



City of Albuquerque

March 1, 2000

Diane Hoelzer, PE
Mark Goodwin & Associates
P.O. 90606
Albuquerque, NM 87199

Re: Gateway Industrial Park Drainage Report
Engineer's Stamp dated 2-29-00 (H14/D1)

Dear Ms. Hoelzer,

Based upon the information provided in your resubmittal dated 3-1-00, the above referenced site is conditionally approved for Site Development for Subdivision and Preliminary Plat. You are also approved for Grading Permit.

Conditions of approval are as follows:

Side treatment of the proposed channel will need to be addressed at Work Order or Final Plat.

DRC approval will also include a profile of the entire channel.

Details of the inlet reconfiguration will be approved at Work Order.

Please submit a mylar for my signature to obtain grading permit.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file

MARK GOODWIN

& ASSOCIATES
CONSULTING ENGINEERS

dmg

DRAINAGE REPORT
FOR
Gateway Industrial Park
(At Broadway and Manual)



Mark Goodwin & Associates, P.A.

January 2000

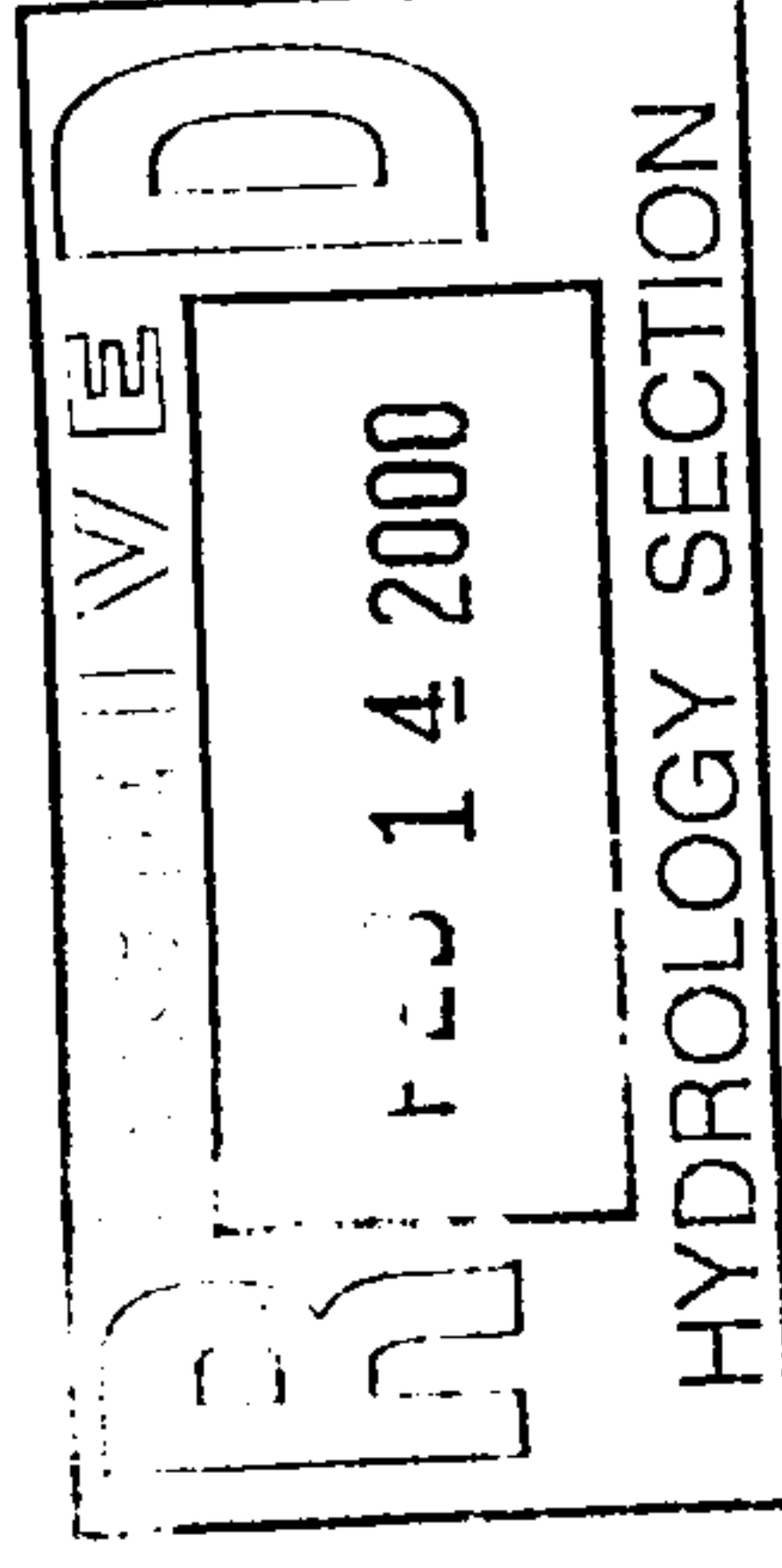


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POCKET 2: STORM DRAIN IMPROVEMENTS (12/94) PROJECT NO.4271.90

I. PROJECT DESCRIPTION

The proposed Gateway Industrial Park is comprised of 13 tracts identified as Tracts 'A' through 'M' and is bounded by Claremont Avenue to the north, Broadway Blvd. to the east, Manual Blvd. to the south and a City Detention Pond Facility and vacant land to the west. The total site is comprised of approximately 14.25 acres. The developable tracts range in size from 0.77 acres to 1.92 acres.

The required paving, water and sanitary sewer infrastructure will be constructed to support the development of each tract.

II. DRAINAGE DESIGN CRITERIA AND PREVIOUS REPORTS

The design criteria used in this report was in accordance with Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria, January 1993 edition. The 100-year 6-hour storm event was analyzed to determine street capacities and sizing the internal storm drain system using $P(1 \text{ hr}) = 1.92"$, $P(6 \text{ hr}) = 2.20"$. The onsite Land Treatment values used for existing conditions is 100 percent B and developed condition values, typical of industrial parks is Treatment D=90 and Treatment B / C=5.

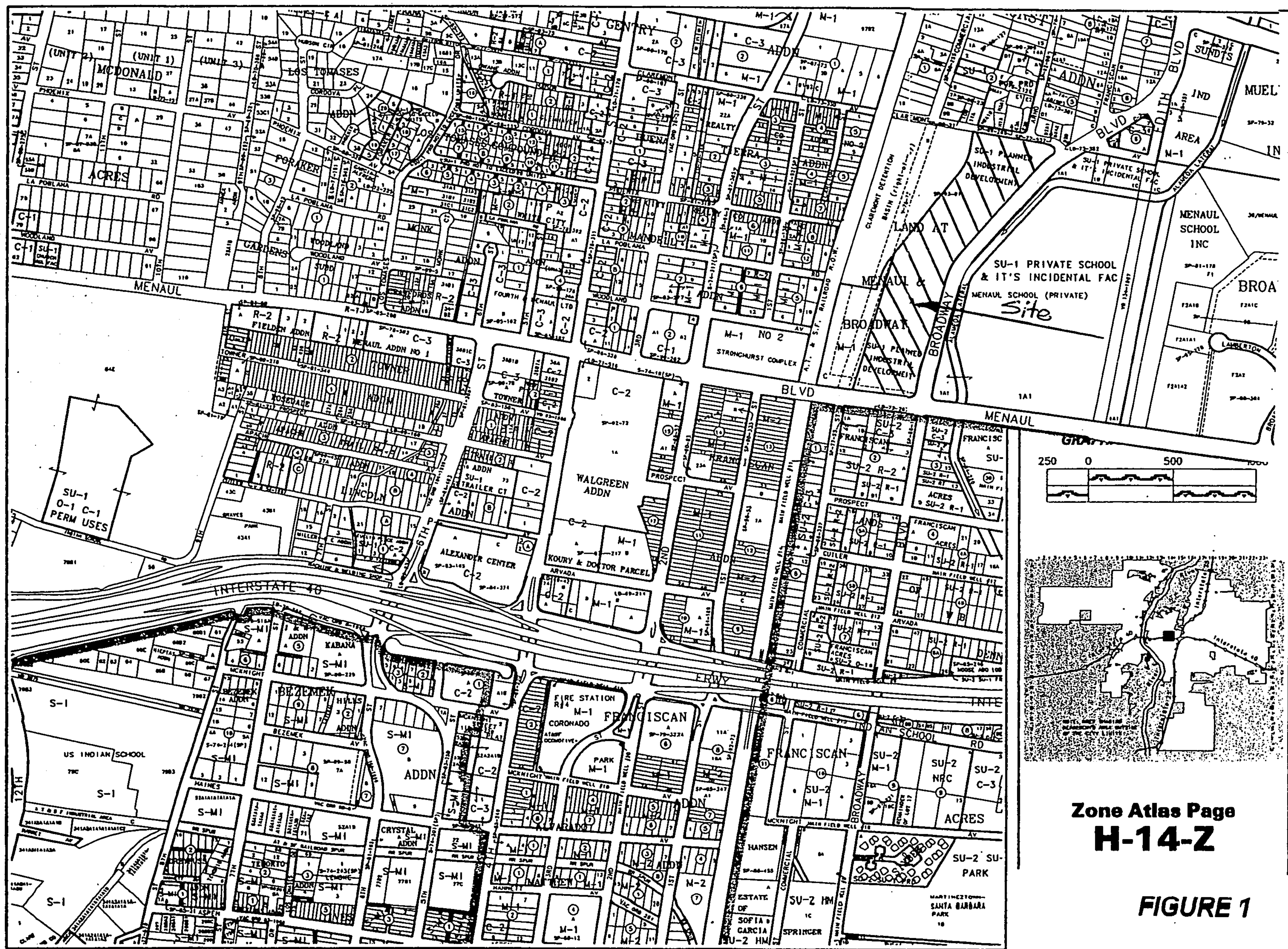
III. EXISTING DRAINAGE CONDITIONS

The peak 100 year discharge from the site was determined to be 29.45 cfs. Under existing conditions the site drains in a general westerly direction toward the City Detention Pond Facility. A small area at the south end drains onto Manual Blvd. before being intercepted by inlets that discharge to the City Detention Pond. A small area at the north end drains onto Claremont Avenue before discharging into the City Detention Pond Facility.

This proposed drainage plan is in accordance with the approved "Claremont, Candelaria and 2nd Street North Storm Drain Improvement Phase One Tract 'A' Grading Plan", Project No. 4271.90, (refer to Pocket 2 drawing).

