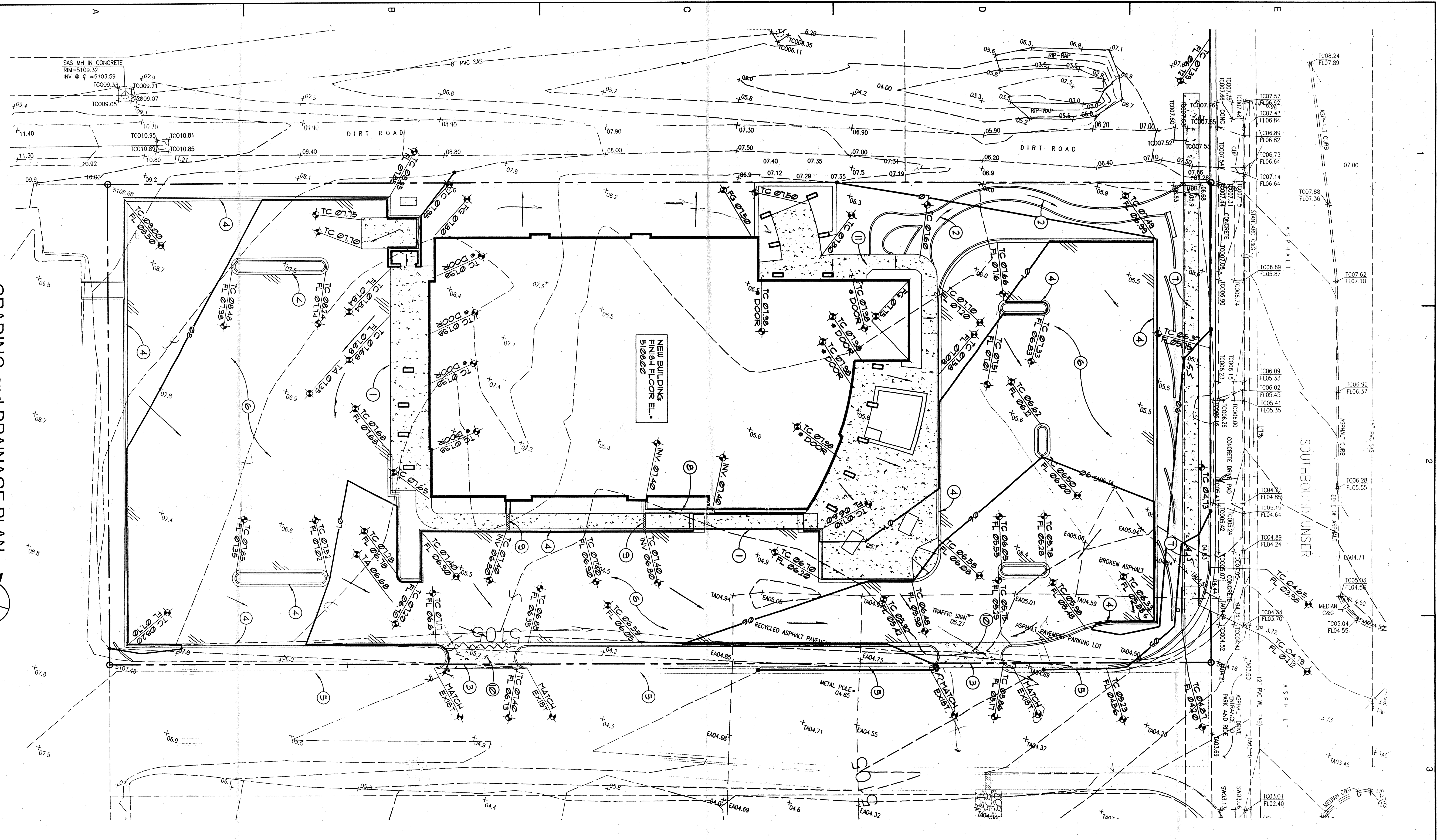
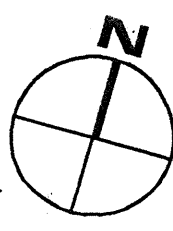


