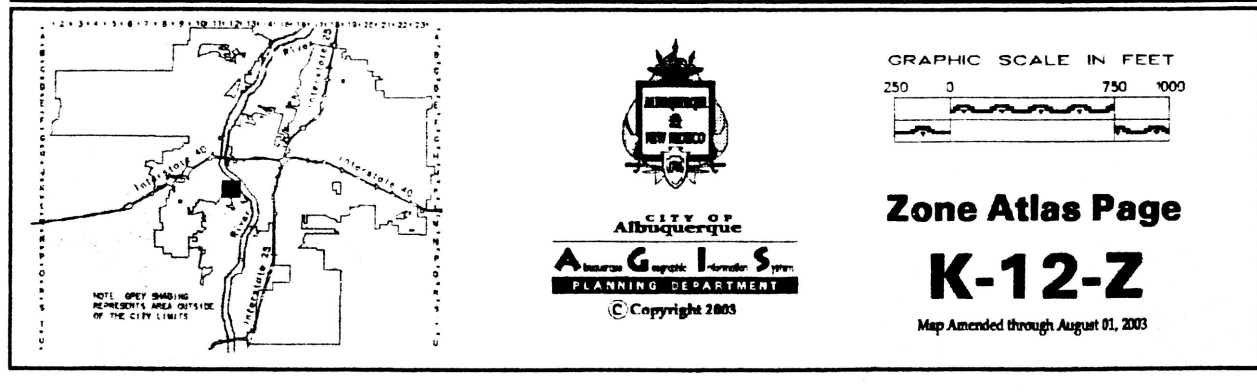
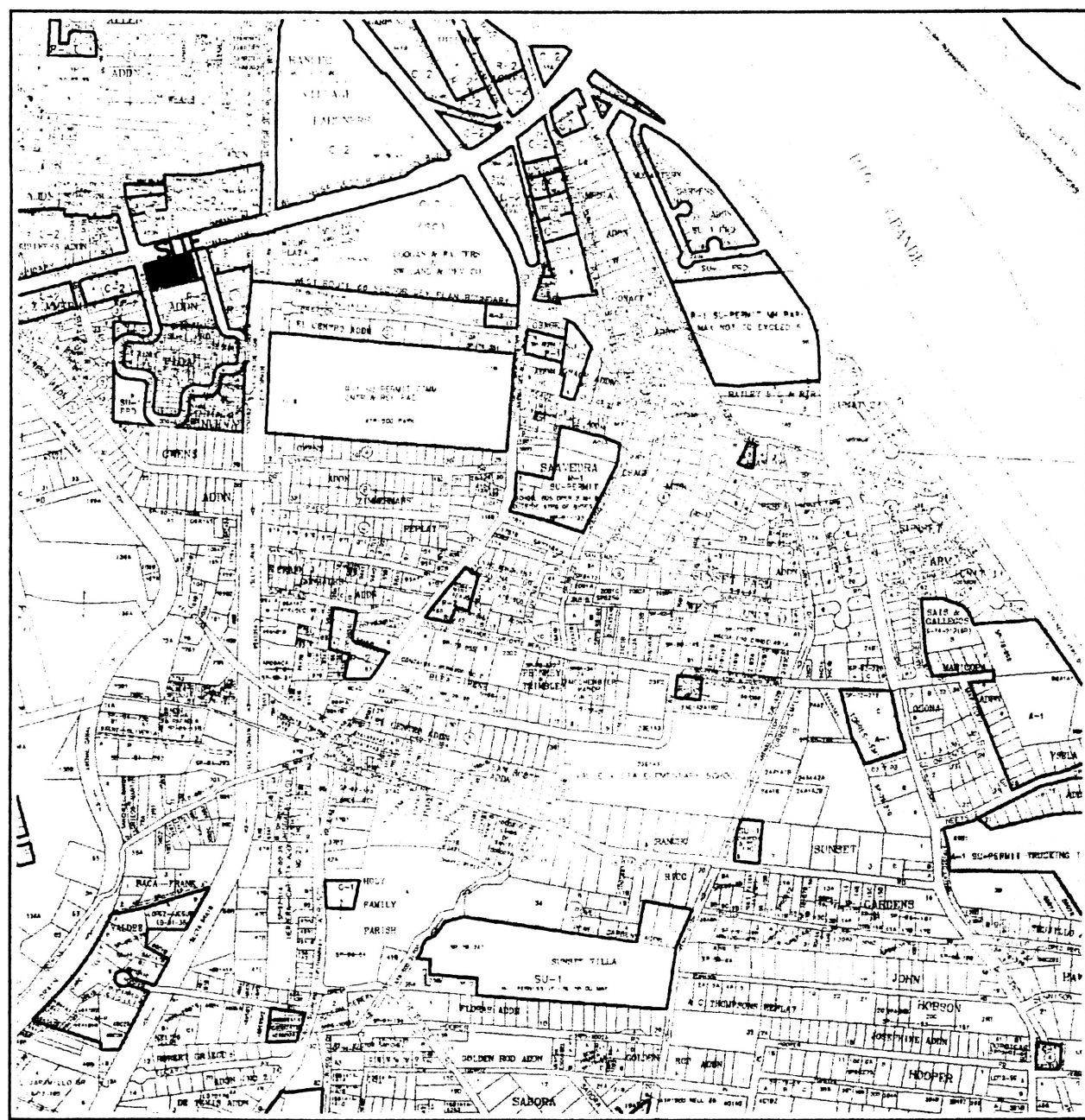


VICINITY MAP (K-12-Z)



LEGAL DESCRIPTION / FLOOD NOTE

Lot numbered Six-A-One-A (6-A-1-A) in Block numbered Two (2) of the ZIMMERMAN ADDITION to the City of Albuquerque, Bernalillo County, New Mexico, as the same is shown and designated on the Plat thereof, filed in the Office of the County Clerk of Bernalillo County, New Mexico, on May 13, 2005, in Volume 2005C, folio 248.

The above described property is located within Zone _____, Community Panel No. 350002 0329 E, dated November 19, 2003, and is located within a Special Flood Hazard Boundary indicated by FEMA Flood Insurance Rate Maps. Determination of Flood Hazard is by graphic plotting only.

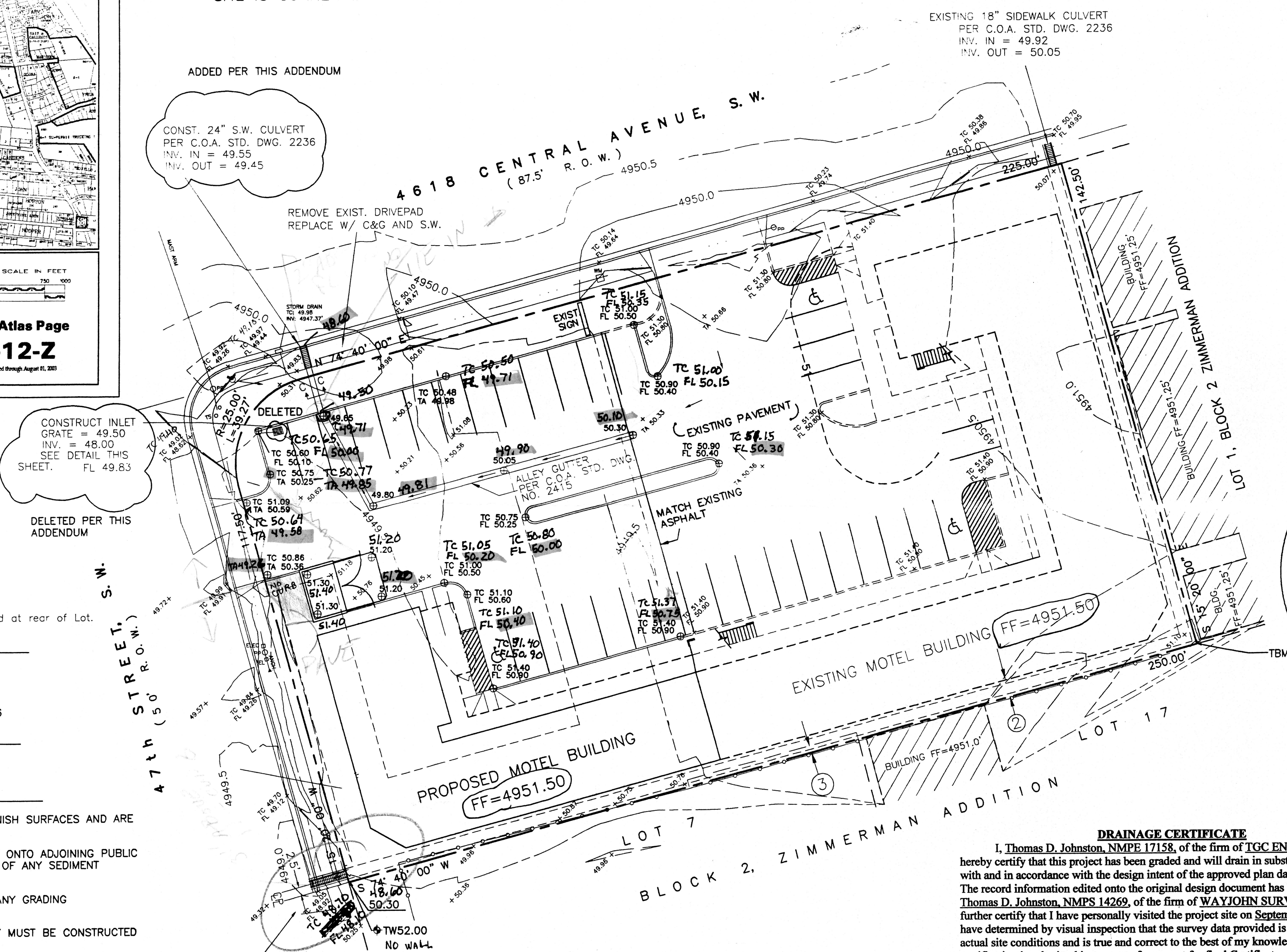
ADDENDUM NOTE: THIS ADDENDUM HAS BEEN CREATED TO DELETE THE DROP INLET AND TO ADD A SIDEWALK CULVERT AS SHOWN HEREON.

SITE IS CURRENTLY UNDER CONSTRUCTION

DRAINAGE CONCEPT:

The site is located on the South side of West Central Avenue, at the SE corner of the intersection of 47th Street. The site consists of Phase I of the Sandia Peak Motel, constructed by grading and drainage plan created by Frank Lovelady, dated November 1997. The proposed building site is graded, but undeveloped at this time. The property to the south of the site is currently developed. Central Avenue and 47th Street are paved with curb and gutter. There is a 48" RCP storm drain system in Central Avenue that turns south in 47th Street and continues south approximately 350' and then east another 500' to the Isleta Drain. There is an inlet near the ESE curb return. The proposed construction will be the final phase of a motel on the property as shown. All runoff from the front of the motel roof and parking lot will be directed to an inlet in the NW corner of the parking lot. Runoff from the rear portion of the motel roof to the south property line will be directed to a sidewalk culvert on 47th Street. All runoff from the rear portion of the motel roof to the east property line is currently directed to a sidewalk culvert on Central Avenue that was constructed in Phase I. The motel roofs will be hip roofs with drip edges and no gutters and downspouts. Offsite flows are negligible.

ORIFICE EQUATION FOR ON-SITE INLET: $Q = A(Cv)(\sqrt{2gh})$
 $Q = 13.95 \text{ cfs}/\text{INLET}$; $A = 11.3 \text{ sq.in.}$ (0.7854 sq''); $Cv = 0.6$
 DEPTH OF WATER IN INLET FOR 100-YEAR STORM: 1.08 FEET
 Q CAPACITY: 3.93 cfs > 3.2 cfs FOR DIRECTED FLOWS TO PARKING LOT
 NO BACKWATER CONDITION



ONSITE HYDROLOGY

ONSITE FLOWS SHALL CONSIST OF THE EXISTING MOTEL BUILDING AND PARKING ALONG WITH THE PROPOSED DEVELOPMENT. CURRENT DEVELOPED CONDITIONS SHALL DIRECT FLOW TO THE EXISTING CONCRETE SWALE TO THE SOUTH AND EAST OF THE EXISTING BUILDING. ALL FLOWS DIRECTED OFF OF THE ROOF TO THE PARKING AREA WILL BE DIRECTED TO THE DROP INLET LOCATED IN THE PARKING LOT. THERE WILL BE NO INCREASE IN FLOWS FROM THE GRADING AND DRAINAGE PLAN PREPARED BY FRANK LOVELADY NOVEMBER 1997.

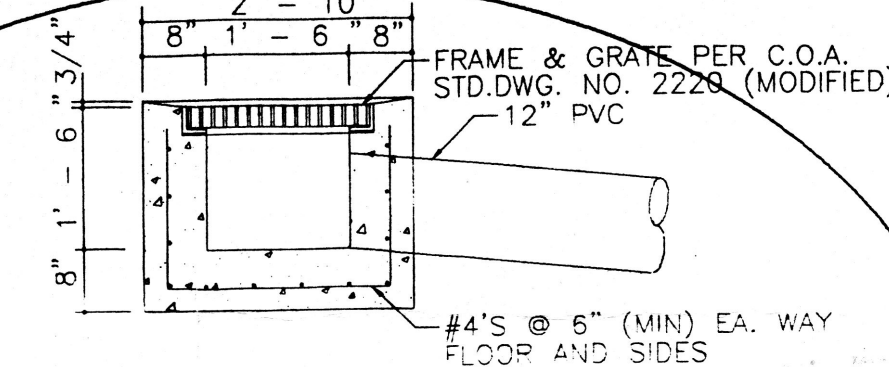
DRAINAGE DATA - SANDIA PEAK MOTEL

THIS SITE LIES WITHIN PRECIPITATION ZONE 1

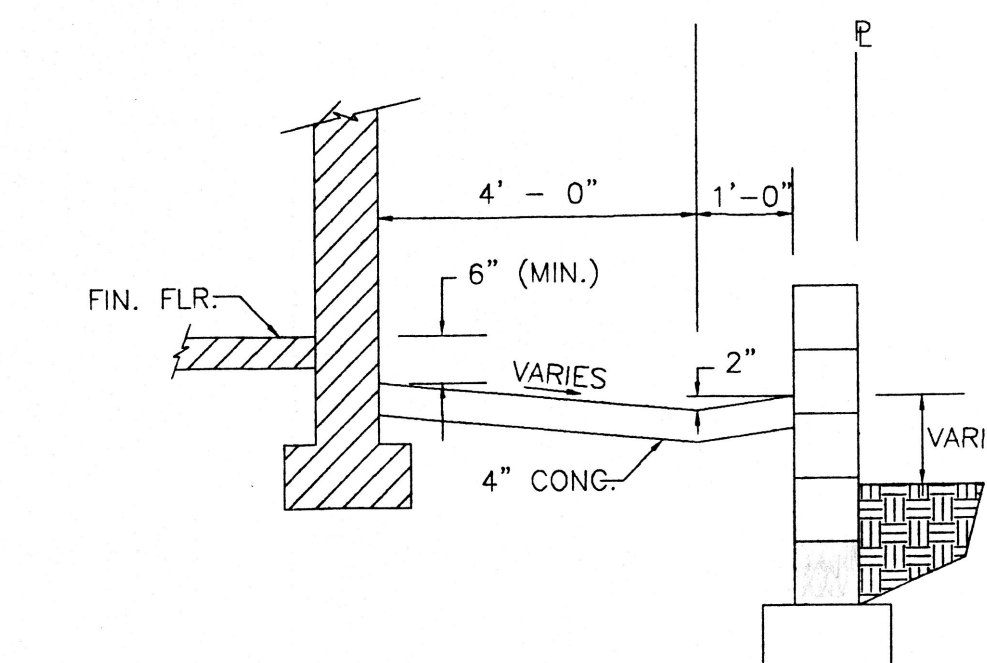
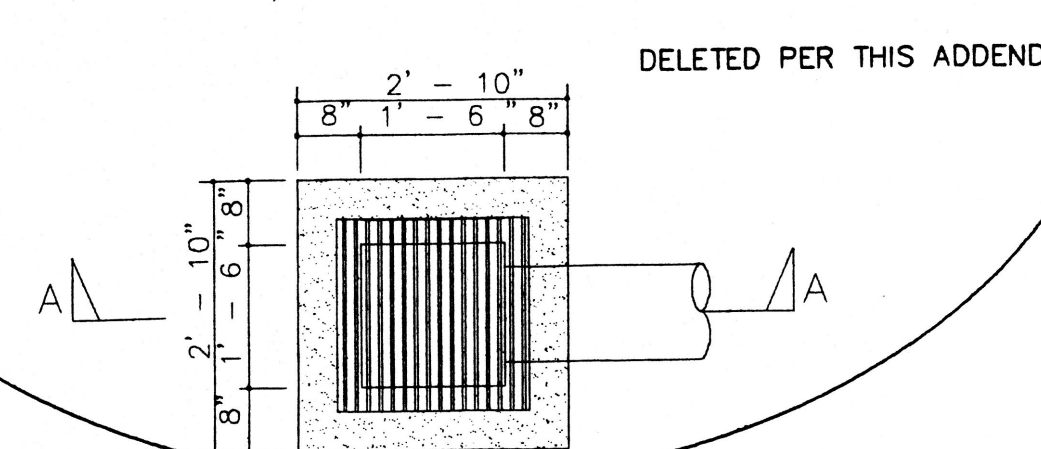
Condition	Return Period Table 4 (Years)	Treatment Type	Area (sq. ft.)	Precip. Table A-8 (in.)	Runoff Table A-9 (cfs/ac)	Volume (cu. ft.)	Rate (cfs)
EXISTING	100	A	0	0.44	1.29	0.0	0.00
		B	0	0.67	2.03	0.0	0.00
		C	21,338	0.99	2.87	1,760.4	1.41
		D	14,225	1.97	4.37	2,335.3	1.43
EXISTING	10	A	0	0.08	0.24	0.0	0.00
		B	0	0.22	0.76	0.0	0.00
		C	21,338	0.44	1.49	782.4	0.73
		D	14,225	1.24	2.89	1,469.9	0.94
DEVELOPED	100	A	0	0.44	1.29	0.0	0.00
		B	6,405	0.67	2.03	357.6	0.30
		C	0	0.99	2.87	0.0	0.00
		D	29,158	1.97	4.37	4,786.8	2.93
DEVELOPED	10	A	0	0.08	0.24	0.0	0.00
		B	6,405	0.22	0.76	117.4	0.11
		C	0	0.44	1.49	0.0	0.00
		D	29,158	1.24	2.89	3,013.0	1.93
TOTAL (EXT)	100					4,095.7	2.8
	10					2,252.3	1.7
TOTAL (DEV)	100					5,144.4	3.2
	10					3,130.4	2.0

FLOW RATE INCREASES (100-YR) = 0.4 CFS
 FLOW RATE INCREASES (10-YR) = 0.4 CFS
 6-HOUR RUNOFF INCREASE (100-YR) = 1,048.7 CU. FT.
 6-HOUR RUNOFF INCREASE (10-YR) = 878.1 CU. FT.

DISCH./VOL	BASIN "A" SOUTH TO VALLEY GUTTER	BASIN "B" EAST TO VALLEY GUTTER	BASIN "C" TO PARKING LOT	TOTALS
Q100	0.51	0.43	2.28	3.22
Q10	0.34	0.28	1.43	2.05
V100	839	698	3,607	5,144
V10	528	439	2,163	3,130



SECTION A - A
1/2" = 1' - 0"



SECTION B - B SWALE BEHIND BUILDING
1/2" = 1' - 0"

DRAINAGE CERTIFICATE

I, Thomas D. Johnston, NMPE 17158, of the firm of TGC ENGINEERING INC. 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 April 24, 2007. The record information edited onto the original design document has been obtained by Thomas D. Johnston, NMPS 14269, of the firm of WAYJOHN SURVEYING INC. I further certify that I have personally visited the project site on September 4, 2007 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 final Certificate of Occupancy. 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 before using it for any other purpose.

Thomas D. Johnston, NMPE 17158

I, THOMAS D. JOHNSTON, NEW MEXICO REGISTERED PROFESSIONAL ENGINEER NO. 17158, DO HEREBY CERTIFY THAT I INSPECTED THIS SITE ON DECEMBER 5, 2005, AND THAT, AS OF THAT DATE, THERE HAD BEEN NO RECENT ALTERATION OF GRADE OR EVIDENCE OF GRADING OPERATIONS ON THIS SITE.

THOMAS D. JOHNSTON, NMPE NO. 17158

DRAINAGE AND GRADING PLAN
SANDIA PEAK INN

TGC ENGINEERING, INC. (505)266-7256
 330 LOUISIANA BLVD. NE ALBUQUERQUE, NM 87108
 Fax: (505) 255-2887

- Five foot (5') utility easement located at the rear of Lot.
- Two foot (2') private drainage and irrigation easement located at rear of Lot.

BENCH MARK

BENCH MARK IS ACS STA. "2-K12-B" located at the Southeast corner of Central Avenue, S.W. and Atrisco Boulevard, S.W. ELEV. 4954.92 (NGVD 29)

TBM
 #4 REBAR AND CAP AT SOUTHEAST CORNER OF SITE; EL. 4950.76

DRAINAGE NOTES:

ALL ELEVATIONS GIVEN ARE TO TOP OF PROPOSED GRADE

NOTICE TO CONTRACTOR

PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ARE TO FINISH SURFACES AND ARE PROVIDED FOR THE PURPOSE OF SHOWING FLOW ROUTING.

CONTRACTOR IS RESPONSIBLE FOR THE ABATEMENT OF SEDIMENT ONTO ADJOINING PUBLIC RIGHTS-OF-WAY DURING CONSTRUCTION AND FOR THE REMOVAL OF ANY SEDIMENT DEPOSITED IN PUBLIC RIGHT-OF-WAY.

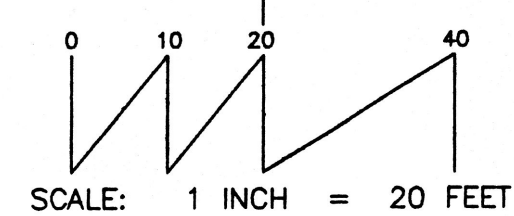
CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO ANY GRADING OR CONSTRUCTION.

ALL IMPROVEMENTS WITHIN CITY OF ALBUQUERQUE RIGHT OF WAY MUST BE CONSTRUCTED BY CITY OF ALBUQUERQUE WORK ORDER.

NOTICE TO CONTRACTORS

- An excavation/barricade permit will be required before beginning any work within the City of Albuquerque Right-of-way. An approved copy of these plans must be submitted at the time of application for these permits.
- All work detailed on these plans to be done, except as otherwise stated or provided hereon, will be constructed in accordance with "City of Albuquerque Interim Standard Specification for Public Works Construction, 1986", latest revision.
- Two working days prior to any excavation, the contractor must contact Line Locating Service, 260-1990, for location of existing utilities.
- Prior to construction, the contractor will excavate and verify the horizontal and vertical locations of all construction. Should a conflict exist, the contractor will notify the Construction Engineer so that the conflict can be resolved with a minimum amount of delay.
- The contractor will be responsible for performing soil density tests as required by the City of Albuquerque.
- Owner shall be responsible for maintenance of sidewalk culverts and shall ensure proper operation of culverts at all times.

APPROVALS FOR	NAME	DATE	TITLE OF PROJECT
DESIGN: CITY HYDROLOGY			FOR: SANDIA PEAK MOTEL
CONSTRUCTION: CONSTRUCTION ENGINEER			4618 CENTRAL AVE. SW
ACCEPTANCE: CONSTRUCTION INSPECTOR			PROJECT NO. _____ ZONE _____
			SHEET 1 OF 1 K-12

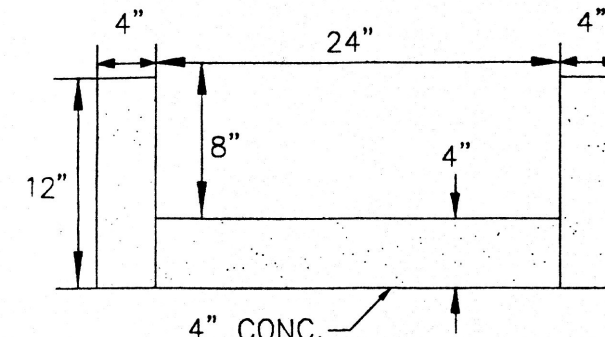


LEGEND

- WV WATER VALVE
- WM WATER METER
- MH SANITARY SEWER MANHOLE
- FH FIRE HYDRANT
- TS TRAFFIC SIGNAL / BOX
- PP POWER POLE
- ANCH ANCHOR
- SPOT ELEVATION UNLESS OTHERWISE INDICATED, SPOT ELEVATIONS ARE TO ASPHALT SURFACE
- EA EDGE OF ASPHALT
- TC TOP OF CURB / CONCRETE FLOWLINE
- FL FLOWLINE
- BSW BACK OF SIDEWALK
- CHAIN LINK FENCE
- CONCRETE BLOCK WALL
- OVERHEAD POWER LINE

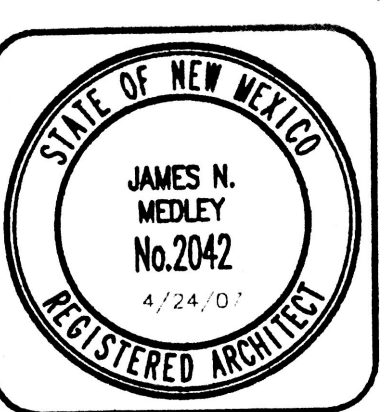
- FLOW LINE
- TOP OF CONCRETE FLOW LINE
- TOP OF SIDEWALK RIM OF MANHOLE
- EXISTING INDEX CONTOURS @ 5 FT. INTERVALS
- EXISTING CONTOURS @ 1 FT. INTERVALS
- PROPOSED CONTOURS @ 1.0' INTERVALS
- PROPOSED SPOT ELEVATION

SECTION C-C CONCRETE RUNDOWN



NO SCALE

12-09-05
 ADDENDUM 4/24/2007



JIM MEDLEY, Architect AIA
 NCARB Certificate No. 96,896
 3100 Christine N.E. Albuquerque, NM 87111
 email: jmedley@jim-medley-architect.com
 Phone (505) 292-3514 Fax (505) 294-5593

Plan No. 0502/SED20001
 Date: April '07
 Drawn by: SED
 Checked by: MC

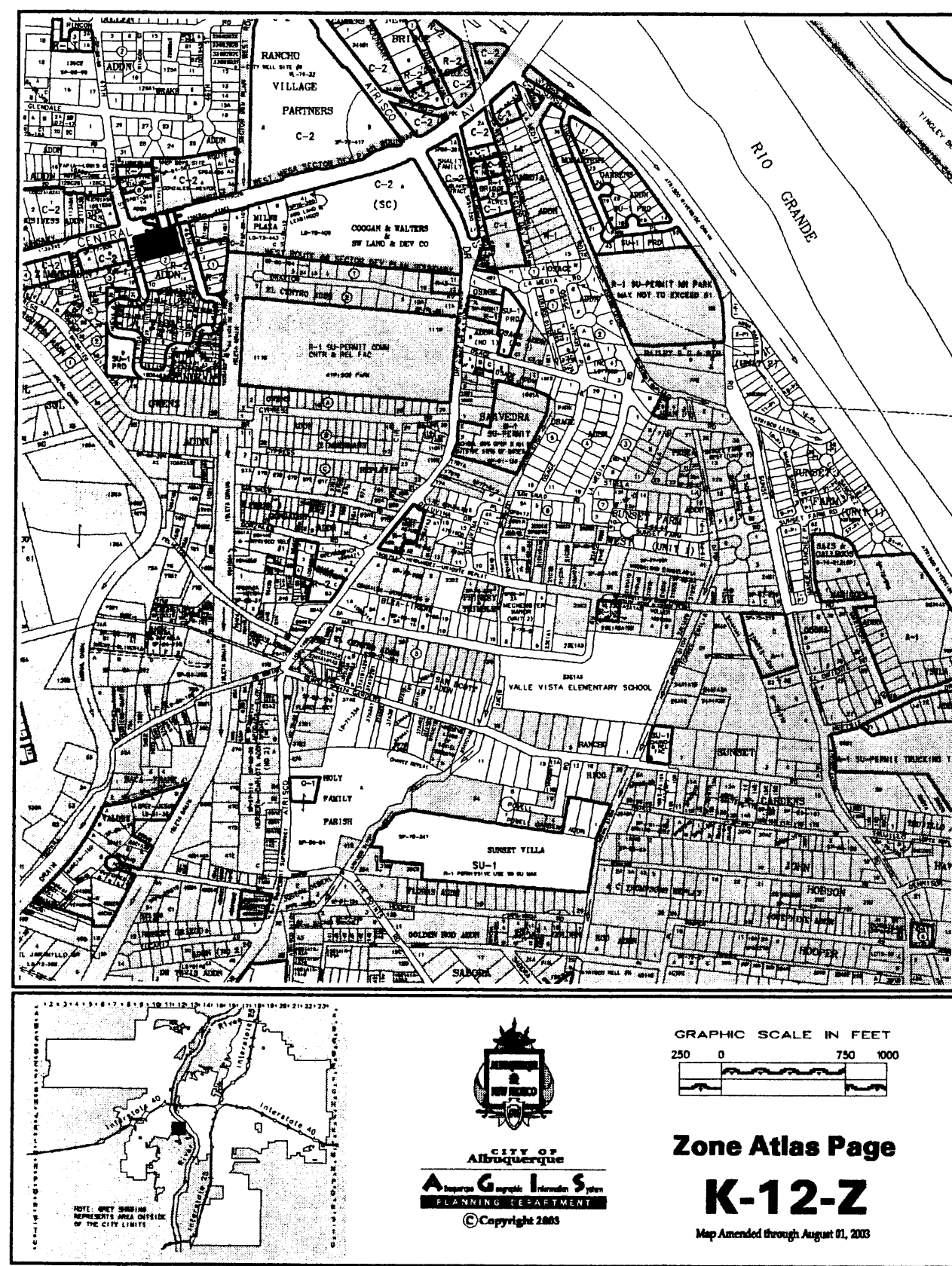
Project: 18 Guestroom Addition to Sandia Peak Motel
 Kanak P. and Pratap Yadav
 Albuquerque, New Mexico

No.	Revision / Issue	Date

Sheet Description

Sheet: C1

VICINITY MAP (K-12-Z)



LEGAL DESCRIPTION / FLOOD NOTE

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ADDENDUM NOTE: THIS ADDENDUM HAS BEEN CREATED TO DELETE THE DROP INLET AND TO ADD A SIDEWALK CULVERT AS SHOWN HEREON.

SITE IS CURRENTLY UNDER CONSTRUCTION

ADDED PER THIS ADDENDUM

CONST. 24" S.W. CULVERT
PER C.O.A. STD. DWG. 2236
INV. IN = 49.55
INV. OUT = 49.45

REMOVE EXIST. DRIVEPAD
REPLACE W/ C&G AND S.W.

CONSTRUCT INLET
GRATE = 49.50
INV. = 48.00
SEE DETAIL THIS
SHEET. FL. 49.83

DELETED PER THIS
ADDENDUM

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BENCH MARK

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TBM
#4 REBAR AND CAP AT SOUTHEAST CORNER OF SITE; EL. 4950.76

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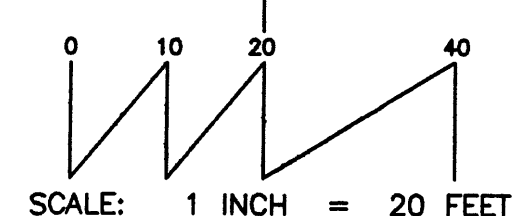
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APPROVALS FOR	NAME	DATE	TITLE OF PROJECT
DESIGN: CITY HYDROLOGY			FOR: SANDIA PEAK MOTEL 4618 CENTRAL AVE. SW
CONSTRUCTION: CONSTRUCTION ENGINEER			
ACCEPTANCE: CONSTRUCTION INSPECTOR			PROJECT NO. ZONE ATLAS SHEET 1 OF 1 K-12



DRAINAGE CONCEPT:

The site is located on the South side of West Central Avenue, at the SE corner of the intersection of 47th Street. The site consists of Phase I of the Sandia Peak Motel, constructed by grading and drainage plan created by Frank Lovelady, dated November 1997. The proposed building site is graded, but undeveloped at this time. The property to the south of the site is currently developed. Central Avenue and 47th Street are paved with curb and gutter. There is a 48" RCP storm drain system in Central Avenue that turns south in 47th Street and continues south approximately 350' and then east another 500' to the Isleta Drain. There is an inlet near the ESE curb return.