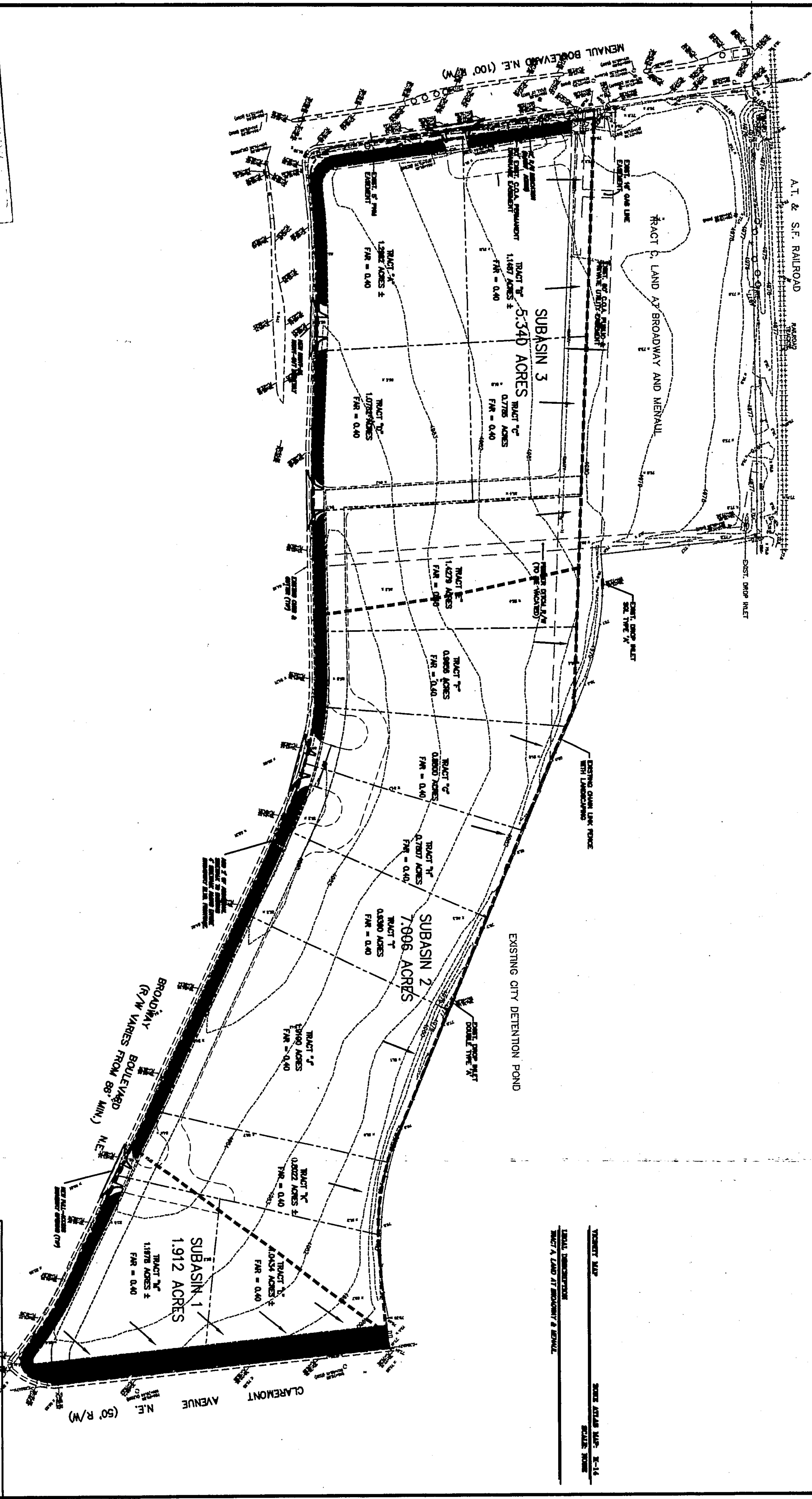
IV. DEVELOPED DRAINAGE CONDITIONS

The 100 year "developed conditions" peak discharge from the site is 60.14 cfs. The proposed drainage plan for this site is in accordance with the approved "Claremont, Candelaria and 2nd Street North Storm Drain Improvement Phase One Tract 'A' Grading Plan", Project No. 4271.90 (refer to Pocket 2). Runoff will be conveyed in a western direction on each tract before being intercepted by a drainage swale and redirected to one of two existing inlets that discharge directly into the City Detention Pond Facility. These inlets will perform as sump inlets with construction modification involving a concrete apron for erosion protection around each inlet to be designed during DRC. Tracts 'M', 'A' and 'B' will free discharge into Claremont Avenue and Manual Blvd., respectively before being intercepted by existing inlets leading to the City Detention Pond Facility. Table 1 is a summary of the 100 year peak discharge values for each tract site. Table 2 is a summary of drainage swale hydraulics adjacent to each tract.

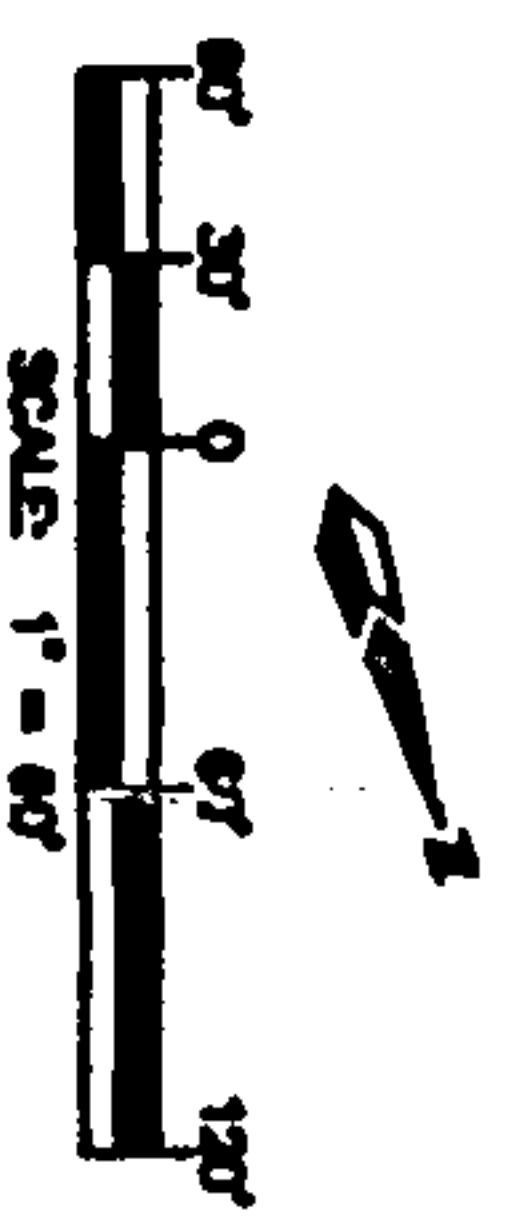


Zone Atlas Page
H-14-Z

FIGURE 1



RECEIVED
 FEB 14 2008
 HYDROLOGY SECTION



GATEWAY INDUSTRIAL PARK

EXISTING SUBBASIN BOUNDARIES

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS

Drawn by: JMM
Scale: 1" = 60'

FIGURE 2

TOTAL DRAINAGE AREA: 15.14
 TRACT A LAND AT BROADWAY & MENAUL
 SCALE: 1" = 60'

GATEWAY INDUSTRIAL PARK

TABLE 1 SUMMARY OF 100 YEAR PEAK DISCHARGE VALUES

TRACT ID	AREA (acres)	PERCENT AREA	PEAK Q (cfs)	RUNOFF VOL-AF
EXISTING CONDITIONS				
TOTAL	14.258	100.000	29.45	
SB 1	1.912	13.410	3.95	
SB 2	7.006	49.137	14.47	
SB 3	5.340	37.453	11.03	
DEVELOPED CONDITIONS				
TOTAL	14.2592	100.0000	60.14	2.208
A	1.2982	9.1043	5.48	
B	1.1487	8.0559	4.84	
C	0.7785	5.4596	3.28	
D	1.0782	7.5614	4.55	
E	1.4279	10.0139	6.02	
F	0.9656	6.7718	4.07	
G	0.8800	6.1715	3.71	
H	0.7807	5.4751	3.29	
I	0.9390	6.5852	3.96	
J	1.9190	13.4580	8.09	
K	0.8022	5.6258	3.38	
L	1.0434	7.3174	4.40	
M	1.1978	8.4002	5.05	

GATEWAY INDUSTRIAL PARK

TABLE 2 SUMMARY TABLE FOR DRAINAGE SWALE

LOCATION	PEAK Q (cfs)	SWALE SLOPE %	DEPTH (ft)	VELOCITY (fps)	TOP WIDTH (ft)
TRACT 'L'	4.40	0.6	0.70	2.24	5.61
TRACT 'K'	7.78	0.6	0.87	2.58	6.94
TRACT 'J'	15.87	0.6	1.13	3.09	9.07
TRACT 'I'	7.25	0.6	0.84	2.54	6.76
TRACT 'H'	3.29	0.6	0.63	2.08	5.03
TRACT 'G'	3.71	0.6	0.66	2.14	5.26
TRACT 'F'	7.78	0.6	0.87	2.81	6.94
TRACT 'E' (north)	10.78	0.6	0.98	2.81	7.83
TRACT 'E' (south)	10.83	0.6	0.98	2.82	7.84
TRACT 'C'	7.83	0.6	0.87	2.59	6.96

*Need protection
from scour.*

SWALE DESIGN IS 3:1 MAX.SLOPE (WEST) and 5:1 MAX.SLOPE (EAST)

APPENDIX A
HYDROLOGY

INPUT FILE

```

START                                TIME=0.0
*****  GATEWAY INDUSTRIAL PARK ZONE ATLAS H-14
*****  100-YEAR 6-HOUR STORM EVENT
*****  FILE: GATEWAY.DAT  JANUARY 2000 BY:DLH
RAINFALL                            TYPE=1 RAIN QUARTER=0.0 IN
                                      RAIN ONE=1.92 IN RAIN SIX=2.20 IN
                                      RAIN DAY=2.60 IN DT=0.05 HR

*****
*****  EXISTING CONDITIONS
*****
COMPUTE NM HYD                      ID=1 HYD NO=100.00 AREA=0.0223 SQ MI
                                      PER A=0 PER B=100 PER C=0 PER D=0
                                      TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                          ID=1 CODE=1
*****
*****  DEVELOPED CONDITIONS
*****
COMPUTE NM HYD                      ID=1 HYD NO=100.00 AREA=0.0223 SQ MI
                                      PER A=0 PER B=5 PER C=5 PER D=90
                                      TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                          ID=1 CODE=1
FINISH

