER	AZ	852962233
1	372 N ASHLEY DR	CHANDLER	AZ	852254135
1	373 E APPALOOSA CT	GILBERT	AZ	852962827
1	373 E ARABIAN DR	GILBERT	AZ	852962819
1	373 E CATCLAW CT	GILBERT	AZ	852962234
1	374 E SAGEBRUSH ST	GILBERT	AZ	852962228
1	375 E SAGEBRUSH ST	GILBERT	AZ	852962230
1	37620 N 9TH ST	DESERT HILLS	AZ	85086
1	380 S DODGE DR	CHANDLER	AZ	852252302
1	3802 E FLOWER COURT	GILBERT	AZ	852978897
1	381 E ARABIAN DR	GILBERT	AZ	852962819
1	381 E TREMAINE AVE	GILBERT	AZ	852344578
1	381 N COTTONWOOD ST	CHANDLER	AZ	852254195
1	382 N ASHLEY DR	CHANDLER	AZ	852254135
1	3825 E IRWIN AVE	MESA	AZ	852063853
1	384 E SAGEBRUSH ST	GILBERT	AZ	852962229
1	384 W LIBERTY LN	GILBERT	AZ	852338554
1	385 W LIBERTY LN	GILBERT	AZ	852338555
1	389 E ARABIAN DR	GILBERT	AZ	852962819
1	39 ROYAL AVE	RIVERHEAD	NY	119014319
1	3902 N PARK ST	BUCKEYE	AZ	853967662
1	391 N COTTONWOOD ST	CHANDLER	AZ	852254197
1	3935 W DAILEY ST	PHOENIX	AZ	850535451

1	3988 S HOLLYHOCK PL	CHANDLER	AZ	852484193
1	400 S DODGE DR	CHANDLER	AZ	852252304
1	400 W CONSTITUTION CT	GILBERT	AZ	852338569
1	401 N COTTONWOOD ST	CHANDLER	AZ	852254196
1	401 S DODGE DR	CHANDLER	AZ	852252305
1	402 S JARED DR	GILBERT	AZ	852962308
1	403 S BURK ST	GILBERT	AZ	852962216
1	4045 PREMIER DR STE 230	HIGH POINT	NC	272659430
1	405 W CONSTUTITION CT	GILBERT	AZ	852338569
1	41 S HONEYSUCKLE LN	GILBERT	AZ	852961123
1	4101 S KERBY WAY	CHANDLER	AZ	852493061
1	4107 S KERBY WAY	CHANDLER	AZ	852493061
1	411 S BURK ST	GILBERT	AZ	852962216
1	4110 S KERBY WAY	CHANDLER	AZ	852493062
1	4111 S KERBY WAY	CHANDLER	AZ	852493061
1	4120 S KERBY WAY	CHANDLER	AZ	852493062
1	4121 S KERBY WY	CHANDLER	AZ	852493061
1	4130 S KERBY WY	CHANDLER	AZ	85249
1	4131 S KERBY WAY	CHANDLER	AZ	852493061
1	4140 S KERBY WAY	CHANDLER	AZ	852493062
1	4141 N SCOTTSDALE RD STE 308	SCOTTSDALE	AZ	852513907
1	415 W CONSTITUTION CT	GILBERT	AZ	852338569
1	4150 S KERBY WAY	CHANDLER	AZ	852493062
1	4151 S KERBY WAY	CHANDLER	AZ	852493061
1	4155 E MEADOWVIEW DR	GILBERT	AZ	852974873
1	4160 S KERBY WAY	CHANDLER	AZ	852493062
1	4161 S KERBY WAY	CHANDLER	AZ	852493061
1	418 S BURK ST	GILBERT	AZ	852962214
1	418 S JARED DR	GILBERT	AZ	852962308
1	4180 S KERBY WAY	CHANDLER	AZ	852493062
1	419 S BURK ST	GILBERT	AZ	852962216
1	42 N COLONIAL DR	GILBERT	AZ	852425919
1	42 S RIATA DR	GILBERT	AZ	852961144
1	420 S DODGE DR	CHANDLER	AZ	852252304
1	4200 S KERBY WAY	CHANDLER	AZ	852493063
1	421 S DODGE DR	CHANDLER	AZ	852252305
1	4210 S KERBY WAY	CHANDLER	AZ	852493063

1	4220 S KERBY WAY	CHANDLER	AZ	852493064
1	4230 S KERBY WAY	CHANDLER	AZ	852493064
1	4240 S KERBY WAY	CHANDLER	AZ	852493064
1	4250 S KERBY WAY	CHANDLER	AZ	852493064
1	426 S BURK ST	GILBERT	AZ	852962214
1	427 S BURK ST	GILBERT	AZ	852962216
1	4270 S KERBY WAY	CHANDLER	AZ	852493064
1	4280 S KERBY WAY	CHANDLER	AZ	852493064
1	4290 S KERBY WAY	CHANDLER	AZ	852493064
1	430 BUCKINGHAM PARK CT	SAN JOSE	CA	951362011
1	43038 MONACAN PL	ELIZABETH LAKE	CA	93532
1	431 N CHASE CT	CHANDLER	AZ	852254020
1	4311 S KERBY WAY	CHANDLER	AZ	852493059
1	432 W LIBERTY LN	GILBERT	AZ	852338556
1	43226 W SNOW DR	MARICOPA	AZ	852398401
1	4331 S KERBY WAY	CHANDLER	AZ	852493059
1	43338 W SUNLAND DR	MARICOPA	AZ	852391711
1	43341 W ESTRADA ST	MARICOPA	AZ	85238
1	434 S BURK ST	GILBERT	AZ	85296
1	434 S JARED DR	GILBERT	AZ	852962308
1	435 S BURK ST	GILBERT	AZ	852962216
1	441 S DODGE DR	CHANDLER	AZ	852252305
1	441 W LIBERTY LN	GILBERT	AZ	852338557
1	442 S BURK ST	GILBERT	AZ	852962214
1	443 S BURK ST	GILBERT	AZ	852962216
1	4431 E TANGLEWOOD DR	PHOENIX	AZ	850487609
1	444 E TREMAINE DR	CHANDLER	AZ	852251008
1	444 N 17TH ST	SAN JOSE	CA	951121732
1	444 W LIBERTY LN	GILBERT	AZ	852338556
1	4461 S KERBY WAY	CHANDLER	AZ	852493058
1	4481 S KERBY WAY	CHANDLER	AZ	852493058
1	45 W UNIVERSITY DR	MESA	AZ	852015831
1	450 S BURK ST	GILBERT	AZ	852962214
1	45235 COUTVIEW TR	NOVI	MI	48375
1	458 S BURK ST	GILBERT	AZ	852962215
1	459 N GILBERT RD STE A145	GILBERT	AZ	852344740
1	460 S DODGE DR	CHANDLER	AZ	852252304

1	4601 S ANVIL PL	CHANDLER	AZ	852493043
1	4608 SEDA CV	SAN DIEGO	CA	921242322
1	461 S DODGE DR	CHANDLER	AZ	852252305
1	4611 S ANVIL PL	CHANDLER	AZ	852493043
1	4630 E RUFFIAN RD	GILBERT	AZ	852975527
1	4645 E COTTON GIN LOOP	PHOENIX	AZ	850408885
1	46625 TWIN CITY TRL	MACOMB	MI	480446209
1	468 S BURK ST	GILBERT	AZ	852962215
1	469 STANFORD DR	ARCADIA	CA	910072648
1	469 W LIBERTY CT	GILBERT	AZ	852338520
1	4725 E HOBART DR	MESA	AZ	852054131
1	474 W SAN REMO ST	GILBERT	AZ	852332605
1	4744 W TYSON ST	CHANDLER	AZ	852262906
1	4750 S ANVIL PL	CHANDLER	AZ	852493042
1	4751 E HOPI CIR	MESA	AZ	852063388
1	478 W LIBERTY LN	GILBERT	AZ	85233
1	4790 S ANVIL PL	CHANDLER	AZ	852493042
1	4793 E CHARLES DR	PARADISE VALLEY	AZ	85253
1	48 N COLONIAL DR	GILBERT	AZ	852345919
1	4810 S ANVIL PL	CHANDLER	AZ	852493040
1	4828 LOOP CENTRAL DR	HOUSTON	TX	770812212
1	483 W LIBERTY LN	GILBERT	AZ	852338557
1	4830 S ANVIL PL	CHANDLER	AZ	852493040
1	4850 S ANVIL PL	CHANDLER	AZ	852493040
1	4870 S ANVIL PL	CHANDLER	AZ	852493041
1	4890 S ANVIL PL	CHANDLER	AZ	852493041
1	49 S HONEYSUCKLE LN	GILBERT	AZ	852961123
1	4900 S ANVIL PL	CHANDLER	AZ	852493039
1	4920 S ANVIL PL	CHANDLER	AZ	852493039
1	4920 S ROBINS WAY	CHANDLER	AZ	852493026
1	4930 S ANVIL PL	CHANDLER	AZ	852493039
1	4950 S ANVIL PL	CHANDLER	AZ	852493039
1	4952 MAYFIELD CT	SAN JOSE	CA	951301828
1	4960 S ANVIL PL	CHANDLER	AZ	852493039
1	4961 S ANVIL PL	CHANDLER	AZ	852493036
1	497 W LIBERTY CT	GILBERT	AZ	852338520
1	4970 S ANVIL PL	CHANDLER	AZ	852493039