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ORIFICE EQUATION FOR ON-SITE INLET: $Q = A(C_v)(\sqrt{2gh})$

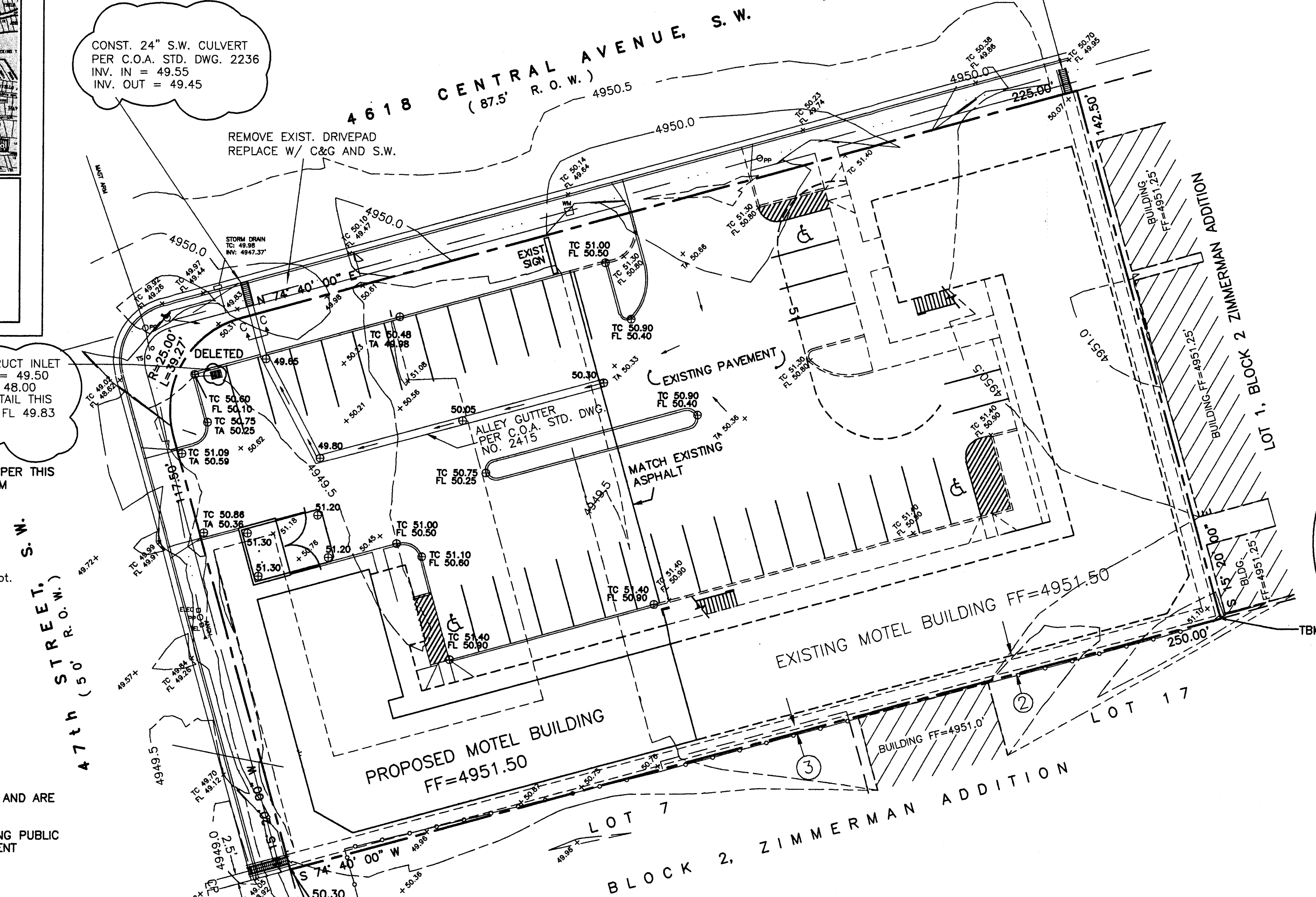
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DEPTH OF WATER IN INLET FOR 100-YEAR STORM: 1.08 FEET

Q CAPACITY: 3.93 cfs > 3.2 cfs FOR DIRECTED FLOWS TO PARKING LOT

NO BACKWATER CONDITION

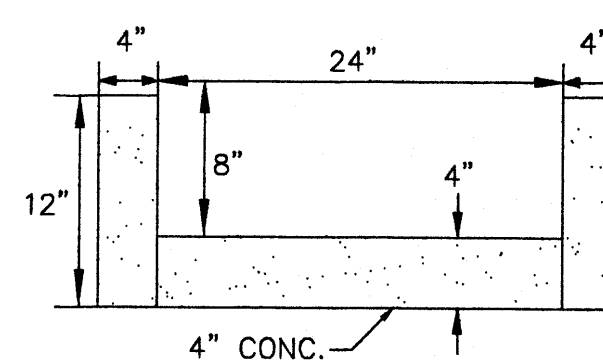
EXISTING 18" SIDEWALK CULVERT
PER C.O.A. STD. DWG. 2236
INV. IN = 49.92
INV. OUT = 50.05



LEGEND

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- WM WATER METER
- MH SANITARY SEWER MANHOLE
- FH FIRE HYDRANT
- TS TRAFFIC SIGNAL / BOX
- PP POWER POLE
- ANCH ANCHOR
- SPOT ELEVATION
UNLESS OTHERWISE INDICATED, SPOT
ELEVATIONS ARE TO ASPHALT SURFACE
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- TC TOP OF CURB / CONCRETE
- FL FLOWLINE
- BSW BACK OF SIDEWALK
- CHAIN LINK FENCE
- CONCRETE BLOCK WALL
- OVERHEAD POWER LINE
- FLOW LINE
- TC TOP OF CONCRETE
- FL FLOW LINE
- TSW TOP OF SIDEWALK
- RM RIM OF MANHOLE
- 4958 EXISTING INDEX CONTOURS @ 5 FT. INTERVALS
- 4958 EXISTING CONTOURS @ 1 FT. INTERVALS
- 56 PROPOSED CONTOURS @ 1.0' INTERVALS
- 58.0 PROPOSED SPOT ELEVATION

SECTION C-C CONCRETE RUNDOWN



ONSITE HYDROLOGY

ONSITE FLOWS SHALL CONSIST OF THE EXISTING MOTEL BUILDING AND PARKING ALONG WITH THE PROPOSED DEVELOPMENT. CURRENT DEVELOPED CONDITIONS SHALL DIRECT FLOW TO THE EXISTING CONCRETE SWALE TO THE SOUTH AND EAST OF THE EXISTING BUILDING. ALL FLOWS DIRECTED OFF OF THE ROOF TO THE PARKING AREA WILL BE DIRECTED TO THE DROP INLET LOCATED IN THE PARKING LOT. THERE WILL BE NO INCREASE IN FLOWS FROM THE GRADING AND DRAINAGE PLAN PREPARED BY FRANK LOVELADY NOVEMBER 1997.

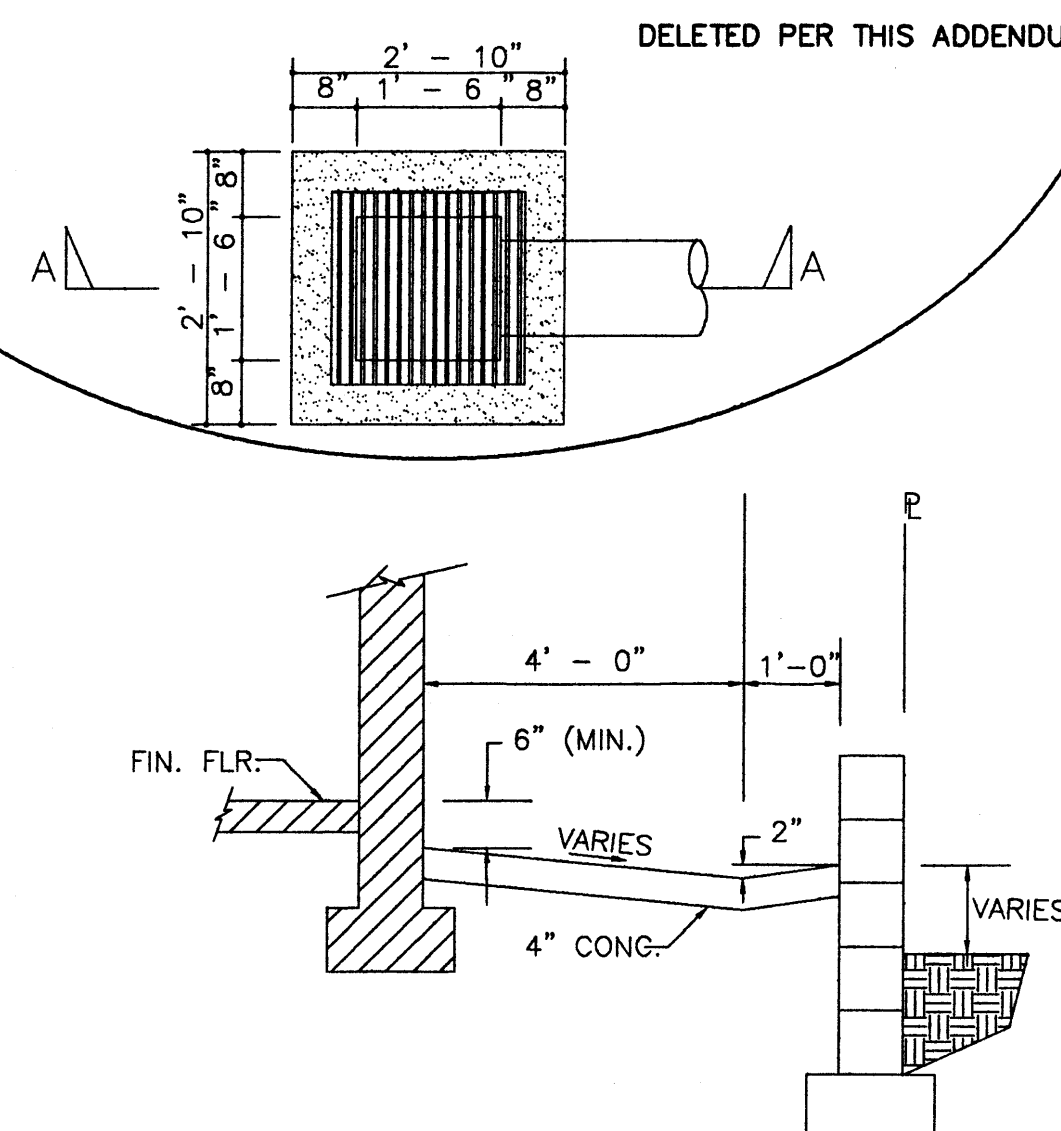
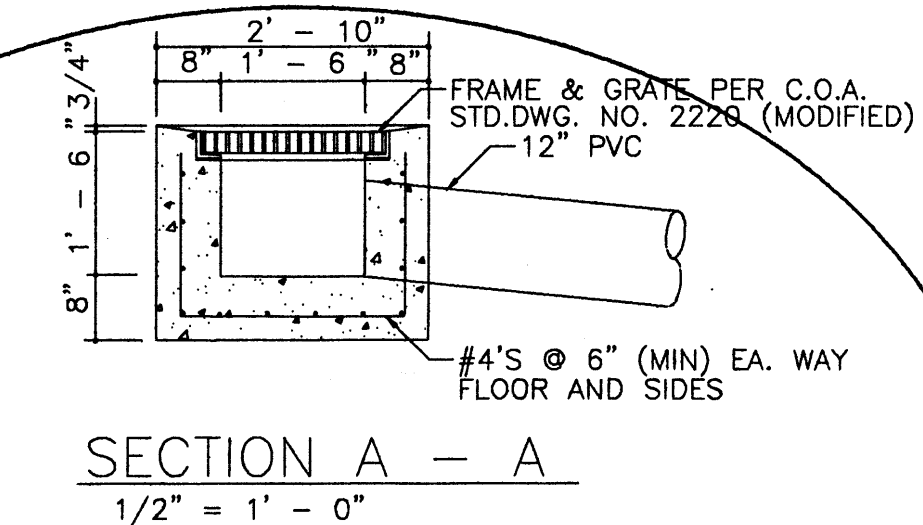
DRAINAGE DATA - SANDIA PEAK MOTEL

THIS SITE LIES WITHIN PRECIPITATION ZONE 1

Condition	Return Period Table 4 (Years)	Treatment Type	Area (sq. ft.)	Precip. Table A-8 (in.)	Runoff Table A-9 (cfs/ac)	Volume (cu. ft.)	Rate (cfs)
EXISTING	100	A	0	0.44	1.29	0.0	0.00
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		D	29,158	1.24	2.89	3,013.0	1.93
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	10					2,252.3	1.7
TOTAL (DEV)	100					5,144.4	3.2
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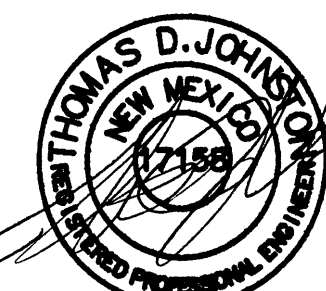
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DISCH. VOL	BASIN "A" SOUTH TO VALLEY GUTTER	BASIN "B" EAST TO VALLEY GUTTER	BASIN "C" TO PARKING LOT	TOTALS
Q100	0.51	0.43	2.28	3.22
Q10	0.34	0.28	1.43	2.05
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I, THOMAS D. JOHNSTON, NEW MEXICO REGISTERED PROFESSIONAL ENGINEER NO. 17158, DO HEREBY CERTIFY THAT I INSPECTED THIS SITE ON DECEMBER 5, 2005, AND THAT, AS OF THAT DATE, THERE HAD BEEN NO RECENT ALTERATION OF GRADE OR EVIDENCE OF GRADING OPERATIONS ON THIS SITE.

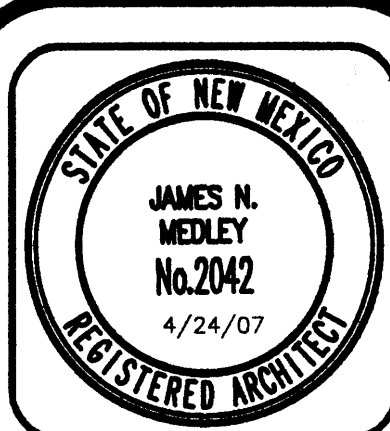
THOMAS D. JOHNSTON, NMPE NO. 17158



DRAINAGE AND GRADING PLAN
SANDIA PEAK INN

TDC ENGINEERING, INC. (505)266-7256
330 LOUISIANA BLVD. NE
ALBUQUERQUE, NM 87108
Fax: (505) 255-2887

12-09-05
ADDENDUM 4/24/2007



JIM MEDLEY, Architect AIA
AIA Certificate No. 36,086
3100 Oriole N. E. Albuquerque, NM 87111
email: jmedley@jim-medley-architect.com
Phone (505) 292-3514 Fax (505) 294-5593

Plan No. 0502/SED25001
Date: April '07
Drawn by: SED
Checked by: MG

Project:
18 Guestroom Addition
Sandia Peak Motel
Kanak P. and Pratap Yadav
Albuquerque, New Mexico

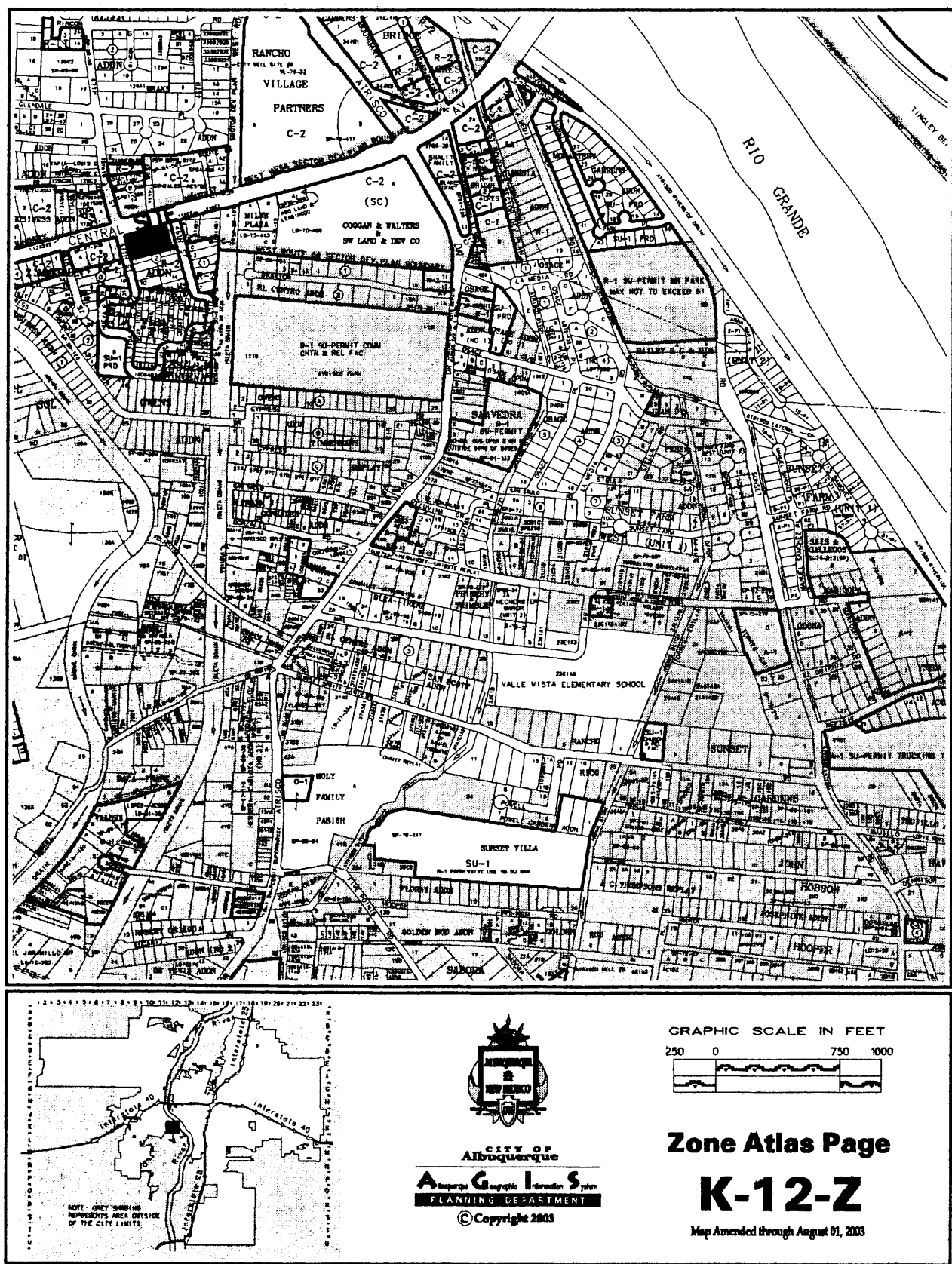
No.	Revision / Issue	Date

Sheet Description

Sheet:

C1

VICINITY MAP (K-12-Z)



LEGAL DESCRIPTION / FLOOD NOTE

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ADDENDUM NOTE: THIS ADDENDUM HAS BEEN CREATED TO DELETE THE DROP INLET AND TO ADD A SIDEWALK CULVERT AS SHOWN HEREON.

DRAINAGE CONCEPT:

The site is located on the South side of West Central Avenue, at the SE corner of the intersection of 47th Street. The site consists of Phase I of the Sandia Peak Motel, constructed by grading and drainage plan created by Frank Lovelady, dated November 1997. The proposed building site is graded, but undeveloped at this time. The property to the south of the site is currently developed. Central Avenue and 47th Street are paved with curb and gutter. There is a 48" RCP storm drain system in Central Avenue that turns south in 47th Street and continues south approximately 350' and then east another 500' to the Isleta Drain. There is an inlet near the ESE curb return. The proposed construction will be the final phase of a motel on the property as shown. All runoff from the front of the motel roof and parking lot will be directed to an inlet in the NW corner of the parking lot. Runoff from the rear portion of the motel roof to the south property line will be directed to a sidewalk culvert on 47th Street. All runoff from the rear portion of the motel roof to the east property line is currently directed to a sidewalk culvert on Central Avenue that was constructed in Phase I. The motel roofs will be hip roofs with drip edges and no gutters and downspouts. Offsite flows are negligible.

ORFICE EQUATION FOR ON-SITE INLET: $Q = A(C_v)(\sqrt{2gh})$
 $Q = 13.95 \text{ cfs}/\text{INLET}; A = 113 \text{ sq.in. } (0.7854 \text{ ft}^2); C_v = 0.6$
 DEPTH OF WATER IN INLET FOR 100-YEAR STORM: 1.08 FEET
 Q CAPACITY: 3.93 cfs > 3.2 cfs FOR DIRECTED FLOWS TO PARKING LOT
 NO BACKWATER CONDITION

EXISTING 18" SIDEWALK CULVERT
 PER C.O.A. STD. DWG. 2236
 INV. IN = 49.92
 INV. OUT = 50.05

ADDED PER THIS ADDENDUM

CONST. 24" S.W. CULVERT
 PER C.O.A. STD. DWG. 2236
 INV. IN = 49.55
 INV. OUT = 49.45

REMOVE EXIST. DRIVEPAD
 REPLACE W/ C&G AND S.W.

CONSTRUCT INLET
 GRATE = 49.50
 INV. 48.00
 SEE DETAIL THIS SHEET.
 FL 49.83

DELETED PER THIS ADDENDUM

- Five foot (5') utility easement located at the rear of Lot.
- Two foot (2') private drainage and irrigation easement located at rear of Lot.

BENCH MARK

BENCH MARK IS ACS STA. "2-K12-B" located at the Southeast corner of Central Avenue, S.W. and Atrisco Boulevard, S.W. ELEV. 4954.92 (NGVD 29)

#4 REBAR AND CAP AT SOUTHEAST CORNER OF SITE; EL. 4950.76

DRAINAGE NOTES:

ALL ELEVATIONS GIVEN ARE TO TOP OF PROPOSED GRADE

NOTICE TO CONTRACTOR

PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ARE TO FINISH SURFACES AND ARE PROVIDED FOR THE PURPOSE OF SHOWING FLOW ROUTING.

CONTRACTOR IS RESPONSIBLE FOR THE ABATEMENT OF SEDIMENT ONTO ADJOINING PUBLIC RIGHTS-OF-WAY DURING CONSTRUCTION AND FOR THE REMOVAL OF ANY SEDIMENT DEPOSITED IN PUBLIC RIGHT-OF-WAY.

CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO ANY GRADING OR CONSTRUCTION.

ALL IMPROVEMENTS WITHIN CITY OF ALBUQUERQUE RIGHT OF WAY MUST BE CONSTRUCTED BY CITY OF ALBUQUERQUE WORK ORDER.

NOTICE TO CONTRACTORS

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- All work detailed on these plans to be done, except as otherwise stated or provided hereon, will be constructed in accordance with "City of Albuquerque Interim Standard Specification for Public Works Construction, 1986", latest revision.
- Two working days prior to any excavation, the contractor must contact Line Locating Service, 260-1990, for location of existing utilities.
- Prior to construction, the contractor will excavate and verify the horizontal and vertical locations of all construction. Should a conflict exist, the contractor will notify the Construction Engineer so that the conflict can be resolved with a minimum amount of delay.
- The contractor will be responsible for performing soil density tests as required by the City of Albuquerque.
- Owner shall be responsible for maintenance of sidewalk culverts and shall ensure proper operation of culverts at all times.

APPROVALS FOR	NAME	DATE	TITLE OF PROJECT
DESIGN: CITY HYDROLOGY			FOR: SANDIA PEAK MOTEL
CONSTRUCTION: CONSTRUCTION ENGINEER			4618 CENTRAL AVE. SW
ACCEPTANCE: CONSTRUCTION INSPECTOR			PROJECT NO. ZONE SHEET 1 OF 1 K-12

SCALE: 1 INCH = 20 FEET

LEGEND

WV	WATER VALVE	SE	SPOT ELEVATION
WM	WATER METER	UNLESS OTHERWISE INDICATED, SPOT ELEVATIONS ARE TO ASPHALT SURFACE	
SMH	SANITARY SEWER MANHOLE		
PH	FIRE HYDRANT		
TS	TRAFFIC SIGNAL / BOX	EA	EDGE OF ASPHALT
PP	POWER POLE	TC	TOP OF CURB / CONCRETE
ANCH	ANCHOR	FL	FLOWLINE
		BSW	BACK OF SIDEWALK
			CHAIN LINK FENCE
			CONCRETE BLOCK WALL
			OVERHEAD POWER LINE
TC	TOP OF CONCRETE		
FL	FLOW LINE		
TSW	TOP OF SIDEWALK		
RIM	RIM OF MANHOLE		
-4958	EXISTING INDEX CONTOURS @ 5 FT. INTERVALS		
-4958	EXISTING CONTOURS @ 1 FT. INTERVALS		
-56	PROPOSED CONTOURS @ 1.0' INTERVALS		
@58.0	PROPOSED SPOT ELEVATION		

ONSITE HYDROLOGY

ONSITE FLOWS SHALL CONSIST OF THE EXISTING MOTEL BUILDING AND PARKING ALONG WITH THE PROPOSED DEVELOPMENT. CURRENT DEVELOPED CONDITIONS SHALL DIRECT FLOW TO THE EXISTING CONCRETE SWALE TO THE SOUTH AND EAST OF THE EXISTING BUILDING. ALL FLOWS DIRECTED OFF OF THE ROOF TO THE PARKING AREA WILL BE DIRECTED TO THE DROP INLET LOCATED IN THE PARKING LOT. THERE WILL BE NO INCREASE IN FLOWS FROM THE GRADING AND DRAINAGE PLAN PREPARED BY FRANK LOVELADY NOVEMBER 1997.

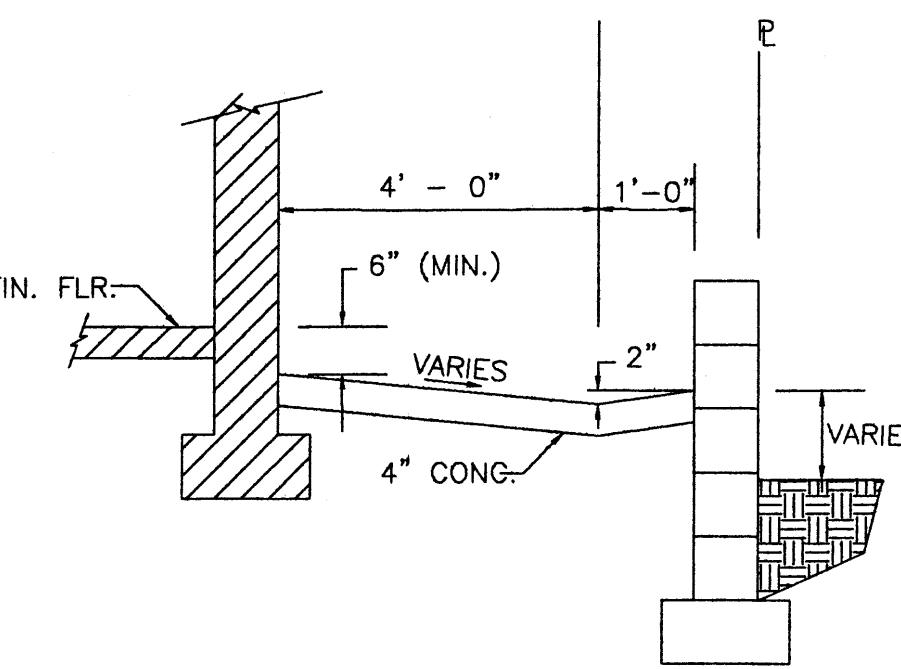
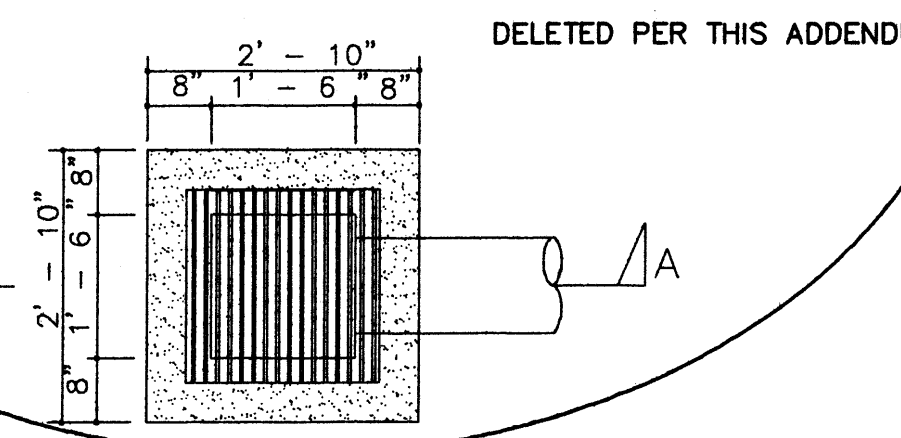
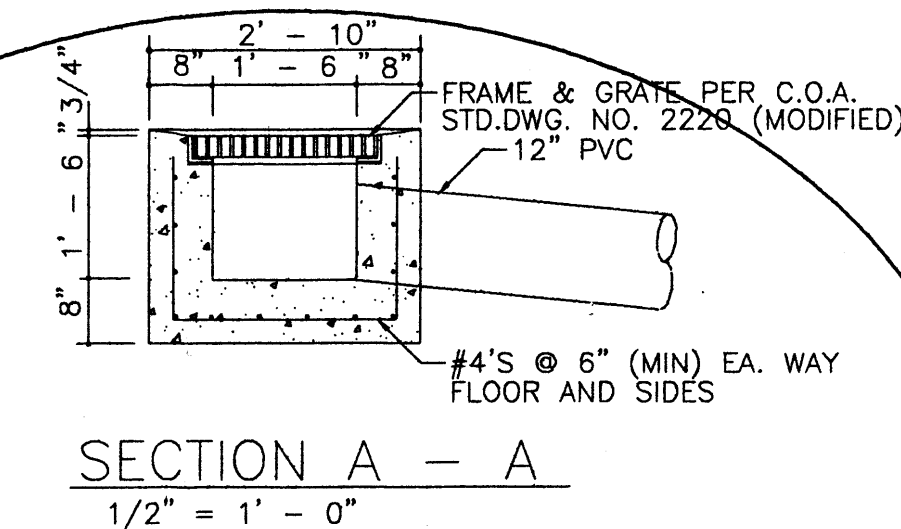
DRAINAGE DATA - SANDIA PEAK MOTEL

THIS SITE LIES WITHIN PRECIPITATION ZONE 1

Condition	Return Period (Years)	Treatment Type	Area (sq. ft.)	Precip. Table A-8 (in.)	Runoff Table A-9 (cfs/ac)	Volume (cu. ft.)	Rate (cfs)
EXISTING	100	A	0	0.44	1.29	0.0	0.00
		B	0	0.67	2.03	0.0	0.00
		C	21,338	0.99	2.87	1,760.4	1.41
		D	14,225	1.97	4.37	2,335.3	1.43
EXISTING	10	A	0	0.08	0.24	0.0	0.00
		B	0	0.22	0.76	0.0	0.00
		C	21,338	0.44	1.49	782.4	0.73
		D	14,225	1.24	2.89	1,469.9	0.94
DEVELOPED	100	A	0	0.44	1.29	0.0	0.00
		B	6,405	0.67	2.03	357.6	0.30
		C	0	0.99	2.87	0.0	0.00
		D	29,158	1.97	4.37	4,786.8	2.93
DEVELOPED	10	A	0	0.08	0.24	0.0	0.00
		B	6,405	0.22	0.76	117.4	0.11
		C	0	0.44	1.49	0.0	0.00
		D	29,158	1.24	2.89	3,013.0	1.93
TOTAL (EXT)	100					4,095.7	2.8
	10					2,252.3	1.7
TOTAL (DEV)	100					5,144.4	3.2
	10					3,130.4	2.0

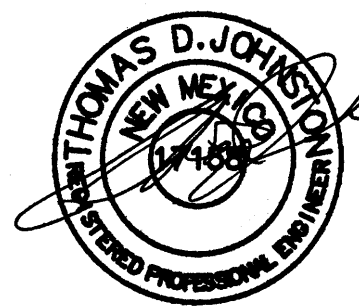
FLOW RATE INCREASES (100-YR) = 0.4 CFS
 FLOW RATE INCREASES (10-YR) = 0.4 CFS
 6-HOUR RUNOFF INCREASE (100-YR) = 1,048.7 CU. FT.
 6-HOUR RUNOFF INCREASE (10-YR) = 878.1 CU. FT.