```

SUMMARY TABLE

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
 INPUT FILE = GATEWAY.DAT

RUN DATE (MON/DAY/YR) =01/10/2000
USER NO.= M GOODWN.I01

		FROM	TO		PEAK	RUNOFF		TIME TO	CFS	PAGE = 1
HYDROGRAPH		ID	ID	AREA	DISCHARGE	VOLUME	RUNOFF	PEAK	PER	
COMMAND	IDENTIFICATION	NO.	NO.	(SQ MI)	(CFS)	(AC-FT)	(INCHES)	(HOURS)	ACRE	NOTATION
START										TIME= .00
RAINFALL TYPE= 1										RAIN6= 2.200
COMPUTE NM HYD	100.00	-	1	.02230	29.45	.820	.68944	1.500	2.064	PER IMP= .00
COMPUTE NM HYD	100.00	-	1	.02230	60.14	2.208	1.85648	1.500	4.214	PER IMP= 90.00
FINISH										

APPENDIX B
HYDRAULICS

1*****
* WATER SURFACE PROFILES *
* VERSION OF SEPTEMBER 1988 *
* ERROR: 01,02 *
* UPDATED: 4 APRIL 1989 *
* RUN DATE 1/13/ 0 TIME 15:17: 9 *

* U.S. ARMY CORPS OF ENGINEERS *
* THE HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET, SUITE D *
* DAVIS, CALIFORNIA 95616-4687 *
* (916) 756-1104, (916) 551-1748 *

```

      X      X XXXXXXXX XXXXX      XXXXX
      X      X X      X      X      X      X
      X      X X      X      X      X      X
      XXXXXXX XXXX      X      XXXXX XXXXX
      X      X X      X      X      X
      X      X X      X      X      X
      X      X XXXXXXXX XXXXX      XXXXXXXX

```

END OF BANNER

THIS RUN EXECUTED 1/13/ 0 15:17: 9

HEC2 RELEASE DATED SEP 88 UPDATED APR 1989
ERROR CORR - 01,02
MODIFICATION -

T1 GATEWAY INDUSTRIAL PARK
T2 DRAINAGE SWALE 3:1 west slope & 5:1 east slope
T3 0.6% SLOPE

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	2	0	0	.006	0	0	0	0	0

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

	38	43	1	2	26	4	68	3		
NC	.025	.025	.025	.1	.3					
QT	9	4.40	7.78	15.87	7.25	3.29	3.71	10.78	10.83	7.83
X1	1	3	0	12.	0	0	0	0	0	0
GR	1.5	0	0	4.5	1.5	12.				

SECNO	DEPTH	CWSEL	CRWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROFILE 1

CCHV= .100 CEHV= .300
*SECNO 1.000

***PROFILE 2**

005. 001. 002.

*SECOND 1.000

2096 WSET NOT GIVEN, AVG OF MAX, MIN USED

1.00	.87	.87	.00	.00	.97	.10	.00	.00	1.50
8.	0.	8.	0.	0.	3.	0.	0.	0.	1.50
.00	.00	2.58	.00	.00	.025	.000	.000	.00	1.90
.0060013	0.	0.	0.	0	0	6	.00	6.94	8.84

TI GATEWAY SWALE

TI 0.68 STOPS

13

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	MSEL	FQ
		0	4	0	0	.006				
J2	NPROF	IPLOT	PREVS	XSECV	XSECH	FN	ALDLC	IBM	CHNIM	ITRACE
		3	0	-1	0	0	0	0	0	0
	SECNO	DEPTH	CMSEL	CRIMS	MSELK	EG	HV	HL	OTLOSS	BANK ELEV
	Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
	TIME	VLOB	VCH	VROB	XNLT	XNCH	XNR	WTN	ELMIN	SSLA
	SLOB	XLOB	XICH	XLOBR	ITRIAT	IDC	ICONT	CORAR	LOPMID	ENDST

TI GATEWAY SWALE

72 0.68 STOP

13

[illegible]

2096 WSET NOT GIVEN, AVG OF MAX, MIN USED

[illegible]

*PROFILE 3

CCHV= .100 CEHV= .300

*SECNO 1.000

2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

1.00	1.13	1.13	.00	.00	1.28	.15	.00	.00	1.50
16.	0.	16.	0.	0.	5.	0.	0.	0.	1.50
.00	.00	3.09	.00	.000	.025	.000	.000	.00	1.10
.006003	0.	0.	0.	0	0	7	.00	9.07	10.17

T1 GATEWAY SWALE

T2 0.6% SLOPE

T3

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	5	0	0	.006					
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	4	0	-1	0	0	0	0	0	0	0

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

*PROFILE 4

CCHV= .100 CEHV= .300

*SECNO 1.000

2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

1.00	.84	.84	.00	.00	.94	.10	.00	.00	1.50
7.	0.	7.	0.	0.	3.	0.	0.	0.	1.50
.00	.00	2.54	.00	.000	.025	.000	.000	.00	1.97
.006008	0.	0.	0.	0	0	6	.00	6.76	8.72

T1 GATEWAY SWALE

T2 0.6% SLOPE

T3

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	6	0	0	.006					
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	5	0	-1	0	0	0	0	0	0	0

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK	ELEV
-------	-------	-------	-------	-------	----	----	----	-------	------	------

Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROFILE 5

CCHV= .100 CEHV= .300

*SECNO 1.000

2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

1.00	.63	.63	.00	.00	.70	.07	.00	.00	1.50
3.	0.	3.	0.	0.	2.	0.	0.	0.	1.50
.00	.00	2.08	.00	.000	.025	.000	.000	.00	2.61
.005964	0.	0.	0.	0	0	5	.00	5.03	7.65

T1 GATEWAY SWALE

T2 0.6% SLOPE

T3

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	7	0	0	.006					
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	6	0	-1	0	0	0	0	0	0	0

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

*PROFILE 6

CCHV= .100 CEHV= .300

*SECNO 1.000

2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

1.00	.66	.66	.00	.00	.73	.07	.00	.00	1.50
4.	0.	4.	0.	0.	2.	0.	0.	0.	1.50
.00	.00	2.14	.00	.000	.025	.000	.000	.00	2.53
.005985	0.	0.	0.	0	0	5	.00	5.26	7.79

T1 GATEWAY SWALE

T2 0.6% SLOPE

T3

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	8	0	0	.006					

J2 NPROF IPLOT PREV XSECV XSECH EN ALTDC IBW CHNIM ITRACE

SECTO	DEPTH	CWSEL	CRIMS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOB	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

7 0 -1 0 0 0 0 0 0 0

*PROFILE 7

CCHV=.100 CEHV=.300

*SECTO 1.000

2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

1.00	.98	.98	.00	.00	1.10	.12	.00	.00	1.50
11.	0.	11.	0.	0.	4.	0.	0.	0.	1.56
.00	2.81	.00	.00	.00	.025	.000	.000	.00	9.39
.006057	0.	0.	0.	0	0	6	.00	7.83	

T1 GATEWAY SWALE

T2 0.68 SLOPE

T3

J1 ICHCK INQ NINV IDIR STRT METRIC HVINS Q WSEL EQ

J2 NPROF IPLOT PREV XSECV XSECH EN ALTDC IBW CHNIM ITRACE

SECTO	DEPTH	CWSEL	CRIMS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOB	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

0 9 0 0 0 0 0 0 0 0

*PROFILE 8

CCHV=.100 CEHV=.300

*SECTO 1.000

2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

1.00	.98	.98	.00	.00	1.10	.12	.00	.00	1.50
11.	0.	11.	0.	0.	4.	0.	0.	0.	1.56
.00	2.82	.00	.00	.00	.025	.000	.000	.00	9.40
.006058	0.	0.	0.	0	0	6	.00	7.84	

T1 GATEWAY SWALE

T2 0.68 SLOPE

T3

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	10	0	0	.006					

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	9	0	-1	0	0	0	0	0	0	0

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

*PROFILE 9

CCHV= .100 CEHV= .300
 *SECNO 1.000
 2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

1.00	.87	.87	.00	.00	.97	.10	.00	.00	1.50
8.	0.	8.	0.	0.	3.	0.	0.	0.	1.50
.00	.00	2.59	.00	.000	.025	.000	.000	.00	1.89
.006013	0.	0.	0.	0	0	6	.00	6.96	8.85