1	4991 S ANVIL PL	CHANDLER	AZ	852493036
5	50 E CIVIC CENTER DR	GILBERT	AZ	852963463
2	50 E NORTH TEMPLE	SALT LAKE CTY	UT	841500002
1	50 E NORTH TEMPLE RM 22	SALT LAKE CTY	UT	841500002
1	50 S RIATA DR	GILBERT	AZ	852961144
1	501 KIRKLIN AVE	LINWOOD	NJ	082211021
1	5011 PRESSLEY RD	SANTA ROSA	CA	954049517
1	502 S BURK ST	GILBERT	AZ	852962218
1	5031 N 77TH PL	SCOTTSDALE	AZ	852507712
1	505 CITY PARKWAY WEST STE 100	ORANGE	CA	928682927
1	5120 E HAMPTON AVE APT 1261	MESA	AZ	852066610
1	513 N BROAD ST	FAIRBORN	OH	453245257
1	513 S IRONWOOD CT	GILBERT	AZ	852962237
1	517 S BAY SHORE BLVD	GILBERT	AZ	852336624
1	518 RICHMOND ST	KENDALLVILLE	IN	467551856
1	5212 S MONTE VISTA ST	CHANDLER	AZ	852493336
1	523 S IRONWOOD CT	GILBERT	AZ	852962237
1	525 E PALO VERDE ST	GILBERT	AZ	852961137
1	525 E SILVER CREEK RD	GILBERT	AZ	852961150
1	526 E PALO VERDE ST	GILBERT	AZ	852961136
1	528 S IRONWOOD CT	GILBERT	AZ	852962237
3	530 W RAY RD	GILBERT	AZ	85234
1	5303 E HANNIBAL	MESA	AZ	85205
1	5312 E TAYLOR ST APT 222	PHOENIX	AZ	850086753
1	532 W NAVARRO AVE	MESA	AZ	852107405
1	5325 W LASALLE ST	LAVEEN	AZ	85339
1	533 S IRONWOOD CT	GILBERT	AZ	852962237
1	536 E CAMPBELL AVE	GILBERT	AZ	852344612
1	539 E PALO VERDE ST	GILBERT	AZ	852961137
1	54 N COLONIAL DR	GILBERT	AZ	85234
1	540 N MAY ST NO 2062	MESA	AZ	852014403
1	548 E PALO VERDE ST	GILBERT	AZ	852961136
1	549 39TH AVE	SAN FRANCISCO	CA	941212619
1	549 E PALO VERDE ST	GILBERT	AZ	852961137
1	5501 32ND ST N	ARLINGTON	VA	222071534
1	557 E SILVER CREEK RD	GILBERT	AZ	852961150
1	558 E SILVER CREEK RD	GILBERT	AZ	852961150

1	5625 E BELLEVUE ST	TUCSON	AZ	857125001
1	57 S HONEYSUCKLE LN	GILBERT	AZ	852961123
1	5739 88TH CRES N	BROOKLYN PARK	MN	554433978
1	58 S RIATA DR	GILBERT	AZ	852961144
1	5918 STONERIDGE MAIL RD	PLEASANTON	CA	94588
1	60 N HERITAGE DR	GILBERT	AZ	852345916
1	601 E SILVER CREEK RD	GILBERT	AZ	852961152
1	602 E SILVER CREEK RD	GILBERT	AZ	852961151
1	605 E REDONDO DR	GILBERT	AZ	852963528
1	606 W CHILTON AVE	CHANDLER	AZ	85225
1	609 E SILVER CREEK RD	GILBERT	AZ	852961152
1	609 W LA DONNA DR	TEMPE	AZ	852832722
1	610 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961106
1	610 S COTTONWOOD DR	GILBERT	AZ	852962800
1	611 E BUENA VISTA DR	CHANDLER	AZ	852493973
1	614 E COUNTRY DOWN DR	CHANDLER	CA	85249
1	615 S COTTONWOOD DR	GILBERT	AZ	852962801
1	617 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961107
1	618 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961106
1	618 E SILVER CREEK RD	GILBERT	AZ	852961153
1	620 E FLINT ST	CHANDLER	AZ	852254729
1	620 S COTTONWOOD DR	GILBERT	AZ	852962800
1	620 S MARIE DR	CHANDLER	AZ	852252370
1	620 W GALVESTON ST	GILBERT	AZ	852338818
1	625 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961107
1	625 E PALO VERDE ST	GILBERT	AZ	852961139
1	626 E CENTURY AVE	GILBERT	AZ	852961118
1	626 E PALO VERDE ST	GILBERT	AZ	852961138
1	626 E SILVER CREEK RD	GILBERT	AZ	852961153
1	6291 W SHANNON ST	CHANDLER	AZ	852265881
1	630 S COTTONWOOD DR	GILBERT	AZ	852962800
1	630 W GALVESTON ST	GILBERT	AZ	852338818
1	631 E BUENA VISTA DR	CHANDLER	AZ	852493973
1	633 BELVEDERE AVE NE	WARREN	OH	444835511
1	633 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961107
1	633 E CENTURY AVE	GILBERT	AZ	852961119
1	633 E SILVER CREEK RD	GILBERT	AZ	852961152

1	634 E CENTURY AVE	GILBERT	AZ	852961118
1	634 E COUNTY DOWN DR	CHANDLER	AZ	852493977
1	635 E COUNTY DOWN DR	CHANDLER	AZ	852493978
1	6360 E THOMAS RD STE 210	SCOTTSDALE	AZ	852517054
1	640 E PALO VERDE ST	GILBERT	AZ	852961138
1	640 S COTTONWOOD DR	GILBERT	AZ	852962800
1	640 S MARIE DR	CHANDLER	AZ	852252370
1	640 W GALVESTON ST	GILBERT	AZ	852338818
1	641 E AVENIDA SIERRA MADRE CIR	GILBERT	AZ	85296
1	641 E CENTURY AVE	GILBERT	AZ	852961119
1	641 E PALO VERDE ST	GILBERT	AZ	852961139
1	642 E CENTURY AVE	GILBERT	AZ	852961118
1	642 E SILVER CREEK RD	GILBERT	AZ	852961153
1	649 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961107
1	649 E SILVER CREEK RD	GILBERT	AZ	852961154
1	65 CRESTWOOD BLVD	POUGH KEEPSIE	NY	126031215
1	65 KINGS OAK PL	WALNUT CREEK	CA	945976817
1	650 E CENTURY AVE	GILBERT	AZ	852961118
1	650 E SILVER CREEK RD	GILBERT	AZ	852961153
1	650 S COTTONWOOD DR	GILBERT	AZ	852962800
1	651 E BUENA VISTA DR	CHANDLER	AZ	852493973
1	6510 S BOGLE AVE	CHANDLER	AZ	852493969
1	653 MICHELLE CT	GARDEN CITY	MI	481352644
1	653 S BURK ST	GILBERT	AZ	852962813
1	6530 S BOGLE AVE	CHANDLER	AZ	852493969
1	654 E COUNTRY DOWN DR	CHANDLER	AZ	85249
1	6550 S BOGLE AVE	CHANDLER	AZ	852493969
1	657 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961107
2	657 E SEATTLE SLEW LN	GILBERT	AZ	852961725
1	658 E CENTURY AVE	GILBERT	AZ	852961118
1	658 E SILVER CREEK RD	GILBERT	AZ	852961153
1	659 E WASHINGTON AVE	GILBERT	AZ	852346401
1	6590 S BOGLE AVE	CHANDLER	AZ	852493969
1	66 N HERITAGE DR	GILBERT	AZ	852345916
1	660 E SEATTLE SLEW LN	GILBERT	AZ	852961725
1	660 S COTTONWOOD DR	GILBERT	AZ	852962800
1	6607 N LOST DUTCHMAN DR	PARADISE VALLEY	AZ	85253