GRADING AND DRAINAGE PLAN



GENERAL NOTES

A THE PAVING CONFIGURATION ACCESS DRIVE IS UNDER CC

KEYED NOTES

- 1 TOP OF CURB TO MATCH TO LOCATION
- 2 1:20 MAXIMUM SLOPE
- 3 NEW CURB CUT REQUIRED
- 4 NEW CURB AND GUTTER PER
- 5 EXISTING CURB AND GUTTER
- 6 ASPHALT PAVING PER DETAIL
- 7 NEW SIDEWALK PER COA 51
- 8 CONCRETE CHANNEL PER DETAIL
- 9 1'-0" WIDE SIDEWALK CURB PER DETAIL
- 10 6" THICK 4000 PSI, AE, CO EACH WAY
- 11 4" THICK 4000 PSI, AE, CO EACH WAY

LEGEND

- PROPERTY LINE
- NEW BUILDING LINE
- S380 --- EXISTING CONTOUR
- 18 --- NEW CONTOUR
- NEW SPOT ELEVATION
- EXISTING SPOT ELEVATION
- NEW FLOW DIRECTION
- TA TOP OF ASPHALT
- TC TOP OF CONCRETE
- FG FINISHED GRADE
- NEW CONCRETE PAVEMENT
- NEW AC PAVING
- ROOF DRAIN LOCATION
- BOC BACK OF CURB (EXISTING)
- EC EDGE OF CONCRETE GRADE (EXISTING)
- FL FLOW LINE
- TG TOP OF GRATE
- INV INVERT
- SU SUDS

DRAINAGE
THE PROPOSED 15,000 SF WEST SIDE DEVELOPMENT UNDER AN EXISTING PAVED PAVEMENT SURFACE WILL BE THE EAST CONSTRUCTION DEVELOPMENT DRIVE EN EXISTING CURB AND STORM DRAIN THEN DRAINAGE UNDER THE SITE ON PRELIMINARY THE CITY REQUIRE AREA WITH

Central and Unser Site Plan

I. PURPOSE AND SCOPE

The purpose of this drainage plan is to present the existing and proposed drainage management plans for the proposed retail development of the lot located at the intersection of Central Ave and Unser Blvd. The site is located on Zone Atlas Page K-10. The site has an existing abandoned asphalt park and ride lot previously used by ABQ Ride. The proposed developments are to demolish the parking area and construct a commercial retail development.

II. SITE DESCRIPTION AND HISTORY

Currently the lot is empty except for an abandoned ABQ Ride park and ride asphalt lot.

The site is bounded on the East by Unser Blvd., the South by Central Ave., the North by a UNM Clinic (under construction), and the West by an existing car-wash and the re-located ABQ Ride park and ride lot.

This 13 acre site is being developed to accommodate a 20,000sq-ft library and 89,400sq-ft of retail space for a total of 109,400sq-ft. To meet the parking requirements for the proposed developed square footage, the site will have 529 parking stalls.

III. COMPUTATIONAL PROCEDURES

Hydrologic analysis was performed utilizing the design criteria found in the COA-DPM Section 22.2 released in June 1997.

IV. PRECIPITATION

The 100-yr. 6-hr duration storm was used as the design storm for this analysis. This site is within Zone 1 as identified in the DPM Section 22.2. Tables within the section were used to establish the 6-hr precipitation, excess precipitation and peak discharge.

V. EXISTING DRAINAGE CONDITIONS OVERVIEW

Currently the site drains to Unser Blvd. and Central Avenue. There are no storm control structures on the site. The existing asphalt parking lot drains to Unser Boulevard. The existing asphalt lot is 600ft x 200ft, this represents 30% of the site with 60% 'A' Land Treatment, and 10% class 'C' Land Treatment.

The excess run-off is 0.722 ac-ft. The peak discharge is 21.54 cfs.

VI. DRAINAGE MANAGEMENT PLAN

The drainage management plan for this site is to drain the water into a series of storm drains on site that route to an existing 72" storm drain in Unser Blvd.