THIS RUN EXECUTED 1/13/ 0 15:17: 9

 HEC2 RELEASE DATED SEP 88 UPDATED APR 1989
 ERROR CORR - 01,02
 MODIFICATION -

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

0.6% SLOPE

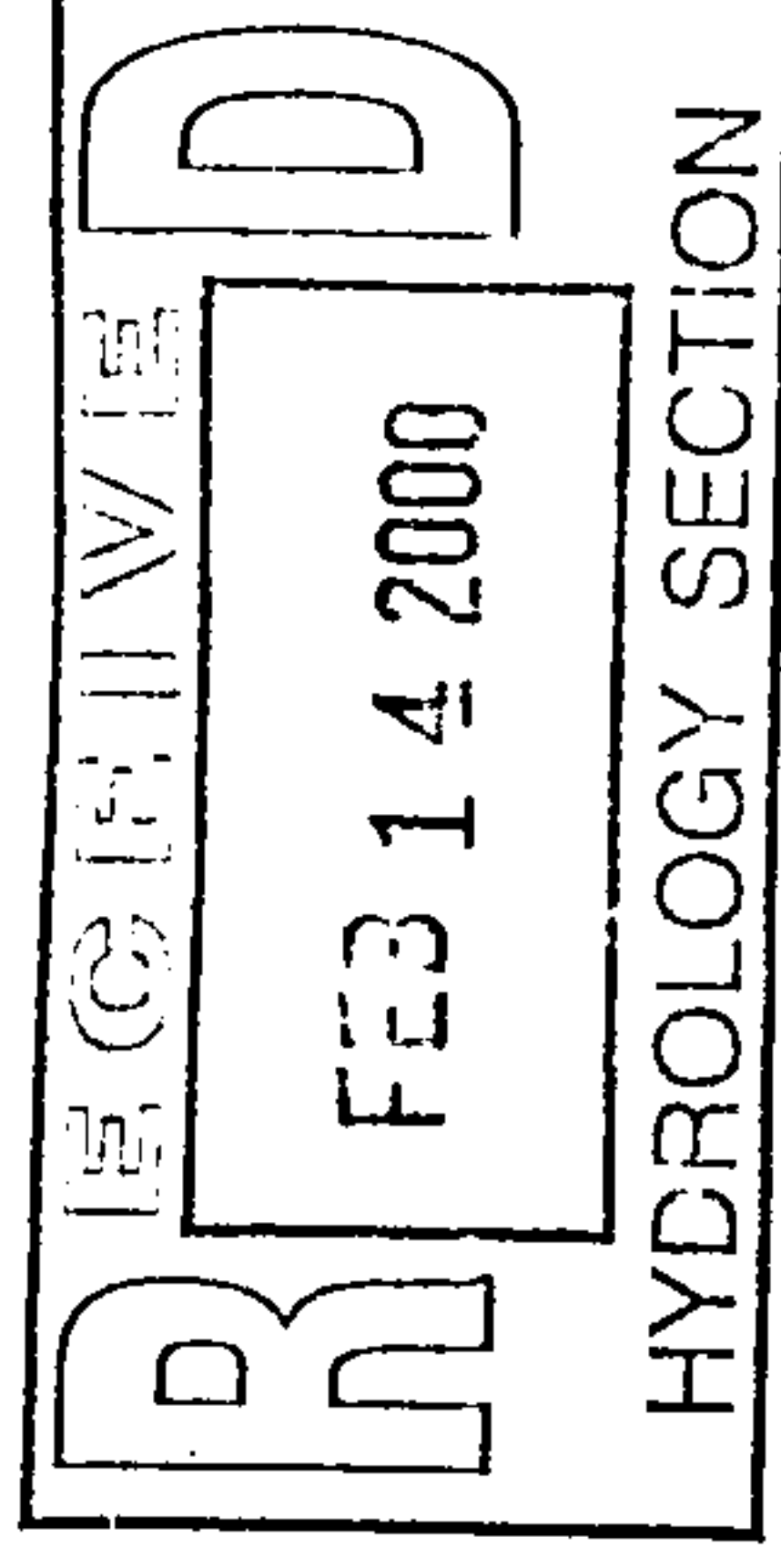
SUMMARY PRINTOUT

SECNO	Q	CWSEL	CRIWS	VCH	TOPWID	FRCH	EG
1.000	4.40	.70	.00	2.24	5.61	.67	.78
1.000	7.78	.87	.00	2.58	6.94	.69	.97
1.000	15.87	1.13	.00	3.09	9.07	.72	1.28
1.000	7.25	.84	.00	2.54	6.76	.69	.94
1.000	3.29	.63	.00	2.08	5.03	.65	.70
1.000	3.71	.66	.00	2.14	5.26	.66	.73
1.000	10.78	.98	.00	2.81	7.83	.71	1.10
1.000	10.83	.98	.00	2.82	7.84	.71	1.10
1.000	7.83	.87	.00	2.59	6.96	.69	.97

SUMMARY OF ERRORS AND SPECIAL NOTES

APPENDIX C

STORM DRAIN



CALCULATIONS FOR SUMP INLETS
for
Gateway Industrial Park

Capacity is measured by the weir equation at the lip of the gutter assuming an allowable ponding elevation equal to the lowest adjacent right of way elevation.

NORTH INLET CALCULATIONS (DOUBLE GRATE)

The length of the double grate is 6.5' and the maximum depth is 1.1' at the lip of the gutter. The sides are each 2' long and the average depth is 1.1'. These depths assume a maximum 1.2' curb on the west side.

Flow from the north:

$$\frac{1}{2} \text{ Front Q cap} = (3.0) \times (3.25') \times (1.1) **1.5 = 11.25 \text{ cfs}$$

$$\text{Sides Q cap} = (3.0) \times (2.0') \times (1.1) **1.5 = 6.92 \text{ cfs}$$

$$\text{Total Q cap} = 11.25 \text{ cfs} + 6.92 \text{ cfs} = 18.17 \text{ cfs} \quad (\text{Actual Q} = 15.87 \text{ cfs})$$

Flow from the south:

$$\frac{1}{2} \text{ Front Q cap} = (3.0) \times (3.25') \times (0.84) **1.5 = 7.51 \text{ cfs}$$

$$\text{Sides Q cap} = (3.0) \times (2.0') \times (0.84) **1.5 = 4.62 \text{ cfs}$$

$$\text{Total Q cap} = 11.25 \text{ cfs} + 6.92 \text{ cfs} = 12.13 \text{ cfs} \quad (\text{Actual Q} = 7.25 \text{ cfs})$$

Total Design Flow Capacity = 30.3 cfs
100 Year Peak Flow = 23.2 cfs

SOUTH INLET CALCULATIONS (DOUBLE GRATE)

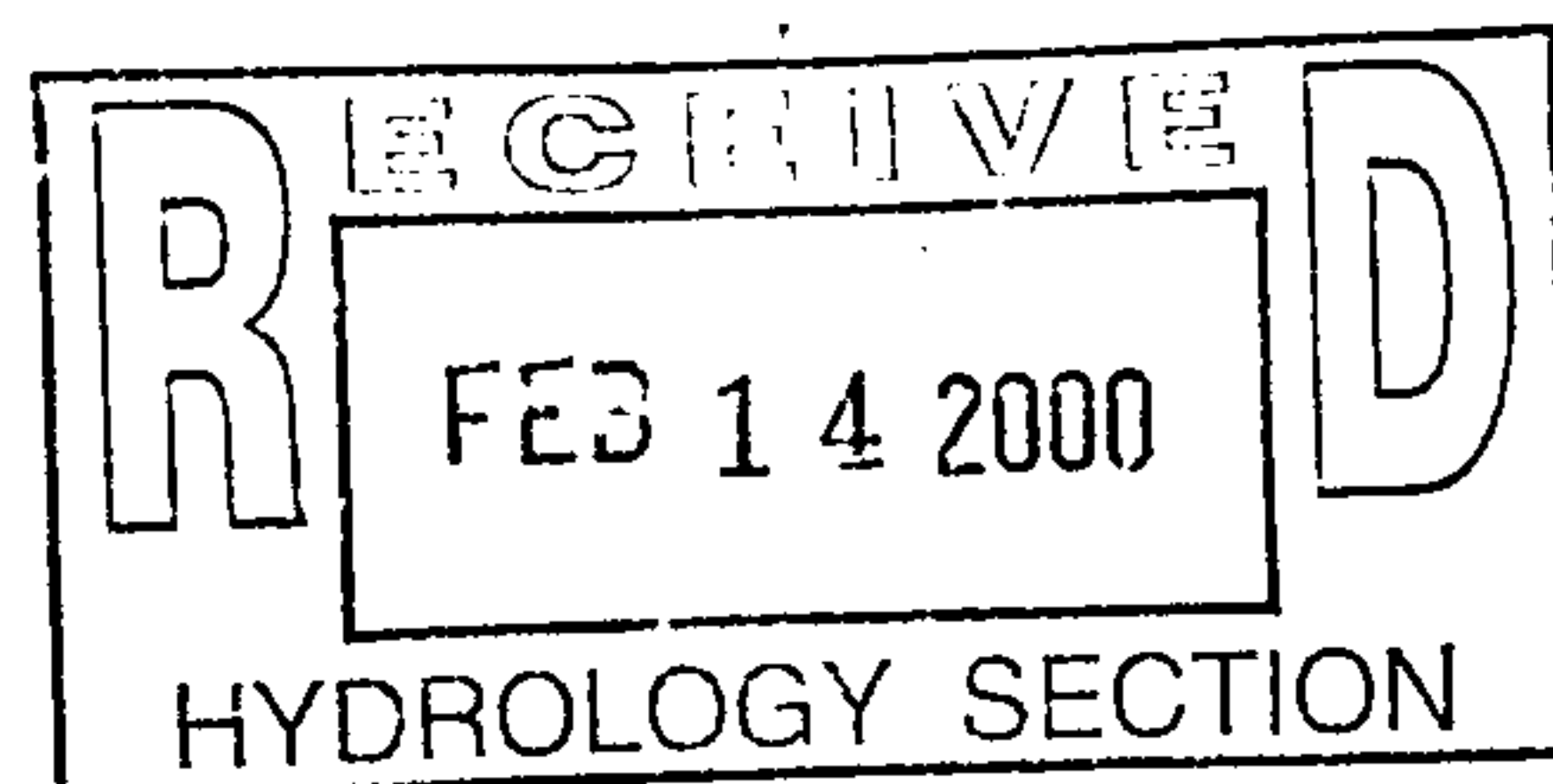
The length of the double grate is 6.5' and the maximum depth is 0.98' at the lip of the gutter. The sides are each 2' long and the average depth is 0.98'. These depths assume a maximum 1.2' curb on the west side.

$$\frac{1}{2} \text{ Front Q cap} = (3.0) \times (6.5') \times (0.98) \times 1.5 = 18.92 \text{ cfs}$$

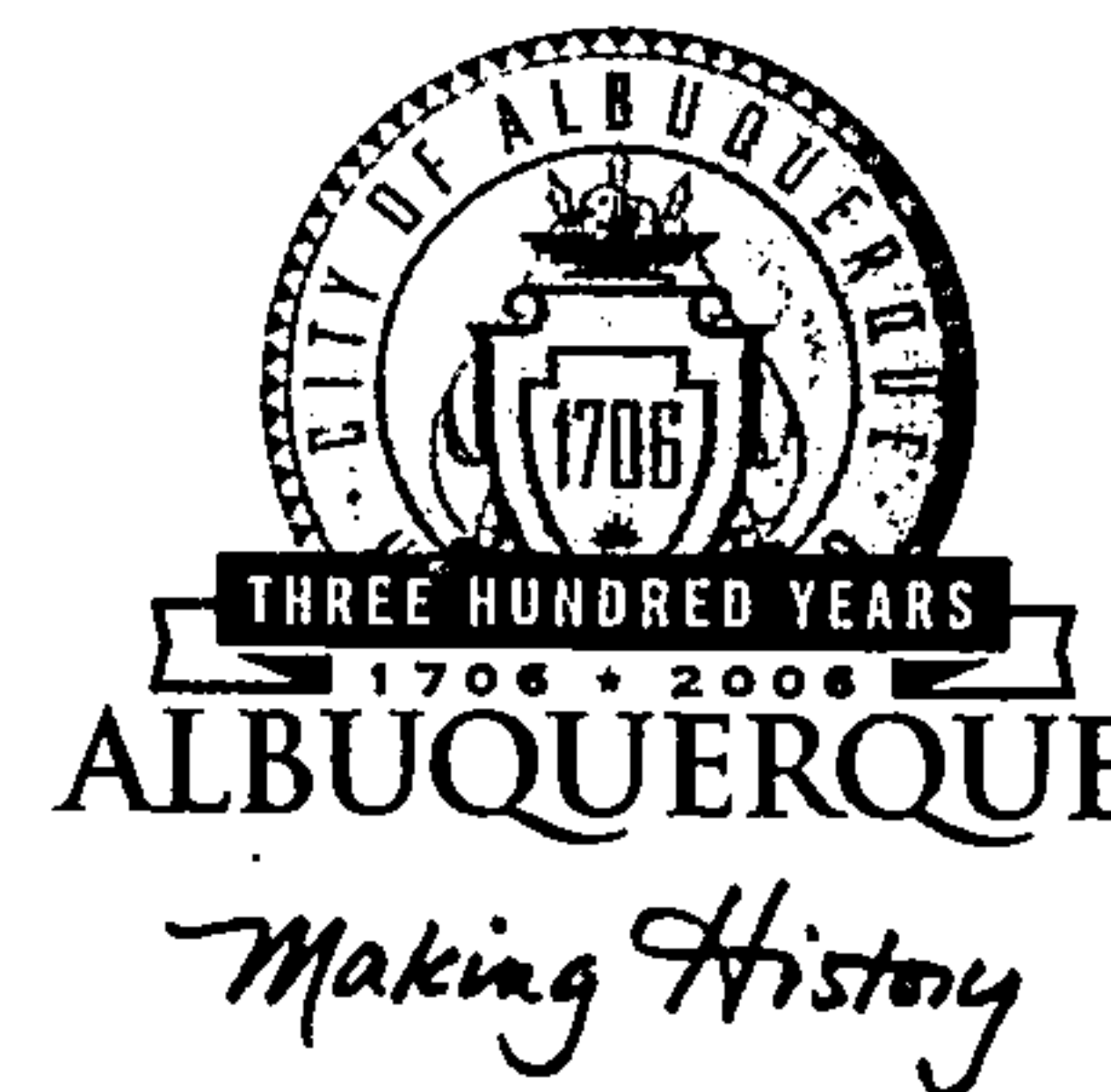
$$\text{Sides Q cap} = (3.0) \times (4.0') \times (0.98) \times 1.5 = 11.64 \text{ cfs}$$