1	6610 S BOGLE AVE	CHANDLER	AZ	852493970
1	6613 N SCOTTSDALE RD STE 200	SCOTTSDALE	AZ	852507804
1	662 E WASHINGTON AVE	GILBERT	AZ	852346400
1	6630 S BOGLE AVE	CHANDLER	AZ	852493970
2	6670 S BOGLE AVE	CHANDLER	AZ	852493970
1	669 S BURK ST	GILBERT	AZ	852962813
1	670 E WASHINGTON AVE	GILBERT	AZ	852346400
1	670 S COTTONWOOD DR	GILBERT	AZ	852962800
1	671 E BUENA VISTA DR	CHANDLER	AZ	852493973
1	672 E LINDA LN	GILBERT	AZ	852345861
1	674 E COUNTY DOWN DR	CHANDLER	AZ	852493977
1	675 E WASHINGTON AVE	GILBERT	AZ	852346401
1	6760 VINEYARD AVE	ALTA LOMA	CA	917014755
1	677 E LINDA LN	GILBERT	AZ	852345862
1	678 E WASHINGTON AVE	GILBERT	AZ	852346400
1	679 E PARK AVE	GILBERT	AZ	852345895
1	680 E LINDA LN	GILBERT	AZ	852345861
1	6818 N 72ND PL	SCOTTSDALE	AZ	852504502
1	682 E PARK AVE	GILBERT	AZ	852345894
1	683 E WASHINGTON AVE	GILBERT	AZ	852346401
1	685 E LINDA LN	GILBERT	AZ	852345862
1	685 W DESERT BROOM DR	CHANDLER	AZ	852483847
1	686 E WASHINGTON AVE	GILBERT	AZ	852346400
1	687 E PARK AVE	GILBERT	AZ	852345895
1	687 E SEATTLE SLEW LN	GILBERT	AZ	852961725
1	688 E LINDA LN	GILBERT	AZ	852345861
1	690 E PARK AVE	GILBERT	AZ	852345894
1	690 E SEATTLE SLEW LN	GILBERT	AZ	852961725
1	691 E BUENA VISTA DR	CHANDLER	AZ	852493973
1	691 E CULLUMBER ST	GILBERT	AZ	852346408
1	691 E WASHINGTON AVE	GILBERT	AZ	852346401
1	693 E LINDA LN	GILBERT	AZ	852345862
1	694 E COUNTY DOWN DR	CHANDLER	AZ	852493977
1	694 E CULLUMBER ST	GILBERT	AZ	852346408
1	694 E WASHINGTON AVE	GILBERT	AZ	852346400
1	6943 E TETON CIR	MESA	AZ	852070940
1	695 E PARK AVE	GILBERT	AZ	852345895

1	696 E LINDA LN	GILBERT	AZ	852345861
1	697 E CULLUMBER AVE	GILBERT	AZ	852346408
1	698 E PARK AVE	GILBERT	AZ	852345894
1	699 E WASHINGTON AVE	GILBERT	AZ	852346401
1	700 E WASHINGTON AVE	GILBERT	AZ	852346403
1	701 E COMSTOCK ST	GILBERT	AZ	852961121
1	701 E SILVER CREEK RD	GILBERT	AZ	852961156
1	702 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961108
1	702 S COTTONWOOD DR	GILBERT	AZ	852962811
1	7020 W 113TH PL	WORTH	IL	604822031
1	702400 4TH AVE S			
1	703 E CULLUMBER ST	GILBERT	AZ	852346406
1	703 E PARK AVE	GILBERT	AZ	852345887
1	704 E LINDA LN	GILBERT	AZ	852345863
1	705 E WASHINGTON AVE	GILBERT	AZ	852346402
1	705 S BURK ST	GILBERT	AZ	852962814
1	705 W CHILTON ST	CHANDLER	AZ	852251824
1	706 E PARK AVE	GILBERT	AZ	852345888
1	707 E COCONINO DR	CHANDLER	AZ	852493065
1	707 E LINDA LN	GILBERT	AZ	852345864
1	708 E CULLUMBER ST	GILBERT	AZ	852346405
1	708 E PRESCOTT DR	CHANDLER	AZ	852493054
1	709 E COMSTOCK ST	GILBERT	AZ	852961121
1	709 E PRESCOTT DR	CHANDLER	AZ	852493055
1	709 E SILVER CREEK RD	GILBERT	AZ	852961156
1	710 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961108
1	710 E PALO VERDE ST	GILBERT	AZ	852961140
1	710 E TONTO DR	CHANDLER	AZ	852493056
1	711 E BUENA VISTA DR	CHANDLER	AZ	852493975
1	711 E PALO VERDE ST	GILBERT	AZ	852961141
1	711 E PARK AVE	GILBERT	AZ	852345887
1	712 E LINDA LN	GILBERT	AZ	852345863
1	712 S COTTONWOOD DR	GILBERT	AZ	852962811
1	713 S BURK ST	GILBERT	AZ	852962814
1	714 E COUNTY DOWN DR	CHANDLER	AZ	852493979
1	715 E LINDA LN	GILBERT	AZ	852345864
1	715 E WASHINGTON AVE	GILBERT	AZ	852346402

1	716 E CULLUMBER ST	GILBERT	AZ	852346405
1	717 E COMSTOCK ST	GILBERT	AZ	852961121
1	718 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961108
1	718 E COMSTOCK ST	GILBERT	AZ	852961120
1	719 S BUCKSKIN TER	GILBERT	AZ	852963325
1	720 E PALO VERDE ST	GILBERT	AZ	852961140
1	721 E GRAND CANYON DR	CHANDLER	AZ	852493075
1	721 S BURK ST	GILBERT	AZ	852962815
1	722 S COTTONWOOD DR	GILBERT	AZ	852962811
1	723 E LINDA LN	GILBERT	AZ	852345864
1	724 E CULLUMBER ST	GILBERT	AZ	852346405
1	725 E COMSTOCK ST	GILBERT	AZ	852961121
1	725 E WASHINGTON AVE	GILBERT	AZ	852346402
1	726 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961108
1	726 E COMSTOCK ST	GILBERT	AZ	852961120
1	729 S BURK ST	GILBERT	AZ	852962815
1	73 N HONEYSUCKLE LN	GILBERT	AZ	852346404
1	730 E WASHINGTON AVE	GILBERT	AZ	852346403
1	7300 W ORCHID LN	CHANDLER	AZ	852261000
1	731 E BUENA VISTA DR	CHANDLER	AZ	852493975
2	7317 E GREENWAY RD	SCOTTSDALE	AZ	85260
1	732 E BEECHNUT DR	CHANDLER	AZ	852493300
1	732 S COTTONWOOD DR	GILBERT	AZ	852962811
1	733 E COMSTOCK ST	GILBERT	AZ	852961121
1	734 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961108
1	734 E CANYON WY	CHANDLER	AZ	85249
1	734 E COUNTY DOWN DR	CHANDLER	AZ	852493979
1	735 E WASHINGTON AVE	GILBERT	AZ	852346402
1	736 E CEDAR DR	CHANDLER	AZ	852493316
1	739 E MEAD DR	CHANDLER	AZ	852495334
1	741 E BEECHNUT DR	CHANDLER	AZ	852493303
1	741 E BUENA VISTA DR	CHANDLER	AZ	852493975
1	741 E COMSTOCK ST	GILBERT	AZ	852961121
1	742 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961108
1	742 E BUENA VISTA DR	CHANDLER	AZ	852493974
1	742 E COMSTOCK ST	GILBERT	AZ	852961120
1	742 S COTTONWOOD DR	GILBERT	AZ	852962811

1	744 E CANYON WAY	CHANDLER	AZ	852493052
1	744 E COUNTY DOWN DR	CHANDLER	AZ	852493979
1	744 E WOOD DR	CHANDLER	AZ	852493354
1	745 N GILBERT RD # 124-269	GILBERT	AZ	852343375
1	745 S BURK ST	GILBERT	AZ	852962815
1	7451 S RITA LN	TEMPE	AZ	852834796
1	7467 TENBY CT	CASTLE ROCK	CO	801088808
1	747 E NOLAN PL	CHANDLER	AZ	852493342
1	748 E NOLAN PL	CHANDLER	AZ	852493341
1	749 E COMSTOCK ST	GILBERT	AZ	852961121
1	750 E AVENIDA SIERRA MADRE	GILBERT	AZ	852961108
1	750 E COMSTOCK ST	GILBERT	AZ	852961120
1	752 E BUENA VISTA DR	CHANDLER	AZ	852493974
1	752 S COTTONWOOD DR	GILBERT	AZ	852962811
1	753 S BURK ST	GILBERT	AZ	852962815
1	754 E ELMWOOD PL	CHANDLER	AZ	852493329
1	755 E COUNTY DOWN DR	CHANDLER	AZ	852493981
2	755 E ROGERS CT	GILBERT	AZ	852345877
1	756 E CEDAR DR	CHANDLER	AZ	85249
1	7570 E SPEEDWAY # 137	GILBERT	AZ	85234
1	758 E COMSTOCK ST	GILBERT	AZ	852961120
1	758 W I ST	BENICIA	CA	945102525
1	759 E TEAKWOOD DR	CHANDLER	AZ	852493348
1	7595 E MCDOWELL RD STE 120	SCOTTSDALE	AZ	852573513
1	761 E BEECHNUT DR	CHANDLER	AZ	852493303
1	761 E BIRCHWOOD PL	CHANDLER	AZ	852493311
1	761 S BURK ST	GILBERT	AZ	852962815
1	762 E BEECHNUT DR	CHANDLER	AZ	852493300
1	762 E BIRCHWOOD PL	CHANDLER	AZ	852493310
1	762 E BUENA VISTA DR	CHANDLER	AZ	852493974
1	762 S COTTONWOOD DR	GILBERT	AZ	852962811
1	764 E WOOD DR	CHANDLER	AZ	852493354
1	7650 S MCCLINTOCK DR STE 103	TEMPE	AZ	852841673
1	7659 KAVOORAS DR	SACRAMENTO	CA	958314207
1	767 E NOLAN PL	CHANDLER	AZ	852493342
1	769 E CEDAR DR	CHANDLER	AZ	852493317
1	769 E CHERRYWOOD PL	CHANDLER	AZ	852493324