The site has been broken down into multiple basins to ease the design of the storm drain pipes as the system progresses throughout the site. Refer to Sheet CD2 for reference. The design is as follows:

BASIN OFF #3 (3.14cfs) and BASIN PRO #1 (2.16cfs) flow into AP1 (4.97cfs). BASIN PRO #4 (2.26cfs) and AP1 (4.97cfs) flow into AP3 (7.23cfs). BASIN PRO #6 (1.76cfs) and AP2 flow into AP5 (8.97cfs).

BASIN PRO #2 (1.99cfs) flows into AP6 (1.99cfs). BASIN PRO #7 (1.19cfs), AP6 (1.99cfs), and AP5 (8.97cfs) flow into AP8 (12.15cfs). BASIN PRO #10 (1.63cfs) and AP8 (12.15cfs) flow into AP10 (13.78cfs).

BASIN OFF #4 (0.38cfs), BASIN PRO #8 (2.54cfs), and BASIN PRO #9 (3.03cfs) flow into AP13 (5.95cfs).

AP13 (5.95cfs) and AP10 (13.78cfs) flow into AP14 (19.73cfs). BASIN PRO #14 and AP14 (19.73cfs) flow into AP16 (23.49cfs).

BASIN OFF #2 (3.14cfs), BASIN PRO #3 (1.61cfs), BASIN PRO #5 (5.72cfs), BASIN PRO #11 (2.36cfs), and BASIN PRO #15 (0.78cfs) flow into AP24 (13.61cfs). AP16 (23.49cfs) and AP24 (13.61cfs) flow into AP25 (37.10cfs).

The storm drains between:

AP1 and AP4 are 18"ø,
AP4 and AP7 are 24"ø,
AP6 and AP7 are 18"ø,
AP7 and the intersection carrying AP13 are 30"ø,
the intersection carrying AP13 and AP15 are 36"ø,
AP13 and the intersection between AP9 and AP15 are 18"ø,
AP15 and the existing 72"ø SD line are 36"ø.

VII. CONCLUSIONS

The project site is currently an undeveloped lot with an abandoned asphalt parking lot. The proposed development plan intends to construct a library and several retail spaces to tie into the existing ABQ Ride park and ride facility to the West.

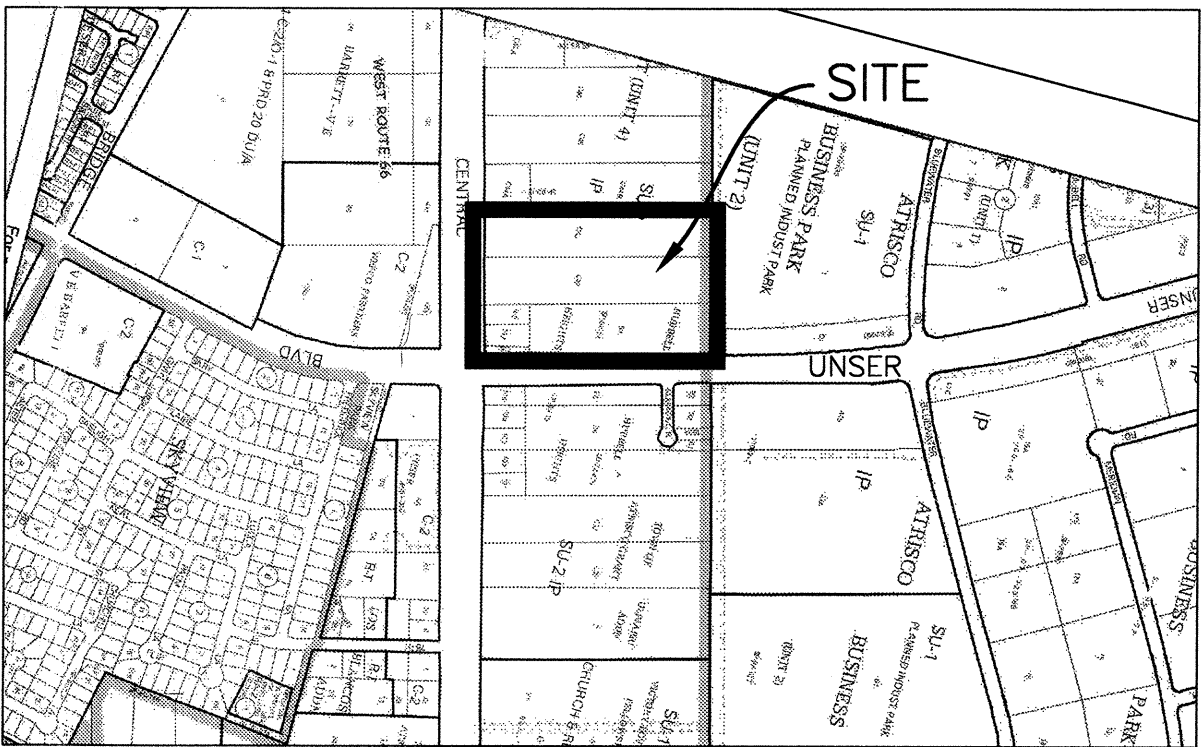
To remove excess storm run-off from the site a series of buried storm drains will direct the water to an existing 72" storm drain in Unser Blvd. based on the design storm of 100-yr 6-hr.