$$\text{Total Q cap} = 9.46 \text{ cfs} + 11.64 \text{ cfs} = 30.56 \text{ cfs} \quad (\text{Actual Q} = 21.63 \text{ cfs})$$

Existing single grate inlet will need to be converted to a double grate.



CITY OF ALBUQUERQUE



October 31, 2005

John Arthur Blessen, PE
Claudio Vigil Architects
1801 Rio Grande Blvd NW
Albuquerque, NM 87104

**Re: Gateway Industrial Park, 2701 Broadway Blvd NE
Grading and Drainage Plan**

Engineer's Stamp dated 10-24-05 (H14/D1)

OS

Dear Mr. Vigil,

Based upon the information provided in your submittal dated 10-25-05, the above referenced plan is approved for Building Permit. This plan will take precedence over all other plans submitted to this office. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Also, prior to Certificate of Occupancy release, Engineer Certification of the grading plan per the DPM checklist will be required.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. If you have any questions regarding this permit please feel free to call the DMD Storm Drainage Design section at 768-3654 (Charles Caruso).

If you have any questions, you can contact me at 924-3695.

Sincerely,

Rudy E. Rael, Associate Engineer
Planning Department.
Building and Development Services

C: Charles Caruso, DMD Storm Drainage Design
File

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Figure 12

EXHIBIT "A"

To Subdivision Improvements Agreement

DEVELOPMENT REVIEW BOARD (DRB) REQUIRED INFRASTRUCTURE LISTING

for Gateway Industrial Park Subdivision (Plat and Site Plan (Z-99-138))

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed to be constructed for the above development. This summary is not necessarily a complete listing. During the design process, if the City determines that appurtenant items have not been included in the summary, those items will be included in the listing and related financial guarantee, if the items normally are the Subdivider responsibility. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility are the responsibility of the Subdivider and will be included in the financial guarantee provided to the City.

<u>Size</u>	<u>Type Improvement</u>	<u>Location</u>	<u>From</u>	<u>To</u>
PRIVATE STREET IMPROVEMENTS				
28' FF	AC Pavement	30' Internal Private Access Easement	Tract C & Broadway	Tract L & Broadway
PUBLIC UTILITY IMPROVEMENTS				
10"	Waterline	Internal Public Water and SAS Easement	Menaul Blvd.	Claremont Ave.
8"	Sanitary Sewer	Internal Public Water and SAS Easement	Menaul Blvd.	Claremont Ave.
10'	Drainage Swale	West PL	Tract L	Tract C

✓ Water and Sewer infrastructure to include valves, fittings, fire hydrants and manholes.

Prepared By: John M. MacKenzie

Print Name: John M. MacKenzie, PE

Firm: Mark Goodwin & Associates, PA

Development Review Board Member Approvals

Transportation Dev.	Date	Utility Dev.	Date
Parks and Recreation	Date	Engineer/AMAFCA	Date
DRB Chair	Date		

CITY OF ALBUQUERQUE



**Planning Department
Transportation Development Services Section**

June 26, 2006

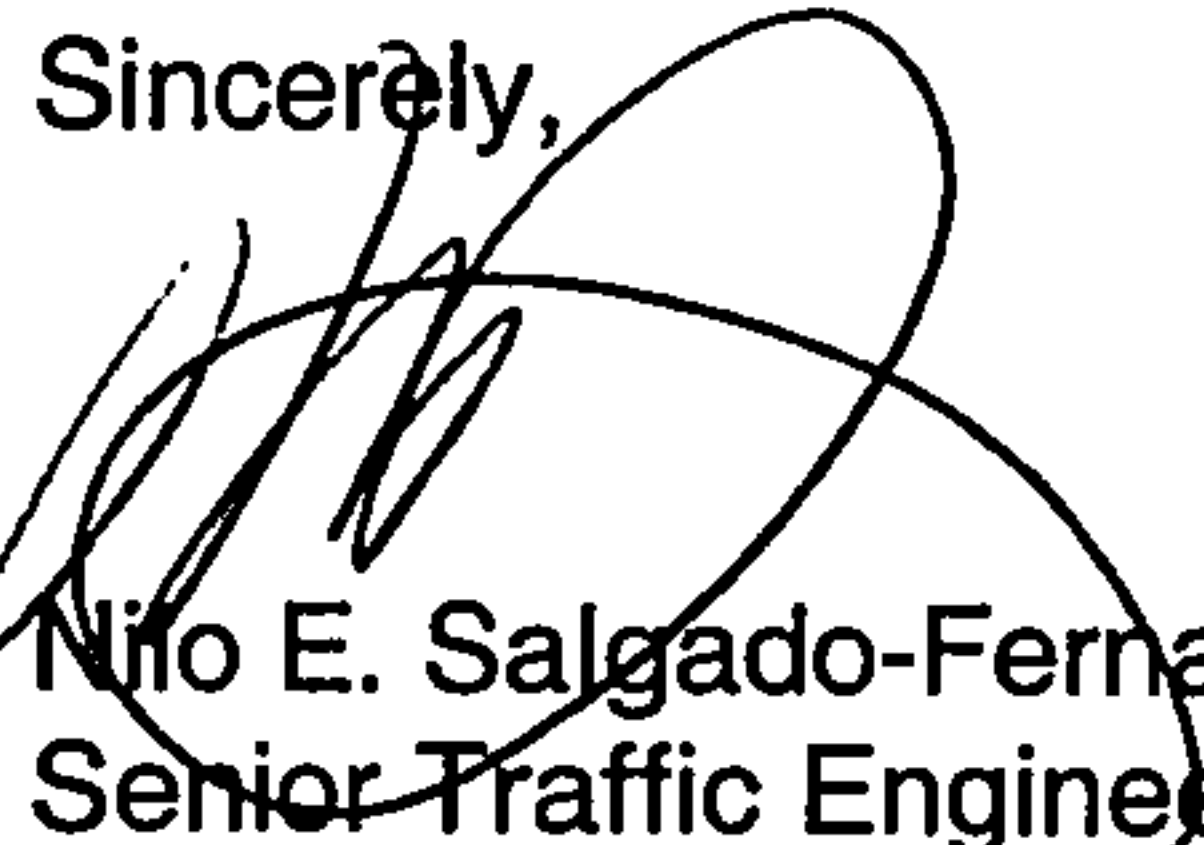
Claudio A. Vigil, Registered Architect
1801 Rio Grande Blvd NE
Albuquerque, NM 87104

Re: Certification Submittal for Final Building Certificate of Occupancy for
Gateway Industrial Park, [H-14 / D1]
2701 Broadway Blvd NE
Architect's Stamp Dated 06/21/06

Dear Mr. Vigil:

The TCL / Letter of Certification submitted on June 21, 2006 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to the Building and Safety Section.

Sincerely,


Nino E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov



June 21, 2006

Traffic Engineer
Development and Building Services
600 2nd. St. N.W
Albuquerque, New Mexico

RE: TRAFFIC CERTIFICATION
Gateway Industrial Park Tract E-1

To whom it may concern:

I, Claudio Vigil, NM Registered Architect 1236, of the firm Claudio Vigil Architects, hereby certify that this project is in substantial compliance with and in accordance with the design intent of the DRB approved site plan. The record information edited onto the original design document has been obtained by Philip Robinson of the firm Claudio Vigil Architects. I further certify that I have personally visited the project site on June 21, 2006 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.

All work necessary to support the facility has been completed, and is in substantial compliance with the approved TCL.