1	769 S BURK ST	GILBERT	AZ	852962815
1	770 E CHERRYWOOD PL	CHANDLER	AZ	852493323
1	772 E BUENA VISTA DR	CHANDLER	AZ	852493974
1	773 E ELMWOOD PL	CHANDLER	AZ	852493330
1	773 E FIELDSTONE PL	CHANDLER	AZ	852493675
1	774 E ELMWOOD PL	CHANDLER	AZ	852493329
1	7740 N 16TH ST STE 300	PHOENIX	AZ	850204473
1	775 E COUNTY DOWN DR	CHANDLER	AZ	852493981
1	776 E CEDAR DR	CHANDLER	AZ	85249
1	778 E TEAKWOOD DR	CHANDLER	AZ	852493347
1	779 E TEAKWOOD DR	CHANDLER	AZ	852493348
1	781 E BEECHNUT DR	CHANDLER	AZ	852493303
1	784 E WOOD DR	CHANDLER	AZ	852493354
1	789 E SAN CARLOS WY	CHANDLER	AZ	852493045
1	791 E BIRCHWOOD PL	CHANDLER	AZ	852493311
1	793 E ELMWOOD PL	CHANDLER	AZ	852493330
1	794 E COUNTY DOWN DR	CHANDLER	AZ	852493980
1	797 E CEDAR DR	CHANDLER	AZ	852493317
1	798 E TEAKWOOD DR	CHANDLER	AZ	852493347
6	798 W KINGBIRD DR	CHANDLER	AZ	852487605
1	801 E ELLIOT RD	GILBERT	AZ	852346911
1	802 E VAUGHN AVE	GILBERT	AZ	852345938
1	802 N SAILORS WAY	GILBERT	AZ	852343666
1	8029 LOMAS CT	FONTANA	CA	923363848
1	803 S MARIE DR	CHANDLER	AZ	852252371
1	805 E BRUCE AVE	GILBERT	AZ	852345906
1	805 E LINDA LN	GILBERT	AZ	852345902
1	805 E PARK AVE	GILBERT	AZ	852345928
1	806 E BRUCE AVE	GILBERT	AZ	852345905
1	806 E LINDA LN	GILBERT	AZ	852345901
1	806 E PARK AVE	GILBERT	AZ	852345927
1	807 E VAUGHN AVE	GILBERT	AZ	852345939
1	807 N SAILORS WAY	GILBERT	AZ	852343667
1	808 E VAUGHN AVE	GILBERT	AZ	852345938
1	808 N SAILORS WY	GILBERT	AZ	852343666
1	811 E BRUCE AVE UNIT 89	GILBERT	AZ	852345906
1	811 E LINDA LN	GILBERT	AZ	852345902

1	811 E PARK AVE	GILBERT	AZ	852345928
1	812 E BRUCE AVE	GILBERT	AZ	852345905
1	812 E LINDA LN	GILBERT	AZ	852345901
1	812 E PARK AVE	GILBERT	AZ	852345927
1	813 E FIELDSTONE PL	CHANDLER	AZ	852493678
1	813 E VAUGHN AVE	GILBERT	AZ	852345939
1	813 N SAILORS WY	GILBERT	AZ	85234
1	814 E COUNTY DOWN DR	CHANDLER	AZ	852493982
1	814 E VAUGHN AVE	GILBERT	AZ	852345938
1	814 N SAILORS WAY	GILBERT	AZ	852343666
1	815 E CULLUMBER ST	GILBERT	AZ	852345932
1	815 E PAGE ST	GILBERT	AZ	852345913
1	816 E CEDAR DR	CHANDLER	AZ	852493318
1	817 E CEDAR DR	CHANDLER	AZ	852493319
1	817 E PARK AVE	GILBERT	AZ	852345928
1	818 E BRUCE AVE	GILBERT	AZ	852345905
1	818 E LINDA LN	GILBERT	AZ	852345901
1	818 E TEAKWOOD DR	CHANDLER	AZ	852493349
1	819 E TEAKWOOD DR	CHANDLER	AZ	852493350
1	819 E VAUGHN AVE	GILBERT	AZ	852345939
1	819 N SAILORS WAY	GILBERT	AZ	852343667
1	820 E CULLUMBER ST	GILBERT	AZ	852345931
1	820 E VAUGHN AVE	GILBERT	AZ	852345938
1	820 N SAILORS WAY	GILBERT	AZ	852343666
1	823 E BRUCE AVE	GILBERT	AZ	852345906
1	823 E CULLUMBER ST	GILBERT	AZ	852345932
1	823 E ELMWOOD PL	CHANDLER	AZ	852493332
1	823 E LEXINGTON AVE	GILBERT	AZ	852345909
1	823 E LINDA LN	GILBERT	AZ	852345902
1	823 E PAGE ST	GILBERT	AZ	852345913
1	823 S MARIE DR	CHANDLER	AZ	850252371
1	824 E LINDA LN	GILBERT	AZ	85234
1	824 E ELMWOOD PL	CHANDLER	AZ	852493331
1	826 E VAUGHN AVE	GILBERT	AZ	852345938
1	826 N SAILORS WAY	GILBERT	AZ	852343666
1	826 N SAINT ELENA ST	GILBERT	AZ	852343585
1	827 E CEDAR DR	CHANDLER	AZ	852493319

1	828 E CULLUMBER ST	GILBERT	AZ	852345931
1	828 E LEXINGTON AVE	GILBERT	AZ	852345908
1	828 E TEAKWOOD DR	CHANDLER	AZ	852493349
1	829 E BRUCE AVE	GILBERT	AZ	852345906
1	829 E LINDA LN	GILBERT	AZ	852345902
1	829 E PARK AVE	GILBERT	AZ	852345928
1	829 E TEAKWOOD DR	CHANDLER	AZ	852493350
1	830 E LEO PL	CHANDLER	AZ	852493636
1	830 E LINDA LN	GILBERT	AZ	852345901
1	830 E PARK AVE	GILBERT	AZ	852345927
1	8306 WILSHIRE BLVD UNIT 7000	BEVERLY HILLS	CA	902112304
1	831 E CULLUMBER ST	GILBERT	AZ	852345932
1	831 E LEXINGTON AVE	GILBERT	AZ	852345909
1	831 E PAGE ST	GILBERT	AZ	852345913
1	831 E TAURUS PL	CHANDLER	AZ	852493656
1	831 N SAILORS WY	GILBERT	AZ	852343667
1	832 E VAUGHN AVE	GILBERT	AZ	852345938
1	832 N SAILORS WAY	GILBERT	AZ	852343666
1	833 E 6TH AVE	MESA	AZ	852042603
1	833 N SAINT ELENA ST	GILBERT	AZ	852343586
1	834 E COUNTY DOWN DR	CHANDLER	AZ	852493982
1	834 N SAINT ELENA ST	GILBERT	AZ	852343585
1	835 E LINDA LN	GILBERT	AZ	852345970
1	835 E PARK AVE	GILBERT	AZ	852345928
1	836 E CONSTITUTION DR	GILBERT	AZ	852969749
1	836 E CULLUMBER ST	GILBERT	AZ	852345931
1	836 E LEXINGTON AVE	GILBERT	AZ	852345908
1	836 E PARK AVE	GILBERT	AZ	852345927
1	837 E CEDAR RDR	CHANDLER	AZ	85249
1	837 E VAUGHN AVE	GILBERT	AZ	852345939
1	837 N SAILORS WAY	GILBERT	AZ	852343667
1	838 E LIBRA PL	CHANDLER	AZ	852493641
1	838 N SAILORS WY	GILBERT	AZ	852343666
1	839 E CULLUMBER ST	GILBERT	AZ	852345932
1	839 E LEXINGTON AVE	GILBERT	AZ	852345909
1	839 E PAGE ST	GILBERT	AZ	852345913
1	840 E LEO PL	CHANDLER	AZ	852493636

1	841 E BRUCE AVE	GILBERT	AZ	852345974
1	841 E LINDA LN	GILBERT	AZ	852345970
1	841 E PARK AVE	GILBERT	AZ	852345957
1	841 E TAURUS PL	CHANDLER	AZ	852493656
1	841 N NIELSON ST	GILBERT	AZ	852348704
1	841 N SAINT ELENA ST	GILBERT	AZ	852343586
1	842 E LINDA LN	GILBERT	AZ	852345969
1	842 E TAURUS PL	CHANDLER	AZ	852493655
1	842 N SAINT ELENA ST	GILBERT	AZ	852343585
1	843 E FIELDSTONE PL	CHANDLER	AZ	852493678
1	843 E VAUGHN AVE	GILBERT	AZ	852345939
1	843 N SAILORS WAY	GILBERT	AZ	852343667
1	8437 N RED ROCK RIDGE CT	TUCSON	AZ	857428117
1	844 E COUNTY DOWN DR	CHANDLER	AZ	852493982
1	844 E CULLUMBER ST	GILBERT	AZ	852345931
1	845 E SAN CARLOS WAY	CHANDLER	AZ	852493029
1	847 E BRUCE AVE	GILBERT	AZ	852345974
1	847 E CULLUMBER ST	GILBERT	AZ	852345932
1	847 E LEXINGTON	GILBERT	AZ	852345909
1	847 E LIBRA PL	CHANDLER	AZ	852493642
1	847 E LINDA LN	GILBERT	AZ	852345970
1	847 E PAGE ST	GILBERT	AZ	852345913
1	848 E BRUCE AVE	GILBERT	AZ	852345973
1	848 E LIBRA PL	CHANDLER	AZ	852493641
1	848 E LINDA LN	GILBERT	AZ	852345969
1	848 E PARK AVE	GILBERT	AZ	852345956
1	849 E HEARNE WAY	GILBERT	AZ	852345945
1	849 N NIELSON ST	GILBERT	AZ	852348704
1	849 N SAINT ELENA ST	GILBERT	AZ	852343586
1	85 N HONEYSUCKLE LN	GILBERT	AZ	852346404
1	850 E HEARNE WAY	GILBERT	AZ	852345944
1	850 E LEO PL	CHANDLER	AZ	852493636
1	850 E VAUGHN AVE	GILBERT	AZ	85234
1	850 N SAILORS WAY	GILBERT	AZ	852343666
1	850 N SAINT ELENA ST	GILBERT	AZ	852343585
1	8501 E PRINCESS DR STE 200	SCOTTSDALE	AZ	852555482
1	851 E BIRCHWOOD PL	CHANDLER	AZ	852493313

1	852 E CULLUMBER ST	GILBERT	AZ	852345931
1	852 E FIELDSTONE PL	CHANDLER	AZ	852493677
1	852 E LEXINGTON AVE	GILBERT	AZ	852345908
1	852 E PAGE ST	GILBERT	AZ	852345912
1	852 E POWELL WAY	CHANDLER	AZ	852493012
1	852 E TAURUS PL	CHANDLER	AZ	852493655
1	853 E FIELDSTONE PL	CHANDLER	AZ	852493678
1	853 E LINDA LN	GILBERT	AZ	852345970
1	854 E BRUCE AVE	GILBERT	AZ	852345973
1	854 E COUNTY DOWN DR	CHANDLER	AZ	852493982
1	854 E ELMWOOD PL	CHANDLER	AZ	852493331
1	854 E LINDA LN	GILBERT	AZ	852345969
1	855 E CULLUMBER ST	GILBERT	AZ	852345932
1	855 E ELGIN ST	GILBERT	AZ	852961686
1	855 E LEXINGTON AVE	GILBERT	AZ	852345909
1	855 E SAN CARLOS WAY	CHANDLER	AZ	852493029
1	855 E VAUGHN AVE	GILBERT	AZ	85234
1	856 E HEARNE WAY	GILBERT	AZ	852345944
1	856 E VAUGHN AVE	GILBERT	AZ	852345980
1	856 N SAILORS WAY	GILBERT	AZ	852343666
1	857 N NIELSON ST	GILBERT	AZ	852348704
1	858 E LIBRA PL	CHANDLER	AZ	852493641
1	858 E TEAKWOOD DR	CHANDLER	AZ	852493349
1	858 N ST ELENA ST	GILBERT	AZ	852343585
1	859 E LINDA LN	GILBERT	AZ	852345970
1	859 E TEAKWOOD DR	CHANDLER	AZ	852493350
1	860 E BRUCE AVE	GILBERT	AZ	852345973
1	860 E CULLUMBER ST	GILBERT	AZ	852345931
1	860 E LEXINGTON AVE	GILBERT	AZ	852345908
1	860 E LINDA LN	GILBERT	AZ	852345969
1	860 E PARK AVE	GILBERT	AZ	852345956
1	861 E HEARNE WAY	GILBERT	AZ	852345945
1	861 N CONCORD ST	GILBERT	AZ	852348753
1	862 E HEARNE WAY	GILBERT	AZ	852345944
1	862 E TAURUS PL	CHANDLER	AZ	852493655
1	862 E VAUGHN AVE	GILBERT	AZ	852345980
1	863 E CULLUMBER ST	GILBERT	AZ	852345953

1	863 E LEXINGTON AVE	GILBERT	AZ	852345909
1	863 E PAGE ST	GILBERT	AZ	852345949
1	865 E SAN CARLOS WAY	CHANDLER	AZ	852493029
1	867 E VAUGHN AVE	GILBERT	AZ	852345979
1	867 N CONCORD ST	GILBERT	AZ	852348753
1	868 E CULLUMBER ST	GILBERT	AZ	852345952
1	868 E HEARNE WAY	GILBERT	AZ	852345944
1	868 E LEXINGTON AVE	GILBERT	AZ	852345908
1	868 E PAGE ST	GILBERT	AZ	852345900
1	868 E VAUGHN AVE	GILBERT	AZ	852345980
1	871 E BIRCHWOOD PL	CHANDLER	AZ	852493313
1	872 E FIELDSTONE PL	CHANDLER	AZ	852493677
1	872 E TAURUS PL	CHANDLER	AZ	852493655
1	873 E HEARNE WAY	GILBERT	AZ	852345945
1	873 E VAUGHN AVE	GILBERT	AZ	852345979
1	873 N CONCORD ST	GILBERT	AZ	852348753
1	8732 E SELLS DR	SCOTTSDALE	AZ	85251
1	874 E COUNTY DOWN DR	CHANDLER	AZ	852493982
1	874 E HEARNE WAY	GILBERT	AZ	852345944
1	874 E VAUGHN AVE	GILBERT	AZ	852345980
1	875 E SAN CARLOS WAY	CHANDLER	AZ	852493030
1	875 W PECOS RD APT 2061	CHANDLER	AZ	852257610
1	8780 CHEER CT	ELK GROVE	CA	95624
1	879 E HEARNE WY	GILBERT	AZ	852345945
1	879 E TEAKWOOD DR	CHANDLER	AZ	852493350
1	879 E VAUGHN AVE	GILBERT	AZ	852345979
1	880 E HEARNE WAY	GILBERT	AZ	852345944
1	880 E VAUGHN AVE	GILBERT	AZ	852345980
1	8822 PIPESTONE WAY	SAN DIEGO	CA	92129
1	885 E SAN CARLOS WAY	CHANDLER	AZ	852493030
1	8910 E POSADA AVE	MESA	AZ	852122840
1	892 E FIELDSTONE PL	CHANDLER	AZ	852493677
1	892 E TAURUS PL	CHANDLER	AZ	852493655
1	893 E FIELDSTONE PL	CHANDLER	AZ	852493679
1	894 E COUNTY DOWN DR	CHANDLER	AZ	852493982
1	8952 92ND AVE			
1	8985 N EAGLESTONE LP	TUCSON	AZ	857429421

1	900 E BRUCE AVE	GILBERT	AZ	852345907
1	900 E PARK AVE	GILBERT	AZ	852345929
1	901 E BIRCHWOOD PL	CHANDLER	AZ	852493315
1	901 E CULLUMBER ST	GILBERT	AZ	852345934
1	901 E HEARNE WAY	GILBERT	AZ	852345941
1	901 E LEXINGTON AVE	GILBERT	AZ	852345911
1	901 E PAGE ST	GILBERT	AZ	852345915
1	901 E VAUGHN AVE	GILBERT	AZ	852345981
1	901 N SAILORS WAY	GILBERT	AZ	852343655
1	902 E BIRCHWOOD PL	CHANDLER	AZ	852493314
1	902 E HEARNE WAY	GILBERT	AZ	852345948
1	902 N SAILORS WAY	GILBERT	AZ	852343654
1	902 N SAINT ELENA ST	GILBERT	AZ	852343590
1	905 E PARK AVE	GILBERT	AZ	852345930
1	905 E SAN CARLOS WAY	CHANDLER	AZ	852493033
1	906 E CULLUMBER ST	GILBERT	AZ	852345933
1	906 E LEXINGTON AVE	GILBERT	AZ	852345910
1	9065 E GARY RD UN 103	SCOTTSDALE	AZ	852606257
1	907 E HEARNE WAY	GILBERT	AZ	852345941
1	907 E VAUGHN AVE	GILBERT	AZ	852345981
1	907 N SAILORS WAY	GILBERT	AZ	852343655
1	908 E HEARNE WAY	GILBERT	AZ	852345948
1	908 N SAILORS WY	GILBERT	AZ	852343654
1	909 E LEXINGTON AVE	GILBERT	AZ	852345951
1	909 N NIELSON ST	GILBERT	AZ	852348705
1	910 N SAINT ELENA ST	GILBERT	AZ	852343590
1	912 E BRUCE AVE	GILBERT	AZ	852345907
1	912 E FIELDSTONE PL	CHANDLER	AZ	852493680
1	912 E PARK AVE	GILBERT	AZ	852345983
1	912 E TAURUS PL	CHANDLER	AZ	852493657
1	913 E ELMWOOD PL	CHANDLER	AZ	852493334
1	913 E HEARNE WAY	GILBERT	AZ	852345941
1	913 E VAUGHN AVE	GILBERT	AZ	852345981
1	914 E HEARNE WAY	GILBERT	AZ	852345948
1	914 E LEXINGTON AVE	GILBERT	AZ	852345950
1	914 E PAGE ST	GILBERT	AZ	852345914
1	914 E VAUGHN AVE	GILBERT	AZ	852345935