DISCH./VOL	BASIN "A" SOUTH TO VALLEY GUTTER	BASIN "B" EAST TO VALLEY GUTTER	BASIN "C" TO PARKING LOT	TOTALS
Q100	0.51	0.43	2.28	3.22
Q10	0.34	0.28	1.43	2.05
V100	839	698	3,607	5,144
V10	528	439	2,163	3,130



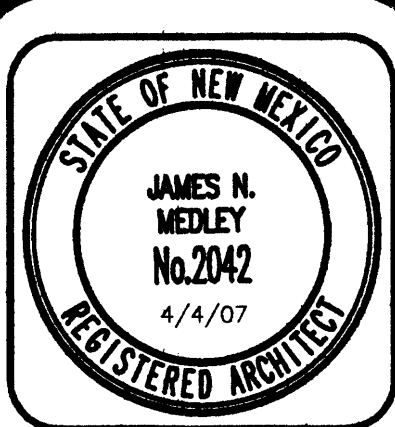
I, THOMAS D. JOHNSTON, NEW MEXICO REGISTERED PROFESSIONAL ENGINEER NO. 17158, DO HEREBY CERTIFY THAT I INSPECTED THIS SITE ON DECEMBER 5, 2005, AND THAT, AS OF THAT DATE, THERE HAD BEEN NO RECENT ALTERATION OF GRADE OR EVIDENCE OF GRADING OPERATIONS ON THIS SITE.

THOMAS D. JOHNSTON, NMPE NO. 17158

DRAINAGE AND GRADING PLAN
SANDIA PEAK INN

TJO ENGINEERING, INC. (505)266-7258
 330 LOUISIANA BLVD. NE
 ALBUQUERQUE, NM 87108
 Fax: (505) 255-2887

12-09-05
 ADDENDUM 4/04/2007



JIM MEDLEY, Architect AIA
 NJAB Cert/No. 36,886

3100 Christine N. E. Albuquerque, NM 87111
 Phone (505) 292-3514 Fax (505) 294-5593
 email: jmedley@jim-medley-architect.com

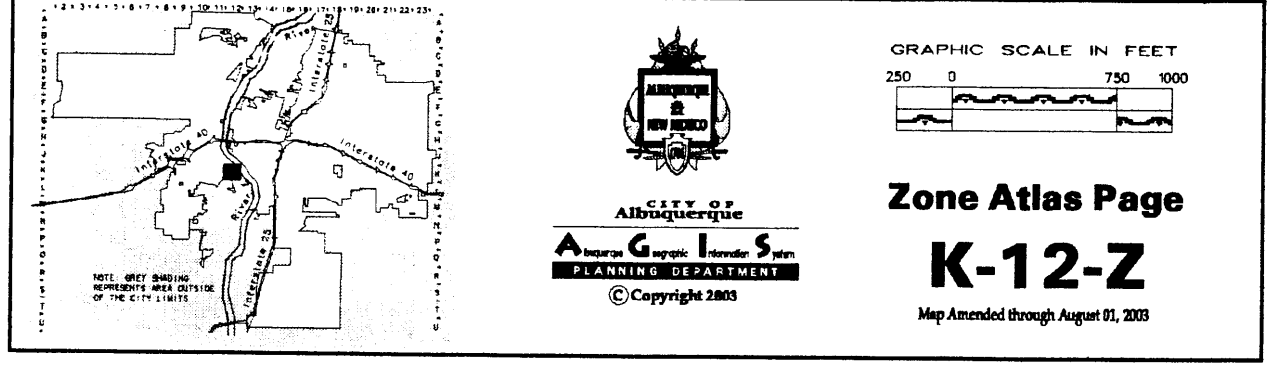
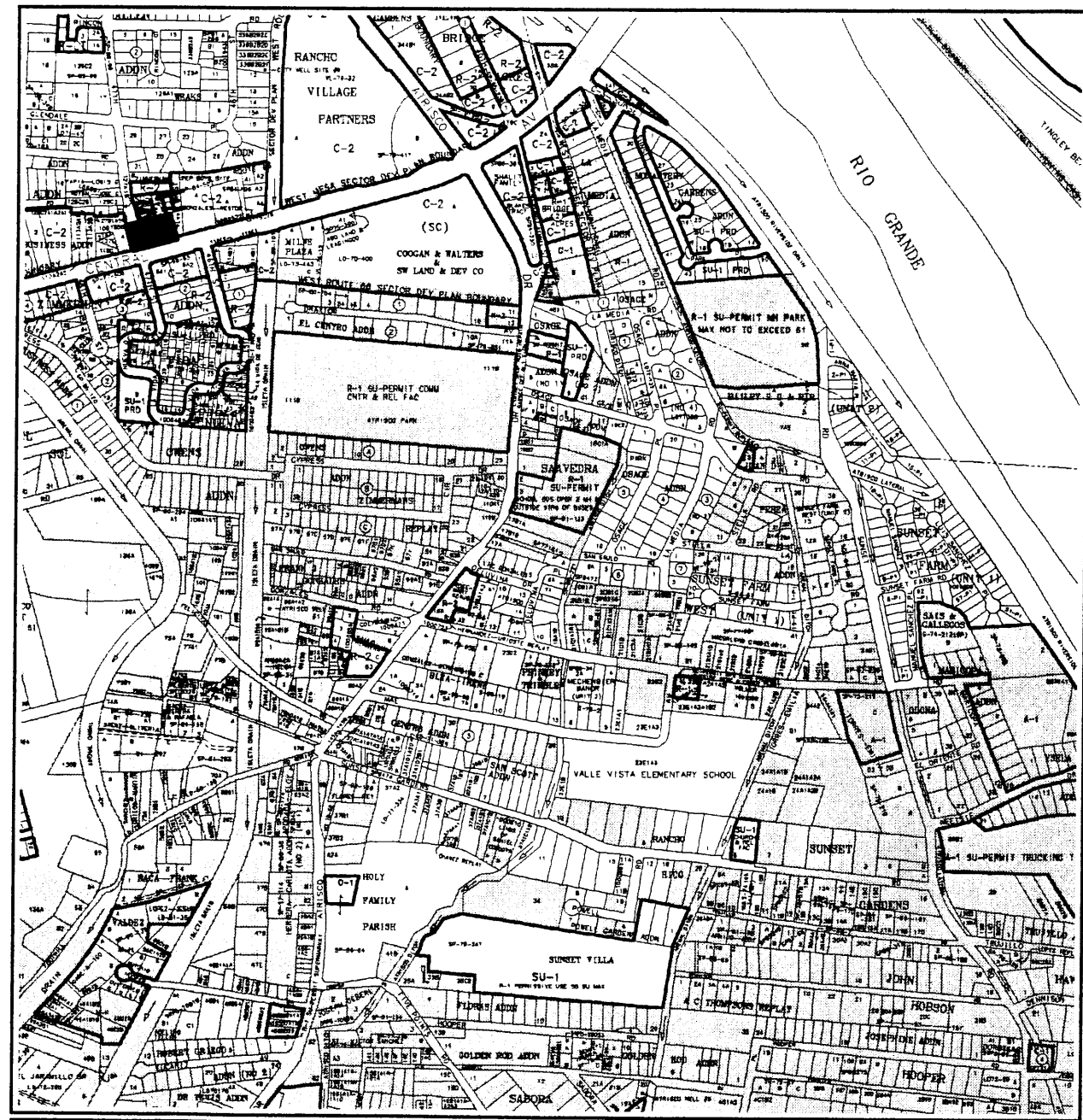
Plan No.	0502/SD25001
Date:	April '07
Drawn by:	SED
Checked by:	MG

18 Guestroom Addition
 Sandia Peak Motel
 Kanak P. and Pratap Yadav
 Albuquerque, New Mexico

No.	Revision / Issue	Date

Sheet Description

Sheet
C1



1. Five foot (5') utility easement located at the rear of Lot.
2. Two foot (2') private drainage and irrigation easement located at rear of Lot.

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BENCH MARK IS ACS STA. "2-K12-B" located at the Southeast corner of Central Avenue, S.W. and Atrisco Boulevard, S.W. ELEV. 4954.92 (NGVD 29)
TBM
#4 REBAR AND CAP AT SOUTHEAST CORNER OF SITE; EL. 4950.76

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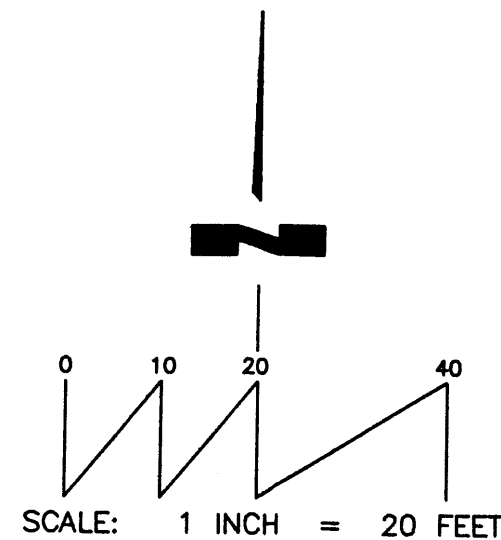
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APPROVALS FOR	NAME	DATE	TITLE OF PROJECT
DESIGN: CITY HYDROLOGY			FOR: SANDIA PEAK MOTEL 4618 CENTRAL AVE. SW
CONSTRUCTION: CONSTRUCTION ENGINEER			
ACCEPTANCE: CONSTRUCTION INSPECTOR			PROJECT NO. ZONE SHEET 1 OF 1 K-12



LEGAL DESCRIPTION / FLOOD NOTE

Lot numbered Six-A-One-A (6-A-1-A) in Block numbered Two (2) of the ZIMMERMAN ADDITION to the City of Albuquerque, Bernalillo County, New Mexico, as the same is shown and designated on the Plat thereof, filed in the Office of the County Clerk of Bernalillo County, New Mexico, on July 13, 2005, in Volume 2005C, folio 248.

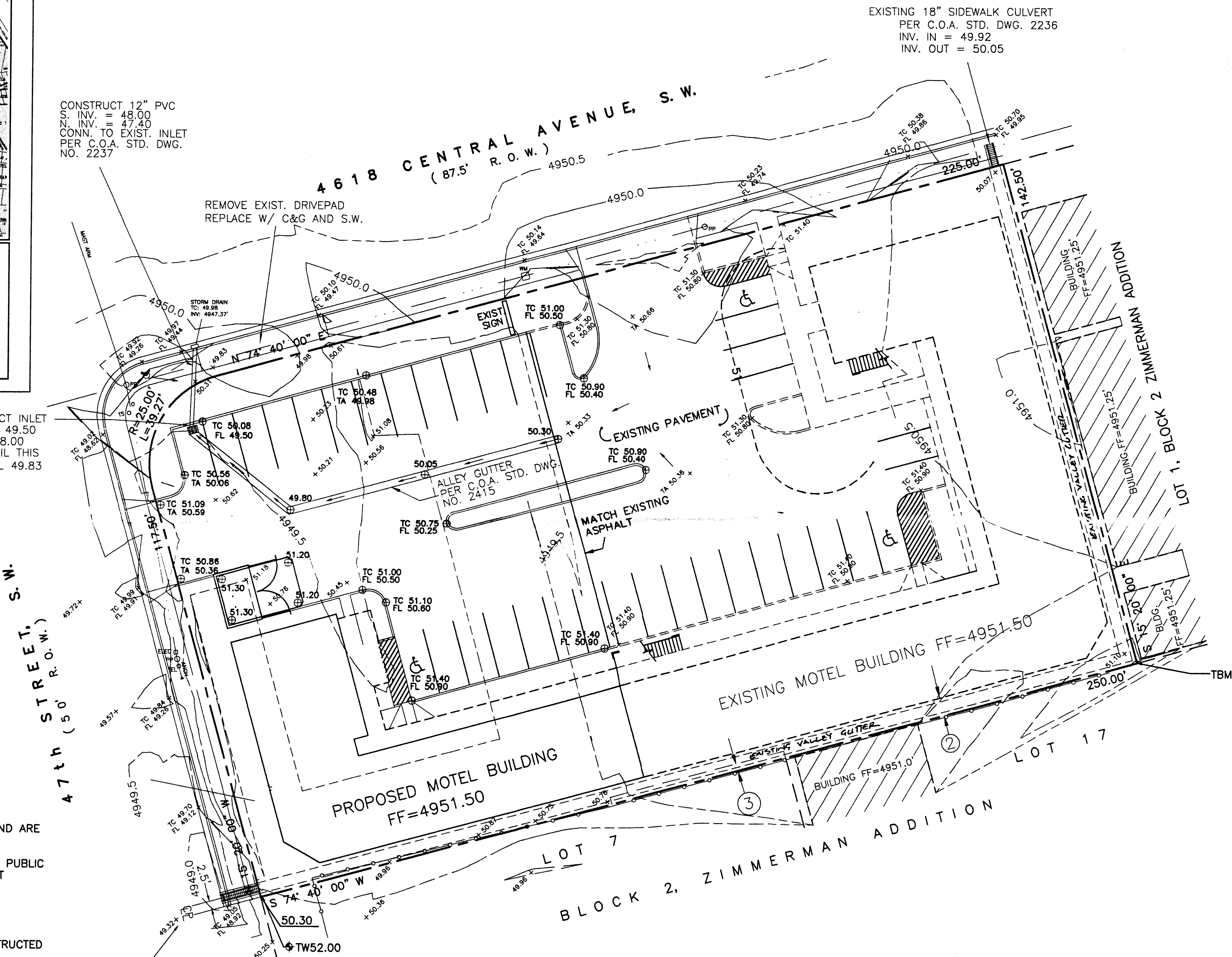
The above described property is located within Zone , Community Panel No. 350002 0329 E, dated November 19, 2003, and is located within a Special Flood Hazard Boundary indicated by FEMA Flood Insurance Rate Maps. Determination of Flood Hazard is by graphic plotting only.

DRAINAGE CONCEPT:

The site is located on the South side of West Central Avenue, at the SE corner of the intersection of 47th Street. The site consists of Phase I of the Sandia Peak Motel, constructed by grading and drainage plan created by Frank Lovelady, dated November 1997. The proposed building site is graded, but undeveloped at this time. The property to the south of the site is currently developed. Central Avenue and 47th Street are paved with curb and gutter. There is a 48" RCP storm drain system in Central Avenue that turns south in 47th Street and continues south approximately 350' and then east another 500' to the Ileta Drain. There is an inlet near the ESE curb return.

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ORIFICE EQUATION FOR ON-SITE INLET: $Q = A(C_v)(\sqrt{2gh})$
 $Q = 13.95 \text{ cfs}/\text{INLET}; A = 113 \text{ sq.in. } (0.7854 \text{ m}^2); C_v = 0.6$
DEPTH OF WATER IN INLET FOR 100-YEAR STORM: 1.08 FEET
Q CAPACITY: 3.93 cfs > 3.2 cfs FOR DIRECTED FLOWS TO PARKING LOT
NO BACKWATER CONDITION



LEGEND

- WV WATER VALVE
- WM WATER METER
- MH SANITARY SEWER MANHOLE
- FH FIRE HYDRANT
- TS TRAFFIC SIGNAL / BOX
- PP POWER POLE
- ANCH ANCHOR
- SPOT ELEVATION UNLESS OTHERWISE INDICATED, SPOT ELEVATIONS ARE TO ASPHALT SURFACE
- EA EDGE OF ASPHALT
- TC TOP OF CURB / CONCRETE
- FL FLOWLINE
- BSW BACK OF SIDEWALK
- CHAIN LINK FENCE
- CONCRETE BLOCK WALL
- OVERHEAD POWER LINE
- FLOW LINE
- TOP OF CONCRETE FLOW LINE
- TOP OF SIDEWALK RIM OF MANHOLE
- EXISTING INDEX CONTOURS @ 5 FT. INTERVALS
- EXISTING CONTOURS @ 1 FT. INTERVALS
- PROPOSED CONTOURS @ 1.0' INTERVALS
- PROPOSED SPOT ELEVATION

ONSITE HYDROLOGY

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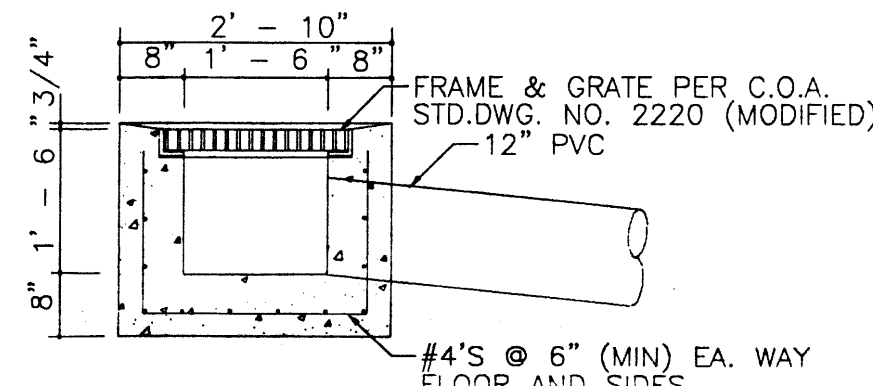
DRAINAGE DATA - SANDIA PEAK MOTEL

THIS SITE LIES WITHIN PRECIPITATION ZONE 1

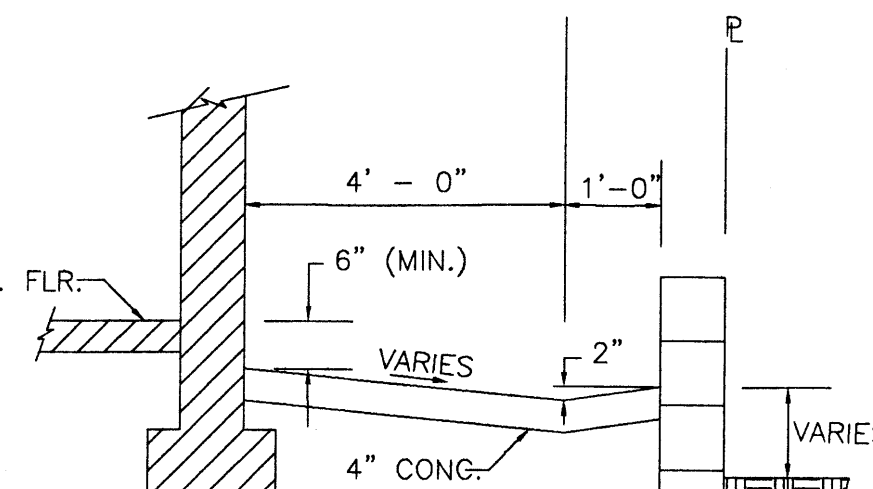
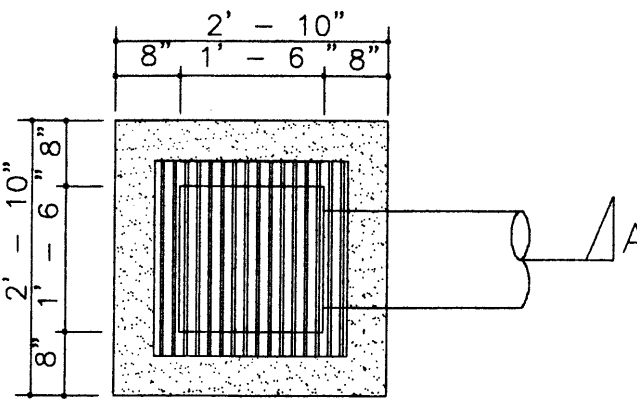
Condition	Return Period Table 4 (Years)	Treatment Type	Area (sq. ft.)	Precip. Table A-8 (in.)	Runoff Table A-9 (cfs/ac)	Volume (cu. ft.)	Rate (cfs)
EXISTING	100	A	0	0.44	1.29	0.0	0.00
		B	0	0.67	2.03	0.0	0.00
		C	21,338	0.99	2.87	1,760.4	1.41
		D	14,225	1.97	4.37	2,335.3	1.43
EXISTING	10	A	0	0.08	0.24	0.0	0.00
		B	0	0.22	0.76	0.0	0.00
		C	21,338	0.44	1.49	782.4	0.73
		D	14,225	1.24	2.89	1,469.9	0.94
DEVELOPED	100	A	0	0.44	1.29	0.0	0.00
		B	6,405	0.67	2.03	357.6	0.30
		C	0	0.99	2.87	0.0	0.00
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		D	29,158	1.24	2.89	3,013.0	1.93
TOTAL (EXT)	100					4,095.7	2.8
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DISCH./VOL	BASIN "A" SOUTH TO VALLEY GUTTER	BASIN "B" EAST TO VALLEY GUTTER	BASIN "C" TO PARKING LOT	TOTALS
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Q10	0.34	0.28	1.43	2.05
V100	839	698	3,607	5,144
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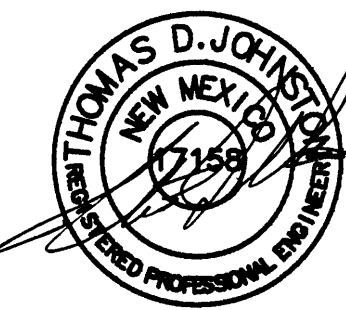
SECTION A - A
1/2" = 1' - 0"



SECTION B - B SWALE BEHIND BUILDING
1/2" = 1' - 0"

I, THOMAS D. JOHNSTON, NEW MEXICO REGISTERED PROFESSIONAL ENGINEER NO. 17158, DO HEREBY CERTIFY THAT I INSPECTED THIS SITE ON DECEMBER 5, 2005, AND THAT, AS OF THAT DATE, THERE HAD BEEN NO RECENT ALTERATION OF GRADE OR EVIDENCE OF GRADING OPERATIONS ON THIS SITE.

THOMAS D. JOHNSTON, NMPE NO. 17158

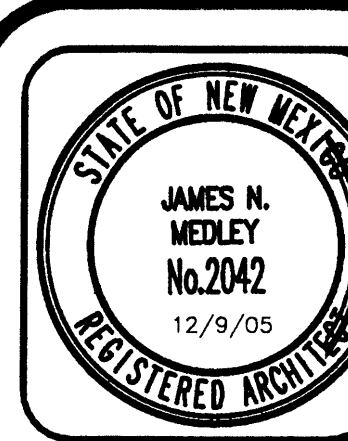


DRAINAGE AND GRADING PLAN
SANDIA PEAK INN

ENGINEERING INC.
330 LOUISIANA BLVD. NE
ALBUQUERQUE, NM 87108

ORIGINAL
APPROVED
PLAN

(505)266-7256
Fax: (505) 255-2887



JTM MEDLEY, Architect AIA
NCEM Certificate No. 26,005
3100 Christine N. E.
Albuquerque, NM 87111
Phone (505) 266-7256

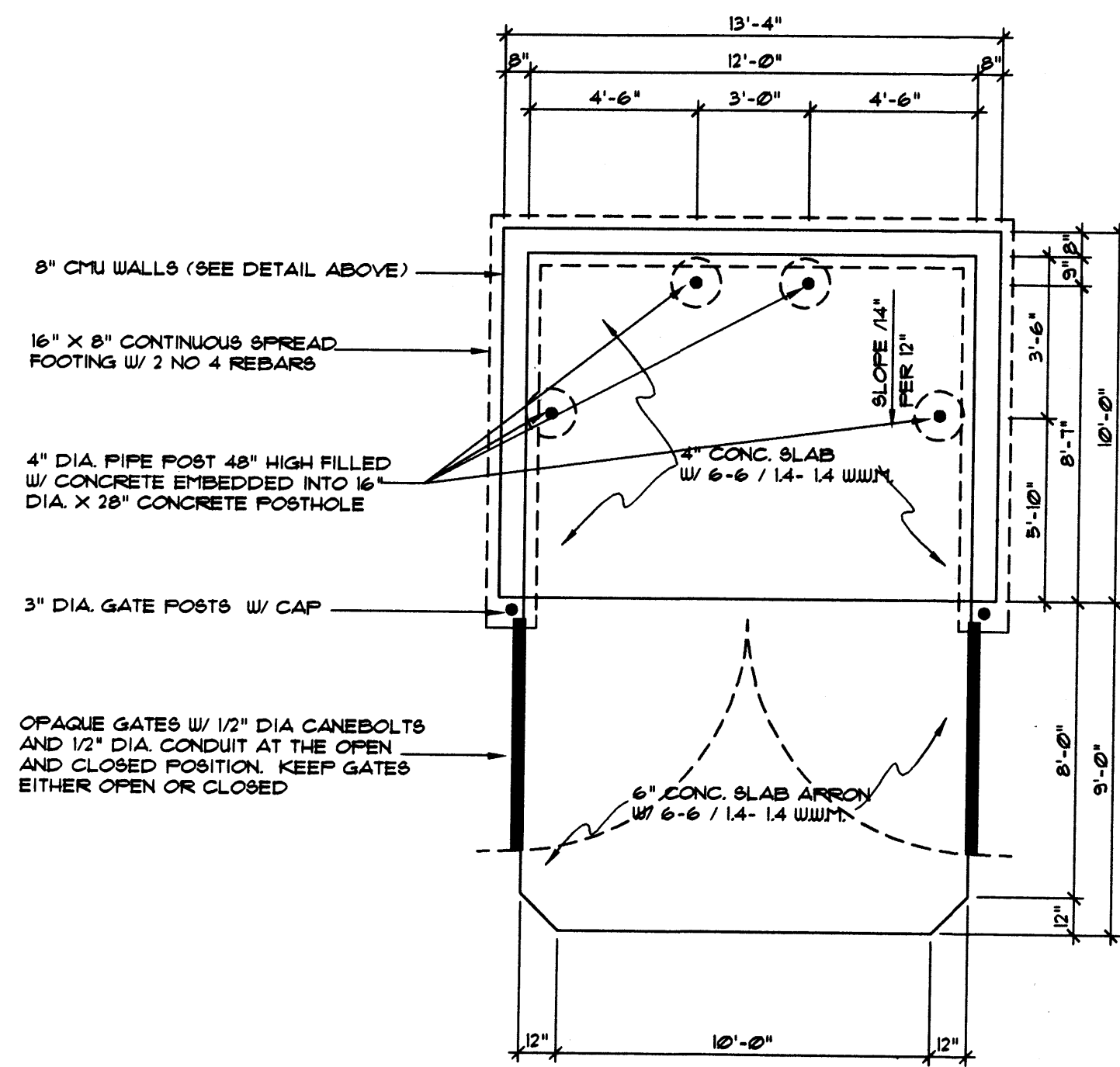
Plan No. 0502/SED25001
Date: December '05
Drawn by: SED
Checked by: JTM

Project: 18 Guestroom Addition
Sandia Peak Motel
Kanak P. and Pratap Yadav
Albuquerque, New Mexico

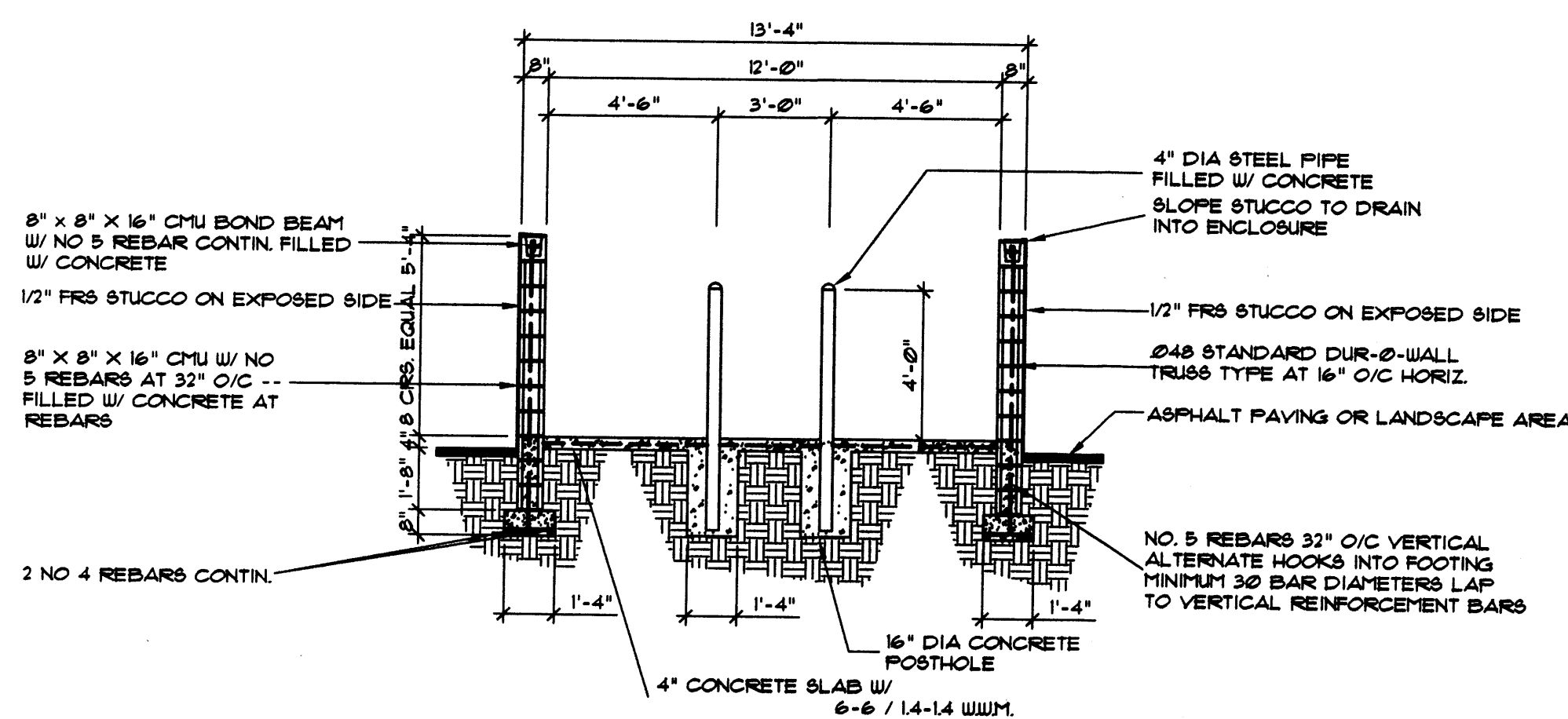
No.	Revision / Issue	Date:

Sheet Description

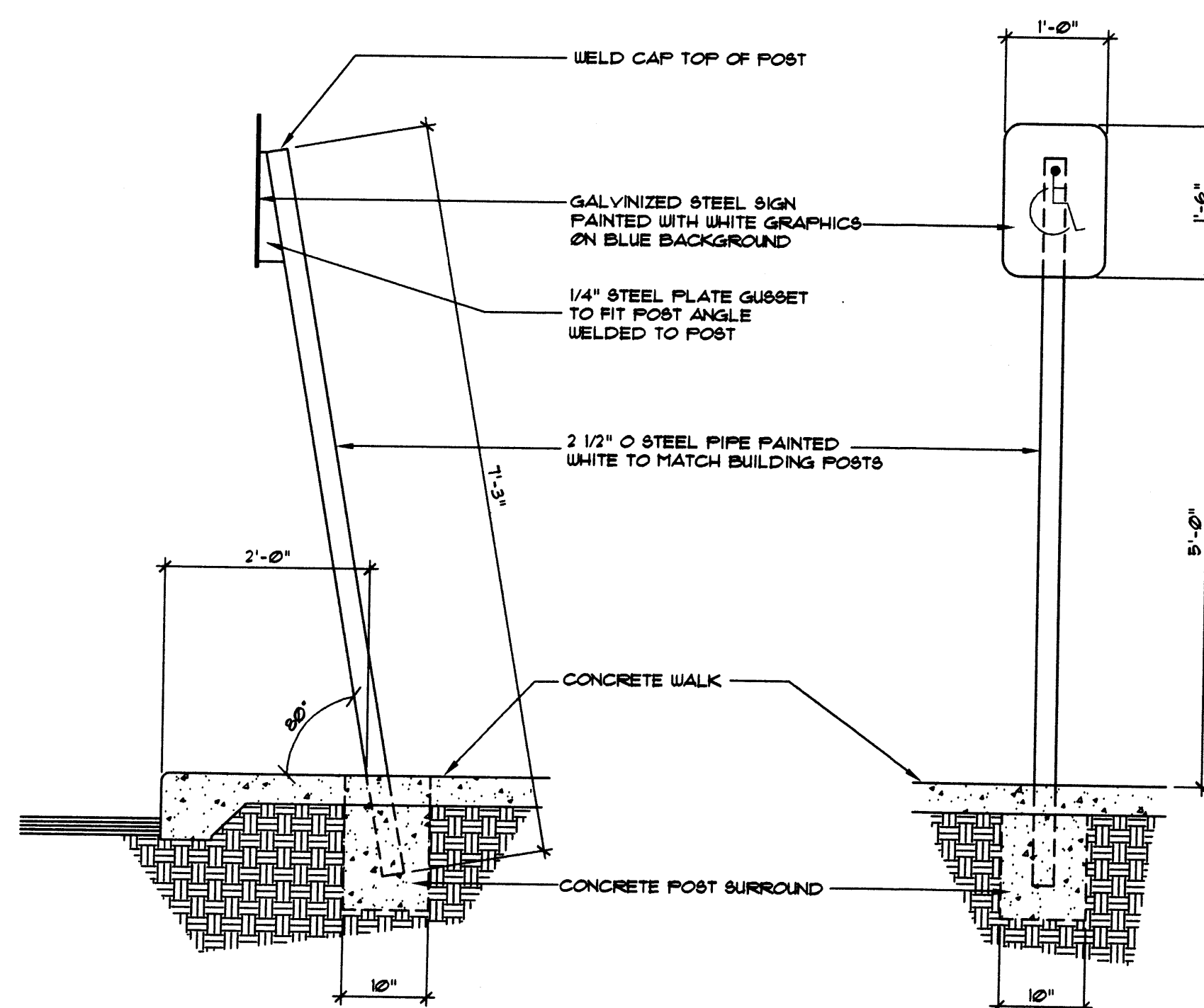
Sheet: C1



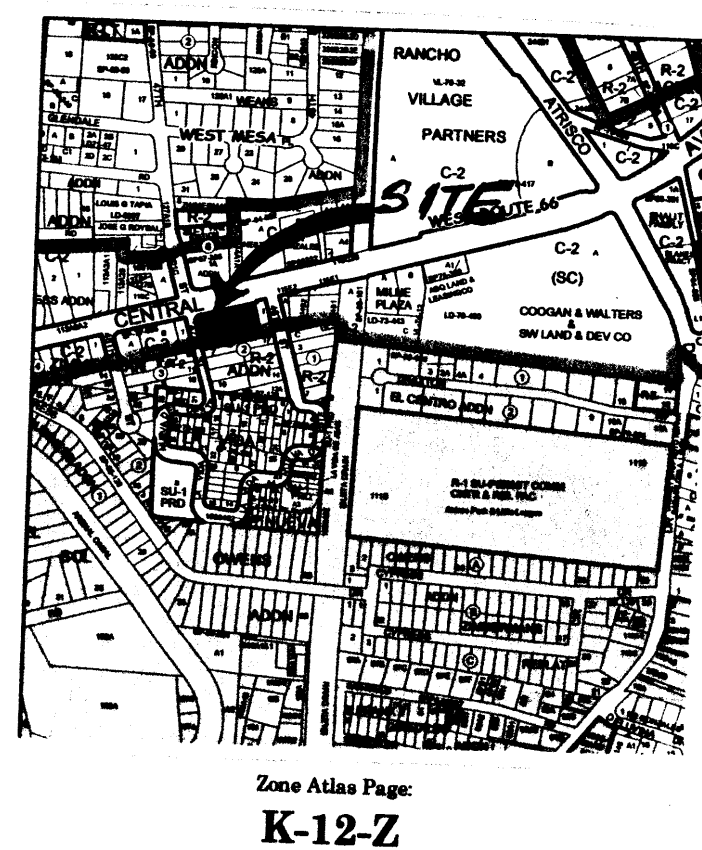
REFUSE ENCLOSURE PLAN
SCALE 1/4" = 1'-0"



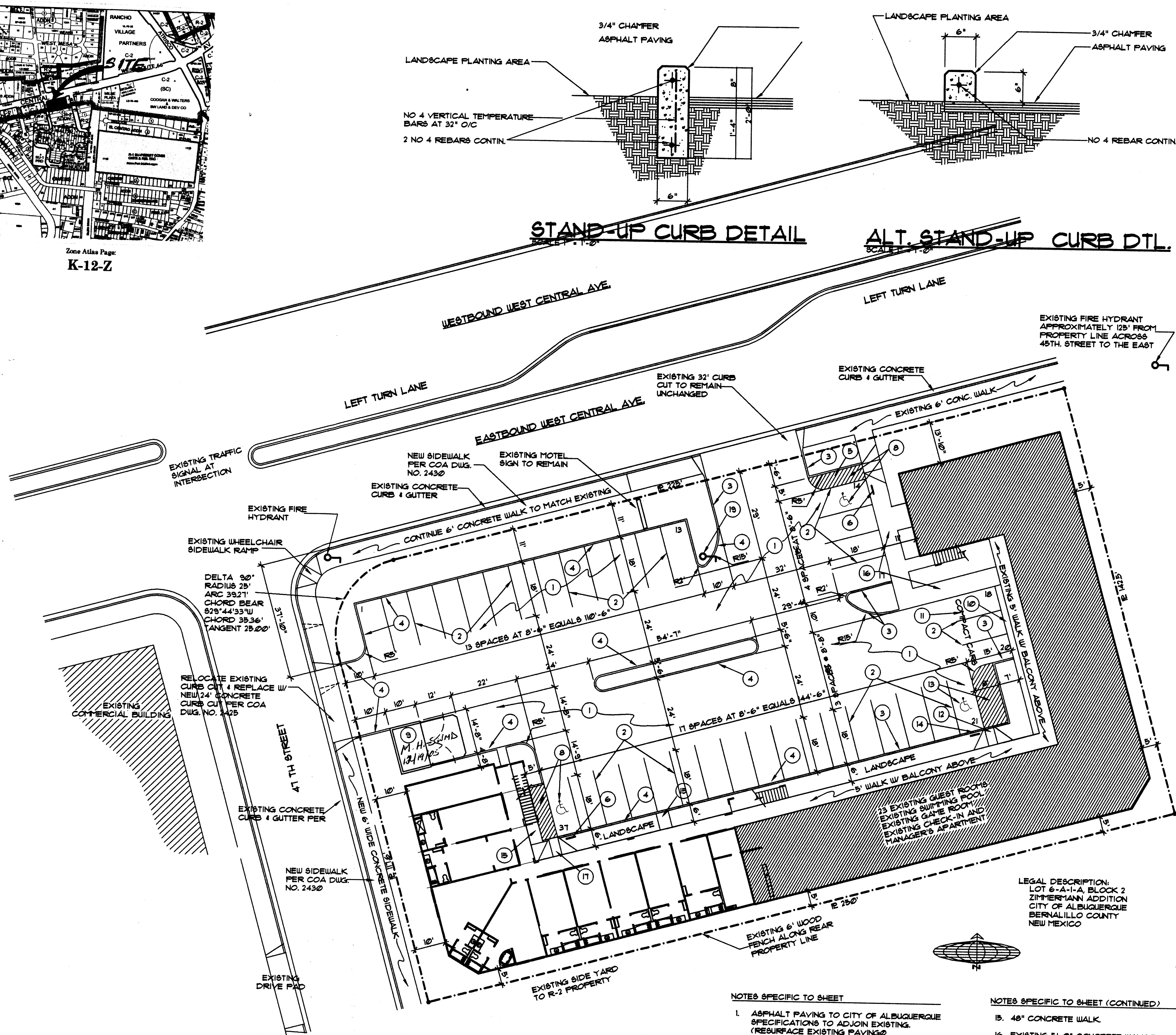
REFUSE ENCLOSURE SECTION
SCALE 1/4" = 1'-0"



HANDICAP PARKING SIGN
SCALE 3/4" = 1'-0"



Zona Atlas Page: K-12-Z



SITE PLAN
SCALE 1/4" = 1'-0"

GENERAL SITE NOTES:

- ENTIRE PARKING LOT SHALL BE RESURFACED AND RESTRIPTED TO CONFIGURATION AS SHOWN.
- 5' WROUGHT IRON FENCE AROUND EXISTING PROPERTY AT BACK OF SIDEWALK TO REMAIN AND BE CONTINUED ALONG CENTRAL AND 41 TH TO MATCH EXISTING.
- EXISTING PROPERTY SIGNAGE TO REMAIN.
- EXISTING HANDICAP RAMP AT FRONT DOORS TO BE REMOVED AND REPLACED WITH NEW RAMP AT NEW HANDICAP ACCESS SPACE TO THE NORTH OF EXISTING PARKING SPACES. REPLACE SIDEWALK TO MATCH EXISTING.

TRAFFIC CIRCULATION LAYOUT
APPROVED

Signed: *[Signature]* Date: 12/19/05

NOTES SPECIFIC TO SHEET

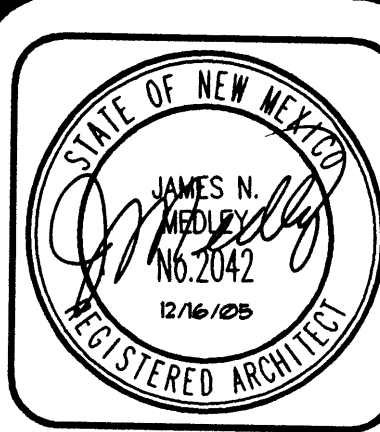
- ASPHALT PAVING TO CITY OF ALBUQUERQUE SPECIFICATIONS TO ADJOIN EXISTING. (RESURFACE EXISTING PAVING)
- 3" WIDE YELLOW OR WHITE STRIPING. (RESTRIPE EXISTING TO LAYOUT AS SHOWN)
- EXISTING 6" STAND-UP CONCRETE CURB.
- NEW 6" STAND-UP CONCRETE CURB. CONNECT AND MATCH EXISTING.
- REMOVE EXISTING CURB AND REPLACE LANDSCAPE WITH 5'-0" ASPHALT PAVED HANDICAP ACCESSIBLE SPACE FOR NEW HANDICAP PARKING SPACE.
- 12" X 16" BLUE AND WHITE HANDICAP PARKING SIGN.
- NEW CURB RAMP TO REPLACE EXISTING AT ENTRANCE DOORS. REFER TO GENERAL NOTES ABOVE.
- BLUE 3" WIDE HANDICAP STRIPING.
- GARBAGE DUMPSTER ENCLOSURE. REFER TO DETAIL AT LEFT.
- EXISTING 24" WIDE CONCRETE CURB TO REMAIN. RESTRIPE PARKING SPACE FOR SMALL CAR PARKING.
- PAINT "COMPACT CARS" ON PAVEMENT.
- EXISTING CURB RAMP TO REMAIN.
- REPAINT EXISTING HANDICAP ACCESS SPACE STRIPING.
- NEW HANDICAP PARKING SIGN WITH "VAN ACCESSIBLE" ATTACHMENT PER DETAIL AT LEFT.

NOTES SPECIFIC TO SHEET (CONTINUED)

- 48" CONCRETE WALK.
- EXISTING 5'-0" CONCRETE WALK TO REMAIN UNCHANGED.
- NEW CURB RAMP. REFER TO PLAN AT LEFT.
- INSTALL NEW FIRE HYDRANT PER CITY OF ALBUQUERQUE REQUIREMENTS AND SPECIFICATION.

PARKING CALCULATIONS	
23 EXISTING GUEST ROOMS	73
18 NEW GUEST ROOMS	18
TOTAL GUEST ROOMS	91
REQUIRED PARKING SPACES	41
LESS 10% FOR BUS	4
REQUIRED SPACES	37
PROVIDED	37
HANDICAP SPACES	3
SMALL CAR SPACES	3

RECEIVED
DEC 19 2005
HYDROLOGY SECTION



JIM MEDLEY, Architect AIA
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3100 Christine N. E. Albuquerque, NM 87111
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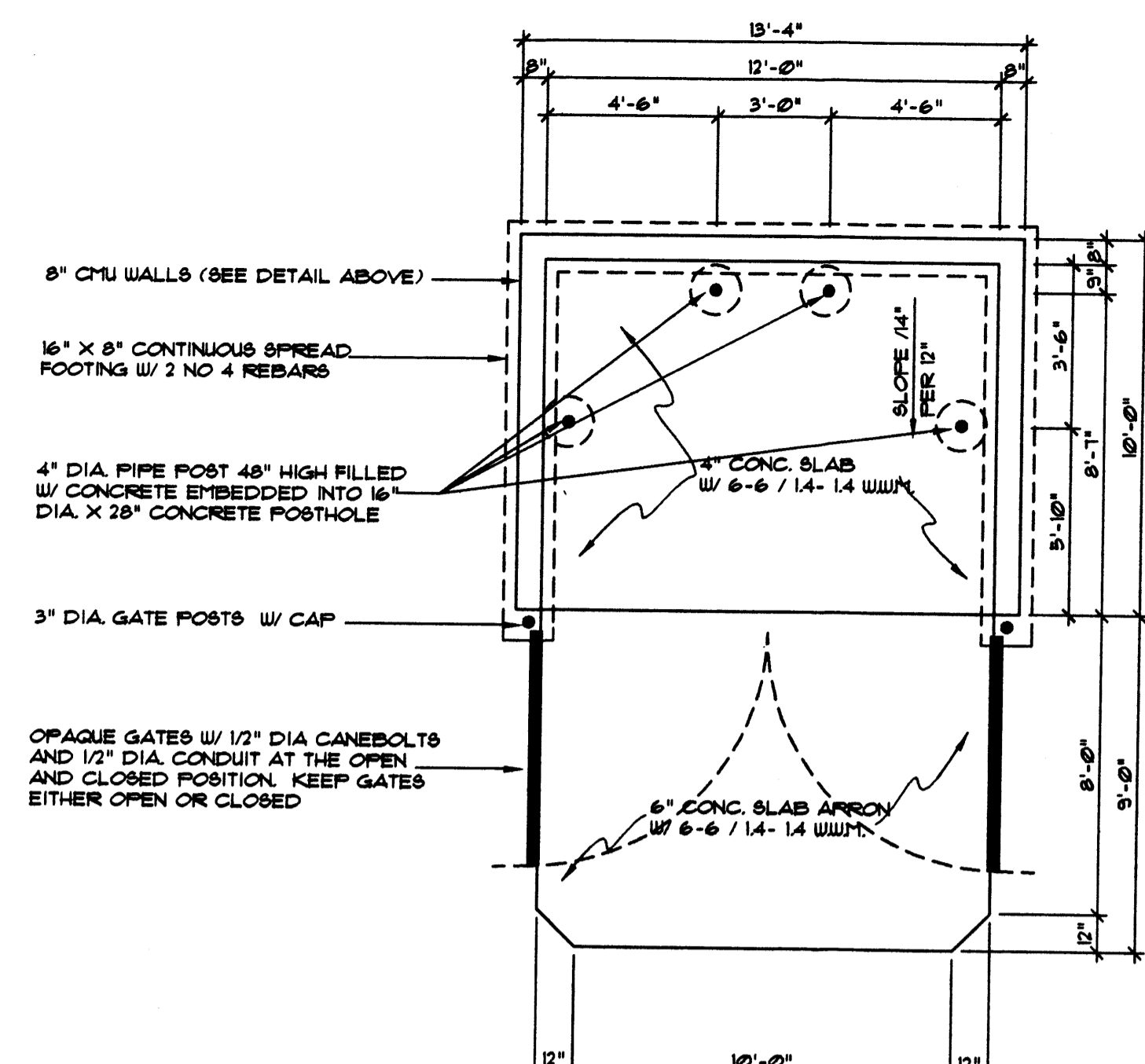
Plan No: 0907/RED/2500
Date: December '05
Drawn by: BED
Checked by: MS

Project: 18 Guestroom Addition
to:
Sandia Peak Motel
Kanak P. and Pratap Yadav
Albuquerque, New Mexico

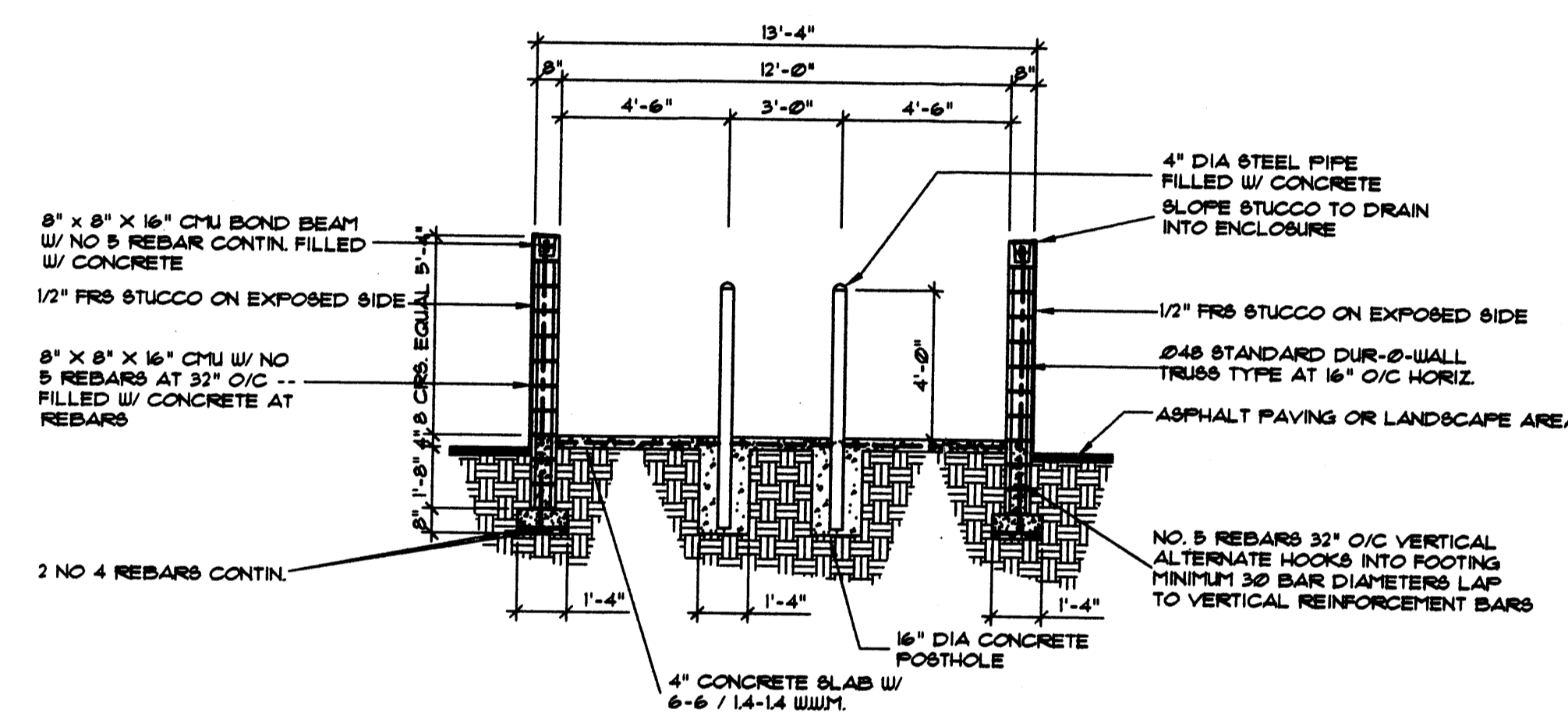
No.	Revision / Issue	Date:

**SITE PLAN AND
SITE ELEMENT DTLS.**

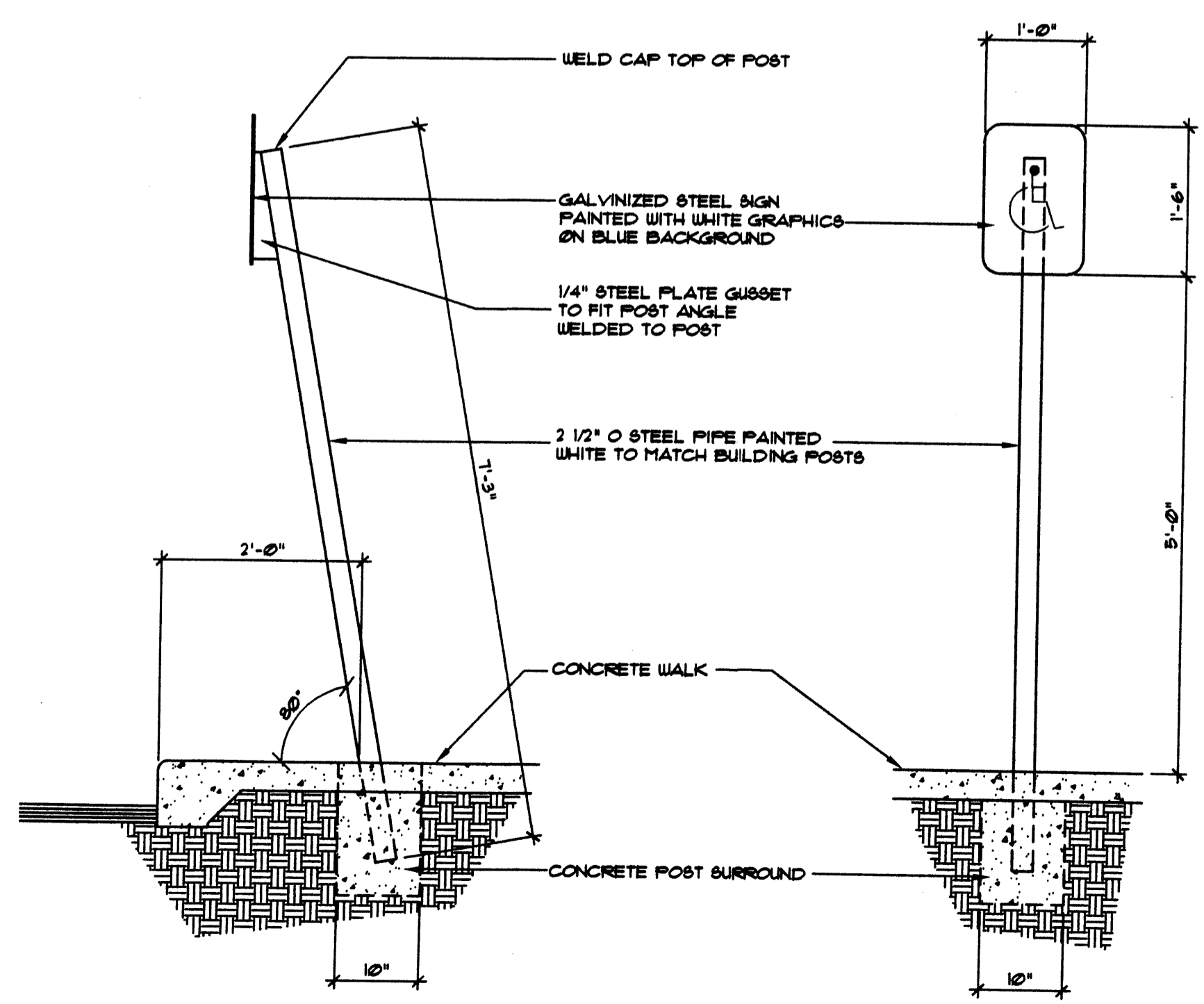
Sheet:
C1.1



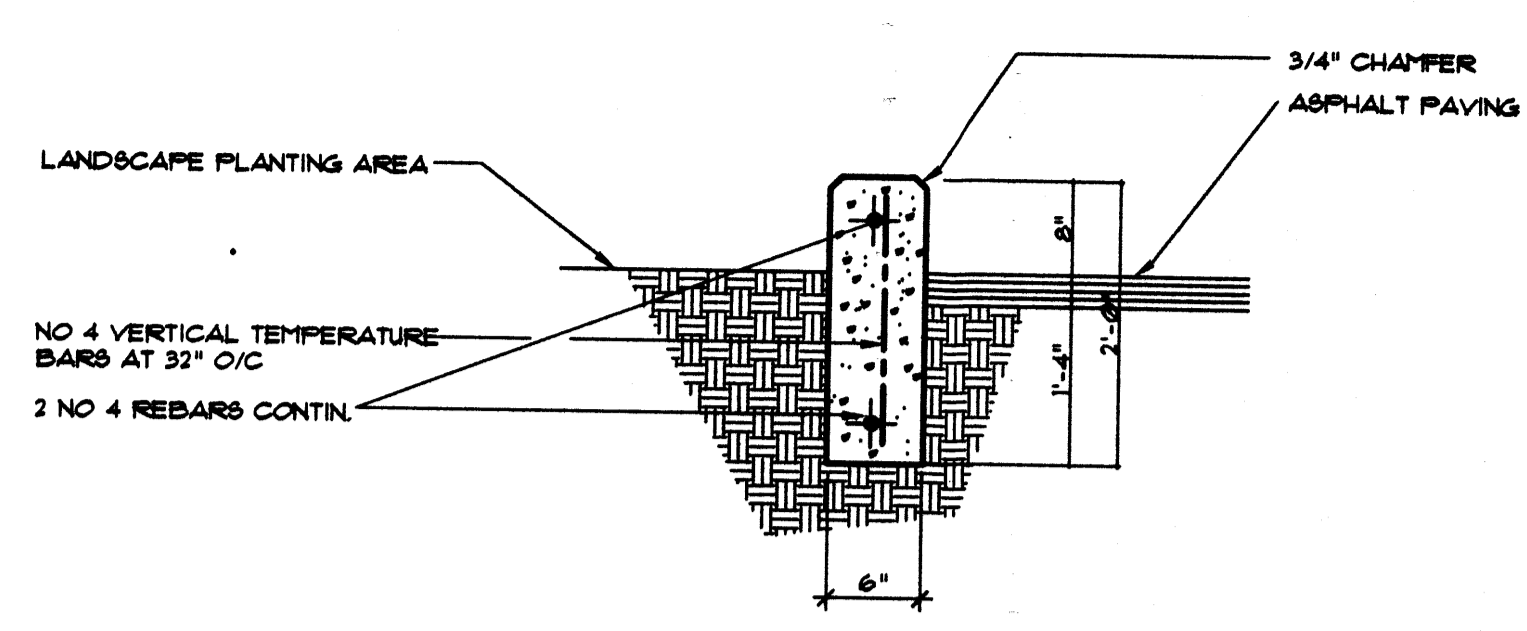
REFUSE ENCLOSURE PLAN
SCALE 1/4" = 1'-0"



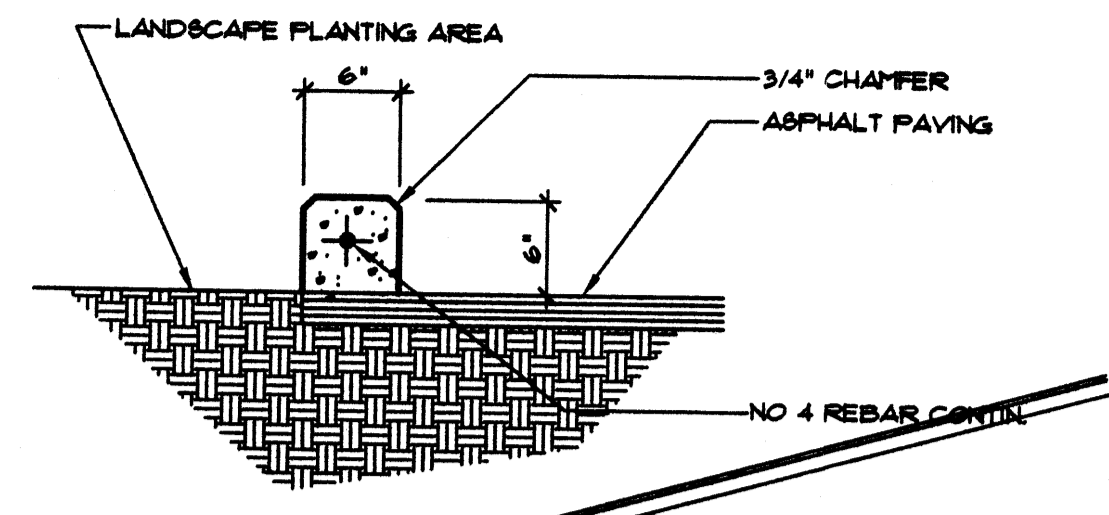
REFUSE ENCLOSURE SECTION
SCALE 1/4" = 1'-0"



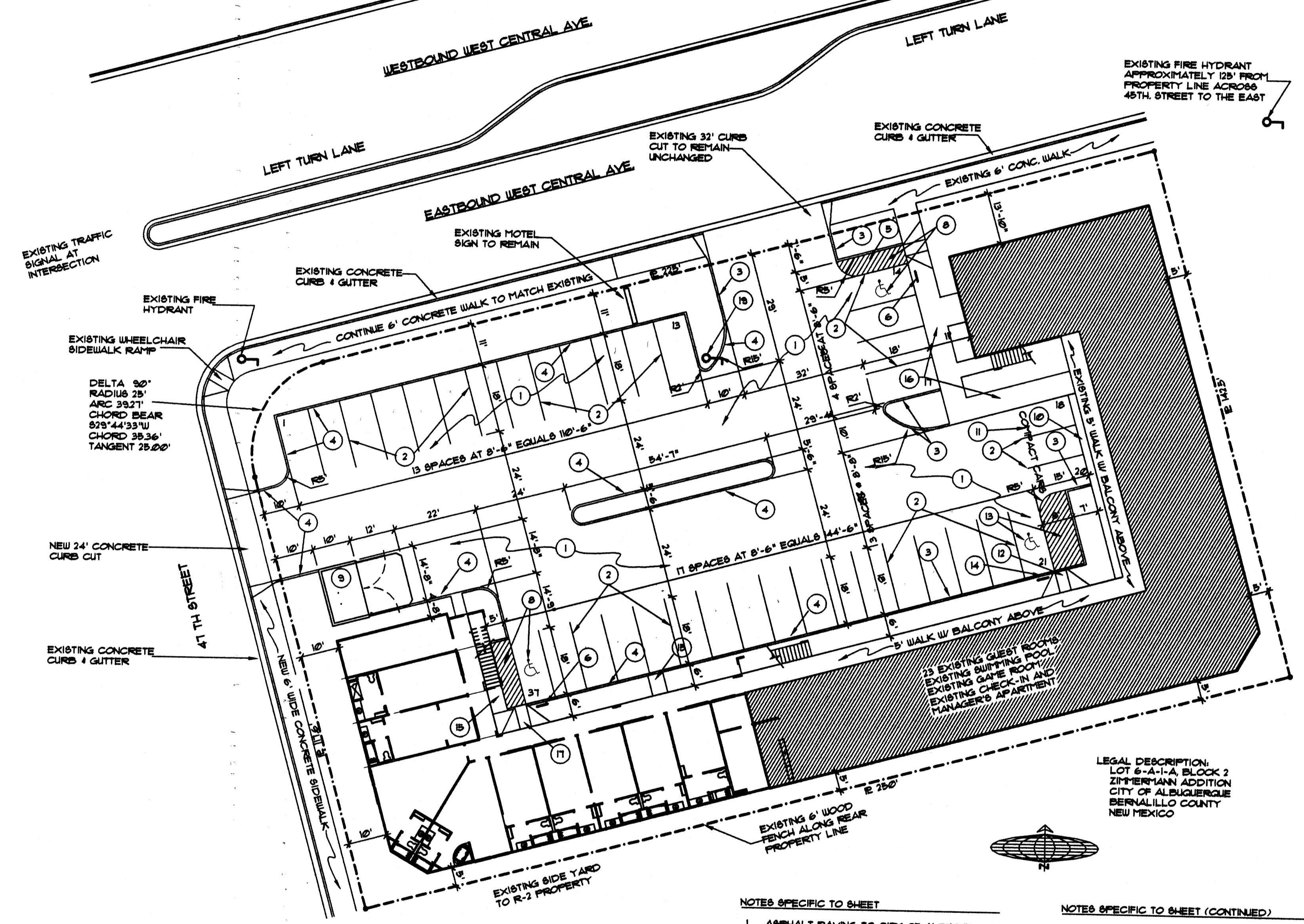
HANDICAP PARKING SIGN
SCALE 3/4" = 1'-0"



STAND-UP CURB DETAIL
SCALE 1" = 1'-0"



ALT. STAND-UP CURB DET.
SCALE 1" = 1'-0"



SITE PLAN
SCALE 1" = 1'-0"

- GENERAL SITE NOTES:**
- ENTIRE PARKING LOT SHALL BE RESURFACED AND RESTRIPTED TO CONFIGURATION AS SHOWN.
 - 5' WROUGHT IRON FENCE AROUND EXISTING PROPERTY AT BACK OF SIDEWALK TO REMAIN AND BE CONTINUED ALONG CENTRAL AND 41 TH TO MATCH EXISTING.
 - EXISTING PROPERTY SIGNAGE TO REMAIN.
 - EXISTING HANDICAP RAMP AT FRONT DOORS TO BE REMOVED AND REPLACED WITH NEW RAMP AT NEW HANDICAP ACCESS SPACE TO THE NORTH OF EXISTING PARKING SPACES. REPLACE SIDEWALK TO MATCH EXISTING.

