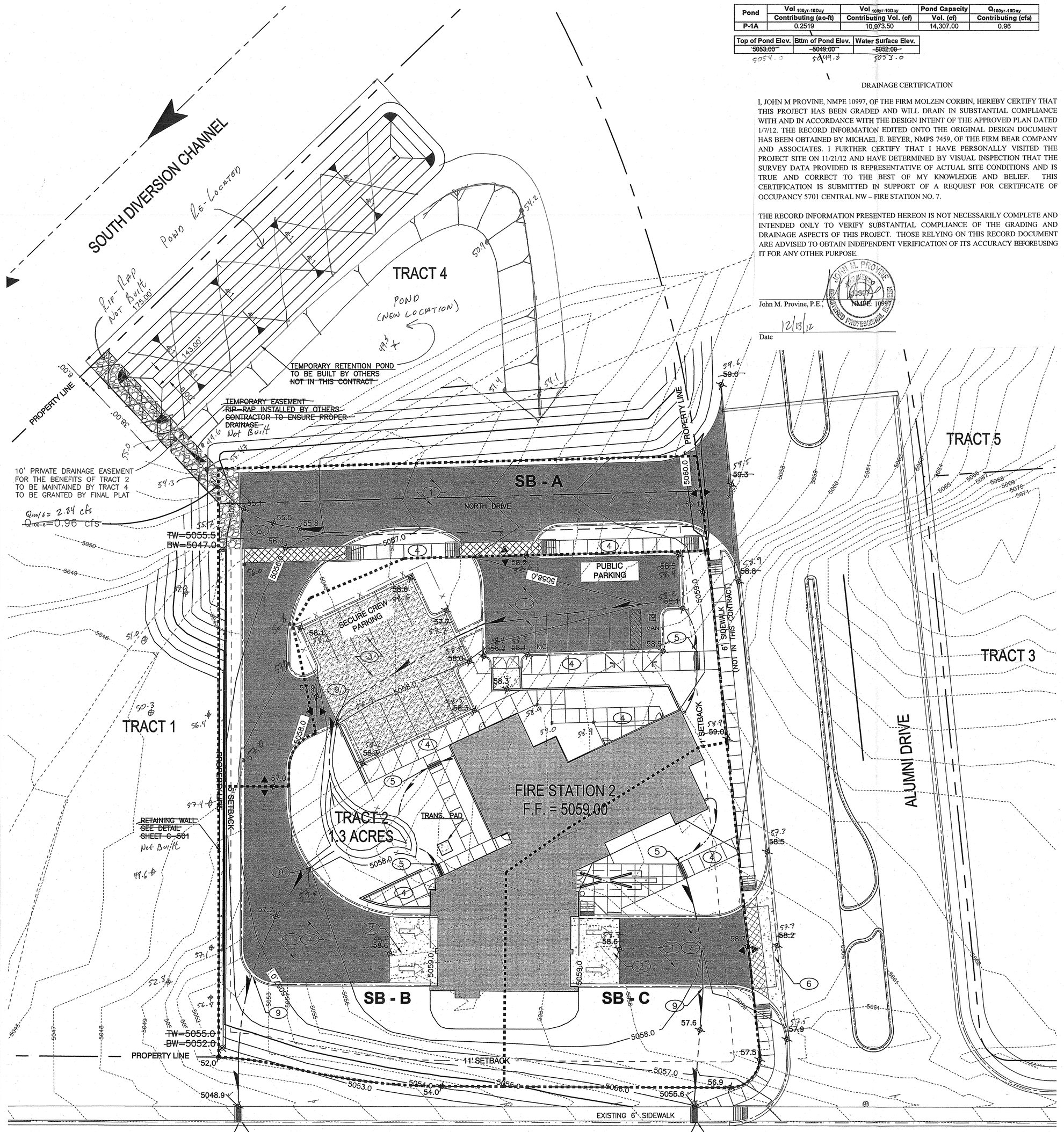


GRADING PLAN (BASE BID – 2 BAY)

POND CALCULATIONS

Pond	Vol 100yr-10Day Contributing (ac-ft)	Vol 100yr-10Day Contributing Vol. (cf)	Pond Capacity Vol. (cf)	Q 100yr-10Day Contributing (cfs)
P-1A	0.2519	10,973.50	14,307.00	0.96

Top of Pond Elev.	Bttm of Pond Elev.	Water Surface Elev.
~~5053.00~~ 5054.0	~~5049.00~~ 5049.0	~~5052.00~~ 5053.0

DRAINAGE CERTIFICATION

I, JOHN M PROVINE, NMPE 10997, OF THE FIRM MOLZEN CORBIN, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 1/7/12. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY MICHAEL E. BEYER, NMPS 7459, OF THE FIRM BEAR COMPANY AND ASSOCIATES. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 11/21/12 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY 5701 CENTRAL NW – FIRE STATION NO. 7.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFOREUSING IT FOR ANY OTHER PURPOSE.