This plan is conceptual in nature. A detailed plan will be prepared for building permit.

Drainage Summary																					
Project:		Central and Unser																			
Project Number:		2336																			
Date:		04/26/10																			
By:		Dave A																			
Site Location																					
Precipitation Zone		1 Per Table A-1 COA DPM Section 22.2																			
Existing summary																					
Basin Name		Off #1	Off #2	Off #3	Off #4	EX #1															
Area (sf)		30492.8	34083.8	57271.9	4077.7	395543.6															
Area (acres)		0.70	0.78	1.31	0.09	9.08															
%A Land treatment						60															
%B Land treatment		15	15	15	15	0															
%C Land treatment		0	0	0	0	10															
%D Land treatment		85	85	85	85	30															
Soil Treatment (acres)																					
Area "A"		0.00	0.00	0.00	0.00	5.45															
Area "B"		0.11	0.12	0.20	0.01	0.00															
Area "C"		0.00	0.00	0.00	0.00	0.91															
Area "D"		0.60	0.67	1.12	0.08	2.72															
Excess Runoff (acre-feet)																					
100yr. 6hr.		0.1035	0.1157	0.1945	0.0138	0.7219															
10yr. 6hr.		0.0634	0.0709	0.1191	0.0085	0.3511															
2yr. 6hr.		0.0358	0.0400	0.0672	0.0048	0.1725															
100yr. 24hr.		0.1264	0.1412	0.2373	0.0169	0.8283															
Peak Discharge (cfs)																					
100 yr.		2.81	3.14	5.28	0.38	21.54															
10yr.		1.80	2.01	3.38	0.24	10.53															
2yr.		1.01	1.13	1.89	0.13	5.03															
Proposed summary																					
Basin Name		Off #1	Off #2	Off #3	Off #4	PRO #1	PRO #2	PRO #3	PRO #4	PRO #5	PRO #6	PRO #7	PRO #8	PRO #9	PRO #10	PRO #11	PRO #12	PRO #13	PRO #14	PRO #15	PRO #16
Area (sf)		30492.8	34083.8	57271.9	4077.7	23360.2	21547	17477.2	24547.9	61991.3	19061.3	12949.9	27560.1	32823.4	17720	25565.4	11123.8	35391.1	40739.3	8503.8	15181.9
Area (acres)		0.70	0.78	1.31	0.09	0.54	0.49	0.40	0.56	1.42	0.44	0.30	0.63	0.75	0.41	0.59	0.26	0.81	0.94	0.20	0.35
%A Land treatment					0																
%B Land treatment		15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
%C Land treatment		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%D Land treatment		85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
Soil Treatment (acres)																					
Area "A"		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area "B"		0.11	0.12	0.20	0.01	0.08	0.07	0.08	0.08	0.21	0.07	0.04	0.09	0.11	0.08	0.09	0.04	0.12	0.14	0.03	0.05
Area "C"		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area "D"		0.60	0.67	1.12	0.08	0.46	0.42	0.34	0.48	1.21	0.87	0.25	0.54	0.64	0.35	0.50	0.22	0.89	0.79	0.17	0.30
Excess Runoff (acre-feet)																					
100yr. 6hr.		0.1035	0.1157	0.1945	0.0138	0.0793	0.07	0.06	0.08	0.21	0.06	0.04	0.09	0.11	0.06	0.09	0.04	0.12	0.14	0.03	0.05
10yr. 6hr.		0.0634	0.0709	0.1191	0.0085	0.0486	0.04	0.04	0.05	0.13	0.04	0.03	0.06	0.07	0.04	0.05	0.02	0.07	0.08	0.02	0.03
2yr. 6hr.		0.0358	0.0400	0.0672	0.0048	0.0274	0.03	0.02	0.03	0.07	0.02	0.02	0.03	0.04	0.02	0.03	0.01	0.04	0.05	0.01	0.02
100yr. 24hr.		0.1264	0.1412	0.2373	0.0169	0.0968	0.09	0.07	0.10	0.26	0.08	0.05	0.11	0.14	0.07	0.11	0.05	0.15	0.17	0.04	0.06
Peak Discharge (cfs)																					
100 yr.		2.81	3.14	5.28	0.38	2.16	1.99	1.61	2.26	5.72	1.76	1.19	2.54	3.03	1.63	2.36	1.03	3.27	3.76	0.78	1.40
10yr.		1.80	2.01	3.38	0.24	1.38	1.27	1.03	1.45	3.66	1.12	0.76	1.63	1.94	1.05	1.51	0.66	2.09	2.40	0.50	0.90
2yr.		1.01	1.13	1.89	0.13	0.77	0.71	0.58	0.81	2.05	0.63	0.43	0.91	1.09	0.59	0.85	0.37	1.17	1.35	0.28	0.50