1	914 N SAILORS WAY	GILBERT	AZ	852343654
1	915 E GUADALUPE RD	GILBERT	AZ	85234
1	915 E SAN CARLOS WY	CHANDLER	AZ	852493033
1	917 E CULLUMBER ST	GILBERT	AZ	852345955
1	917 E PAGE ST	GILBERT	AZ	852345915
1	917 E PARK AVE	GILBERT	AZ	852345960
1	917 N NIELSON ST	GILBERT	AZ	852348705
1	918 E PARK AVE	GILBERT	AZ	852345958
1	918 N SAINT ELENA ST	GILBERT	AZ	852343590
1	919 E GUADALUPE RD	GILBERT	AZ	852344705
1	919 E HEARNE WAY	GILBERT	AZ	852345941
1	920 COUNTRY CLUB DR	SPEARIFSH	SD	577833102
1	920 E VAUGHN AVE	GILBERT	AZ	852345935
1	920 N SAILORS WAY	GILBERT	AZ	852343654
1	922 E CULLUMBER ST	GILBERT	AZ	852345954
1	922 E PAGE ST	GILBERT	AZ	852345914
1	923 E PARK AVE	GILBERT	AZ	852345960
1	924 N COUNTRY CLUB DR	MESA	AZ	852014108
1	925 E CULLUMBER ST	GILBERT	AZ	852345955
1	925 E JEARNE WAY	GILBERT	AZ	85234
1	925 E LEXINGTON AVE	GILBERT	AZ	852345951
1	925 E PAGE ST	GILBERT	AZ	852345915
1	925 E SAN CARLOS WAY	CHANDLER	AZ	852493033
1	925 E VAUGHN AVE	GILBERT	AZ	852345937
1	925 N NIELSON ST	GILBERT	AZ	852348705
1	926 E HEARNE WAY	GILBERT	AZ	852345946
1	926 N SAILORS WAY	GILBERT	AZ	852343654
1	926 N SAINT ELENA ST	GILBERT	AZ	852343590
1	929 E PARK AVE	GILBERT	AZ	852345960
2	93 N COOPER RD	CHANDLER	AZ	852255890
1	93 N COOPER RD 28	CHANDLER	AZ	852255874
1	93 N COOPER RD 8	CHANDLER	AZ	852255873
1	93 N COOPER RD NO 39	CHANDLER	AZ	852255875
1	93 N COOPER RD NO 4	CHANDLER	AZ	852255873
1	93 N COOPER RD UNIT 1	CHANDLER	AZ	852255873
1	93 N COOPER RD UNIT 10	CHANDLER	AZ	852255873
1	93 N COOPER RD UNIT 11	CHANDLER	AZ	852255873

1	93 N COOPER RD UNIT 17	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 18	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 19	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 20	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 21	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 22	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 24	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 25	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 26	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 29	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 3	CHANDLER	AZ	852255873
1	93 N COOPER RD UNIT 31	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 32	CHANDLER	AZ	852255874
1	93 N COOPER RD UNIT 36	CHANDLER	AZ	852255875
1	93 N COOPER RD UNIT 37	CHANDLER	AZ	852255875
1	93 N COOPER RD UNIT 38	CHANDLER	AZ	852255875
1	93 N COOPER RD UNIT 5	CHANDLER	AZ	852255873
1	93 N COOPER RD UNIT 9	CHANDLER	AZ	852255873
1	930 E CULLUMBER ST	GILBERT	AZ	852345954
1	930 E LEXINGTON AVE	GILBERT	AZ	852345950
1	930 E PAGE ST	GILBERT	AZ	852345914
1	930 E PARK AVE	GILBERT	AZ	852345958
1	930 S DOBSON RD UNIT 24	MESA	AZ	852022912
1	931 E VAUGHN AVE	GILBERT	AZ	852345937
1	932 E TAURUS PL	CHANDLER	AZ	852493657
1	932 E VAUGHN AVE	GILBERT	AZ	852345936
1	932 N MARBLE ST	GILBERT	AZ	852343656
1	932 N SAILORS WAY	GILBERT	AZ	852343654
1	933 E CULLUMBER ST	GILBERT	AZ	852345977
1	933 E JULIAN DR	GILBERT	AZ	852968344
1	933 E LEXINGTON AVE	GILBERT	AZ	852345951
1	933 N NIELSON ST	GILBERT	AZ	852348705
1	934 N SAINT ELENA ST	GILBERT	AZ	852343590
1	935 E PARK AVE	GILBERT	AZ	852345960
1	935 E SAN CARLOS WAY	CHANDLER	AZ	852493033
1	937 E HEARNE WAY	GILBERT	AZ	852345947
1	937 E PRINCETON AVE	GILBERT	AZ	852348728

1	937 E VAUGHN AVE	GILBERT	AZ	852345937
1	937 W EBONY DR	CHANDLER	AZ	852484333
1	938 E CULLUMBER ST	GILBERT	AZ	852345976
1	938 E HEARNE WAY	GILBERT	AZ	852345946
1	938 E PAGE ST	GILBERT	AZ	852345914
1	938 N MARBLE ST	GILBERT	AZ	852343656
1	94 S 300 E	CEDAR CITY	UT	847203318
1	941 E BIRCHWOOD PL	CHANDLER	AZ	852493315
1	941 E CULLUMBER ST	GILBERT	AZ	852345977
1	941 E LEXINGTON AVE	GILBERT	AZ	852345951
1	941 E PAGE ST	GILBERT	AZ	852345915
1	941 N NIELSON ST	GILBERT	AZ	852348705
1	942 N SAINT ELENA ST	GILBERT	AZ	852343590
1	943 E HEARNE WY	GILBERT	AZ	85234
1	943 E PRINCETON AVE	GILBERT	AZ	852348728
1	943 E VAUGHN AVE	GILBERT	AZ	852345937
1	943 W CARSON ST APT 313	TORRANCE	CA	905022024
1	944 E HEARNE WAY	GILBERT	AZ	852345946
1	944 E VAUGHN AVE	GILBERT	AZ	852345936
1	944 N MARBLE ST	GILBERT	AZ	852343656
1	944 N SAILORS WAY	GILBERT	AZ	852343654
1	945 E SAN CARLOS WAY	CHANDLER	AZ	852493033
1	946 E CULLUMBER ST	GILBERT	AZ	852345976
1	946 E LEXINGTON AVE	GILBERT	AZ	852345950
1	946 E PAGE ST	GILBERT	AZ	852345914
1	948 S LINDA CIR	MESA	AZ	85204
1	949 E LEXINGTON AVE	GILBERT	AZ	852345951
1	949 E PRINCETON AVE	GILBERT	AZ	852348728
1	95 N COOPER RD	CHANDLER	AZ	852255891
1	95 N COOPER RD # 30	CHANDLER	AZ	852255891
1	95 N COOPER RD 47	CHANDLER	AZ	852255876
1	95 N COOPER RD 54	CHANDLER	AZ	852255868
1	95 N COOPER RD 71	CHANDLER	AZ	85225
1	95 N COOPER RD NO 44	CHANDLER	AZ	85255
1	95 N COOPER RD NO 51	CHANDLER	AZ	852255876
1	95 N COOPER RD UNIT 41	CHANDLER	AZ	852255876
1	95 N COOPER RD UNIT 42	CHANDLER	AZ	852255876