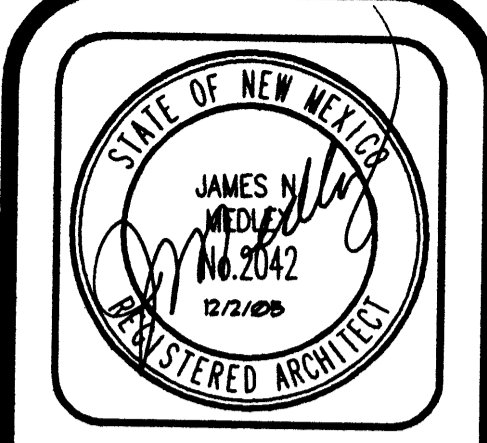
- NOTES SPECIFIC TO SHEET**
- ASPHALT PAVING TO CITY OF ALBUQUERQUE SPECIFICATIONS TO ADJOIN EXISTING. (RESURFACE EXISTING PAVING).
 - 3" WIDE YELLOW OR WHITE STRIPING. (RESTRIPE EXISTING TO LAYOUT AS SHOWN).
 - EXISTING 6" STAND-UP CONCRETE CURB.
 - NEW 6" STAND-UP CONCRETE CURB. CONNECT AND MATCH EXISTING.
 - REMOVE EXISTING CURB AND REPLACE LANDSCAPE WITH 5'-0" ASPHALT PAVED HANDICAP ACCESSIBLE SPACE FOR NEW HANDICAP PARKING SPACE.
 - 12" X 18" BLUE AND WHITE HANDICAP PARKING SIGN.
 - NEW CURB RAMP TO REPLACE EXISTING AT ENTRANCE DOORS. REFER TO GENERAL NOTES ABOVE.
 - BLUE 3" WIDE HANDICAP STRIPING.
 - GARBAGE DUMPSTER ENCLOSURE. REFER TO DETAIL AT LEFT.
 - EXISTING 24" WIDE CONCRETE CURB TO REMAIN. RESTRIPE PARKING SPACE FOR SMALL CAR PARKING.
 - PAINT "COMPACT CAR" ON PAVEMENT.
 - EXISTING CURB RAMP TO REMAIN.
 - REPAINT EXISTING HANDICAP ACCESS SPACE STRIPING.
 - NEW HANDICAP PARKING SIGN WITH "VAN ACCESSIBLE" ATTACHMENT PER DETAIL AT LEFT.

NOTES SPECIFIC TO SHEET (CONTINUED)

- 48" CONCRETE WALK.
- EXISTING 5'-0" CONCRETE WALK TO REMAIN UNCHANGED.
- NEW CURB RAMP. REFER TO PLAN AT LEFT.
- INSTALL NEW FIRE HYDRANT PER CITY OF ALBUQUERQUE REQUIREMENTS AND SPECIFICATION.

PARKING CALCULATIONS

23 EXISTING GUEST ROOMS	23
18 NEW GUEST ROOMS	18
TOTAL GUEST ROOMS	41
REQUIRED PARKING SPACES	41
LESS 10% FOR BUS	4
REQUIRED SPACES	37
PROVIDED	37
HANDICAP SPACES	3
SMALL CAR SPACES	3



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email: jmedley@jim-medley-architect.com

Plan No. 09-07/RED/25-001
Date: December 05
Drawn by: SED
Checked by: RM

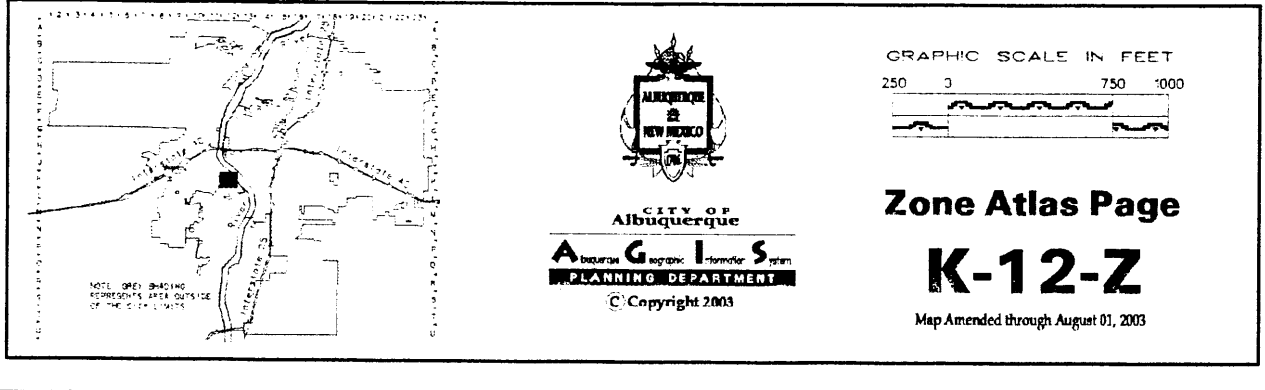
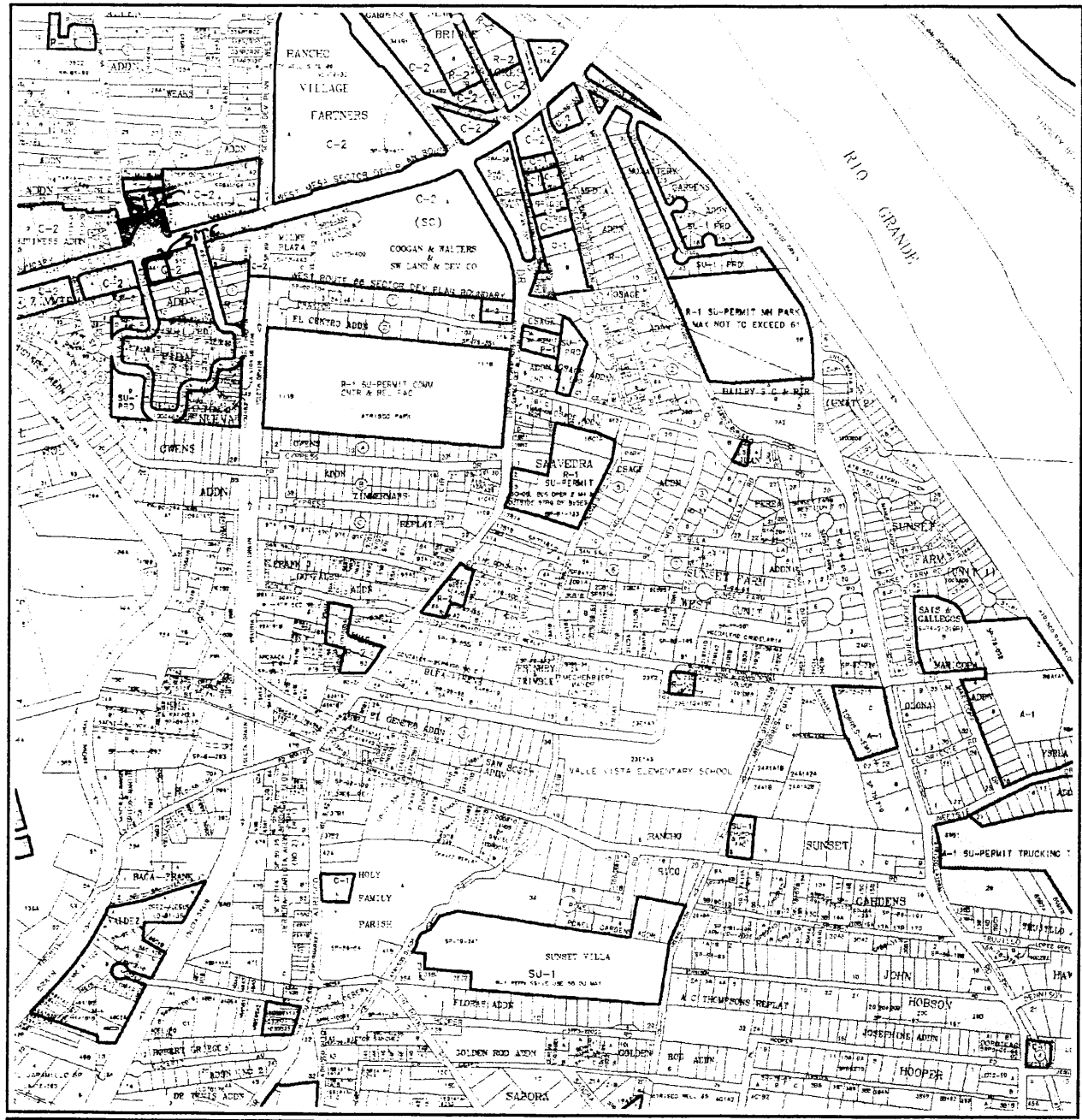
Project: 18 Guestroom Addition
Sandia Peak Motel
Kanak P. and Pratap Yadav
Albuquerque, New Mexico

No.	Revision / Issue	Date:

SITE PLAN AND SITE ELEMENT DTLS.

Sheet: **C1.1**

ICINITY MAP (K-12-Z)



LEGAL DESCRIPTION / FLOOD NOTE

The above described property is located within Zone Panel No. 350002.0329.E, dated November 19, 2003, and is located within a Special Flood Hazard Boundary indicated by FEMA Flood Insurance Rate Maps. Determination of Flood Hazard is by graphic plotting only.

DRAINAGE CONCEPT:

The site is located on the South side of West Central Avenue, at the SE corner of the intersection of 47th Street. The site consists of Phase 1 of the Sandia Peak Motel, constructed by grading and drainage plan created by Frank Lovelady, dated November 1997. The proposed building site is graded, but undeveloped at this time. The property to the south of the site is currently developed. Central Avenue and 47th Street are paved with curb and gutter. There is a 48" RCP storm drain system in Central Avenue that turns south in 47th Street and continues south approximately 350' and then east another 500' to the Isleta Drain. There is an inlet near the ESE curb return. The proposed construction will be the final phase of a motel on the property as shown. All runoff from the front of the motel roof and parking lot will be directed to an inlet in the NW corner of the parking lot. Runoff from the rear portion of the motel roof to the south property line will be directed to a sidewalk culvert on 47th Street. All runoff from the rear portion of the motel roof to the east property line is currently directed to a sidewalk culvert on Central Avenue that was constructed in Phase I. The motel roofs will be hip roofs with drip edges and no gutters and downspouts. Offsite flows are negligible.

ORIFICE EQUATION FOR ON-SITE INLET: $Q = A(C_v)(\sqrt{2gh})$
 $Q = 13.95 \text{ cfs}/\text{INLET}$; $A = 113 \text{ sq.in.}$ (0.7854 sq ft); $C_v = 0.6$
 DEPTH OF WATER IN INLET FOR 100-YEAR STORM: 1.08 FEET
 Q CAPACITY: 3.93 cfs > 3.2 cfs FOR DIRECTED FLOWS TO PARKING LOT
 NO BACKWATER CONDITION

ONSITE HYDROLOGY

ONSITE FLOWS SHALL CONSIST OF THE EXISTING MOTEL BUILDING AND PARKING ALONG WITH THE PROPOSED DEVELOPMENT. CURRENT DEVELOPED CONDITIONS SHALL DIRECT FLOW TO THE EXISTING CONCRETE SWALE TO THE SOUTH AND EAST OF THE EXISTING BUILDING. ALL FLOWS DIRECTED OFF OF THE ROOF TO THE PARKING AREA WILL BE DIRECTED TO THE DROP INLET LOCATED IN THE PARKING LOT. THERE WILL BE NO INCREASE IN FLOWS FROM THE GRADING AND DRAINAGE PLAN PREPARED BY FRANK LOVELADY NOVEMBER 1997.

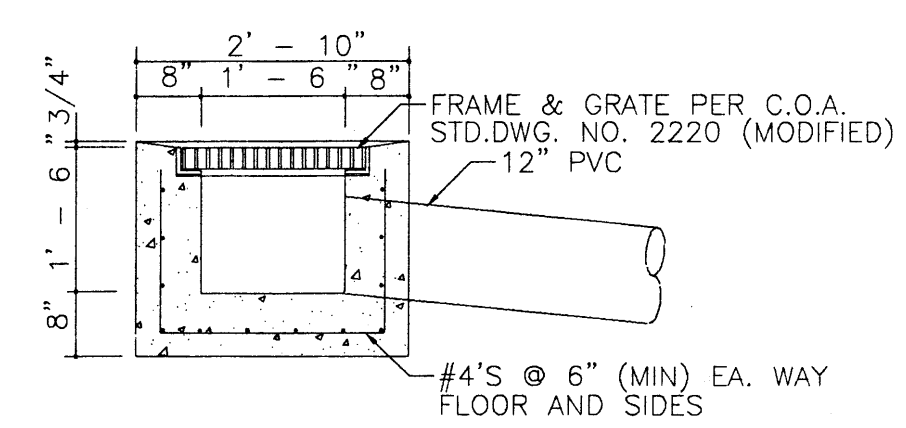
DRAINAGE DATA - SANDIA PEAK MOTEL

THIS SITE LIES WITHIN PRECIPITATION ZONE 1

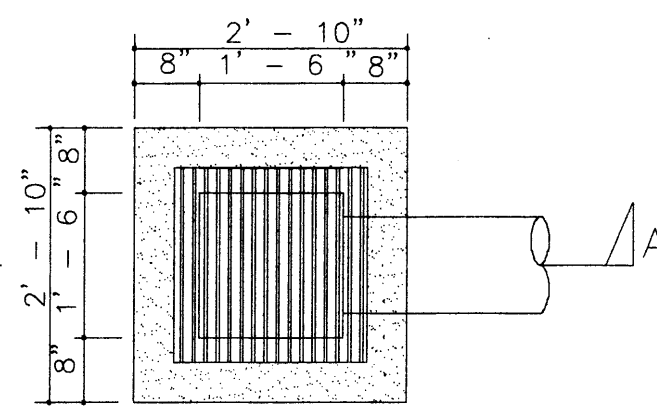
Condition	Return Period Table 4 (Years)	Treatment Type	Area (sq. ft.)	Precip. Table A-8 (in.)	Runoff Table A-9 (cfs/ac)	Volume (cu. ft.)	Rate (cfs)
EXISTING	100	A	0	0.44	1.29	0.0	0.00
		B	0	0.67	2.03	0.0	0.00
		C	21,338	0.99	2.87	1,760.4	1.41
		D	14,225	1.97	4.37	2,335.3	1.43
EXISTING	10	A	0	0.08	0.24	0.0	0.00
		B	0	0.22	0.76	0.0	0.00
		C	21,338	0.44	1.49	782.4	0.73
		D	14,225	1.24	2.89	1,469.9	0.94
DEVELOPED	100	A	0	0.44	1.29	0.0	0.00
		B	6,405	0.67	2.03	357.6	0.30
		C	0	0.99	2.87	0.0	0.00
		D	29,158	1.97	4.37	4,786.8	2.93
DEVELOPED	10	A	0	0.08	0.24	0.0	0.00
		B	6,405	0.22	0.76	117.4	0.11
		C	0	0.44	1.49	0.0	0.00
		D	29,158	1.24	2.89	3,013.0	1.93
TOTAL (EXT)	100					4,095.7	2.8
	10					2,252.3	1.7
TOTAL (DEV)	100					5,144.4	3.2
	10					3,130.4	2.0

FLOW RATE INCREASES (100-YR) = 0.4 CFS
 FLOW RATE INCREASES (10-YR) = 0.4 CFS
 6-HOUR RUNOFF INCREASE (100-YR) = 1,048.7 CU. FT.
 6-HOUR RUNOFF INCREASE (10-YR) = 878.1 CU. FT.

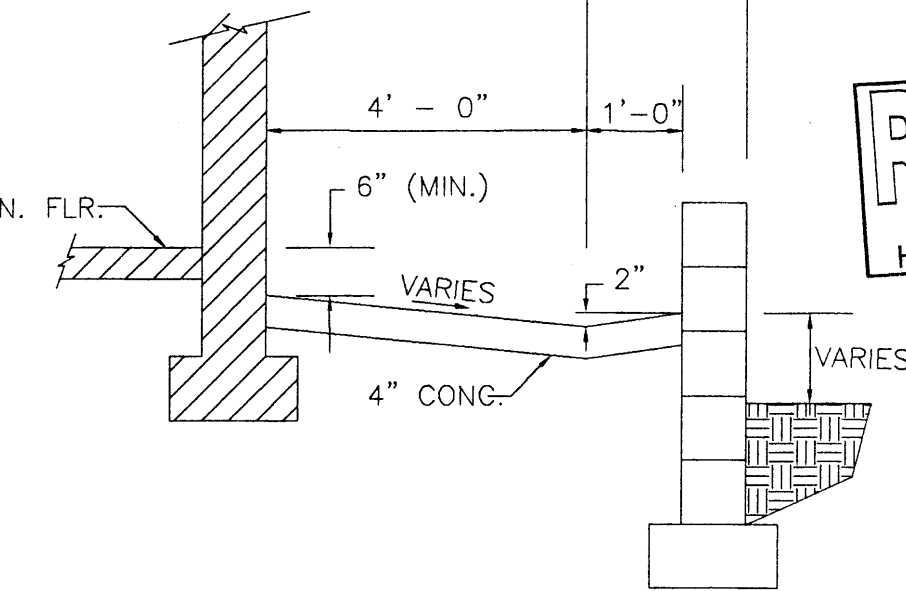
DISCH./VOL	BASIN "A" SOUTH TO VALLEY GUTTER	BASIN "B" EAST TO VALLEY GUTTER	BASIN "C" TO PARKING LOT	TOTALS
Q100	0.51	0.43	2.28	3.22
Q10	0.34	0.28	1.43	2.05
V100	839	698	3,607	5,144
V10	528	439	2,163	3,130



SECTION A - A
1/2" = 1' - 0"



SECTION B - B
1/2" = 1' - 0"



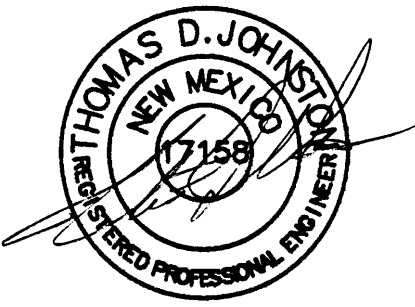
SECTION B - B
1/2" = 1' - 0"

I, THOMAS D. JOHNSTON, NEW MEXICO REGISTERED PROFESSIONAL ENGINEER NO. 17158, DO HEREBY CERTIFY THAT I INSPECTED THIS SITE ON DECEMBER 5, 2005, AND THAT, AS OF THAT DATE, THERE HAD BEEN NO RECENT ALTERATION OF GRADE OR EVIDENCE OF GRADING OPERATIONS ON THIS SITE.

THOMAS D. JOHNSTON, NMPE NO. 17158

DRAINAGE AND GRADING PLAN

SANDIA PEAK INN
TLO ENGINEERING, INC. (505)266-7256
 330 LOUISIANA BLVD. NE
 ALBUQUERQUE, NM 87108
 Fax: (505) 255-2887



12-09-05

- Five foot (5') utility easement located at the rear of Lot.
- Two foot (2') private drainage and irrigation easement located at rear of Lot.

BENCH MARK

BENCH MARK IS ACS STA. "2-K12-B" located at the Southeast corner of Central Avenue, S.W. and Atrisco Boulevard, S.W. ELEV. 4954.92 (NGVD 29)

TBM #4 REBAR AND CAP AT SOUTHEAST CORNER OF SITE; EL. 4950.76

DRAINAGE NOTES:

ALL ELEVATIONS GIVEN ARE TO TOP OF PROPOSED GRADE

NOTICE TO CONTRACTOR

PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ARE TO FINISH SURFACES AND ARE PROVIDED FOR THE PURPOSE OF SHOWING FLOW ROUTING.

CONTRACTOR IS RESPONSIBLE FOR THE ABATEMENT OF SEDIMENT ONTO ADJOINING PUBLIC RIGHTS-OF-WAY DURING CONSTRUCTION AND FOR THE REMOVAL OF ANY SEDIMENT DEPOSITED IN PUBLIC RIGHT-OF-WAY.

CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO ANY GRADING OR CONSTRUCTION.

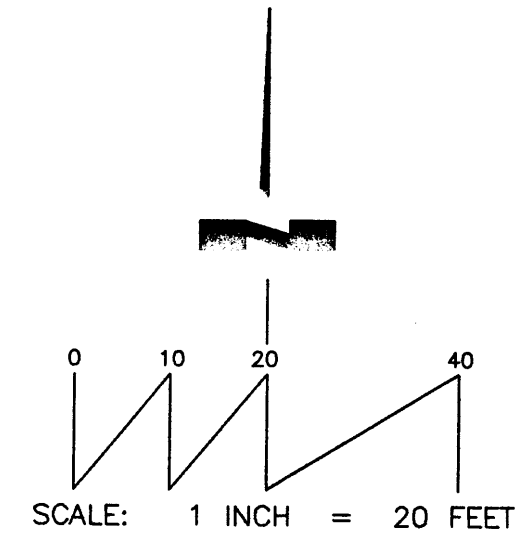
ALL IMPROVEMENTS WITHIN CITY OF ALBUQUERQUE RIGHT OF WAY MUST BE CONSTRUCTED BY CITY OF ALBUQUERQUE WORK ORDER.

NOTICE TO CONTRACTORS

- An excavation/barricade permit will be required before beginning any work within the City of Albuquerque Right-of-way. An approved copy of these plans must be submitted at the time of application for these permits.
- All work detailed on these plans to be done, except as otherwise stated or provided hereon, will be constructed in accordance with "City of Albuquerque Interim Standard Specification for Public Works Construction, 1986", latest revision.
- Two working days prior to any excavation, the contractor must contact Line Locating Service, 260-1990, for location of existing utilities.
- Prior to construction, the contractor will excavate and verify the horizontal and vertical locations of all construction. Should a conflict exist, the contractor will notify the Construction Engineer so that the conflict can be resolved with a minimum amount of delay.
- The contractor will be responsible for performing soil density tests as required by the City of Albuquerque.
- Owner shall be responsible for maintenance of sidewalk culverts and shall ensure proper operation of culverts at all times.

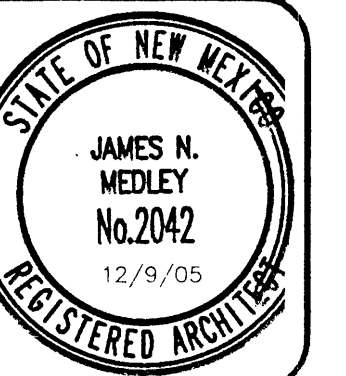
APPROVALS FOR	NAME	DATE	TITLE OF PROJECT
DESIGN: CITY HYDROLOGY			FOR: SANDIA PEAK MOTEL 4618 CENTRAL AVE. SW
CONSTRUCTION: CONSTRUCTION ENGINEER			
ACCEPTANCE: CONSTRUCTION INSPECTOR			PROJECT NO. ZONE SHEET 1 OF 1 K-12

CONST. 18" S.W. CULVERT
 PER C.O.A. STD. DWG. 2236
 INV. IN = 49.05
 INV. OUT = 48.92



LEGEND

- WV WATER VALVE
- WM WATER METER
- SMH SANITARY SEWER MANHOLE
- FH FIRE HYDRANT
- TS TRAFFIC SIGNAL / BOX
- PP POWER POLE
- ANCH ANCHOR
- SPOT ELEVATION UNLESS OTHERWISE INDICATED, SPOT ELEVATIONS ARE TO ASPHALT SURFACE
- EA EDGE OF ASPHALT
- TC TOP OF CURB / CONCRETE
- FL FLOWLINE
- BSW BACK OF SIDEWALK
- CHAIN LINK FENCE
- CONCRETE BLOCK WALL
- OVERHEAD POWER LINE
- TC TOP OF CONCRETE
- FL FLOW LINE
- TSW TOP OF SIDEWALK
- RIM RIM OF MANHOLE
- 4958 EXISTING INDEX CONTOURS @ 5 FT. INTERVALS
- 4958 EXISTING CONTOURS @ 1 FT. INTERVALS
- 56 PROPOSED CONTOURS @ 1.0' INTERVALS
- 58.0 PROPOSED SPOT ELEVATION



JIM MEDLEY, Architect AIA
 N.E.B.B. Certificate No. 35,286
 3100 Christine N. E. Albuquerque, NM 87111
 Phone (505) 262-3232 or (505) 262-5593

Plan No. 0502/SED25001
 Date: December '05
 Drawn by: SED
 Checked by: ...

Project: 18 Guestroom Addition
 Sandia Peak Motel
 Kanak P. and Pratap Yadav
 Albuquerque, New Mexico

No.	Revision / Issue	Date:

Sheet Description

Sheet: C1

(Not to scale)

VICINITY MAP
ZONE ATLAS NO. K - 12 - Z

FIRM MAP
MAP NO. 35001C0329 D

SCALE: 1" = 20'

LEGEND:

- Found Boundary Corner
- Utility Pole
- Overhead Lines
- c CATV Pedestal
- e Electric Pedestal
- t Telephone Pedestal
- g Gas Meter
- en Electric Meter
- wm Water Meter
- W Water Valve
- g Gas Valve
- ⊙ Sanitary Sewer Manhole
- ⊙ Storm Sewer Manhole
- AG New Alley Gutter per CDA Std. Dwg. 2415
- SD Storm Drain Catch Basin
- ⊙ Light Pole
- ✕ Fence
- Arroyo or watercourse
- ⊙ Fire Hydrant
- ◆ Exist. Spot Elevation
- ◆ New Spot Elevation
- 4950.5 EXISTING CONTOUR
- 50 NEW CONTOUR
- FLOW DIRECTION
- ROOF SLOPE

LEGAL DESCRIPTION:

Lot numbered Six-A-2 (6-A-2) in Block numbered Two (2) of the ZIMMERMAN ADDITION to the City of Albuquerque, Bernalillo County, New Mexico, as the same is shown and designated on the Plat thereof, filed in the Office of the County Clerk of Bernalillo County, New Mexico, on May 10, 1996, in Volume 96C, folio 191.

SITE ADDRESS:

4618 Central Avenue, S.W.

FLOOD NOTE:

The above described property is located within Zone X (500 year), Community Panel No. 350002 0329 D, dated 9/20/96, and is not located within a Special Flood Hazard Boundary indicated by FEMA Flood Insurance Rate Maps.

EXISTING CONDITIONS:

The site is located on the South side of West Central Avenue, West of the intersection of 47th Street. The site is replatted Lot 6-A-2, Block 2, Zimmerman Addition, a parcel with 146' frontage on Central Ave. and a depth of 142.5'. The site is presently undeveloped and is considered to be Tractment C since the area has been graded but not recently. Property to the East and West is presently developed. Land to the south is partially developed. Central Avenue is paved with curb and gutter. There is a 48" dia. RCP storm drain system in Central Avenue that turns South in 47th Street and continues south approximately 350' and then east another 500' to the Isleta Drain. There is an inlet near the ESE curb return. The Firm Map for the site shows that the site does not lie within or adjacent to a 100-year Flood hazard area (Flood zone). There have been two previous hydrology submittals for this site. The original hydrology submittal was for a site that extended to 47th Street and proposed to replace the existing hotel. The second submittal proposed leaving the old hotel and constructing a new one on the undeveloped portion of the site. A replat of the previous site has been completed which divides the original site into two lots. The old hotel is no longer a part of the site.

PROPOSED CONDITIONS:

All runoff from the front of the hotel and parking lot will be routed to a sidewalk culvert near the NW corner of the new parking lot. The rear portion of the hotel roof will flow from a high point at the rear of the hotel both ways to the two sidewalk culverts, the second near the NE corner of the property. The hotel roof will be a hip roof with drip edges and no gutters and downspouts. Concrete channels and alley gutter is proposed where grades are less than one percent.

DRAINAGE CRITERIA:

The calculations shown on this plan were prepared in accordance with Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority, January, 1993.

TOPOGRAPHIC SURVEY NOTES (INCLUDING BENCH MARK):

- Bearings based upon ACS Brass Cap "2-K12-B" located at the Southeast corner of Central Avenue, S.W. and Alvarado Boulevard, S.W. Brass Cap has a spirit level elevation of 4954.92 Feet, Mean Sea Level.
- There is a Five foot (5') utility easement located at the rear of Lot 2-A as indicated on drawing.
- There is a Two foot (2') private drainage and irrigation easement located at the rear of the property as shown on drawing.
- Curve Data: C1 Rad = 25.00', Delta = 90', Len = 39.27'

SEC. C-C CONCRETE CHANNEL

1/2" = 1'-0"

SECTION A-A SWALE AT PATIO

1/2" = 1'-0"

SECTION B-B SWALE BEHIND BUILDING

1/2" = 1'-0"

PRECIPITATION ZONE:

The site is west of the Rio Grande River and is, therefore, in Precipitation Zone 1.

LAND TREATMENT AREAS, EXCESS PRECIPITATION AND UNIT PEAK DISCHARGE:

The peak discharge per acre and excess precipitation are shown for the four land treatments in Zone 2 in the table below, and the values shown are from the City of Albuquerque D.P.M. Also shown are the existing and proposed land treatment areas.