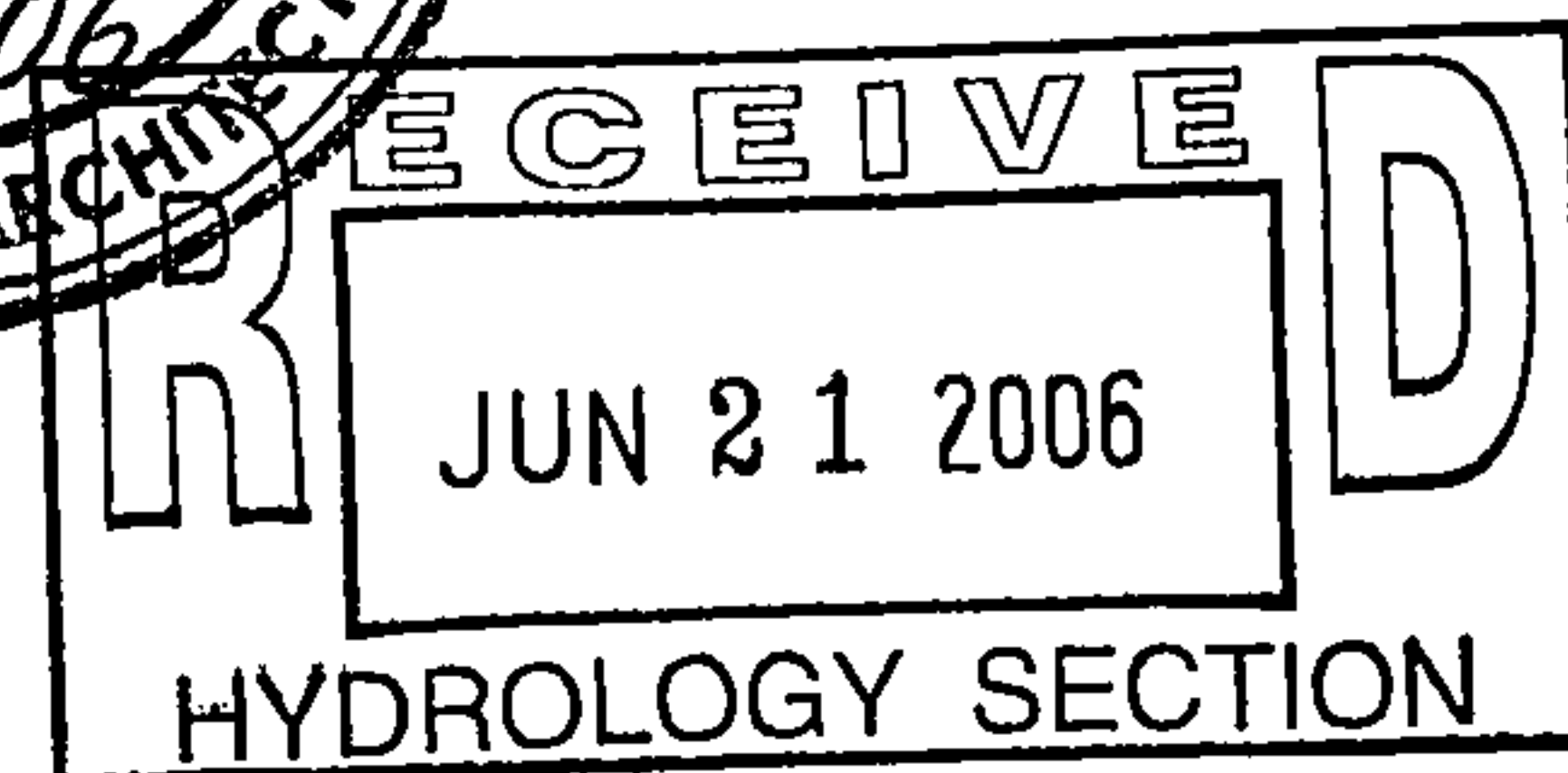
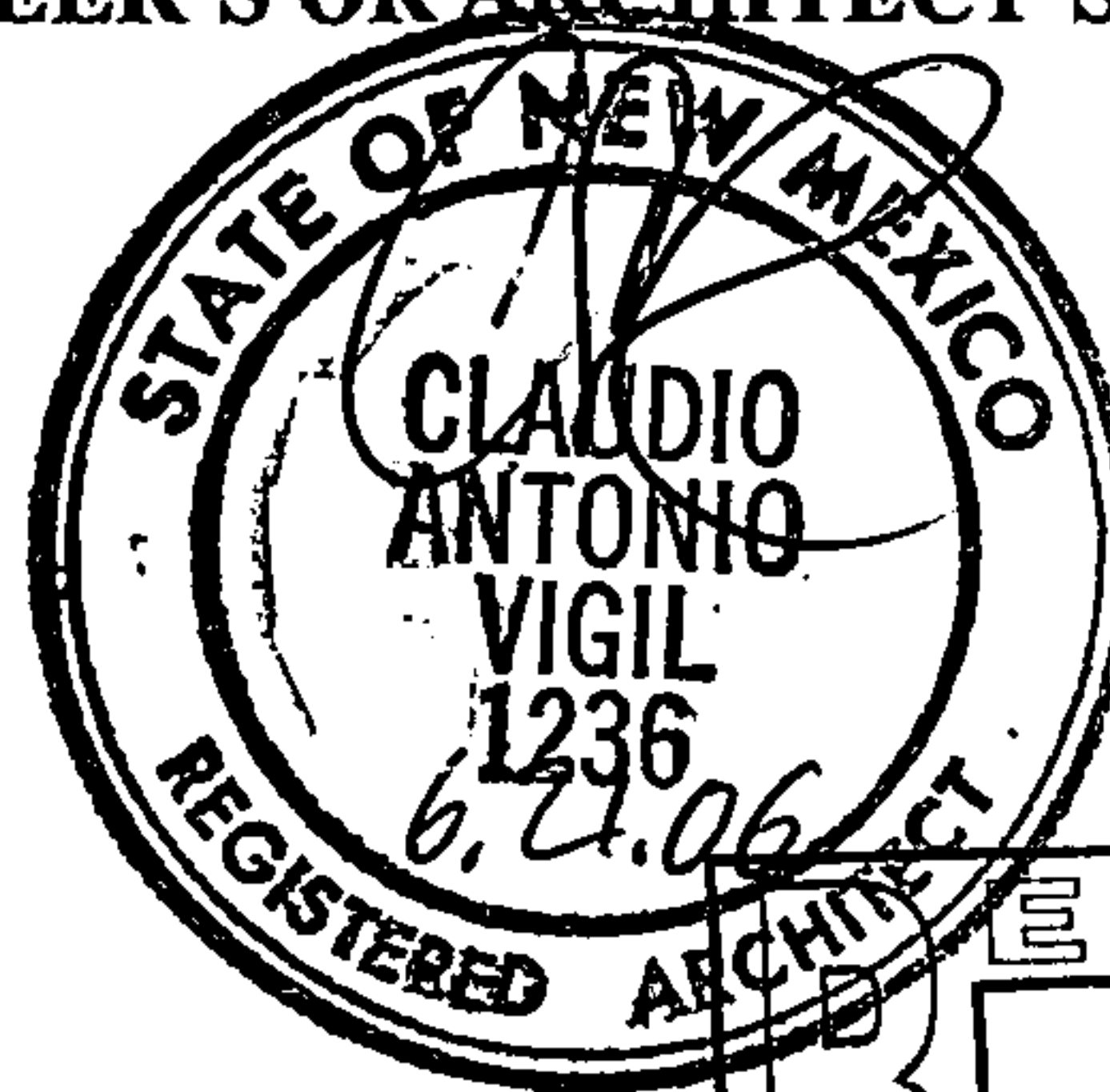
The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Signature of Engineer or Architect

6/21/06

Date

ENGINEER'S OR ARCHITECT'S STAMP



DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

H-14/D1

PROJECT TITLE: Gateway Industrial Park
DRB #: 1000195 EPC#: 06EPC00012

ZONE MAP/DRG. FILE #: ~~145~~
WORK ORDER#: _____

LEGAL DESCRIPTION: Tract E-1 Gateway Industrial Park

CITY ADDRESS: 2701 Gateway Industrial Park

ENGINEERING FIRM: Claudio Vigil Architects

ADDRESS: 1801 Rio Grande Blvd NW

CITY, STATE: Albuquerque, NM

CONTACT: Arthur Blessen

PHONE: 505.842.1113

ZIP CODE: 87104

OWNER: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

ARCHITECT: Claudio Vigil Architects

ADDRESS: 1801 Rio Grande Blvd NW

CITY, STATE: Albuquerque, NM

CONTACT: Arthur Blessen

PHONE: 505.842.1113

ZIP CODE: 87104

SURVEYOR: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

CONTRACTOR: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

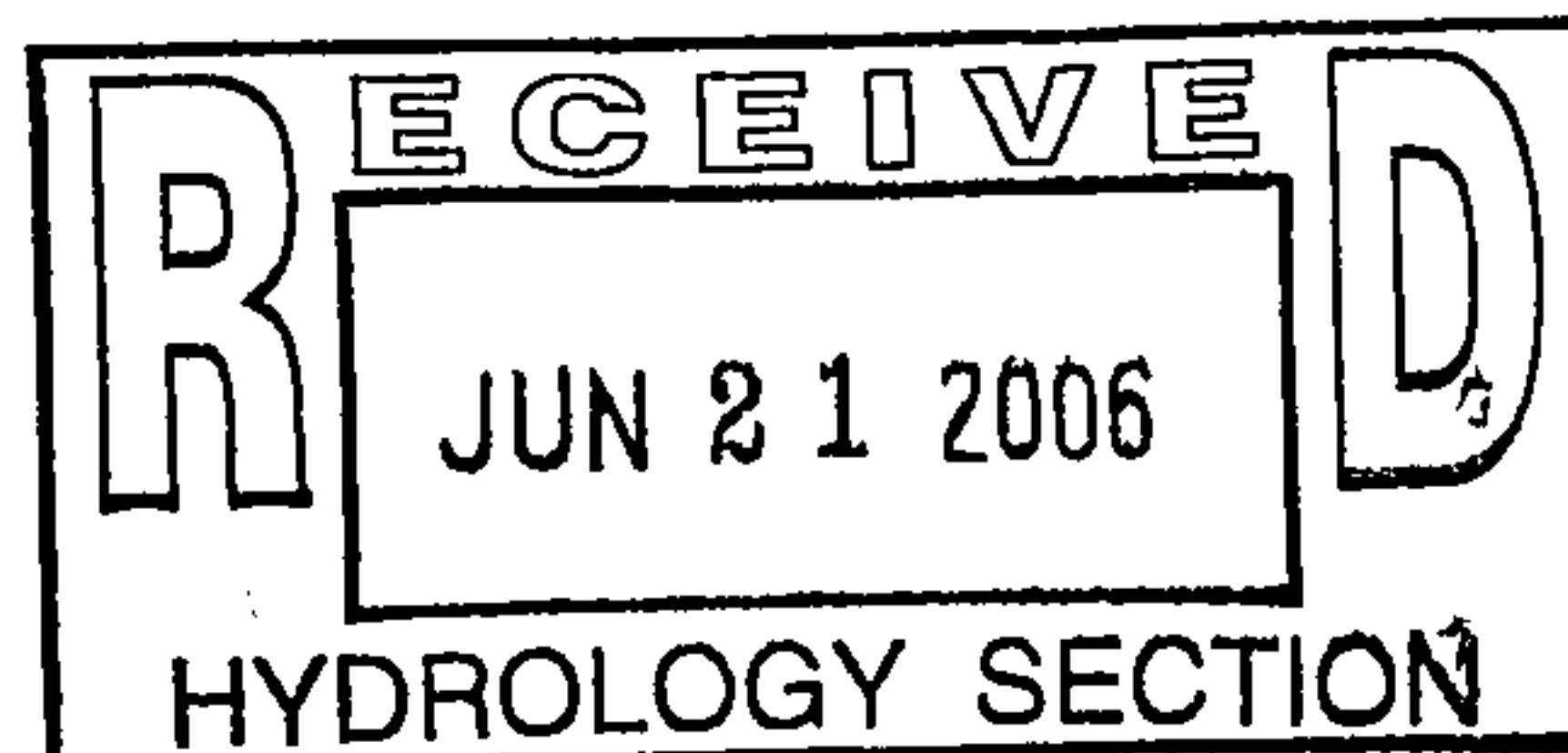
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL, **REQUIRES TCL or equal**
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☒ ENGINEERS CERTIFICATION (TCL)
- ☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☒ CERTIFICATE OF OCCUPANCY (PERM.)
- ☐ CERTIFICATE OF OCCUPANCY (TEMP.)
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☐ NO
- ☐ COPY PROVIDED