1	95 N COOPER RD UNIT 43	CHANDLER	AZ	852255876
1	95 N COOPER RD UNIT 45	CHANDLER	AZ	852255876
1	95 N COOPER RD UNIT 46	CHANDLER	AZ	852255876
1	95 N COOPER RD UNIT 49	CHANDLER	AZ	852255876
1	95 N COOPER RD UNIT 52	CHANDLER	AZ	852255876
1	95 N COOPER RD UNIT 53	CHANDLER	AZ	852255868
1	95 N COOPER RD UNIT 55	CHANDLER	AZ	852255868
1	95 N COOPER RD UNIT 56	CHANDLER	AZ	852255868
1	95 N COOPER RD UNIT 57	CHANDLER	AZ	852255868
1	95 N COOPER RD UNIT 60	CHANDLER	AZ	852255868
1	95 N COOPER RD UNIT 61	CHANDLER	AZ	852255868
1	95 N COOPER RD UNIT 63	CHANDLER	AZ	852255868
1	95 N COOPER RD UNIT 69	CHANDLER	AZ	852255869
1	95 N COOPER RD UNIT 74	CHANDLER	AZ	852255869
1	95 N COOPER RD UNIT 76	CHANDLER	AZ	852255869
1	95 N COOPER RD UNIT 77	CHANDLER	AZ	852255869
1	95 N COOPER RD UNIT 79	CHANDLER	AZ	852255869
1	95 N COOPER RD UNIT 80	CHANDLER	AZ	852255869
1	95-099 LOKALIA PL	MILILANI	HI	967893731
1	950 E HEARNE WAY	GILBERT	AZ	852345946
1	950 E VAUGHN AVE	GILBERT	AZ	852345936
1	950 N GILBERT RD	GILBERT	AZ	852343313
1	950 N SAILORS WAY	GILBERT	AZ	852343654
1	950 N ST ELENA ST	GILBERT	AZ	852343590
3	9510 W SAHARA AVE STE 200	LAS VEGAS	NV	891178804
5	9510 W SAHARA STE 200	LAS VEGAS	NV	891178804
1	952 E FIELDSTONE PL	CHANDLER	AZ	852493682
1	952 E PRINCETON AVE	GILBERT	AZ	852348729
1	952 E TAURUS PL	CHANDLER	AZ	852493657
1	953 E FIELDSTONE PL	CHANDLER	AZ	852493682
1	953 E SCOTT AVE	GILBERT	AZ	852348732
1	954 E COUNTY DOWN DR	CHANDLER	AZ	852493984
1	954 E CULLUMBER ST	GILBERT	AZ	852345976
1	955 E COUNTY DOWN DR	CHANDLER	AZ	852493985
1	955 E HEARNE WAY	GILBERT	AZ	852345947
1	955 E PRINCETON AVE	GILBERT	AZ	852348728
1	955 E VAUGHN AVE	GILBERT	AZ	852345937

1	956 E VAUGHN AVE	GILBERT	AZ	852345936
1	956 EASTGLEN DR	LA VERNE	CA	917501833
1	957 N NIELSON ST	GILBERT	AZ	852348705
1	958 N SAINT ELENA ST	GILBERT	AZ	852343590
1	961 E PRINCETON AVE	GILBERT	AZ	852348728
1	961 E VAUGHN AVE	GILBERT	AZ	852345937
1	962 E HEARNE WAY	GILBERT	AZ	852345946
1	962 E PRINCETON AVE	GILBERT	AZ	852348729
1	962 E TAURUS PL	CHANDLER	AZ	852493657
1	962 E VAUGHN AVE	GILBERT	AZ	852345936
1	963 E SCOTT AVE	GILBERT	AZ	852348732
1	964 E SCOTT AVE	GILBERT	AZ	852348747
1	966 N SAINT ELENA ST	GILBERT	AZ	852343590
1	9662 E NARANJA AVE	MESA	AZ	852092483
1	968 E PRINCETON AVE	GILBERT	AZ	852348729
1	969 E SCOTT AVE	GILBERT	AZ	852348732
1	97 N COOPER RD # 0-118	CHANDLER	AZ	852255892
1	97 N COOPER RD # K85	CHANDLER	AZ	852255892
1	97 N COOPER RD # M-103	CHANDLER	AZ	852255892
1	97 N COOPER RD 120	CHANDLER	AZ	852255872
1	97 N COOPER RD NO 102	CHANDLER	AZ	852255871
1	97 N COOPER RD NO 87	CHANDLER	AZ	852255870
1	97 N COOPER RD UNIT 101	CHANDLER	AZ	852255871
1	97 N COOPER RD UNIT 105	CHANDLER	AZ	852255872
1	97 N COOPER RD UNIT 109	CHANDLER	AZ	852255872
1	97 N COOPER RD UNIT 110	CHANDLER	AZ	852255872
1	97 N COOPER RD UNIT 112	CHANDLER	AZ	852255872
1	97 N COOPER RD UNIT 113	CHANDLER	AZ	852255872
1	97 N COOPER RD UNIT 114	CHANDLER	AZ	852255872
1	97 N COOPER RD UNIT 116	CHANDLER	AZ	852255872
1	97 N COOPER RD UNIT 117	CHANDLER	AZ	852255872
1	97 N COOPER RD UNIT 119	CHANDLER	AZ	852255872
1	97 N COOPER RD UNIT 81	CHANDLER	AZ	852255870
1	97 N COOPER RD UNIT 83	CHANDLER	AZ	852255870
1	97 N COOPER RD UNIT 84	CHANDLER	AZ	852255870
1	97 N COOPER RD UNIT 86	CHANDLER	AZ	852255870
1	97 N COOPER RD UNIT 88	CHANDLER	AZ	852255870

1	97 N COOPER RD UNIT 90	CHANDLER	AZ	852255870
1	97 N COOPER RD UNIT 92	CHANDLER	AZ	852255870
1	97 N COOPER RD UNIT 93	CHANDLER	AZ	852255871
1	97 N COOPER RD UNIT 95	CHANDLER	AZ	852255871
1	97 N COOPER RD UNIT 96	CHANDLER	AZ	852255871
1	97 N COOPER RD UNIT 98	CHANDLER	AZ	852255871
1	97 N HONEYSUCKLE LN	GILBERT	AZ	852346404
1	970 E SCOTT AVE	GILBERT	AZ	852348747
1	971 E BIRCHWOOD PL	CHANDLER	AZ	852493315
1	972 E FIELDSTONE PL	CHANDLER	AZ	852493681
1	972 E TAURUS PL	CHANDLER	AZ	852493657
1	973 E FIELDSTONE PL	CHANDLER	AZ	852493682
1	973 E PRINCETON AVE	GILBERT	AZ	852348728
1	974 E COUNTY RD	CHANDLER	AZ	85249
1	974 E PRINCETON AVE	GILBERT	AZ	852348729
1	975 E ARMSTRONG WY	CHANDLER	AZ	85249
1	975 E COUNTY DOWN DR	CHANDLER	AZ	852493985
1	975 E SCOTT AVE	GILBERT	AZ	852348732
1	9750 LIBERTY CT	ALTA LOMA	CA	917373568
1	976 E SCOTT AVE	GILBERT	AZ	852348747
1	981 E BIRCHWOOD PL	CHANDLER	AZ	852493315
1	9815 MOUNTAINAIRE RD	FLAGSTAFF	AZ	860019588
1	982 E SCOTT AVE	GILBERT	AZ	852348747
1	9830 N 32ND ST STE B-106	PHOENIX	AZ	85028
1	984 E PRINCETON AVE	GILBERT	AZ	852348731
1	9843 E LINDNER AVE	MESA	AZ	85209
1	985 E PRINCETON AVE	GILBERT	AZ	852348730
1	985 E SCOTT AVE	GILBERT	AZ	852348748
1	988 E SCOTT AVE	GILBERT	AZ	852348747
1	99 N COOPER 156	CHANDLER	AZ	85225
1	99 N COOPER RD	CHANDLER	AZ	852255864
1	99 N COOPER RD # 151151	CHANDLER	AZ	852255864
1	99 N COOPER RD # R143	CHANDLER	AZ	852255864
1	99 N COOPER RD #129	CHANDLER	AZ	852255865
1	99 N COOPER RD 164	CHANDLER	AZ	852255867
1	99 N COOPER RD NO 123	CHANDLER	AZ	852255865
1	99 N COOPER RD UNIT 121	CHANDLER	AZ	852255865

1	99 N COOPER RD UNIT 124	CHANDLER	AZ	852255865
1	99 N COOPER RD UNIT 125	CHANDLER	AZ	852255865
1	99 N COOPER RD UNIT 126	CHANDLER	AZ	852255865
1	99 N COOPER RD UNIT 127	CHANDLER	AZ	852255865
1	99 N COOPER RD UNIT 130	CHANDLER	AZ	852255865
1	99 N COOPER RD UNIT 131	CHANDLER	AZ	852255865
1	99 N COOPER RD UNIT 132	CHANDLER	AZ	852255865
1	99 N COOPER RD UNIT 133	CHANDLER	AZ	852255865
1	99 N COOPER RD UNIT 134	CHANDLER	AZ	852255865
1	99 N COOPER RD UNIT 137	CHANDLER	AZ	85225
1	99 N COOPER RD UNIT 138	CHANDLER	AZ	852255866
1	99 N COOPER RD UNIT 139	CHANDLER	AZ	852255866
1	99 N COOPER RD UNIT 141	CHANDLER	AZ	852255866
1	99 N COOPER RD UNIT 142	CHANDLER	AZ	852255866
1	99 N COOPER RD UNIT 146	CHANDLER	AZ	852255866
1	99 N COOPER RD UNIT 147	CHANDLER	AZ	852255866
1	99 N COOPER RD UNIT 148	CHANDLER	AZ	852255866
1	99 N COOPER RD UNIT 149	CHANDLER	AZ	852255866
1	99 N COOPER RD UNIT 150	CHANDLER	AZ	852255866
1	99 N COOPER RD UNIT 152	CHANDLER	AZ	852255866
1	99 N COOPER RD UNIT 153	CHANDLER	AZ	852255867
1	99 N COOPER RD UNIT 155	CHANDLER	AZ	852255867
1	99 N COOPER RD UNIT 158	CHANDLER	AZ	852255867
1	99 N COOPER RD UNIT 159	CHANDLER	AZ	852255867
1	99 N COOPER RD UNIT 160	CHANDLER	AZ	852255867
1	99 N COOPER RD UNIT 161	CHANDLER	AZ	852255867
1	99 N COOPER RD UNIT 165	CHANDLER	AZ	852255867
1	99 N COOPER RD UNIT 166	CHANDLER	AZ	852255867
1	99 N COOPER RD UNIT 167	CHANDLER	AZ	852255867
1	99 N COOPER UNIT 145	CHANDLER	AZ	85225
2	99 N DELAWARE ST	CHANDLER	AZ	852255911
1	990 E DESERT INN DR	CHANDLER	AZ	852493989
1	990 E PRINCETON AVE	GILBERT	AZ	852348731
1	991 E PRINCETON AVE	GILBERT	AZ	852348730
1	991 E SCOTT AVE	GILBERT	AZ	852348748
1	992 E TAURUS PL	CHANDLER	AZ	852493657
1	993 E FIELDSTONE PL	CHANDLER	AZ	852493682