B2 HYDROLAULIC/HYDROLOGY CALCULATIONS

SCALE: NOT TO SCALE



A3 ZONE ATLAS MAP K-10-Z

SCALE: NOT TO SCALE



A4 SITE MAP

SCALE: NOT TO SCALE

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HYDROLOGY
SECTION

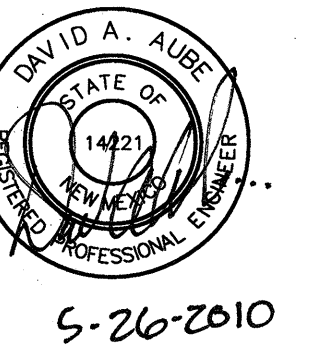
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CONSULTANT

STAMP



PROJECT NAME

CENTRAL/UNSER

CITY OF ALBUQUERQUE

ALBUQUERQUE, NM

CD2

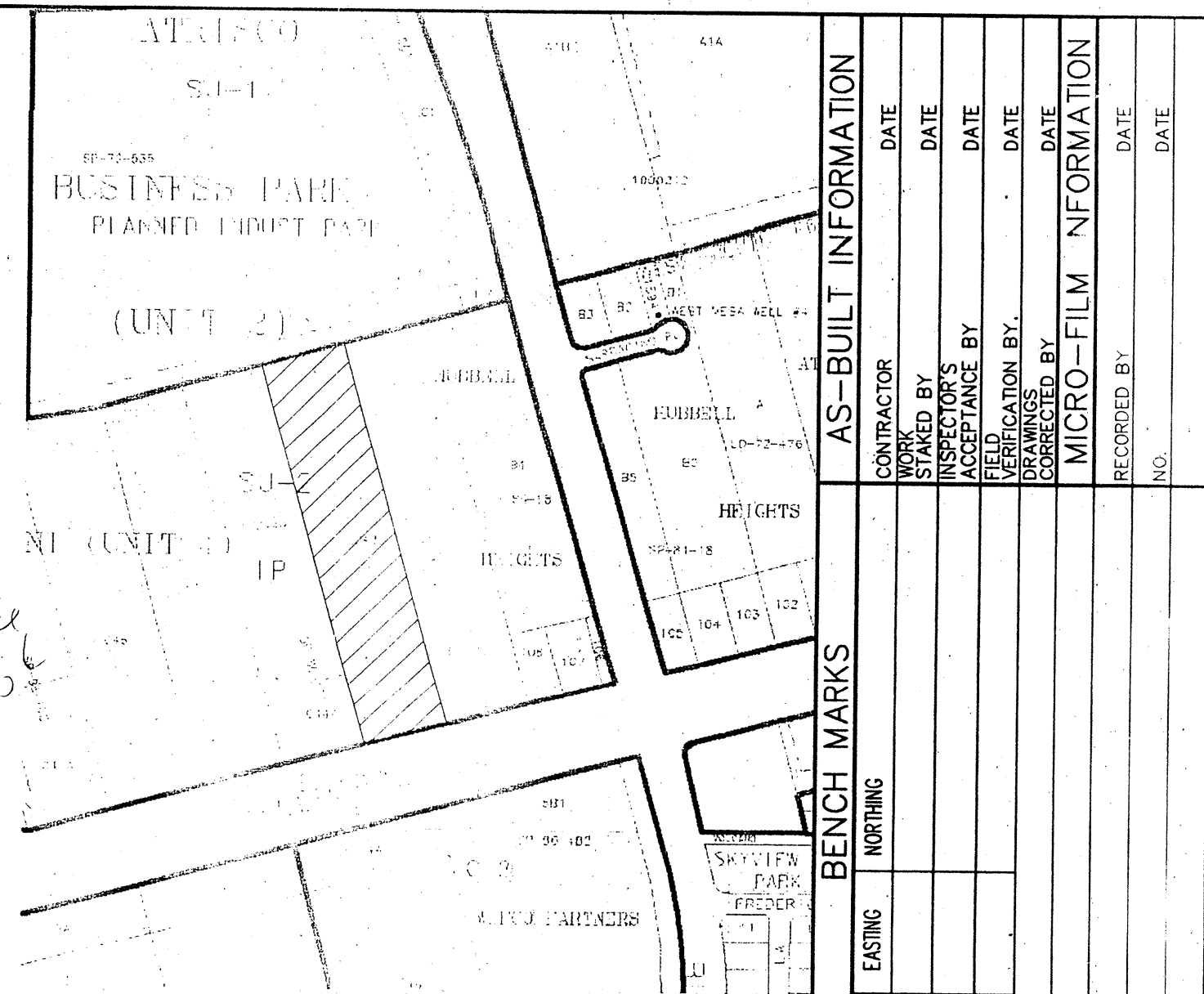
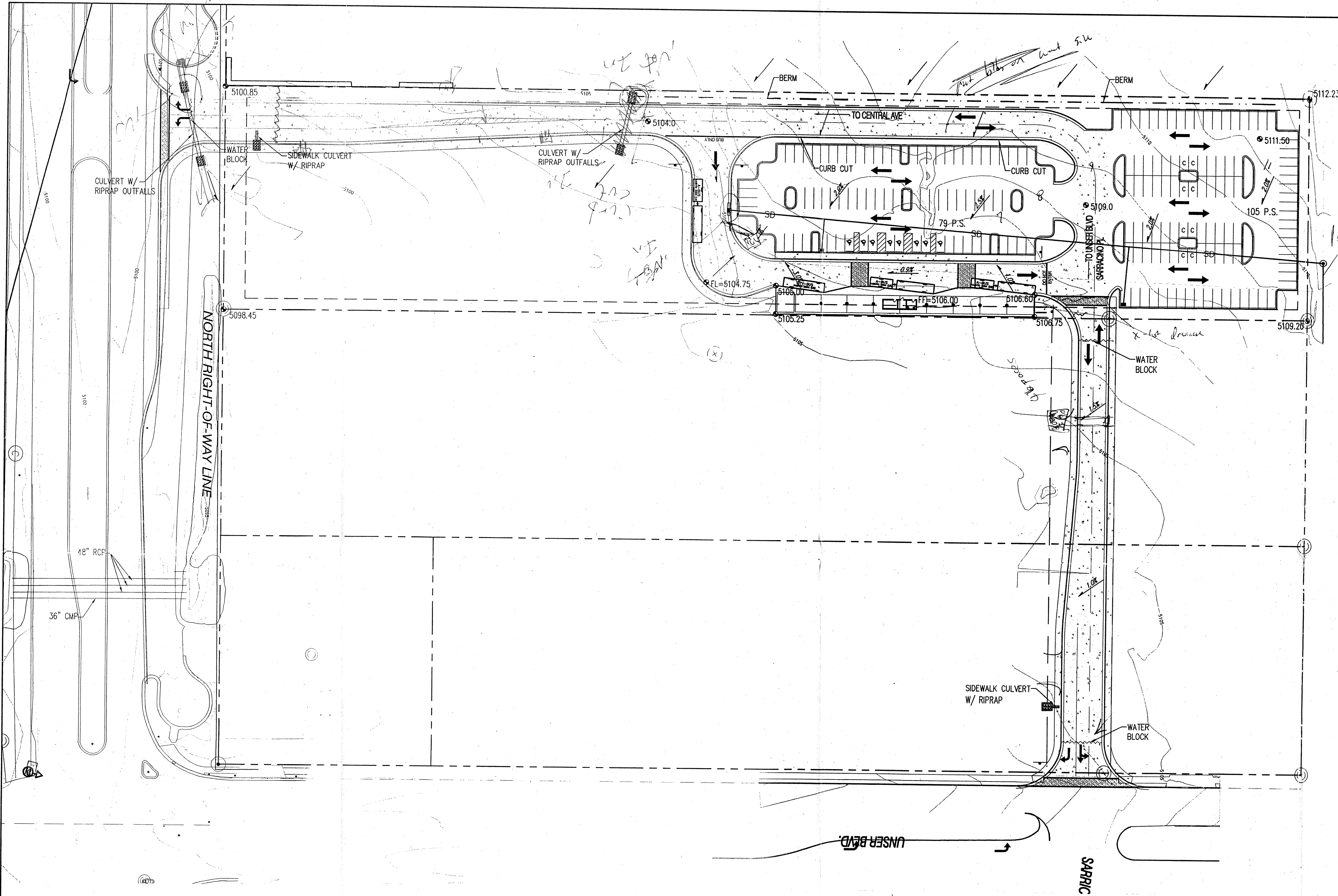