LAND TREATMENT	100-yr. 10-yr.	100-yr. 10-yr.	Existing Site Areas	Developed Site Areas
	100-yr. 10-yr.	100-yr. 10-yr.	% Sq. Ft. Acres	% Sq. Ft. Acres
A	1.29 0.24	0.44 0.08	0.0	0.0000
B	2.03 0.76	0.67 0.22	0.0	0.0000
C	2.87 1.49	0.99 0.44	100.0	20,805 0.4776
D	4.37 2.89	1.97 1.24	0.0	0.0000
Totals			100.0	20,805 0.4776

PEAK DISCHARGE:

EXISTING CONDITIONS:
Q100 = 0.4776 x 2.87 = 1.37 cfs Q10 = 0.4776 x 1.49 = 0.71 cfs

DEVELOPED CONDITIONS:
Q100 = 0.0713 x 2.03 + 0.4063 x 4.37 = 1.92 cfs
Q10 = 0.0713 x 0.76 + 0.4063 x 2.89 = 1.23 cfs

VOLUME, 100-YEAR, 6-HOUR:

EXISTING CONDITIONS:
V100 = (20,805 x 0.99) / 12 = 1,716 cf
V10 = (20,805 x 0.44) / 12 = 763 cf

DEVELOPED CONDITIONS:
V100 = (3,107 x 0.67 + 17,698 x 1.97) / 12 = 3,079 cf
V10 = (3,107 x 0.22 + 17,698 x 1.24) / 12 = 1,886 cf

SUMMARY OF ON-SITE VOLUMES AND PEAK DISCHARGE RATES:

	V100(CF)	V10(CF)	Q100(CFS)	Q10(CFS)
DEVELOPED	3,079	1,886	1.92	1.23
EXISTING	1,716	763	1.37	0.71
INCREASE	1,363	1,123	0.55	0.52

PEAK DISCHARGE RATES AND VOLUMES BY ON-SITE BASINS:

BASIN "A" - E. & S. ROOF SLOPE. AREA = 4,856 SF (0.1115 AC.). AREA TREAT. D = 4,154 SF (0.0954 AC.). Q100 = 0.0161 x 2.03 + 0.0954 x 4.37 = 0.45 CFS Q10 = 0.0161 x 0.76 + 0.0954 x 2.89 = 0.29 CFS V100 = (702 x 0.67 + 4,154 x 1.97) / 12 = 721 CF V10 = (702 x 0.22 + 4,154 x 1.24) / 12 = 442 CF
BASIN "B" - N. ROOF SLOPE, PARKING LOT, ETC. AREA = 15,949 SF (0.3661 AC.). AREA TREAT. B = 2,405 SF (0.0552 AC.) AREA TREAT. D = 13,544 SF (0.3109 AC.). Q100 = 0.0552 x 2.03 + 0.3109 x 4.37 = 1.47 CFS Q10 = 0.0552 x 0.76 + 0.3109 x 2.89 = 0.94 CFS V100 = (2,405 x 0.67 + 13,544 x 1.97) / 12 = 2,358 CF V10 = (2,405 x 0.22 + 13,544 x 1.24) / 12 = 1,444 CF

SUMMARY:

DISCH./VOL.	BASIN "A"	BASIN "B"	TOTALS
Q100	0.45	1.47	1.92
Q10	0.29	0.94	1.23
V100	721	2,358	3,079
V10	442	1,444	1,886

DISCHARGE PIPE ON EAST SIDE OF BLDG.

USE ORIFICE EQUATION: $Q = C_d A \sqrt{2gh}$ A = 0.1963 SF, C = 0.6
H = 1.0 - 0.5 = 0.5
Q = 0.6 x 0.1963 (2 x 32.2 x 0.5)^{1/2} = 0.66 CFS > 0.44 CFS (OK)

ANALYSIS OF DOWNSTREAM CONDITIONS:

The 48" storm drain in 47th Street is part of a system that extends at least as far as North Coors Blvd. Without doing an analysis of the system, it is clear that the time to peak in the system adjacent to the site is considerably longer than the time to peak for the site itself. Therefore, runoff from the site will be safely in the 47th Street drain before the storm drain reaches its peak flow. The site is an infill site and the increase in peak discharge resulting from development is very small, only 0.55 cfs. Therefore, unrestricted discharge is warranted.

OFF-SITE FLOW:

The roof of the existing hotel to the west drains via canals on the east side of the building and, thus, enters this site. This flow is accepted and will drain through the S.W. culvert. Area, Treat B = 715 sf (0.0097 AC) Area, Treat, D = 3000 sf (0.0689 AC) Q100 = 0.0097 x 2.03 + 0.0689 x 4.37 = 0.32 CFS Q10 = 0.0097 x 0.76 + 0.0689 x 2.89 = 0.21 CFS V100 = (715 x 0.67 + 3,000 x 1.97) / 12 = 532 CF V10 = (715 x 0.22 + 3,000 x 1.24) / 12 = 323 CF

CITY OF ALBUQUERQUE
DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY (S.O. 19)
NOTICE TO CONTRACTORS

- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
- ALL WORK DETAILED ON THIS PLAN TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, INC., 260-1990, FOR LOCATION FOR EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE FOR 47TH STREET AND ARTERIAL STREET USE ON CENTRAL AVENUE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- THE ADDRESS OF THE PROPERTY SERVED IS 4614 CENTRAL AVENUE, S.W.

APPROVALS:		
HYDROLOGY	NAME	DATE
INSPECTOR	NAME	DATE
CONSTRUCTION	NAME	DATE

KEYED NOTES:

- EXISTING STANDARD CURB AND GUTTER
- NEW DRIVEWAY PER C.O.A. STD. DWG. 2426.
- NEW ASPHALT PAVEMENT
- NEW 6" CONCRETE CURB
- NEW ALLEY GUTTER PER C.O.A. STD. DWG. 2415
- 3" PVC PIPE THRU CURB, MAX. 10' O.C.
- NEW LANDSCAPING

DRAINAGE CERT W/ VERIFICATION BY ENGINEER OF RECORD
12/28/01

DRAINAGE CERTIFICATION

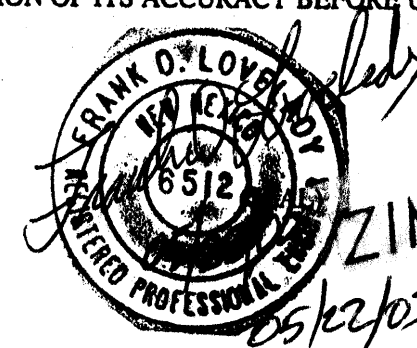
I, Frank D. Lovelady, NMPE, OF THE FIRM, FRANK D. LOVELADY, P.E., HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 8/18/99 THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR

(DESCRIBE ANY EXCEPTIONS AND/OR QUALIFICATIONS HERE IN A SEPARATE PARAGRAPH)

(DESCRIBE ANY DEFICIENCIES AND/OR REQUIRED CORRECTIONS HERE IN A SEPARATE PARAGRAPH)

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 BEFORE USING IT FOR ANY OTHER PURPOSE.

Frank D. Lovelady 6512
NMPE
DATE 05/22/03



LOT 7
ZIMMERMAN ADDITION, FILED 1/30/1937
BLOCK 2
VOL. C, FOLIO 48

EROSION CONTROL REQUIREMENTS:

- The Contractor shall be responsible for compliance with the following:
- No sediment-bearing water shall be allowed to discharge from the site during construction.
 - During grading operations and until the project has been completed, all adjacent property rights-of-way, and easements shall be protected from flooding by runoff from the site.
 - Should the contractor fail to prevent sediment-bearing water from entering public right-of-way, he shall promptly remove from the public right-of-way any and all sediment originating from the site.
 - Control of sediment-bearing waters will be accomplished by use of a compacted earth berm of adequate height. The berm shall be located along the downstream perimeter of the property.

RECEIVED
OCT 26 2001
HYDROLOGY SECTION

(Not to scale)

VICINITY MAP

ZONE ATLAS NO. K - 12 - Z

FIRM MAP

MAP NO. 35001C0329 D

SCALE: 1" = 20'

LEGEND:

- Found Boundary Corner
- PP Utility Pole
- Overhead Lines
- c CATV Pedestal
- e Electric Pedestal
- t Telephone Pedestal
- g Gas Meter
- en Electric Meter
- wm Water Meter
- W Water Valve
- g Gas Valve
- Ⓢ Sanitary Sewer Manhole
- Ⓜ Storm Sewer Manhole
- AG New Alley Gutter per COA Std. Dwg. 2415
- Storm Drain Catch Basin
- ⊙ Light Pole
- ✕ Fence
- Arroyo or watercourse
- ⊕ Fire Hydrant
- ⊕ Exist. Spot Elevation
- ⊕ New Spot Elevation
- EXISTING CONTOUR
- NEW CONTOUR
- FLOW DIRECTION
- ↘ ROOF SLOPE

LEGAL DESCRIPTION:

Lot numbered Six-A-2 (6-A-2) in Block numbered Two (2) of the ZIMMERMAN ADDITION to the City of Albuquerque, Bernalillo County, New Mexico, as the same is shown and designated on the Plat thereof, Filed in the Office of the County Clerk of Bernalillo County, New Mexico, on May 10, 1996, in Volume 96C, Folio 191.

SITE ADDRESS:

4618 Central Avenue, S.W.

FLOOD NOTE:

The above described property is located within Zone X (500 year), Community Panel No. 350002 0329 D, dated 9/20/96, and is not located within a Special Flood Hazard Boundary indicated by FEMA Flood Insurance Rate Maps.

CONSTRUCT 18" SIDEWALK CULVERT
PER C.O.A. STD. DWG. 2236
INV. OUT = 49.92 49.55
INV. IN = 50.05 50.15

CONSTRUCT 24" SIDEWALK CULVERT
PER C.O.A. STD. DWG. 2236
INV. IN = 49.72 49.10
INV. OUT = 49.62 48.89

CENTRAL AVENUE, S.W. (8750' RIGHT-OF-WAY)

LOT 6-A-1

LOT 6-A-2

LOT 7

LOT 17

LOT 48

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

LOT 130/1937

KEY NOTES:

- EXISTING STANDARD CURB AND GUTTER
- NEW DRIVEWAY PER C.O.A. STD. DWG. 2426.
- NEW ASPHALT PAVEMENT
- NEW 6" CONCRETE CURB
- NEW ALLEY GUTTER PER C.O.A. STD. DWG. 2415
- 3" PVC PIPE THRU CURB, MAX. 10' O.C.
- NEW LANDSCAPING

ENGINEER'S CERTIFICATION:

HAVING FIELD-INSPECTED THE SITE AND HAVING TAKEN SPOT ELEVATIONS AT CRITICAL LOCATIONS INCLUDING THE FINISH FLOOR ELEVATION, I HEREBY CERTIFY THAT THE AS-CONSTRUCTED FACILITY IS IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN WITH ENGINEER'S STAMP DATED 8/18/99.

Frank D. Lovelady, P.E.



The above certification was prepared with the understanding that the sidewalk culverts would be replaced by the contractor. The owner is having the contractor replace the full curb and gutter as required.

LOT 7
ZIMMERMAN ADDITION, FILED 1/30/1937

BLOCK 2
FILED 1/30/1937

LOT 130/1937

LOT 130/1937

EXISTING CONDITIONS:

The site is located on the South side of West Central Avenue, West of the intersection of 47th Street. The site is replatted Lot 6-A-2, Block 2, Zimmerman Addition, a parcel with 146' frontage on Central Ave. and a depth of 142.5'. The site is presently undeveloped and is considered to be Treatment C since the area has been graded but not recently. Property to the East and West is presently developed. Land to the south is partially developed. Central Avenue is paved with curb and gutter. There is a 48" dia.

RCP storm drain system in Central Avenue that turns South in 47th Street and continues south approximately 350' and then east another 500' to the Isleta Drain. There is an inlet near the ESE curb return. The Firm Map for the site shows that the site does not lie within or adjacent to a 100-year flood hazard area (Flood zone). There have been two previous hydrology submittals for this site. The original hydrology submittal was for a site that extended to 47th Street and proposed to replace the existing motel. The second submittal proposed leaving the old motel and constructing a new one on the undeveloped portion of the site. A replat of the previous site has been completed which divides the original site into two lots. The old motel is no longer a part of the site.

PROPOSED CONDITIONS:

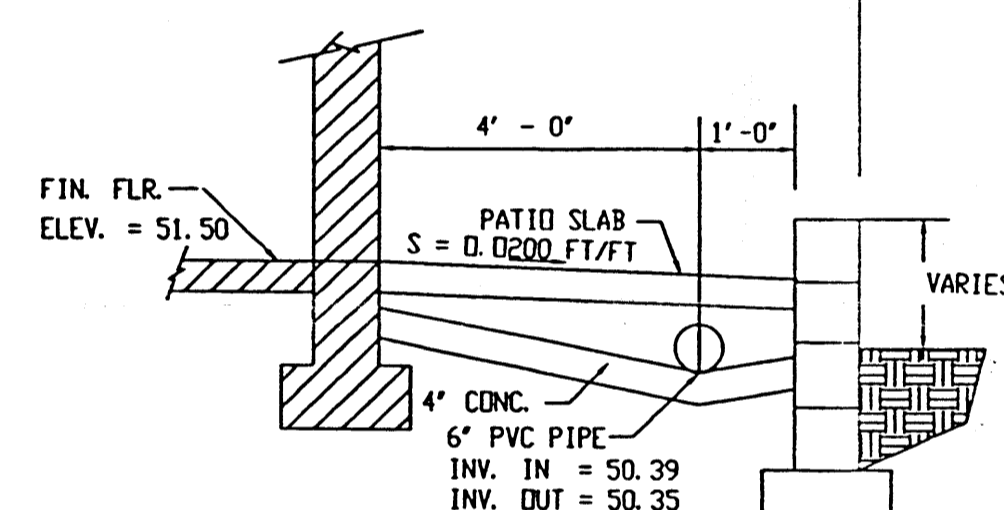
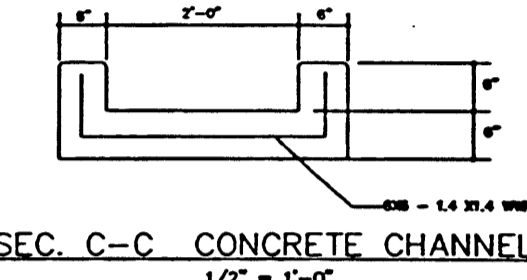
All runoff from the front of the motel and parking lot will be routed to a sidewalk culvert near the NW corner of the new parking lot. The rear portion of the motel roof will flow from a high point at the rear of the motel both ways to the two sidewalk culverts, the second near the NE corner of the property. The motel roof will be a hip roof with drip edges and no gutters and downspouts. Concrete channels and alley gutter is proposed where grades are less than one percent.

DRAINAGE CRITERIA:

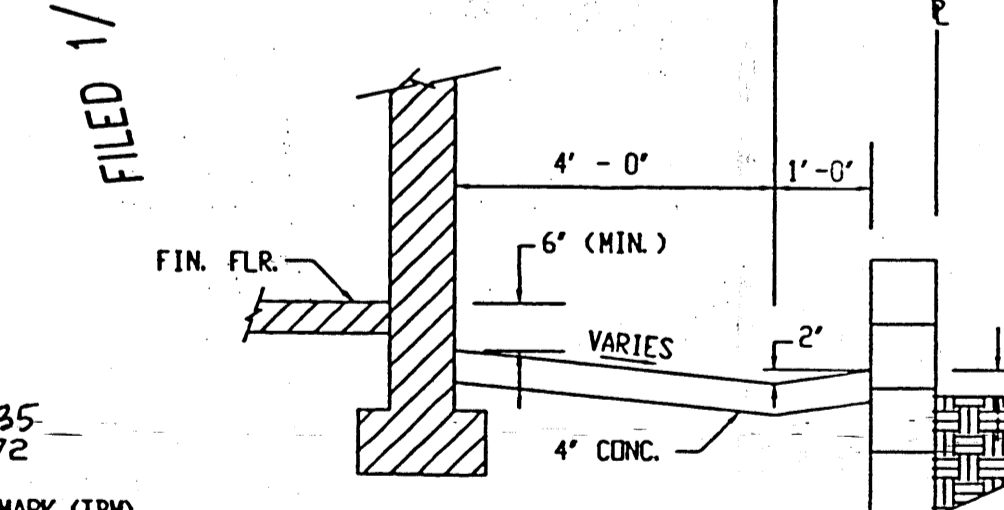
The calculations shown on this plan were prepared in accordance with Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority, January, 1993.

TOPOGRAPHIC SURVEY NOTES (INCLUDING BENCH MARK):

- Bearings based upon ACS Brass Cap "2-K12-B" located at the Southeast corner of Central Avenue, S.W. and Arisco Boulevard, S.W. Brass Cap has a spirit level elevation of 4954.92 feet, Mean Sea Level.
- There is a Five foot (5') utility easement located at the rear of Lot 2-A as indicated on drawing.
- There is a Two foot (2') private drainage and irrigation easement located at the rear of the property as shown on drawing.
- Curve Data: C1 Rad = 25.00', Delta = 90°, Len = 39.27'



SECTION A-A SWALE AT PATIO
1/2" = 1' - 0"



SECTION B-B SWALE BEHIND BUILDING
1/2" = 1' - 0"

EROSION CONTROL REQUIREMENTS:

- The Contractor shall be responsible for compliance with the following:
- No sediment-bearing water shall be allowed to discharge from the site during construction.
 - During grading operations and until the project has been completed, all adjacent property rights-of-way, and easements shall be protected from flooding by runoff from the site.
 - Should the contractor fail to prevent sediment-bearing water from entering public right-of-way, he shall promptly remove from the public right-of-way any and all sedimentation originating from the site.
 - Control of sediment-bearing waters will be accomplished by use of a compacted earth berm of adequate height. The berm shall be located along the downstream perimeter of the property.

PRECIPITATION ZONE:

The site is west of the Rio Grande River and is, therefore, in Precipitation Zone 1.

LAND TREATMENT AREAS, EXCESS PRECIPITATION AND UNIT PEAK DISCHARGE:

The peak discharge per acre and excess precipitation are shown for the four land treatments in Zone 2 in the table below, and the values shown are from the City of Albuquerque D.P.M. Also shown are the existing and proposed land treatment areas.

LAND TREATMENT	100-yr. 10-yr. 100-yr. 10-yr.	E (in)	Existing Site Areas	Developed Site Areas
	100-yr. 10-yr.	100-yr. 10-yr.	Sq. Ft. Acres	Sq. Ft. Acres
A	1.29 0.24	0.44 0.08	0.0 0.0000	0.0 0.0000
B	2.03 0.76	0.67 0.22	0.0 0.0000	14.9 3.107
C	2.87 1.49	0.99 0.44	100.0 20,805	0.0 0.0000
D	4.37 2.89	1.97 1.24	0.0 0.0000	85.1 17,698
Totals			100.0 20,805	0.4776 100.0 20,805

PEAK DISCHARGE:

EXISTING CONDITIONS:
Q100 = 0.4776 x 2.87 = 1.37 cfs Q10 = 0.4776 x 1.49 = 0.71 cfs

DEVELOPED CONDITIONS:

Q100 = 0.0713 x 2.03 + 0.4063 x 4.37 = 1.92 cfs

Q10 = 0.0713 x 0.76 + 0.4063 x 2.89 = 1.23 cfs

VOLUME, 100-YEAR, 6-HOUR:

EXISTING CONDITIONS:
V100 = (20,805 x 0.99) / 12 = 1,716 cf

V10 = (20,805 x 0.44) / 12 = 763 cf

DEVELOPED CONDITIONS:

V100 = (3,107 x 0.67 + 17,698 x 1.97) / 12 = 3,079 cf

V10 = (3,107 x 0.22 + 17,698 x 1.24) / 12 = 1,886 cf

SUMMARY OF ON-SITE VOLUMES AND PEAK DISCHARGE RATES:

	V100(CF)	V10(CF)	Q100(CFS)	Q10(CFS)
DEVELOPED	3,079	1,886	1.92	1.23
EXISTING	1,716	763	1.37	0.71
INCREASE	1,363	1,123	0.55	0.52

PEAK DISCHARGE RATES AND VOLUMES BY ON-SITE BASINS:

BASIN "A" - E.S. ROOF SLOPE. AREA = 4,856 SF (0.1115 AC.).
AREA TREAT. B = 702 SF (0.0161 AC.) AREA TREAT. D = 4,154 SF (0.0954 AC.).
Q100 = 0.0161 x 2.03 + 0.0954 x 4.37 = 0.45 CFS Q10 = 0.0161 x 0.76 + 0.0954 x 2.89 = 0.29 CFS
V100 = (702 x 0.67 + 4,154 x 1.97) / 12 = 721 CF V10 = (702 x 0.22 + 4,154 x 1.24) / 12 = 442 CF
BASIN "B" - N. ROOF SLOPE, PARKING LOT, ETC. AREA = 15,949 SF (0.3661 AC.).
AREA TREAT. B = 2,405 SF (0.0552 AC.) AREA TREAT. D = 13,544 SF (0.3109 AC.).
Q100 = 0.0552 x 2.03 + 0.3109 x 4.37 = 1.47 CFS Q10 = 0.0552 x 0.76 + 0.3109 x 2.89 = 0.94 CFS
V100 = (2,405 x 0.67 + 13,544 x 1.97) / 12 = 2,358 CF
V10 = (2,405 x 0.22 + 13,544 x 1.24) / 12 = 1,444 CF

SUMMARY:

DISCH. VOL.	BASIN "A"	BASIN "B"	TOTALS
Q100	0.45	1.47	1.92
Q10	0.29	0.94	1.23
V100	721	2,358	3,079
V10	442	1,444	1,886

DISCHARGE PIPE ON EAST SIDE OF BLDG:

USE ORIFICE EQUATION Q = CA2 G H^{1/2} A = 0.1963 SF C = 0.6
H = 1.0 - 0.5 = 0.5
Q = 0.6 x 0.1963 (2 x 32.2 x 0.5)^{1/2} = 0.66 CFS > 0.44 CFS (OK)

ANALYSIS OF DOWNSTREAM CONDITIONS:

The 48" storm drain in 47th Street is part of a system that extends at least as far as North Coors Blvd. Without doing an analysis of the system, it is clear that the time to peak in the system adjacent to the site is considerably longer than the time to peak for the site itself. Therefore, runoff from the site will be safely in the Isleta drain before the storm drain reaches its peak flow. The site is an infill site and the increase in peak discharge resulting from development is very small, only 0.55 cfs. Therefore, unrestricted discharge is warranted.

OFF-SITE FLOW:

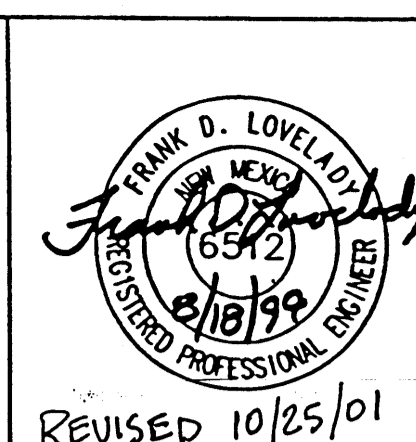
The roof of the existing motel to the west drains via canals on the east side of the building, and, thus, enters this site. This flow is accepted and will drain through the S.W. culvert.
Area Treat B = 715 sf (0.0097 AC) Area Treat. D = 3000 sf (0.0689 AC)
Q100 = 0.0097 x 2.03 + 0.0689 x 4.37 = 0.32 CFS Q10 = 0.0097 x 0.76 + 0.0689 x 2.89 = 0.21 CFS
V100 = (715 x 0.67 + 3,000 x 1.97) / 12 = 532 CF
V10 = (715 x 0.22 + 3,000 x 1.24) / 12 = 323 CF

CITY OF ALBUQUERQUE DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY (S.O. 19) NOTICE TO CONTRACTORS

- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
- ALL WORK DETAILED ON THIS PLAN TO BE PERFORMED UNDER CONTRACT, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREIN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, AS UPDATED THROUGH REVISION NO. 6.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, INC., 260-1990, FOR LOCATION FOR EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE FOR 47TH STREET AND ARTERIAL STREET USE ON CENTRAL AVENUE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- THE ADDRESS OF THE PROPERTY SERVED IS 4614 CENTRAL AVENUE, S.W.

APPROVALS:

HYDROLOGY	NAME	DATE
INSPECTOR	NAME	DATE
CONSTRUCTION	NAME	DATE



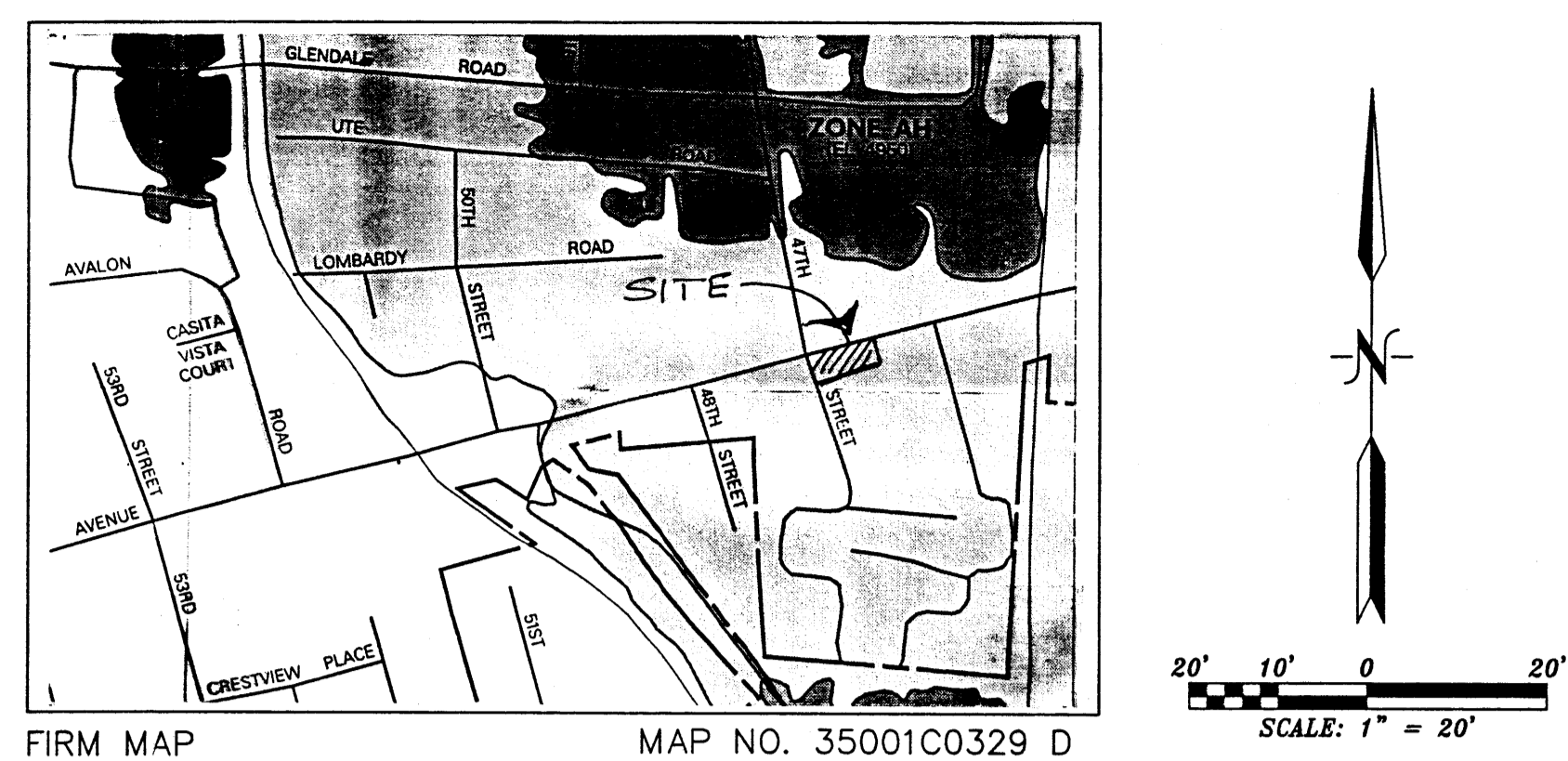
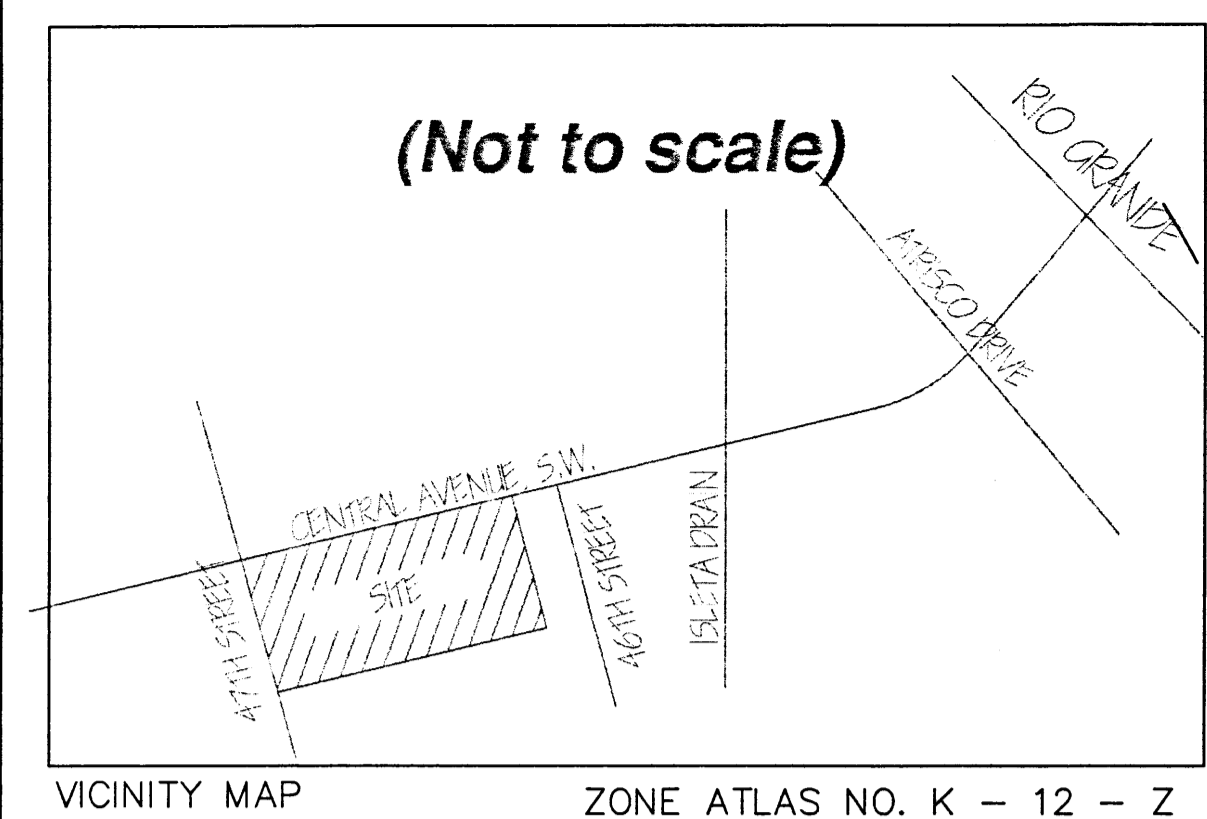
REVISED 10/25/01

GRADING AND DRAINAGE PLAN
SANDIA PEAK - A MOTEL PROJECT
LOT 2-A, BLOCK 2, ZIMMERMAN ADDITION
4618 CENTRAL AVENUE SW
ALBUQUERQUE, NEW MEXICO

FRANK D. LOVELADY, P.E.
300 ALAMOSA ROAD NW
ALBUQUERQUE, NEW MEXICO 87107
(505)345-2267

SHEET 1
OF 1

City of Albuquerque Hydrology No. K12 - D24



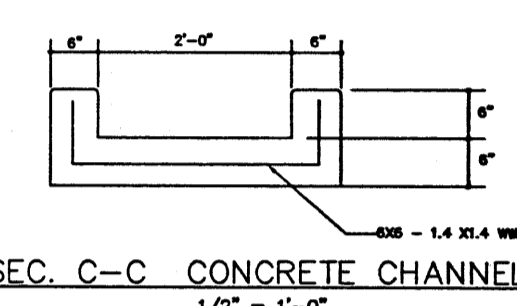
- LEGEND:**
- Found Boundary Corner
 - Utility Pole
 - Overhead Lines
 - CATV Pedestal
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 - Telephone Pedestal
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 - Electric Meter
 - Water Meter
 - Water Valve
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 - Sanitary Sewer Manhole
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 - AG New Alley Gutter per COA Std. Dwg. 2415
 - SD Storm Drain Catch Basin
 - Light Pole
 - Fence
 - Arroyo or watercourse
 - Fire Hydrant
 - Exist. Spot Elevation
 - New Spot Elevation
 - 4950.5 EXISTING CONTOUR
 - 50 NEW CONTOUR
 - FLOW DIRECTION
 - ROOF SLOPE

LEGAL DESCRIPTION:
LOT 1, BLOCK 2, ZIMMERMAN ADDITION, BERNALILLO COUNTY, NEW MEXICO, as the same is shown and designated on the Plat thereof, filed in the Office of the County Clerk of Bernalillo County, New Mexico, on May 10, 1936, in Volume 96C, folio 191.
SITE ADDRESS:
4618 Central Avenue, S.W.
FLOOD NOTE:
The above described property is located within Zone X (500-year), Community Panel No. 350002 0329 D, dated 9/20/96, and is not located within a Special Flood Hazard Boundary indicated by FEMA Flood Insurance Rate Maps.

EXISTING CONDITIONS:
The site is located on the South side of West Central Avenue, West of the intersection of 47th Street. The site is replatted Lot 6-A-2, Block 2, Zimmerman Addition, a parcel with 146' frontage on Central Avenue and a depth of 142.5'. The site is presently undeveloped and is considered to be Treatment C since the area has been graded but not recently. Property to the East and West is presently developed. Land to the south is partially developed. Central Avenue is paved with curb and gutter. There is a 48" dia. RCP storm drain system in Central Avenue that turns South in 47th Street and continues south approximately 350' and then east another 500' to the Isleta Drain. There is an inlet near the ESE curb return. The Firm Map for the site shows that the site does not lie within or adjacent to a 100-year flood hazard area (flood zone). There have been two previous hydrology submittals for this site. The original hydrology submittal was for a site that extended to 47th Street and proposed to replace the existing motel. The second submittal proposed leaving the old motel and constructing a new one on the undeveloped portion of the site. A replat of the previous site has been completed which divides the original site into two lots. The old motel is no longer a part of the site.

PROPOSED CONDITIONS:
All runoff from the front of the motel and parking lot will be routed to a sidewalk culvert near the NW corner of the new parking lot. The rear portion of the motel roof will flow from a high point at the rear of the motel both ways to the two sidewalk culverts, the second near the NE corner of the property. The motel roof will be a hip roof with drip edges and no gutters and downspouts. Concrete channels and alley gutter is proposed where grades are less than one percent.

DRAINAGE CRITERIA:
The calculations shown on this plan were prepared in accordance with Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority, January, 1993.



- TOPOGRAPHIC SURVEY NOTES (INCLUDING BENCH MARK):**
- Bearings based upon ACS Brass Cap '2-K12-B' located at the Southeast corner of Central Avenue, S.W. and Atrisco Boulevard, S.W. Brass Cap has a spirit level elevation of 4954.92 feet, Mean Sea Level.
 - There is a Five foot (5') utility easement located at the rear of Lot 2-A as indicated on drawing.
 - There is a Two foot (2') private drainage and irrigation easement located at the rear of the property as shown on drawing.
 - Curve Data: C1 Rad = 25.00', Delta = 90°, Len = 39.27'

PRECIPITATION ZONE:
The site is west of the Rio Grande River and is, therefore, in Precipitation Zone 1.

LAND TREATMENT AREAS, EXCESS PRECIPITATION AND UNIT PEAK DISCHARGE:
The peak discharge per acre and excess precipitation are shown for the four land treatments in Zone 2 in the table below, and the values shown are from the City of Albuquerque D.P.M. Also shown are the existing and proposed land treatment areas.

LAND TREATMENT	q (cfs/acre)		E (in)		Existing Site Areas %	Site Areas Sq. Ft. Acres	Developed Site Areas %		Site Areas Sq. Ft. Acres
	100-yr.	10-yr.	100-yr.	10-yr.			%	%	
A	1.29	0.24	0.44	0.08	0.0	0	0.0000	0.0	0.0000
B	2.03	0.76	0.67	0.22	0.0	0	0.0000	14.9	0.0713
C	2.87	1.49	0.99	0.44	100.0	20,805	0.4776	0.0	0.0000
D	4.37	2.89	1.97	1.24	0.0	0	0.0000	85.1	17,698
Totals					100.0	20,805	0.4776	100.0	0.4776

PEAK DISCHARGE:
EXISTING CONDITIONS:
Q100 = 0.4776 * 2.87 = 1.37 cfs Q10 = 0.4776 * 1.49 = 0.71 cfs
DEVELOPED CONDITIONS:
Q100 = 0.0713 * 2.03 + 0.4063 * 4.37 = 1.92 cfs
Q10 = 0.0713 * 0.76 + 0.4063 * 2.89 = 1.23 cfs
VOLUME, 100-YEAR, 6-HOUR:
EXISTING CONDITIONS:
V100 = (20,805 * 0.99) / 12 = 1,716 cf
V10 = (20,805 * 0.44) / 12 = 763 cf
DEVELOPED CONDITIONS:
V100 = (3,107 * 0.67 + 17,698 * 1.97) / 12 = 3,079 cf
V10 = (3,107 * 0.22 + 17,698 * 1.24) / 12 = 1,886 cf

SUMMARY OF ON-SITE VOLUMES AND PEAK DISCHARGE RATES:

	V100(CF)	V10(CF)	Q100(CFS)	Q10(CFS)
DEVELOPED	3,079	1,886	1.92	1.23
EXISTING	1,716	763	1.37	0.71
INCREASE	1,363	1,123	0.55	0.52

PEAK DISCHARGE RATES AND VOLUMES BY ON-SITE BASINS:
BASIN 'A' - E. & S. ROOF SLOPE. AREA = 4,856 SF (0.1115 AC.).
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Q100 = 0.0161 * 2.03 + 0.0954 * 4.37 = 0.45 CFS Q10 = 0.0161 * 0.76 + 0.0954 * 2.89 = 0.29 CFS
V100 = 0.702 * 0.67 + 4,154 * 1.97 / 12 = 721 CF V10 = 0.702 * 0.22 + 4,154 * 1.24 / 12 = 442 CF
BASIN 'B' - N. ROOF SLOPE, PARKING LOT, ETC. AREA = 15,949 SF (0.3661 AC.).
AREA TREAT. C = 2,405 SF (0.0552 AC.). AREA TREAT. D = 13,544 SF (0.3109 AC.).
Q100 = 0.0552 * 2.03 + 0.3109 * 4.37 = 1.47 CFS Q10 = 0.0552 * 0.76 + 0.3109 * 2.89 = 0.94 CFS
V100 = (2,405 * 0.67 + 13,544 * 1.97) / 12 = 2,358 CF
V10 = (2,405 * 0.22 + 13,544 * 1.24) / 12 = 1,444 CF

SUMMARY:

DISCH./VOL.	BASIN 'A'	BASIN 'B'	TOTALS
Q100	0.45	1.47	1.92
Q10	0.29	0.94	1.23
V100	721	2,358	3,079
V10	442	1,444	1,886

DISCHARGE PIPE ON EAST SIDE OF BLDG:
USE ORIFICE EQUATION $Q = C A \sqrt{2 g H}$ $A = 0.1963 \text{ SF}$ $C = 0.6$
 $H = 1.0 - 0.5 = 0.5'$
 $Q = 0.6 \times 0.1963 \sqrt{2 \times 32.2 \times 0.5} = 0.66 \text{ CFS} > 0.44 \text{ CFS (OK)}$

ANALYSIS OF DOWNSIDE CONDITIONS:
The 48" storm drain in 47th Street is part of a system that extends at least as far as North Co. Blvd. Without doing an analysis of the system, it is clear that the time to peak in the system adjacent to the site is considerably longer than the time to peak for the site itself. Therefore, runoff from the site will be safely in the Isleta drain before the storm drain reaches its peak flow. The site is an infill site and the increase in peak discharge resulting from development is very small, only 0.55 cfs. Therefore, unrestricted discharge is warranted.

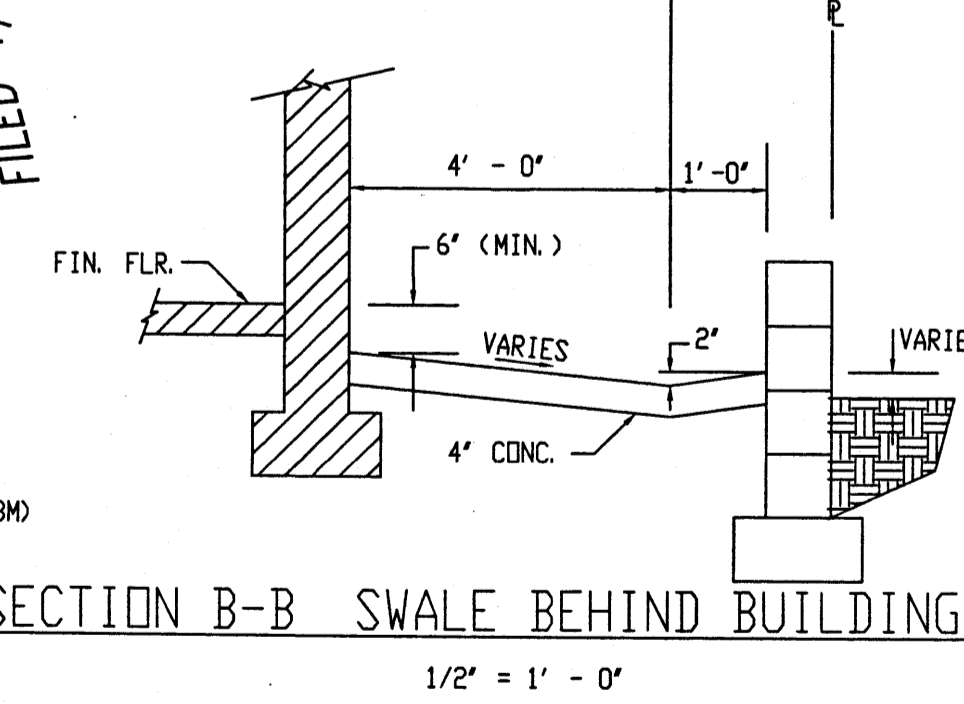
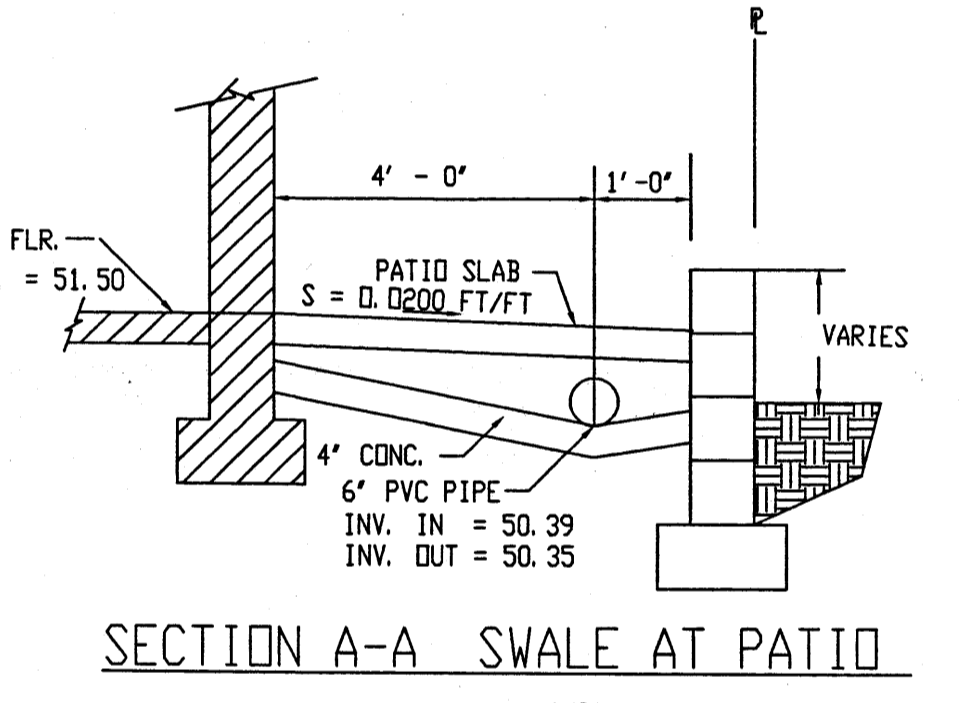
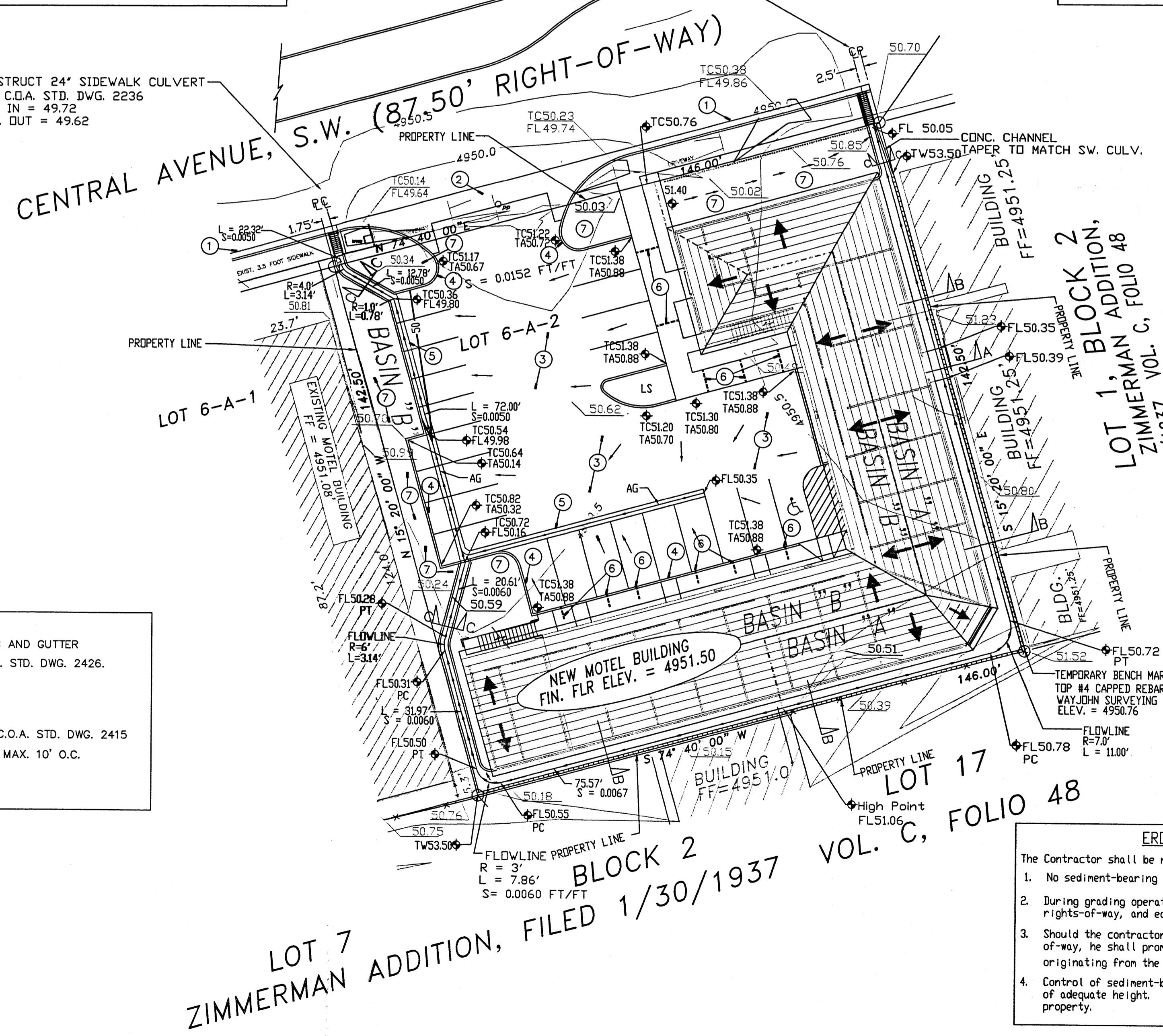
OFF-SITE FLOW:
The roof of the existing motel to the west drains via canals on the east side of the building, and, thus, enters this site. This flow is accepted and will drain through the S.W. culvert.
Area Treat B = 715 SF (0.0097 AC) Area Treat. D = 3000 SF (0.0689 AC)
Q100 = 0.0097 * 2.03 + 0.0689 * 4.37 = 0.32 CFS Q10 = 0.0097 * 0.76 + 0.0689 * 2.89 = 0.21 CFS
V100 = (715 * 0.67 + 3,000 * 1.97) / 12 = 532 CF
V10 = (715 * 0.22 + 3,000 * 1.24) / 12 = 323 CF

**CITY OF ALBUQUERQUE
DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY (S.O. 19)
NOTICE TO CONTRACTORS**

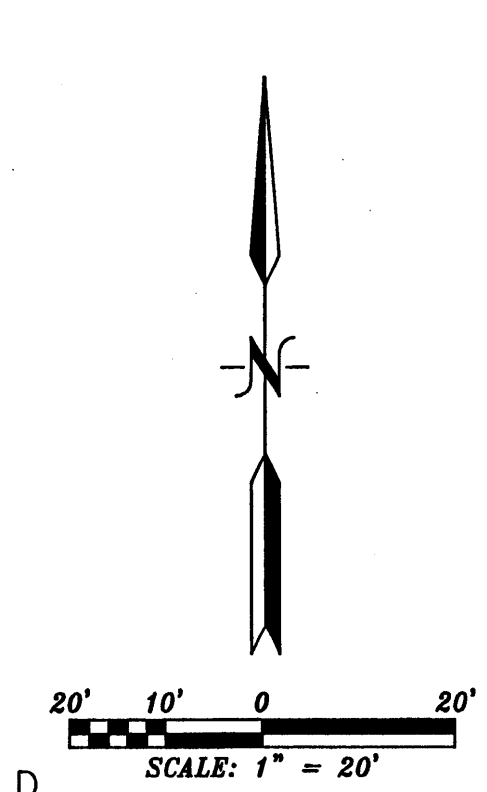
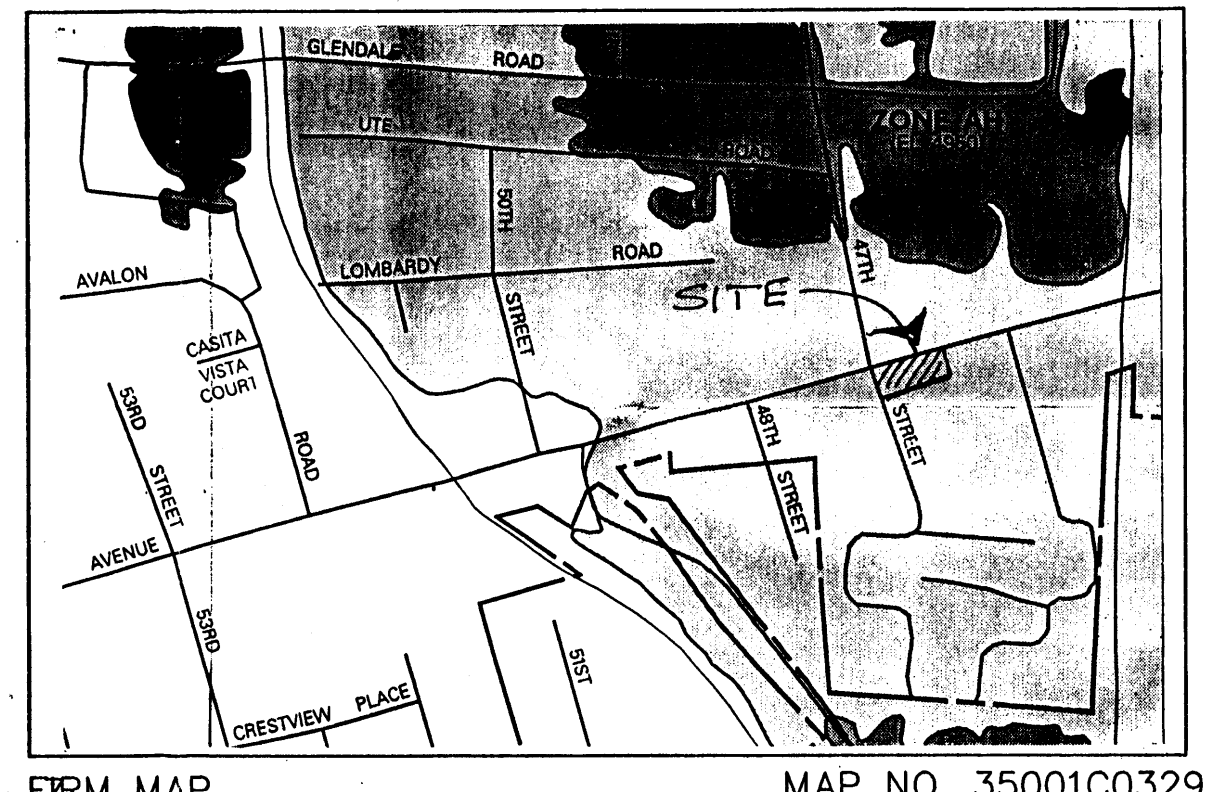
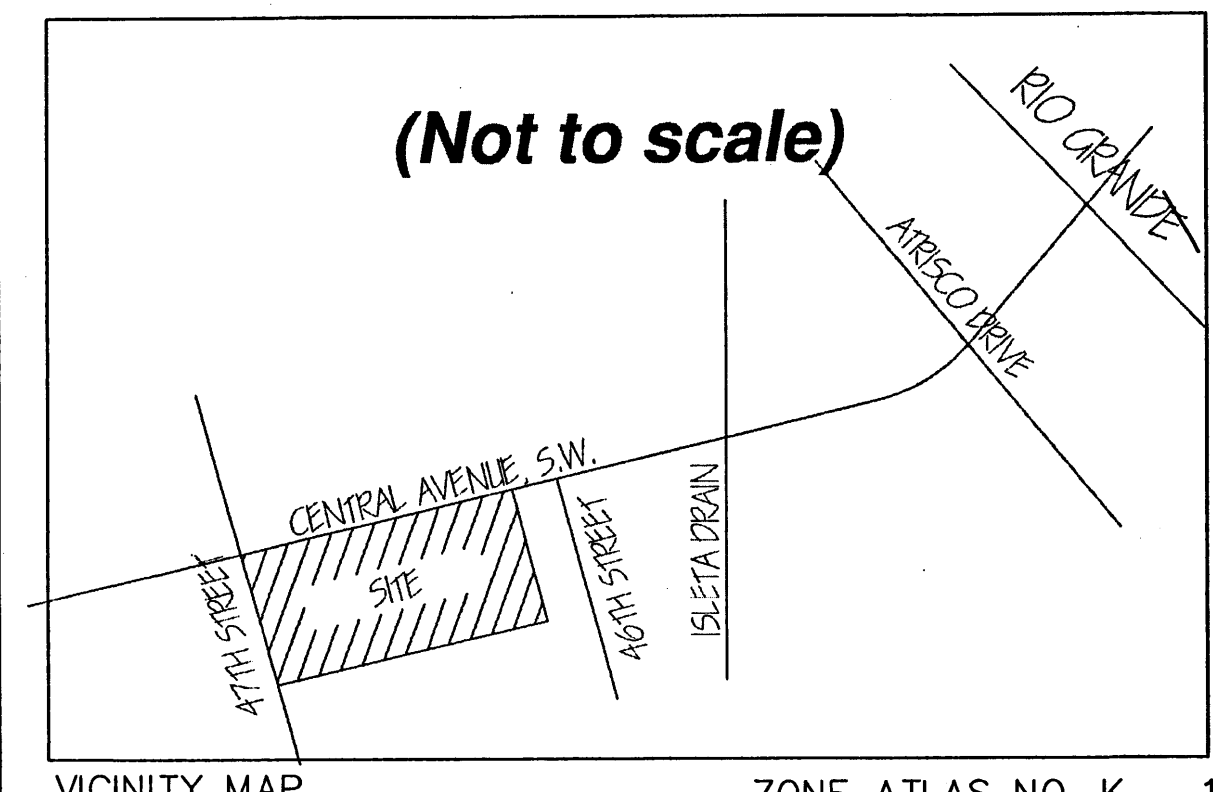
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
- ALL WORK DETAILED ON THIS PLAN TO BE PERFORMED UNDER CONTRACT, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREIN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, AS UPDATED THROUGH REVISION NO. 6.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, INC., 260-1990, FOR LOCATION FOR EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE FOR 47TH STREET AND ARTERIAL STREET USE IN CENTRAL AVENUE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- THE ADDRESS OF THE PROPERTY SERVED IS 4614 CENTRAL AVENUE, S.W.

APPROVALS:
HYDROLOGY: *Bradley Bingham* **NAME:** *Bradley Bingham* **DATE:** 10/12/99
INSPECTOR: **NAME:** **DATE:**
CONSTRUCTION: **NAME:** **DATE:**

- KEYED NOTES:**
- EXISTING STANDARD CURB AND GUTTER
 - NEW DRIVEWAY PER C.O.A. STD. DWG. 2426.
 - NEW ASPHALT PAVEMENT
 - NEW 6" CONCRETE CURB
 - NEW ALLEY GUTTER PER C.O.A. STD. DWG. 2415
 - 3" PVC PIPE THRU CURB, MAX. 10' O.C.
 - NEW LANDSCAPING



EROSION CONTROL REQUIREMENTS:
The Contractor shall be responsible for compliance with the following:
1. No sediment-bearing water shall be allowed to discharge from the site during construction.
2. During grading operations and until the project has been completed, all adjacent property rights-of-way, and easements shall be protected from flooding by runoff from the site.
3. Should the contractor fail to prevent sediment-bearing water from entering public right-of-way, he shall promptly remove from the public right-of-way any and all sedimentation originating from the site.
4. Control of sediment-bearing waters will be accomplished by use of a compacted earth berm of adequate height. The berm shall be located along the downstream perimeter of the property.

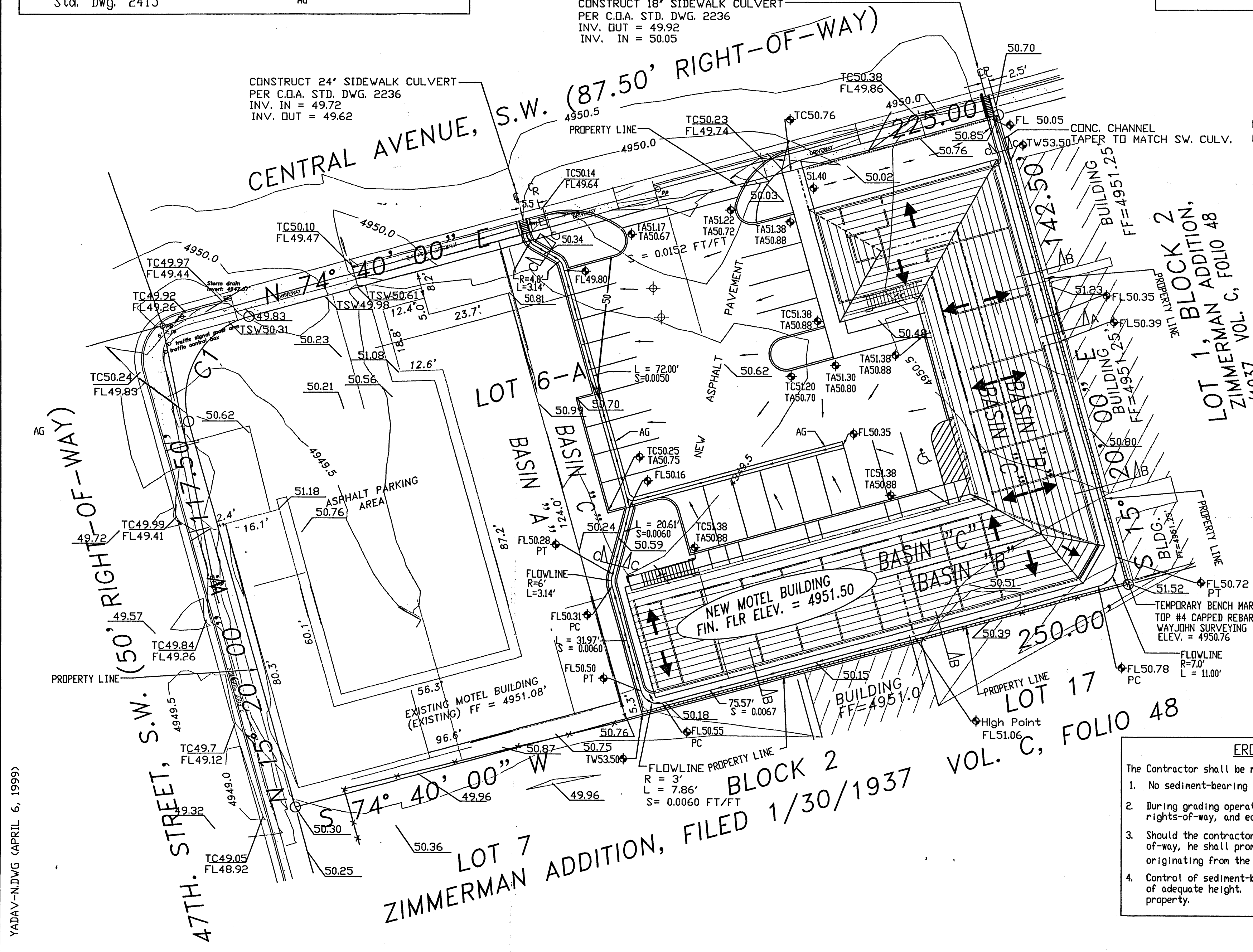


- LEGEND:**
- Found Boundary Corner
 - Utility Pole
 - Overhead Lines
 - CATV Pedestal
 - Electric Pedestal
 - Telephone Pedestal
 - Gas Meter
 - Electric Meter
 - Water Meter
 - Water Valve
 - Gas Valve
 - Sanitary Sewer Manhole
 - Storm Sewer Manhole
 - AG New Alley Gutter per CDA Std. Dwg. 2415
 - SD Storm Drain Catch Basin
 - Light Pole
 - ✕ Fence
 - Arroyo or watercourse
 - Fire Hydrant
 - Exist. Spot Elevation
 - ◆ New Spot Elevation
 - 4950.5 EXISTING CONTOUR
 - 50 NEW CONTOUR
 - FLOW DIRECTION
 - ROOF SLOPE

LEGAL DESCRIPTION:
Lot numbered Six-A (6-A) in Block numbered Two (2) of the ZIMMERMAN ADDITION to the City of Albuquerque, Bernalillo County, New Mexico, as the same is shown and designated on the Plat thereof, Filed in the Office of the County Clerk of Bernalillo County, New Mexico, on May 10, 1996, in Volume 96C, Folio 191.

SITE ADDRESS:
4618 Central Avenue, S.W.

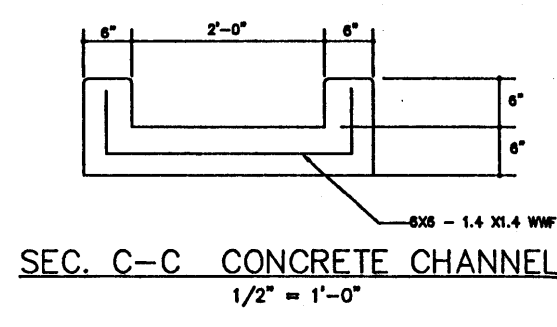
FLOOD NOTE:
The above described property is located within Zone X (500 year), Community Panel No. 350002 0329 D, dated 9/20/96, and is not located within a Special Flood Hazard Boundary indicated by FEMA Flood Insurance Rate Maps.



EXISTING CONDITIONS:
The site is located on the South side of West Central Avenue, at the SE corner of the intersection of 47th Street. The site consists of Lot 2-A, Block 2, Zimmerman Addition, a parcel with 250' frontage on Central Avenue and 142.5' frontage on 47th Street. Before replatting, the area consisted of 5 each 50' x 142.5' lots. The westerly 100 feet of the site is now developed as the Sandia Motel and is all Treatment D. The easterly 150' is presently undeveloped and is considered to be Treatment C, since the area has been graded, but not recently. Property to the east is presently developed. Land to the south is partially developed. Central Avenue and 47th Street are paved with curb and gutter. There is a 40' RCP storm drain system in Central Avenue that turns south in 47th Street and continues south approximately 350' and then east another 500' to the Isleta Drain. There is an inlet near the ESE curb return. The Firm Map for the site shows that the site does not lie within or adjacent to a 100-year flood hazard area (flood zone). Due to financial restraints, the existing motel is proposed to remain and the proposed new motel is to be constructed on the remainder of the site. The original drainage plan submitted called for removal of the existing motel and construction of the new motel on the entire property.

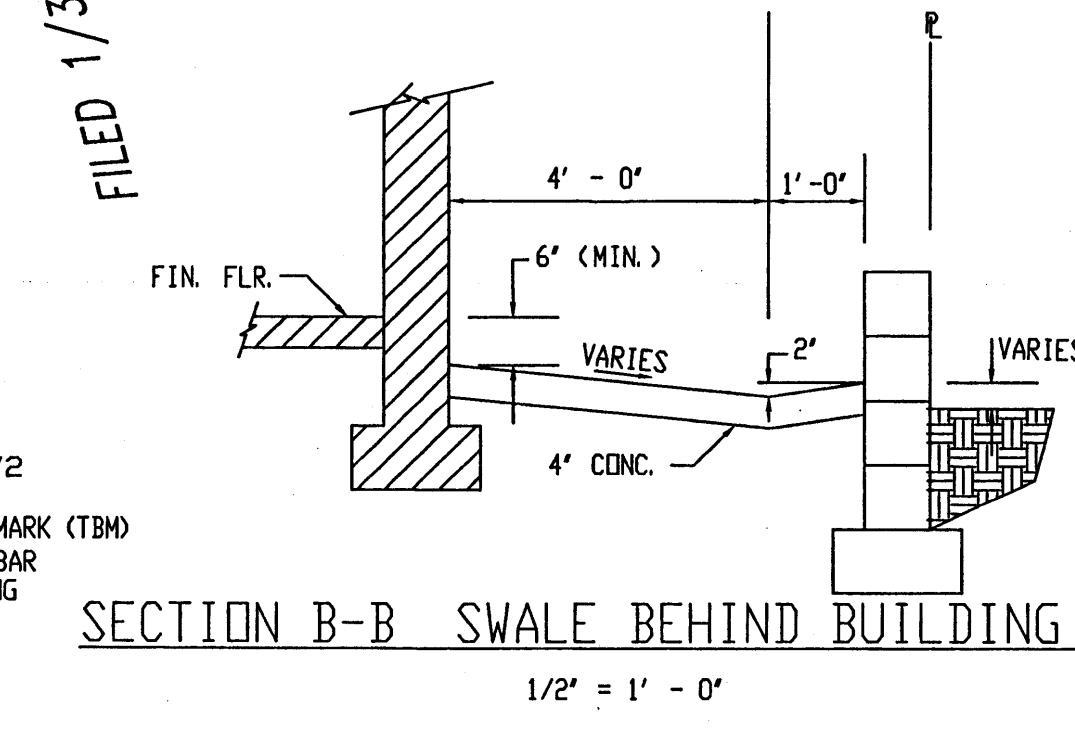
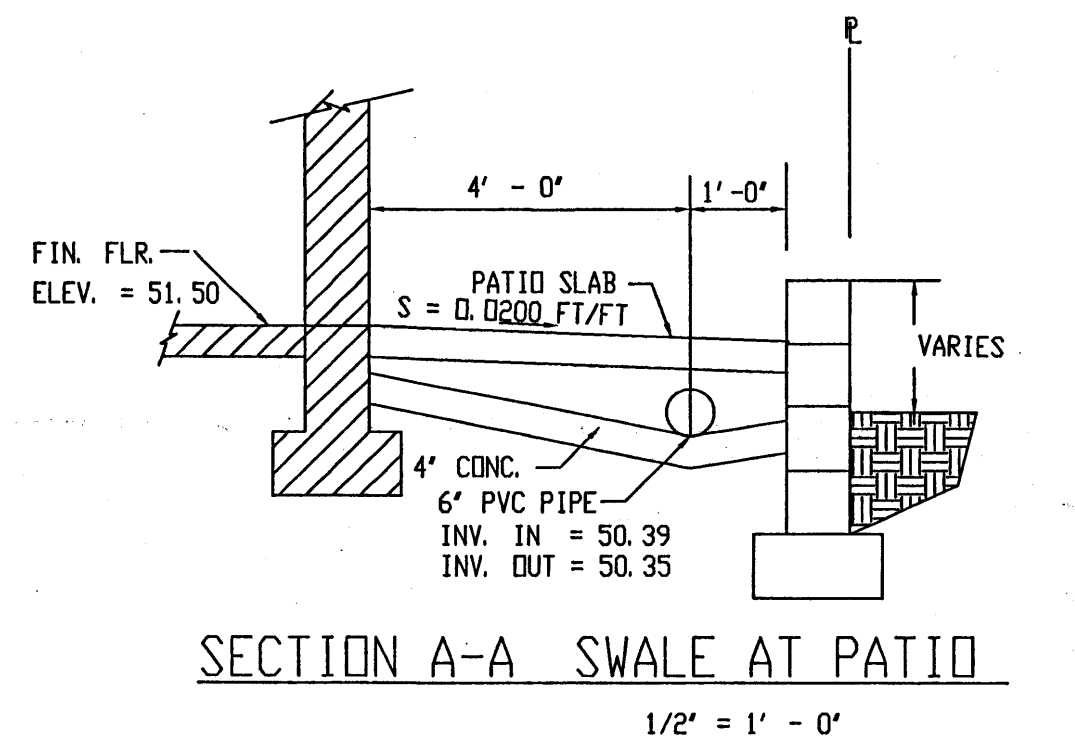
PROPOSED CONDITIONS:
It is proposed to drain the existing motel as it now drains, through the existing driveways. All runoff from the front of the motel and parking lot will be routed to a sidewalk culvert near the NW corner of the new parking lot. The rear portion of the motel roof will flow from a high point at the rear of the motel both ways to the two sidewalk culverts, the second near the NE corner of the property. The motel roof will be hip roofs with drip edges and no gutters and downspouts. Concrete channels and alley gutter is proposed where grades are less than one percent.

DRAINAGE CRITERIA:
The calculations shown on this plan were prepared in accordance with Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority, January, 1993.



TOPOGRAPHIC SURVEY NOTES (INCLUDING BENCH MARK):

- Bearings based upon ACS Brass Cap "2-K12-B" located at the Southeast corner of Central Avenue, S.W. and Atrisco Boulevard, S.W. Brass Cap has a spirit level elevation of 4954.92 feet, Mean Sea Level.
- There is a Five foot (5') utility easement located at the rear of Lot 2-A as indicated on drawing.
- There is a Two foot (2') private drainage and irrigation easement located at the rear of the property as shown on drawing.
- Curve Data: C1 Rad = 25.00', Delta = 90°, Len = 39.27'



EROSION CONTROL REQUIREMENTS:

The Contractor shall be responsible for compliance with the following:

- No sediment-bearing water shall be allowed to discharge from the site during construction.
- During grading operations and until the project has been completed, all adjacent property rights-of-way, and easements shall be protected from flooding by runoff from the site.
- Should the contractor fail to prevent sediment-bearing water from entering public right-of-way, he shall promptly remove from the public right-of-way any and all sedimentation originating from the site.
- Control of sediment-bearing waters will be accomplished by use of a compacted earth berm of adequate height. The berm shall be located along the downstream perimeter of the property.

PRECIPITATION ZONE:
The site is west of the Rio Grande River and is, therefore, in Precipitation Zone 1.

LAND TREATMENT AREAS - EXCESS PRECIPITATION AND UNIT PEAK DISCHARGE:
The peak discharge per acre and excess precipitation are shown for the four land treatments in Zone 2 in the table below, and the values shown are from the City of Albuquerque D.P.M. Also shown are the existing and proposed land treatment areas.

LAND TREATMENT	Q (cfs/acre)		E (in)		Existing Site Areas		Developed Site Areas	
	100-yr	10-yr	100-yr	10-yr	Sq. Ft.	Acres	Sq. Ft.	Acres
A	1.29	0.24	0.44	0.08	0.0	0.0000	0.0	0.0000
B	2.03	0.76	0.67	0.22	0.0	0.0000	18.0	6.405
C	2.87	1.49	0.99	0.44	60.0	21.338	0.498	0.0
D	4.37	2.89	1.97	1.24	40.0	14.225	0.3266	29.158
Totals					100.0	35.563	0.8164	100.0

PEAK DISCHARGE:
EXISTING CONDITIONS:
Q100 = 0.4898 * 2.87 + 0.3266 * 4.37 = 2.83 cfs Q10 = 0.4898 * 1.49 + 0.3266 * 2.89 = 1.67 cfs
DEVELOPED CONDITIONS:
Q100 = 0.1470 * 2.03 + 0.6694 * 4.37 = 3.22 cfs
Q10 = 0.1470 * 0.76 + 0.6694 * 2.89 = 2.05 cfs
VOLUME - 100-YEAR, 6-HOUR:
EXISTING CONDITIONS:
V100 = (21,338 * 0.99 + 14,225 * 1.97)/12 = 4,095 cf
V100 = (21,338 * 0.44 + 14,225 * 1.24)/12 = 2,252 cf
DEVELOPED CONDITIONS:
V100 = (6,405 * 0.67 + 29,158 * 1.97)/12 = 5,144 cf
V100 = (6,405 * 0.22 + 29,158 * 1.24)/12 = 3,130 cf

SUMMARY OF ON-SITE VOLUMES AND PEAK DISCHARGE RATES:

	V100(CF)	V10(CF)	Q100(CFS)	Q10(CFS)
DEVELOPED	5,144	3,180	3.22	2.05
EXISTING	4,095	2,252	2.83	1.67
INCREASE	1,049	878	0.39	0.38

PEAK DISCHARGE RATES AND VOLUMES BY ON-SITE BASINS:
BASIN 'A' - EXISTING SANDIA MOTEL - WILL CONTINUE TO DRAIN TO CENTRAL AVE.
Q100 = 0.3669 * 4.37 = 1.60 CFS Q10 = 0.3669 * 2.89 = 1.06 CFS
V100 = (15,984 * 1.97)/12 = 2,624 CF V10 = (15,984 * 1.24)/12 = 1,652 CF
BASIN 'B' - E. & S. ROOF SLOPE. AREA = 4,370 SF = 0.1003 ACRE.
Q100 = 0.1003 * 4.37 = 0.44 CFS Q10 = 0.1003 * 2.89 = 0.29 CFS
V100 = (4,370 * 1.97)/12 = 717 CF V10 = (4,370 * 1.24)/12 = 452 CF
BASIN 'C' - N. ROOF SLOPE, PARKING LOT, ETC. AREA = 15,329 SF (0.3519 AC).
SUBTRACT BASINS 'A' AND 'B' FROM TOTAL.

SUMMARY:

DISCH./VOL.	BASIN 'A'	BASIN 'B'	BASIN 'C'	TOTALS
Q100	1.60	0.44	1.18	3.22
Q10	1.06	0.29	0.70	2.05
V100	2,624	717	1,803	5,144
V10	528	452	2,150	3,130

DISCHARGE PIPE ON EAST SIDE OF BLDG. 1:
USE ORIFICE EQUATION $Q = C A \sqrt{2 G H}$ $A = 0.1963 \text{ SF}$ $C = 0.6$
 $H = 1.0 - 0.5 = 0.5$
 $Q = 0.6 \times 0.1963 \sqrt{2 \times 32.2 \times 0.50}^{1/2} = 0.66 \text{ CFS} > 0.44 \text{ CFS (OK)}$

ANALYSIS OF DOWNSTREAM CONDITIONS:
The 48' storm drain in 47th Street is part of a system that extends at least as far as North Coors Blvd. Without doing an analysis of the system, it is clear that the time to peak in the system adjacent to the site is considerably longer than the time to peak for the site itself. Therefore, runoff from the site will be safely in the Isleta drain before the storm sewer reaches its peak flow. The site is an infill site and the increase in peak discharge resulting from development is very small, only 0.39 cfs. Therefore, unrestricted discharge is warranted.

OFF-SITE FLOW:
There is no off-site flow associated with this site.

CITY OF ALBUQUERQUE
DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY (S.O. 19)
NOTICE TO CONTRACTORS

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- BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE FOR 47TH STREET AND ARTERIAL STREET USE ON CENTRAL AVENUE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- THE ADDRESS OF THE PROPERTY SERVED IS 4618 CENTRAL AVENUE, S.W.

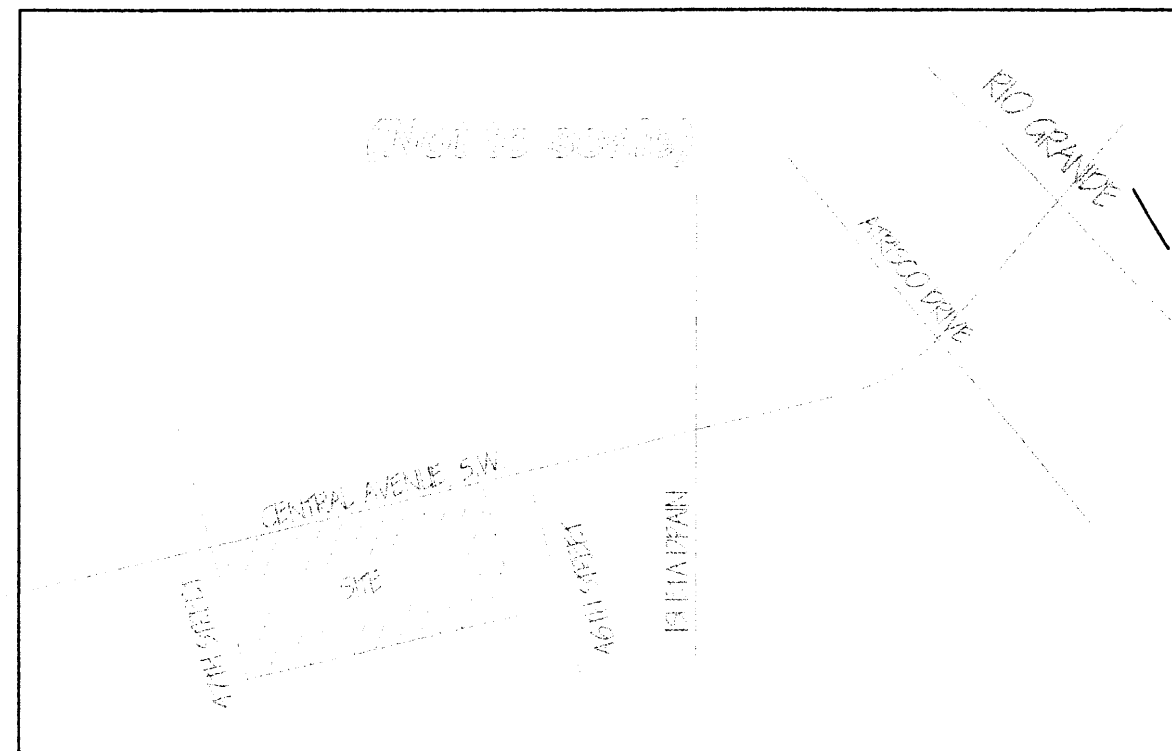
APPROVALS:

HYDROLOGY: _____ NAME _____ DATE _____

INSPECTOR: _____ NAME _____ DATE _____

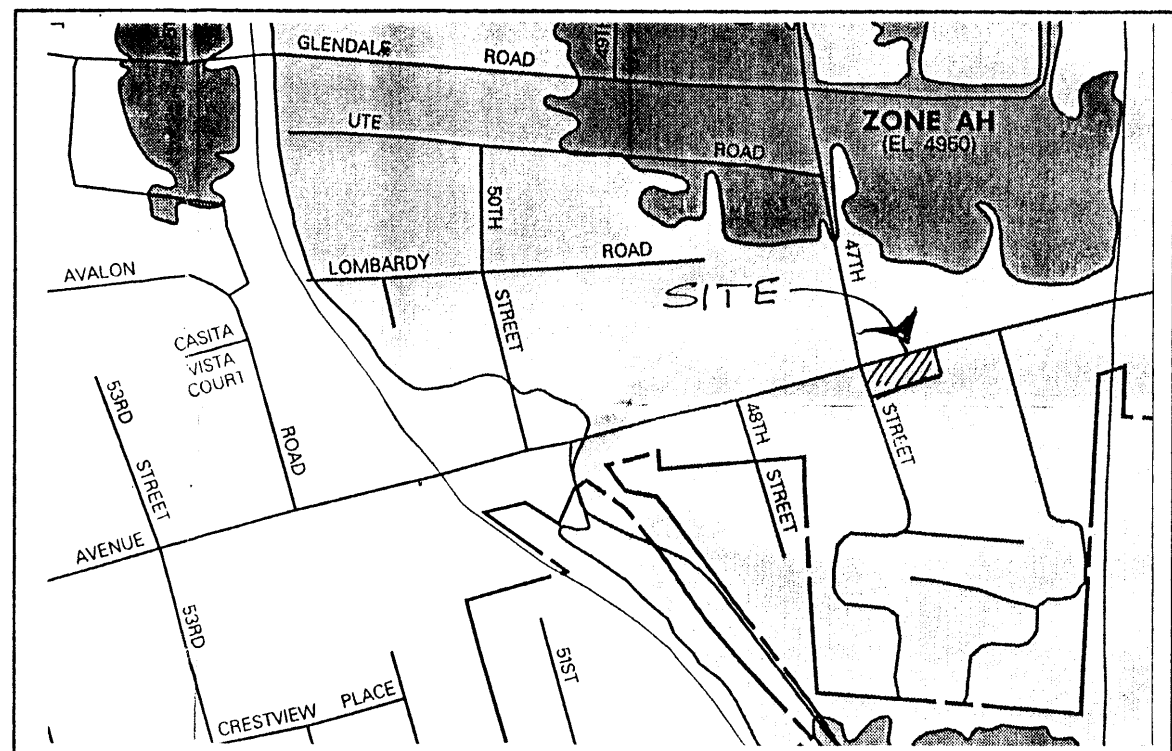
CONSTRUCTION: _____ NAME _____ DATE _____

HYDROLOGY SECTION
APR 7 1999



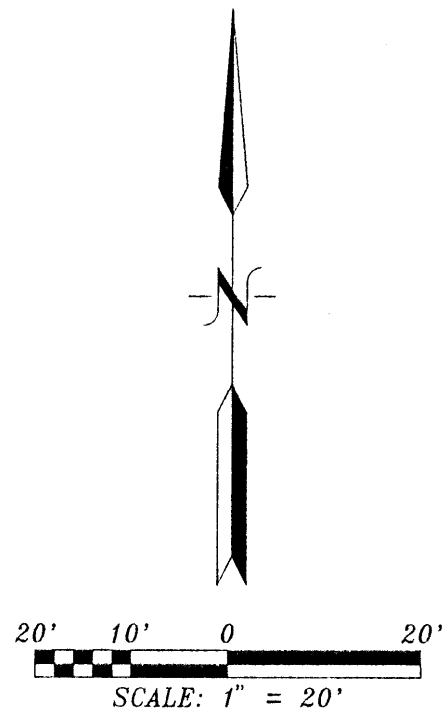
VICINITY MAP

ZONE ATLAS NO. K - 12 - Z



FIRM MAP

MAP NO. 3500IC0329 D



EXISTING CONDITIONS:

The site is located on the South side of West Central Avenue, at the SE corner of the intersection of 47th Street. The site consists of Lot 2-A, Block 2, Zimmerman Addition, a parcel with 250' frontage on Central Avenue and 142.5' frontage on 47th Street. Before replanning, the area consisted of 5 each 50' x 142.5' lots. The westerly 100 feet of the site is now developed as the Sandia Motel and is all Treatment D. The easterly 150' is presently undeveloped and is considered to be Treatment C, since the area has been graded, but not recently. Property to the east is presently developed. Land to the south is partially developed. Central Avenue and 47th Street are paved with curb and gutter. There is a 48" RCP storm drain system in Central Avenue that turns south in 47th Street and continues south return. The Firm Map for the site shows that the site does not lie within or adjacent to a 100-year flood hazard area (flood zone).

PROPOSED CONDITIONS:

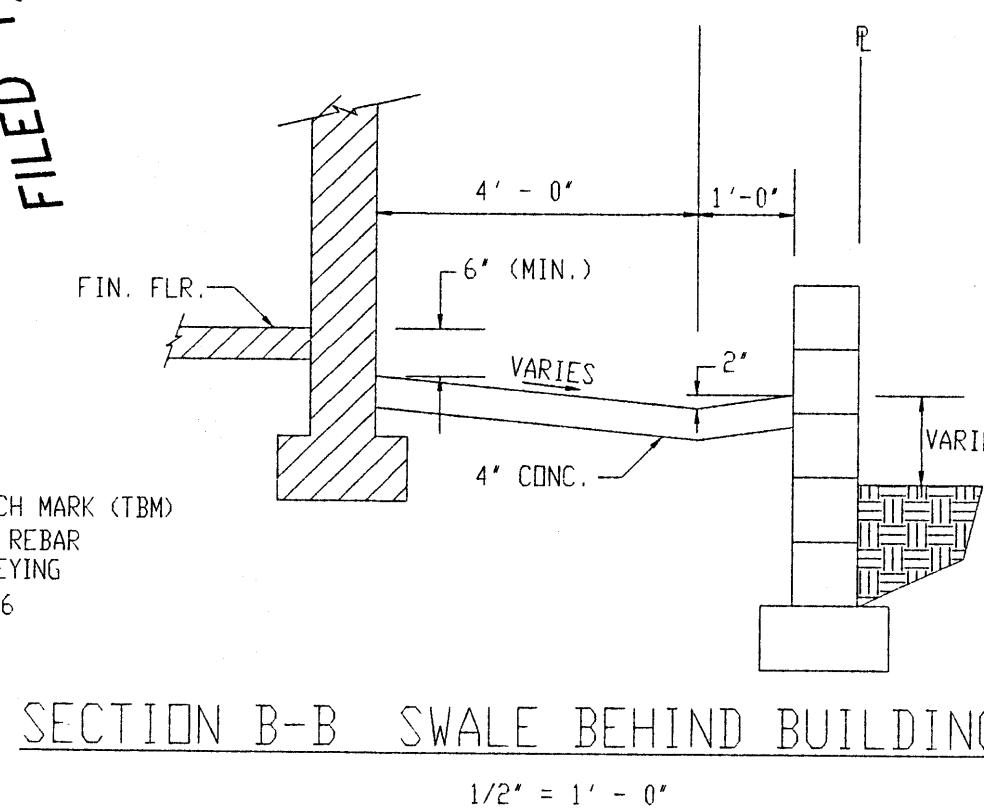
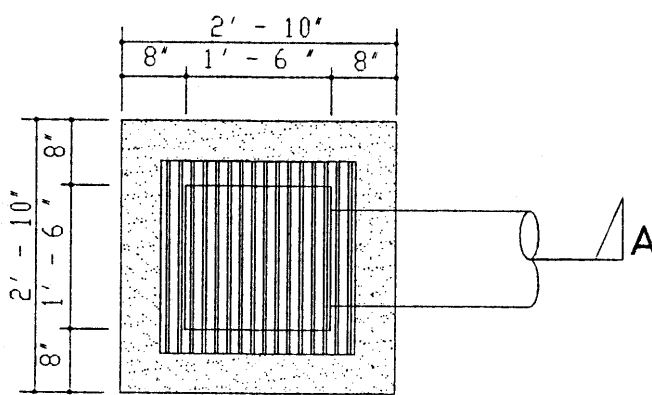
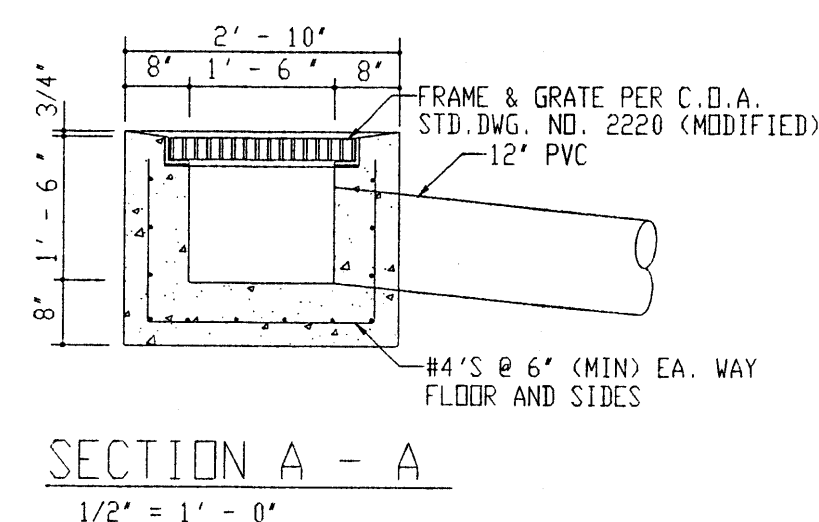
It is proposed to construct a motel on the property as shown. All runoff from the front of the motel roof and parking lot will be directed to an inlet in the NW corner of the parking lot. Runoff from the rear portion of the motel roof to the south property line will be directed to a sidewalk culvert on 47th Street. All runoff from the rear portion of the motel roof to the east property line will be directed to a sidewalk culvert on Central Avenue. The motel roofs will be hip roofs with drip edges and no gutters and downspouts.

DRAINAGE CRITERIA:

The calculations shown on this plan were prepared in accordance with Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority, January, 1993.

TOPOGRAPHIC SURVEY NOTES (INCLUDING BENCH MARK):

- Bearings based upon ACS Brass Cap "2-K12-B" located at the Southeast corner of Central Avenue, S.W. and Arisco Boulevard, S.W. Brass Cap has a spirit level elevation of 4954.92 feet, Mean Sea Level.
- There is a Five foot (5') utility easement located at the rear of Lot 2-A as indicated on drawing.
- There is a Two foot (2') private drainage and irrigation easement located at the rear of the property as shown on drawing.
- Curve Data: C1 Rad = 25.00', Delta = 90', Len = 39.27'



EROSION CONTROL REQUIREMENTS:

- The Contractor shall be responsible for compliance with the following:
- No sediment-bearing water shall be allowed to discharge from the site during construction.
 - During grading operations and until the project has been completed, all adjacent property rights-of-way, and easements shall be protected from flooding by runoff from the site.
 - Should the contractor fail to prevent sediment-bearing water from entering public right-of-way, he shall promptly remove from the public right-of-way any and all sedimentation originating from the site.
 - Control of sediment-bearing waters will be accomplished by use of a compacted earth berm of adequate height. The berm shall be located along the downstream perimeter of the property.

PRECIPITATION ZONE:

The site is west of the Rio Grande River and is, therefore, in Precipitation Zone 1.

LAND TREATMENT AREAS, EXCESS PRECIPITATION AND UNIT PEAK DISCHARGE:

The peak discharge per acre and excess precipitation are shown for the four land treatments in Zone 2 in the table below, and the values shown are from the City of Albuquerque D.P.M. Also shown are the existing and proposed land treatment areas.

LAND TREATMENT	q(cfs/acre)	E (in)	% Existing Site Areas	Developed Site Areas
	100-yr.	10-yr.	100-yr.	10-yr.
A	1.29	0.24	0.44	0.08
B	2.03	0.76	0.67	0.22
C	2.87	1.49	0.99	0.44
D	4.37	2.89	1.97	1.24
Totals			100.0	100.0

PEAK DISCHARGE:

EXISTING CONDITIONS:

$$Q_{100} = 0.4898 \times 2.87 + 0.3266 \times 4.37 = 2.83 \text{ cfs} \quad Q_{10} = 0.4898 \times 1.49 + 0.3266 \times 2.89 = 1.67 \text{ cfs}$$

DEVELOPED CONDITIONS:

$$Q_{100} = 0.1470 \times 2.03 + 0.6694 \times 4.37 = 3.22 \text{ cfs}$$

$$Q_{10} = 0.1470 \times 0.76 + 0.6694 \times 2.89 = 2.05 \text{ cfs}$$

VOLUME, 100-YEAR, 6-HOUR:

EXISTING CONDITIONS:

$$V_{100} = (21,338 \times 0.99 + 14,225 \times 1.97)/12 = 4,095 \text{ cf}$$

$$V_{100} = (21,338 \times 0.44 + 14,225 \times 1.24)/12 = 2,252 \text{ cf}$$

DEVELOPED CONDITIONS:

$$V_{100} = (6,405 \times 0.67 + 29,158 \times 1.97)/12 = 5,144 \text{ cf}$$

$$V_{100} = (6,405 \times 0.22 + 29,158 \times 1.24)/12 = 3,180 \text{ cf}$$

SUMMARY OF ON-SITE VOLUMES AND PEAK DISCHARGE RATES:

	V100(CF)	V10(CF)	Q100(CFS)	Q10(CFS)
DEVELOPED	5,144	3,180	3.22	2.05
EXISTING	4,095	2,252	2.83	1.67
INCREASE	1,049	878	0.39	0.38

PEAK DISCHARGE RATES AND VOLUMES BY ON-SITE BASINS:

BASIN "A" - SOUTH AND WEST SIDE OF BUILDING. AREA = 5,112 SF = 0.1174 ACRE.

$$Q_{100} = 0.1174 \times 4.37 = 0.51 \text{ CFS} \quad Q_{10} = 0.1174 \times 2.89 = 0.34 \text{ CFS}$$

$$V_{100} = (5,112 \times 1.97)/12 = 839 \text{ CF} \quad V_{10} = (5,112 \times 1.24)/12 = 528 \text{ CF}$$

BASIN "B" - EAST SIDE OF BUILDING. AREA = 4,250 SF = 0.0976 ACRE.

$$Q_{100} = 0.0976 \times 4.37 = 0.43 \text{ CFS} \quad Q_{10} = 0.0976 \times 2.89 = 0.28 \text{ CFS}$$

$$V_{100} = (4,250 \times 1.97)/12 = 698 \text{ CF} \quad V_{10} = (4,250 \times 1.24)/12 = 439 \text{ CF}$$

BASIN "C" - NORTH SIDE OF BUILDING. OBTAINED BY SUBTRACTING THE SUMS FOR BASINS "A" AND "B".

SUMMARY:

DISCH./VOL.	BASIN "A"	BASIN "B"	BASIN "C"	TOTALS
Q100	0.51	0.43	2.28	3.22
Q10	0.34	0.28	1.43	2.05
V100	839	698	3,607	5,144
V10	528	439	2,163	3,130

DISCHARGE PIPE FROM PARKING LOT INLET TO STREET INLET:

$$\text{USE ORIFICE EQUATION } Q = CA(2GH)^{1/2} \quad A = 0.7854 \text{ SF} \quad C = 0.6$$

$$H = 1.58 - 0.5 = 1.08$$

$$Q = 0.6 \times 0.7854 (2 \times 32.2 \times 1.08)^{1/2} = 3.93 \text{ CFS} > 2.28 \text{ CFS (OK)}$$

ANALYSIS OF DOWNSTREAM CONDITIONS:

The 48" storm drain in 47th Street is part of a system that extends at least as far as North Coors Blvd. Without doing an analysis of the system, it is clear that the time to peak in the system adjacent to the site is considerably longer than the time to peak for the site itself. Therefore, runoff from the site will be safely in the Isleta drain before the storm sewer reaches its peak flow. The site is an infill site and the increase in peak discharge resulting from development is very small, only 0.39 cfs. Therefore, unrestricted discharge is warranted.

OFF-SITE FLOW:

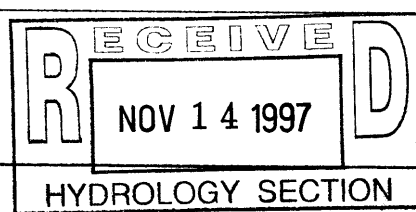
There is no off-site flow associated with this site.

CITY OF ALBUQUERQUE
DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY (S.O.19)
NOTICE TO CONTRACTORS

- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
- ALL WORK DETAILED ON THIS PLAN TO BE PERFORMED UNDER CONTRACT, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREIN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, AS UPDATED THROUGH REVISION NO. 6.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, INC., 260-1990, FOR LOCATION FOR EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE FOR 47TH STREET AND ARTERIAL STREET USE IN CENTRAL AVENUE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- THE ADDRESS OF THE PROPERTY SERVED IS 4618 CENTRAL AVENUE, S.W.

APPROVALS:

HYDROLOGY Frank D. Lovelady 12-8-92
INSPECTOR _____
CONSTRUCTION _____



GRADING AND DRAINAGE PLAN
SANDIA PEAK - A MOTEL PROJECT
LOT 2-A, BLOCK 2, ZIMMERMAN ADDITION
4618 CENTRAL AVENUE SW
ALBUQUERQUE, NEW MEXICO

FRANK D. LOVELADY, P.E.
300 ALAMOSA ROAD NW
ALBUQUERQUE, NEW MEXICO 87107
(505)345-2267

SHEET 1 OF 1

City of Albuquerque Hydrology No.

Scale: 1" = 20' Date: NOV. 1997 Job No. 551 Zone Atlas No. K-12-Z