1	994 E SCOTT AVE	GILBERT	AZ	852348747
1	996 E PRINCETON AVE	GILBERT	AZ	852348731
1	997 E PRINCETON AVE	GILBERT	AZ	852348730
1	997 E SCOTT AVE	GILBERT	AZ	852348748
1	ALAN/MONTSERRAT WARRINGTON TRUSTEES	MENIFEE	CA	925847991
1	ALLAN M GYOLAI	GILBERT	AZ	852343579
1	ALVIN I OKUNAMI TRUSTEE	GILBERT	AZ	852348749
1	ATTN CITY CLERK	CHANDLER	AZ	852444008
1	ATTN CORP RE ASSESSMENTS/NC1-001-03-81	CHARLOTTE	NC	282550001
1	BTZKK HOME INVESTMENTS	MESA	AZ	852103013
2	C/O AAM LLC	PHOENIX	AZ	850204473
3	C/O ASSOCIATED ASSET MANAGEMENT INC	PHOENIX	AZ	850204473
7	C/O CITY PROPERTY MGMT	PHOENIX	AZ	850444307
8	C/O JOMAR ASSOCIATIONS SVCS	TEMPE	AZ	852834846
1	C/O KACHINA MANAGEMENT INC	GLENDALE	AZ	853085978
1	C/O LEPIN & RENEHAN MGMT INC	TEMPE	AZ	85284
1	C/O LEPIN AND RENEHAN MGMT INC	TEMPE	AZ	85284
2	C/O PETERSON COMMUNITY MGMT & REALTY	SCOTTSDALE	AZ	852675427
12	C/O PMG SERVICES	MESA	AZ	85210
1	C/O PROPERTY MGMT	PHOENIX	AZ	850444307
1	C/O REMAX	MESA	AZ	852129627
4	C/O RENAISSANCE COMMUNITY PARTNERS	GILBERT	AZ	85204
2	C/O ROSSMAR & GRAHAM	SCOTTSDALE	AZ	85260
1	C/O ROSSMART & GRAHAM	SCOTTSDALE	AZ	852602098
2	CITY CLERK	CHANDLER	AZ	852444008
1	CORPORATE REAL ESTATE - ERIKA HILL	LANSING	MI	48909
1	DEPT OF THE INTERIOR	PHOENIX	AZ	850691169
1	DOUGLAS A FOUTS TR	GILBERT	AZ	852343680
1	DR ALEXANDRA	HAMPSTEAD	MD	21074
1	GLORIA MORTENSEN	CHANDLER	AZ	852255732
2	GREG MEDLEY TRUSTEE	TEMPE	AZ	852841483
1	JANE M GENTZEN TR	TEMPE	AZ	852833020
1	JOMAR ASSOCIATION SERVICES	TEMPE	AZ	852834846
1	LAND DEPARTMENT/PAB400	PHOENIX	AZ	850722025
1	LANDS END ESTATES CONTO	GILBERT	AZ	85299
1	LAURA E NAGURKA AND RALPH J RIZZOLO III	CHANDLER	AZ	852493030
6	LORENCE M ZIMTBAUM/MERITAGE HOME CORPORA	SCOTTSDALE	AZ	852556316

1	MARI H THUNDER KRUGER	GILBERT	AZ	852343529
1	P O BOX 11330	TEMPE	AZ	852840023
43	P O BOX 893	CHANDLER	AZ	852240893
1	PMG SERVICES	TEMPE	AZ	85282
1	PO BOX 1516	CHANDLER	AZ	852441516
1	PO BOX 1043	HIRAM	GA	30141
1	PO BOX 1081	MORGAN HILL	CA	950381081
1	PO BOX 11207	TEMPE	AZ	852840021
1	PO BOX 11248	CHANDLER	AZ	852480005
10	PO BOX 11330	TEMPE	AZ	85284
5	PO BOX 12170	GLENDALE	AZ	851382170
1	PO BOX 12408	TEMPE	AZ	852840041
1	PO BOX 12806	CHANDLER	AZ	852480031
1	PO BOX 13172	CHANDLER	AZ	852480037
1	PO BOX 132	GILBERT	AZ	852990132
1	PO BOX 1783	GILBERT	AZ	852991783
1	PO BOX 184	TRYON	OK	748750184
1	PO BOX 18755	MUNDS PARK	AZ	850178755
1	PO BOX 1892	GILBERT	AZ	852991892
1	PO BOX 190211	SAN FRANCISCO	CA	941190211
1	PO BOX 193	TOLLESON	AZ	85353
1	PO BOX 1974	CHANDLER	AZ	852441974
5	PO BOX 1980	PHOENIX	AZ	850011980
1	PO BOX 20118	EL SOBRANTE	CA	948200118
6	PO BOX 2018	GILBERT	AZ	852992018
1	PO BOX 2088	GILBERT	AZ	852992088
1	PO BOX 21600	MESA	AZ	852771600
1	PO BOX 21837	BAKERSFIELD	CA	933901837
1	PO BOX 232	CHANDLER	AZ	852440232
1	PO BOX 2373	GILBERT	AZ	852992373
3	PO BOX 25466	TEMPE	AZ	852855466
1	PO BOX 27137	PRESCOTT VALLEY	AZ	86312
1	PO BOX 3816	GILBERT	AZ	852993816
1	PO BOX 3819	GILBERT	AZ	852993819
1	PO BOX 397	VAIL	CO	816580397
10	PO BOX 4008	CHANDLER	AZ	852444008
3	PO BOX 4008 MS 606	CHANDLER	AZ	85244

2	PO BOX 4171	MESA	AZ	852114171
1	PO BOX 475697	SAN FRANCISCO	CA	941475697
1	PO BOX 502	KAMAS	UT	840360502
4	PO BOX 50309	PHOENIX	AZ	850760309
1	PO BOX 511196	SALT LAKE CTY	UT	841511196
2	PO BOX 52025	PHOENIX	AZ	850722025
1	PO BOX 52025 LAND DEPT	PHOENIX	AZ	850722025
1	PO BOX 57215	CHICAGO	IL	606570215
1	PO BOX 669	GILBERT	AZ	852990669
1	PO BOX 6694	MESA	AZ	852166694
1	PO BOX 699	GILBERT	AZ	85299
1	PO BOX 763	GILBERT	AZ	852990763
2	PO BOX 81169	PHOENIX	AZ	850691169
1	PO BOX 815	GILBERT	AZ	852990815
1	PO BOX 90423	PHOENIX	AZ	850660423
1	PO BOX 9081	MESA	AZ	852149081
1	PO BOX 9980	PHOENIX	AZ	850680980
2	R/W OPERATIONS 612E	PHOENIX	AZ	850073212
2	REAL ESTATE SERVICES	CHANDLER	AZ	852444008
1	REAL ESTATE SERVICES DIVISION	CHANDLER	AZ	852444008
1	RIDGLEY MARK/ALICIA TRUSTEES	ARLETA	CA	913315531
1	RONNIE D MCKIBBON AND DEBRA D MCKIBBON T	CHANDLER	AZ	852493050
1	STASIO RICHARD/MARY ANN TR	GILBERT	AZ	852961153
1	THE BERLAN FAMILY TRUST	GILBERT	AZ	852961147
1	WARD MICHELLE	CHANDLER	AZ	85225
1	WILFRED JP CHALOUX TR	GILBERT	AZ	852338503
1	WILLIAM S/BARBARA A TRUSTEES	CHANDLER	AZ	852254192

B.7 FEMA Correspondence

APPENDIX C: SURVEY FIELD NOTES

C.1 Survey field notes for hydrologic and hydraulic calculations

No additional field survey was used for the hydrologic and hydraulic calculations. Refer to the Chandler / Gilbert Flood Delineation Study, Phase 1 Eastern Canal Watershed, Technical Data Notebook, Volume 2, for all survey information relative to Phase 2 of the study.