TABLE 1 SOUTHWEST MESA PARK & RIDE - HYDRAULIC CALCULATIONS										
Existing and Ultimate Development Conditions Basin Data Table										
This table is based on the DPM Section 22.2, Zone 1										
SUB-BASIN ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q(100) (cfs/ac.)	Q(100) (cfs)	WT E _{100yr} (inches)	V(100) ₃₆₀ (CF)
			A	B	C	D				V(100) _{10day} (CF)
EXISTING	216639	4.97	100.0%	0.0%	0.0%	0.0%	1.29	6.42	0.44	7943
PROPOSED-A	130680	3.00	0.0%	0.0%	18.0%	82.0%	4.10	12.30	1.79	19532
PROPOSED-B	85813	1.97	0.0%	70.0%	5.0%	25.0%	2.66	5.23	1.01	7230
							11.12			18818.63
										35966.74

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Fri, 3-Apr-2009 - 9:07:am, Plotted by: RGBSON

DRAINAGE MANAGEMENT PLAN

I. INTRODUCTION

THE PURPOSE OF THIS SUBMITTAL IS TO PRESENT A DRAINAGE PLAN FOR THE PROPOSED SOUTHWEST MESA PARK & RIDE. THIS SITE IS LOCATED ON THE NORTHWEST CORNER OF CENTRAL AVENUE AND UNSER BOULEVARD. THERE IS VACANT LAND TO THE WEST AND WEST, ON THE NORTHSIDE IS A UTILITY EASEMENT AND UTILITY ACCESS ROAD AND TO THE SOUTH IS CENTRAL AVENUE. THIS PROJECT WILL INCLUDE A NEW PARK & RIDE FACILITY WITH SHADE STRUCTURE SIMILAR TO THE UPTOWN TRANSIT CENTER AND A NEW PARKING LOT. WITH THIS SUBMITTAL WE ARE SEEKING HYDROLOGY APPROVAL FOR SITE DEVELOPMENT FOR BUILDING PERMIT APPROVAL.

II. EXISTING HYDROLOGIC CONDITIONS

THE SITE IS APPROXIMATELY 4.97 ACRES AND IS CURRENTLY UNDEVELOPED. THE LAND SLOPES 1.0% TO 2.5% FROM THE NORTHWEST CORNER TO THE SOUTHEAST CORNER. THIS PARCEL AND THE SURROUNDING PARCELS SHEET FLOW THE NORTHEAST INTERSECTION OF CENTRAL AVENUE AND UNSER BOULEVARD WHERE FLOW IS THEN DIRECTED INTO 3-48" RCPS AND 1-36" CMP.

III. PROPOSED HYDROLOGIC CONDITIONS

THE PROPOSED SITE WILL CONSIST OF APPROXIMATELY 3.0 ACRES OF DEVELOPMENT AND THE REMAINING 2.97 ACRES BASIN B WILL BE NATIVELY RESEEDED AND WILL FOLLOW HISTORIC FLOW PATHS. THE DEVELOPED AREA WILL CONSIST OF IMPERVIOUS PAVING, SHADE STRUCTURE AND LANDSCAPING. WATER HARVESTING IN THE LANDSCAPING AREAS WILL BE UTILIZED AND WILL HELP TO CHANNEL FLOWS. ON THE PROPOSED DEVELOPMENT BASIN A SHEET FLOW AND STORM DRAIN TO CHANNEL STORM WATER TO THE

EXISTING 48" STORMDRAIN ON THE NORTH BOUNDARY. NO PONDING WILL BE NECESSARY DURING THIS PHASE OF DEVELOPMENT BASIN A WILL TAKE THE ENTIRE FLOW TO EXISTING STORMDRAIN AND BASIN B WILL BE ALLOWED TO SHEET FLOW TO THE EXISTING CULVERT CROSSING CENTRAL. THE TOTAL FLOW FROM BASIN A WILL BE 12.30CFS AND BASIN B 5.23CFS.

OFFSITE DRAINAGE

CURRENT DRAINAGE FROM THE PROPERTY TO THE WEST WILL BE DIVERTED ALONG THE WESTERN PROPERTY LINE TO THE PROPOSED CULVERT TO CROSS THE PROPOSED ACCESS TO CENTRAL AVENUE FLOW WILL THEN FOLLOW HISTORIC SHEET FLOWS TO THE EXISTING CULVERTS AT THE INTERSECTION OF UNSER AND CENTRAL.

FLOODPLAIN

IN ACCORDANCE WITH FEMA COMMUNITY MAP PANEL #35001C0328 G, THE SITE IS NOT LOCATED WITHIN A FLOODPLAIN.

IV. CONCLUSION

THE 100YR PEAK DISCHARGE FROM THE SITE WILL BE SEPERATED INTO TWO DIRECTIONS BASIN A WILL DISCHARGE 12.30CFS TO THE 48" STORMDRAIN TO THE NORTH, AND BASIN B WILL DIRECT 5.23CFS TO THE CULVERTS IN CENTRAL AVENUE THIS DRAINAGE MANAGEMENT PLAN IS CAPABLE OF SAFELY PASSING THE 100 YEAR STORM EVEN AND MEETS CITY REQUIREMENTS. WITH THIS SUBMITTAL WE ARE SEEKING SITE DEVELOPMENT FOR BUILDING PERMIT APPROVAL.

BHI JOB NO. 090422

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CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT SOUTHWEST MESA PARK & RIDE DRAINAGE MANAGEMENT PLAN	
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL
MO./DAY/YR. MO./DAY/YR.	
LAST DESIGN UPDATE	
CITY PROJECT NO. 7616.91	
ZONE MAP NO. K - 10	
SHEET XX OF	