John M. Provine, P.E. NMPE 10997

12/13/12
Date

FLOW CALCULATIONS

CITY OF ALBUQUERQUE FIRE STATION NO. 2

DRAINAGE ANALYSIS

INTRODUCTION

PURPOSE AND SITE LOCATION

Fire Station No. 2 will be located at Lot 2 of the UNM Gibson Commercial District located on the north side of Gibson Blvd, SE. The location is located west of University Ave and Gibson Blvd and east of I-25 and Gibson Blvd. Fire Station No. 2 will be located within a 1.3 acre site of predominately undeveloped property. The City of Albuquerque will own the development property after a property transfer is completed with the University of New Mexico Board of Regents.

CRITERIA

The proposed grading and drainage for the development of this site are based on the criteria in the City of Albuquerque Development Process Manual (DPM) Chapter 22. Flow calculations are based on the 100-yr, 6-hr design storm. The existing conditions are calculated from a single basin – Basin SB – 1.3 ac. The area of study was divided into three sub basins; Basin SB-A 0.28 ac; Basin SB-B – 0.77 ac; Basin SB-C – 0.29 ac, to calculate the developed conditions.

Basin SB-B, the largest subbasin, will be routed through an on-site pond. The initial 0.44-in rainfall on the property will be retained in the pond at the request of the City of Albuquerque for storm water treatment purposes utilizing the bottom 1 ft of the pond volume. Discharge from the pond will be discharged overland to Gibson Blvd.

EXISTING CONDITIONS

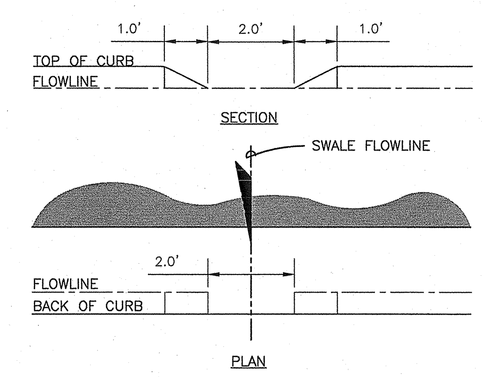
The 1.3 acre site for Fire Station 2 (Lot 2) is primarily undeveloped. The existing stormwater discharge flows across the property generally from east to west. The minimal off-site flows are generally from the east to west. The adjacent properties are generally graded away from Lot 2. The AMAFCA South Diversion Channel and Geneiva Arroyo are located to the north and west of the property and these drainage ways collect the drainage flows from the adjacent properties located to the north and west of Lot 2. The northern and western portion of Lot 2 also discharges to these drainage ways across the adjacent properties. The southern portion of Lot 2 discharge drainage flows overland to Gibson Blvd. and eventually to the South Diversion Channel through a channel inlet located on the north curb of Gibson Blvd, west of Lot 2.

DEVELOPED CONDITIONS

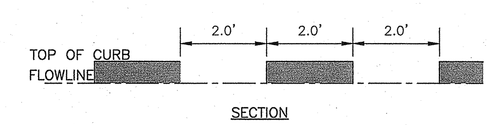
Off-site flows from the east of the property will be intercepted by Alumni Dr to be constructed under a separate project (UNM project) and will be diverted to Gibson Blvd. The on-site flows have been calculated with fully developed conditions from the proposed site plan. A drainage pond proposed for the site has been sized to retain approximately 0.44-in of the initial storm flows. The pond will discharge approx. 2.63 cfs (SB-B) of the design storm to the southwest and eventually to Gibson Blvd through a drainage swale and sidewalk culvert. Approximately 0.99 cfs (SB-C) will discharge from the site at the Southeast corner of Alumni Dr and Gibson Blvd through a sidewalk culvert to Gibson Blvd. The third discharge point from the site will be located at the Northwest corner of the site. Ultimately, approximately 0.96 cfs (SB-A) will discharge overland to a 10 ft wide drainage easement (with approval by AMAFCA) which will convey the flow to the AMAFCA South Diversion Channel. As a temporary measure until a discharge agreement is reached by UNM with AMAFCA, UNM will allow a temporary retention pond to be constructed on Lot 4 of the UNM property.

EXISTING CONDITIONS							
DESCRIPTION		LAND TREATMENT				FLOW (cfs)	VOL (cf)
Basin	Areas (SF)	A	B	C	D	Q 100-6	V 100-6
SB	1.3	0	0	100	0	3.71	4619.4

DEVELOPED CONDITIONS								
DESCRIPTION		LAND TREATMENT				FLOW (cfs)	VOL (cf)	VOL (cf)
Basin	Areas (ac)	A	V 100-6	C	D	Q 100-6	V 100-6	V 100-10 day
SB-A	0.28	0	0.03	60	40	0.96	1306.8	10973.5
SB-B	0.77	0	0.10	60	40	2.63	4356.0	N/A
SB-C	0.29		0.03	60	40	0.99	1306.8	N/A