DATE SUBMITTED: 6/21

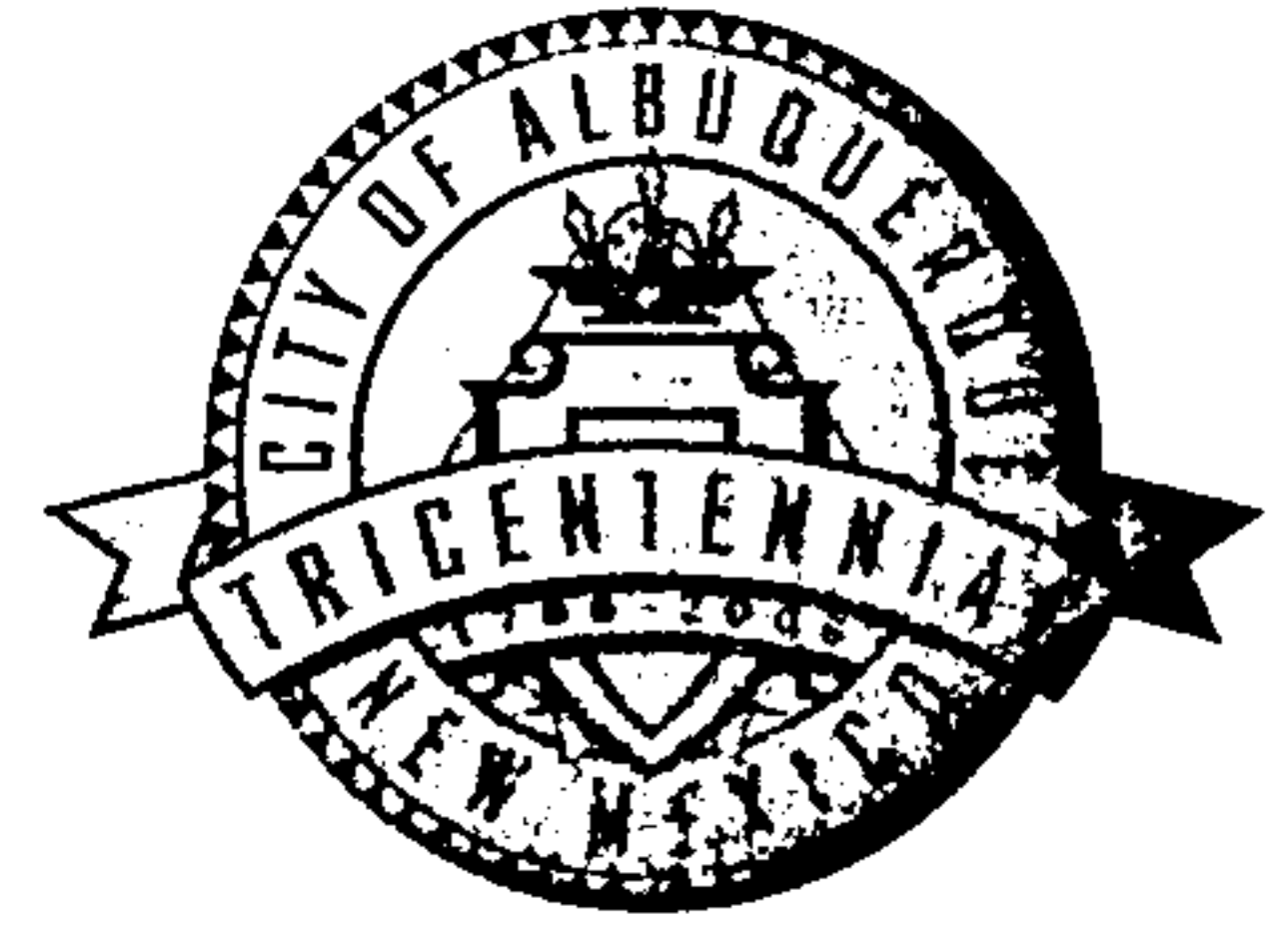
BY: [Signature]

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.

2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.

CITY OF ALBUQUERQUE



June 30, 2006

Mr. Arthur Blessen, P.E.
CLAUDIO VIGIL ARCHITECTS
1801 Rio Grande Blvd. NW
Albuquerque, NM 87104

Re: GATEWAY INDUSTRIAL PARK
2701 Broadway Blvd. NE
Approval of Permanent Certificate of Occupancy (C.O.)
Engineer's Stamp dated 10/24/2005 (H-14/D1)
Certification dated 05/31/2006

Dear Arthur:

P.O. Box 1293

Based upon the information provided in your submittal received 06/30/2006, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

Albuquerque

If you have any questions, you can contact me at 924-3982.

New Mexico 87103

Sincerely,

Arlene V. Portillo
Plan Checker, Planning Dept. - Hydrology
Development and Building Services

www.cabq.gov

C: C.O. Clerk
File

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Gateway Industrial Park
DRB #: _____ EPC#: _____

ZONE MAP/DRG. FILE #: h-14/d1
WORK ORDER#: _____

LEGAL DESCRIPTION: Tract E-1 Gateway Industrial Park
CITY ADDRESS: 2701 Broadway Blvd. N.E.

ENGINEERING FIRM: Claudio Vigil Architects
ADDRESS: 1801 Rio Grande Blvd NW
CITY, STATE: Albuquerque, NM

CONTACT: Arthur Blessen
PHONE: 505.842.1113
ZIP CODE: 87104

OWNER: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

ARCHITECT: Claudio Vigil Architects
ADDRESS: 1801 Rio Grande Blvd NW
CITY, STATE: Albuquerque, NM

CONTACT: Arthur Blessen
PHONE: 505.842.1113
ZIP CODE: 87104

SURVEYOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CONTRACTOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

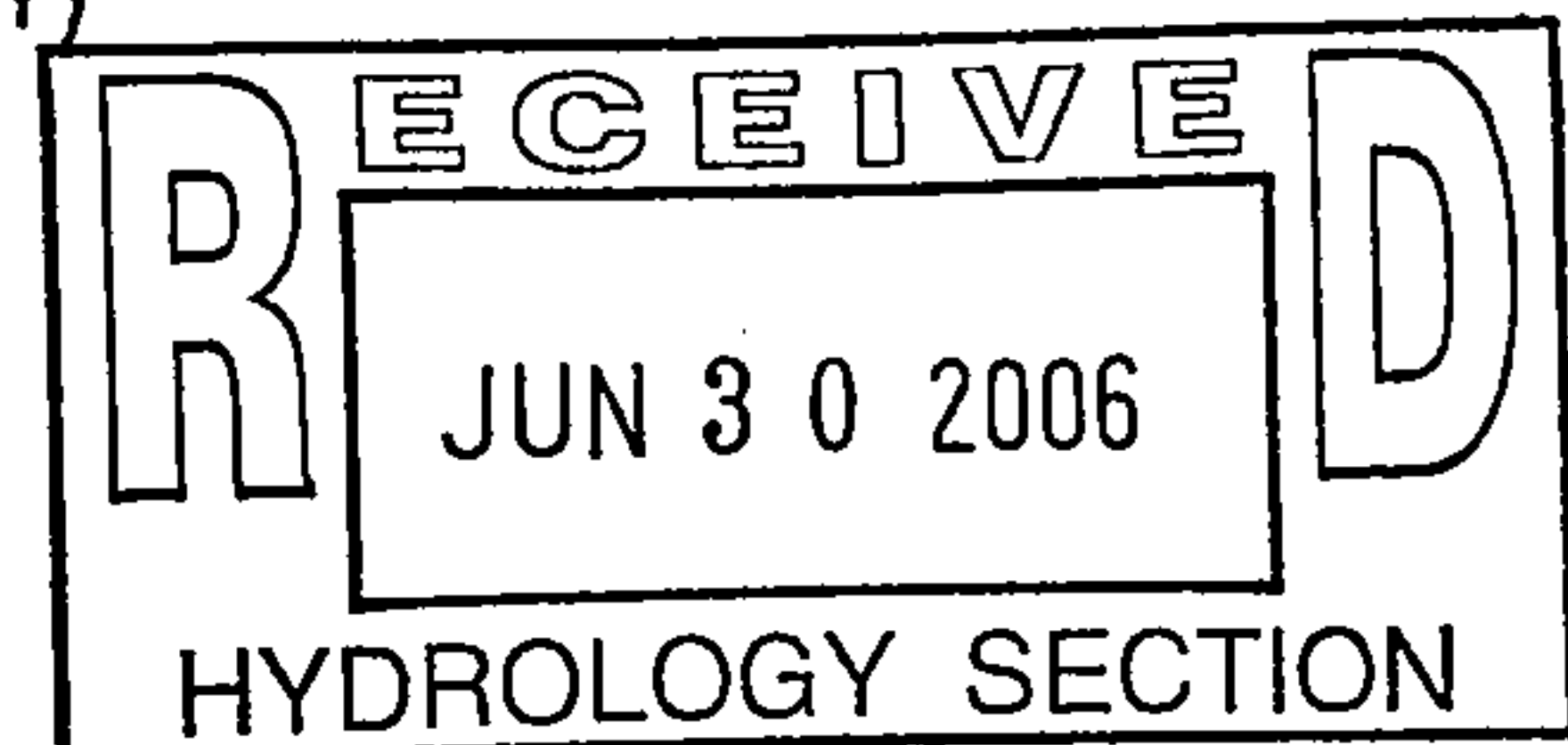
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL, **REQUIRES TCL or equal**
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☒ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEERS CERTIFICATION (TCL)
- ☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☒ CERTIFICATE OF OCCUPANCY (PERM.)
- ☐ CERTIFICATE OF OCCUPANCY (TEMP.)
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☐ NO
- ☐ COPY PROVIDED