2' CURB CUT TYPICAL
N.T.S



2' ASPHALT CURB CUTS TYPICAL
N.T.S

LEGEND

- GRADED FLOWLINE
- 5814.50 — NEW TOPOGRAPHIC CONTOUR
- 5814.50 — EXISTING TOPOGRAPHIC CONTOUR
- GRADE BREAK (RIDGE)
- DRAINAGE BASIN
- NEW ASPHALT
- CONCRETE PAVEMENT
- BASECOURSE PAVEMENT

GENERAL NOTES

1. ALL EXISTING UTILITIES MAY NOT BE SHOWN.
2. EXISTING SERVICE CONNECTIONS ARE NOT SHOWN
3. ANY EXISTING UTILITIES THAT ARE SHOWN ARE SHOWN IN APPROXIMATE LOCATION ONLY.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY OWNERS AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATIONS TO DETERMINE ACTUAL LOCATIONS OF EXISTING UTILITIES THAT MAY BE EFFECTED BY NEW CONSTRUCTION.

SPECIAL NOTES

1. IMPROVEMENTS SHOWN ON THIS PLAN LOCATED OUTSIDE LOT #2 PROPERTY LINES WILL BE BUILT BY OTHERS AND NOT INTENDED TO BE IN THIS CONTRACT. I.E. ALUMNI DR. ROADWAY AND SIDEWALKS, INFRASTRUCTURE, GIBSON IMPROVEMENTS, ETC.. WITH EXCEPTION OF NORTH DRIVE

NOTICE TO CONTRACTOR

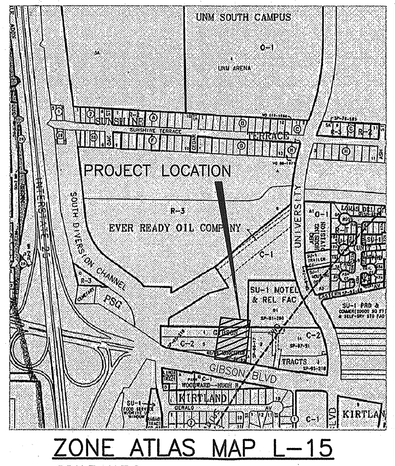
OF DRAINAGE FACILITIES WITHIN CITY RIGHT–OF–WAY

1. AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT–OF–WAY.
2. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, NEW MEXICO ONE CALL 260–1990. (NM ONE CALL "811") FOR THE LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
6. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24–HOUR BASIS.

KEYED NOTED

1. ASPHALT SURFACE. SEE TYPICAL SECTION SHEET C–501.
2. CONCRETE APRON. SEE TYPICAL SECTION SHEET C–501.
3. BASECOURSE PAVEMENT PARKING AREA. SEE TYPICAL SECTION SHEET C–501.
4. 6' WIDE CONCRETE SIDEWALK. SEE TYPICAL SECTION SHEET C–501.
5. SIDEWALK CULVERT. LOCATED IN RELATION WITH ROOF DRAIN OUTLETS. PER COA STD. DWG. 2236. SEE NOTICE TO CONTRACTOR ABOVE.
6. CONCRETE DRIVE WITH PRESSED PATTERN SIDEWALK. SEE ARCH. DETAILS FOR PRESSED PATTERN AND SEE SHEET C–501 FOR TYPICAL CONCRETE SECTION. VALLEY GUTTER PER COA STD DWG. 2420
7. ADD. ALT. #3 – CONCRETE PAVEMENT SURFACE IN LIEU OF ASPHALT. SEE TYPICAL SECTION SHEET C–501
8. TEMPORARY ASPHALT CURB, TYPE C. PER COA STD DWG. 2415B. INSTALL CURB CUTS EVERY 24" ON CENTER AND CHANNEL RUNOFF TO EASEMENT. SEE DETAIL THIS SHEET.
9. TYPICAL 2' CURB CUT. CENTERED WITH DRAINAGE SWALES. SEE DETAIL THIS SHEET.

MOLZENCORBIN
ENGINEERS | ARCHITECTS | PLANNERS



ZONE ATLAS MAP L–15
SCALE: N.T.S.

AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY DATE
STAKING REVIEWED BY DATE
ACCEPTANCE BY DATE
FIELD VERIFICATION BY DATE
DRAWINGS CORRECTED BY DATE
MICRO–FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

SEAL

NO.	DATE	REMARKS	BY
1	01.03.12	ADDITIONAL INFORMATION	M–C

REVISIONS

DESIGN		
DESIGNED BY	CWG	DATE 12.30.11
DRAWN BY	CWG	DATE 12.30.11
CHECKED BY	JMP	DATE 12.30.11

Dekker/Perich/Sabatini
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505 761-9700 fax 761-4222

CITY OF ALBUQUERQUE
CAPITAL IMPLEMENTATION PROGRAM

PROJECT TITLE:
FIRE STATION 2
ALBUQUERQUE, NEW MEXICO

DRAWING TITLE:
GRADING AND DRAINAGE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	DWG.	Sheet	Of
8006.91	L-15-Z	C–101		

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CDP–101 1/3/12 1:214.4