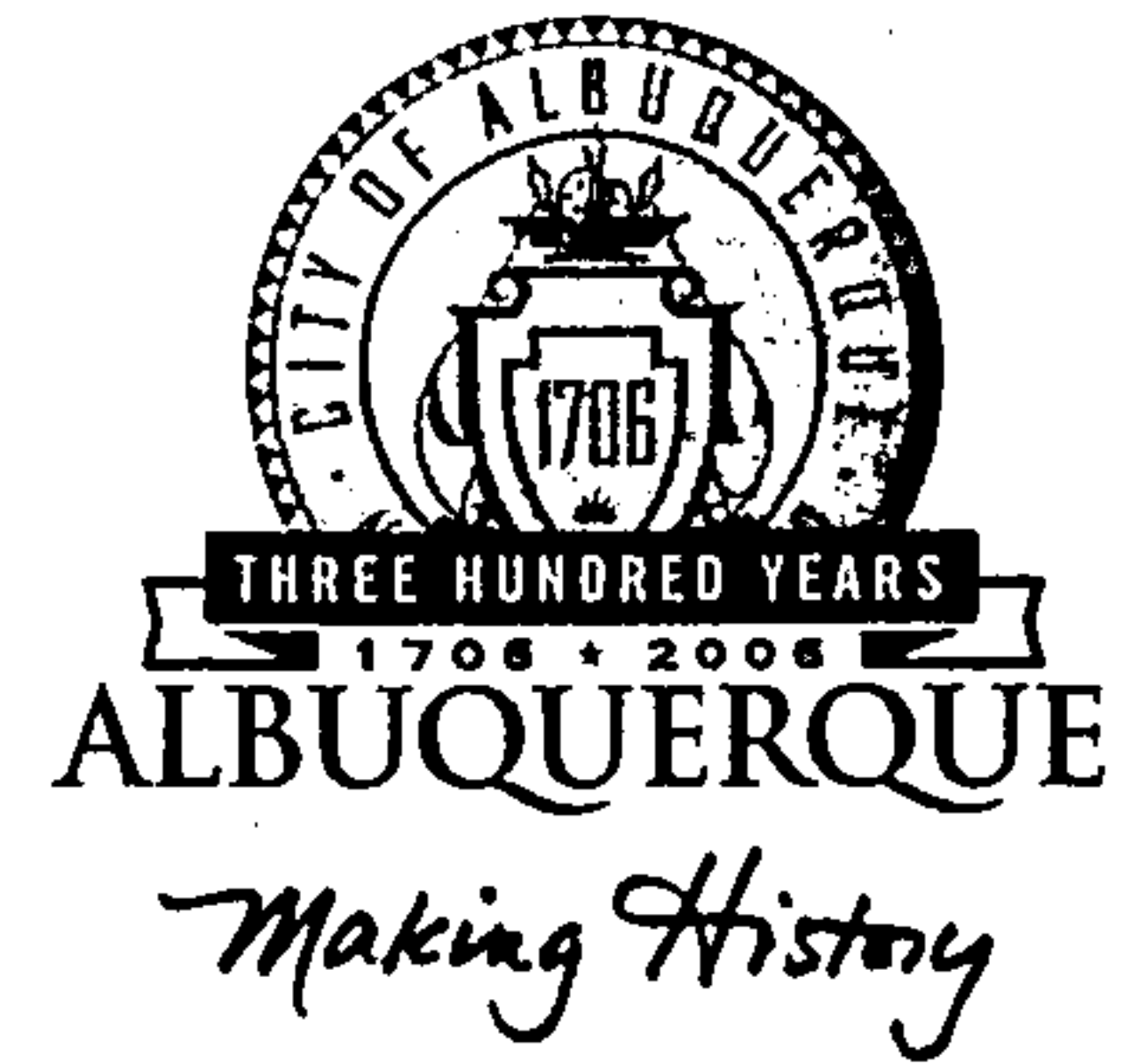


DATE SUBMITTED: 6/30 BY: Phil R...

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.

CITY OF ALBUQUERQUE



August 29, 2005

John Arthur Blessen, PE
Claudio Vigil Architects
1801 Rio Grande NW
Albuquerque, NM 87104

Re: Gateway Industrial Park, Tract E-1 Drainage Plan
Engineer's Stamp dated 8-16-05 (H14/D1)

Dear Mr. Blessen,

Based upon the information provided in your submittal dated 8-16-05, the above referenced plan is approved for Site Development for Building Permit action by the DRB. Prior to Building Permit approval please resubmit the plan with all pertinent spot elevations and build notes for channels, matching existing asphalt, etc.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE, CFM
Principal Engineer, Planning Dept.
Development and Building Services

C: file

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE



June 22, 2006

Mr. Arthur Blessen, PE
CLAUDIO VIGIL ARCHITECTS
1801 Rio Grande Blvd. NW
Albuquerque, NM 87104

Re: GATEWAY INDUSTRIAL PARK, (H-14/D1)
2701 Broadway Blvd. NE
Permanent Hydrology Certificate of Occupancy, Submitted 06/21/2006,
Certification dated 05/31/2006

Dear Arthur:

P.O. Box 1293

Based upon the information provided in your submittal received 06/21/2006, the above referenced Certification cannot be approved until the following is addressed:

Albuquerque

1. The approved Grading and Drainage (G/D) Plan has an Engineer Stamp date of 10/24/2005 not 08/16/2005 as indicated in your submittal. Attached, is a copy of the G/D approval letter, and a copy of the bottom right hand corner of the approved G/D Plan.

New Mexico 87103

If you have any questions, please do not hesitate to contact me at 924-3982.

www.cabq.gov

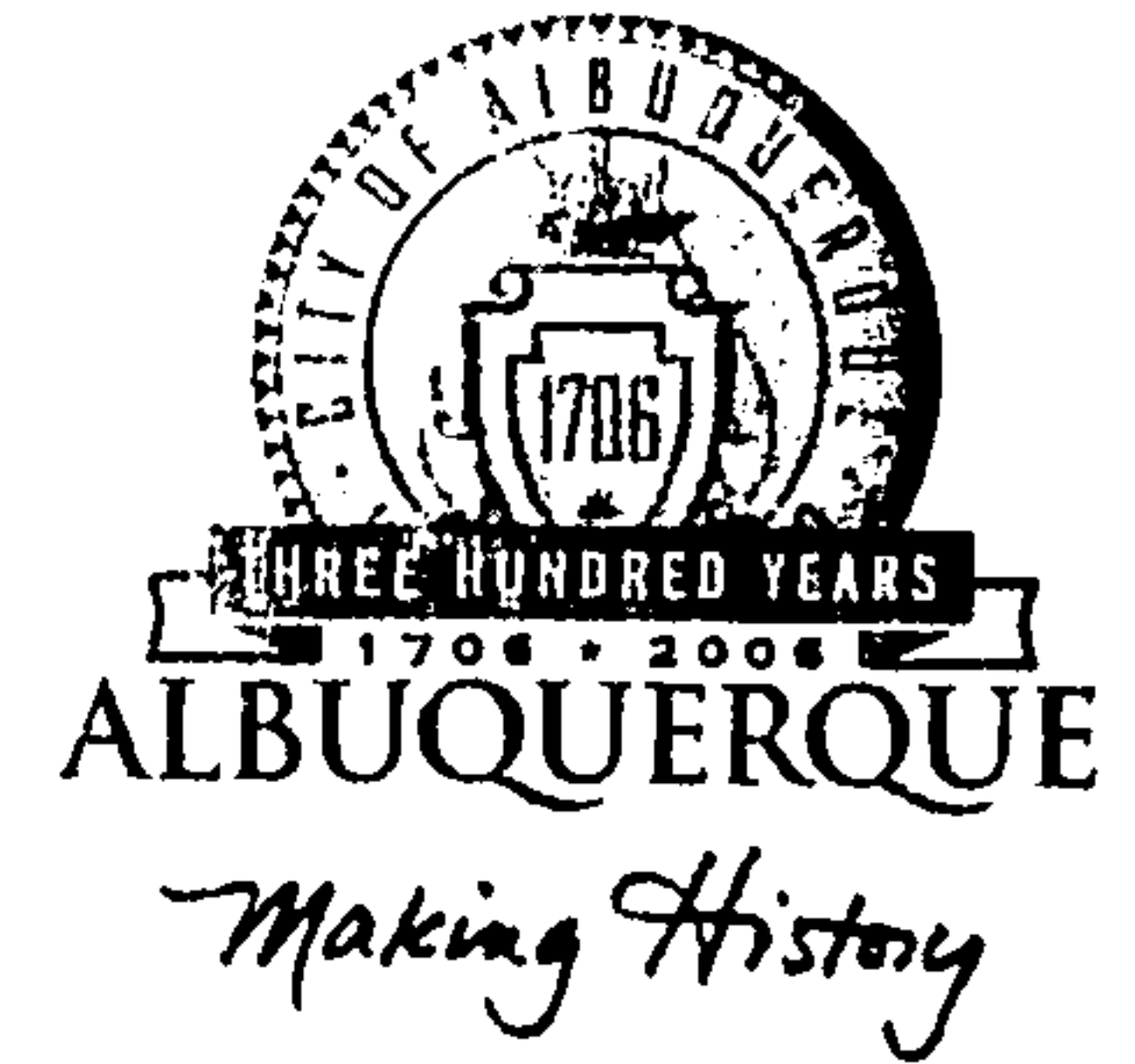
Sincerely,

Arlene V. Portillo
Plan Checker, Planning Dept. - Hydrology
Development and Building Services

Attachments

C: file

CITY OF ALBUQUERQUE



October 31, 2005

John Arthur Blessen, PE
Claudio Vigil Architects
1801 Rio Grande Blvd NW
Albuquerque, NM 87104

Re: Gateway Industrial Park, 2701 Broadway Blvd NE
Grading and Drainage Plan
Engineer's Stamp dated 10-24-~~X~~ (H14/D1)

05

Dear Mr. Vigil,

Based upon the information provided in your submittal dated 10-25-05, the above referenced plan is approved for Building Permit. This plan will take precedence over all other plans submitted to this office. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Also, prior to Certificate of Occupancy release, Engineer Certification of the grading plan per the DPM checklist will be required.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. If you have any questions regarding this permit please feel free to call the DMD Storm Drainage Design section at 768-3654 (Charles Caruso).

If you have any questions, you can contact me at 924-3695.

Sincerely,

Rudy E. Rael, Associate Engineer
Planning Department.
Building and Development Services

C: Charles Caruso, DMD Storm Drainage Design
File

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov