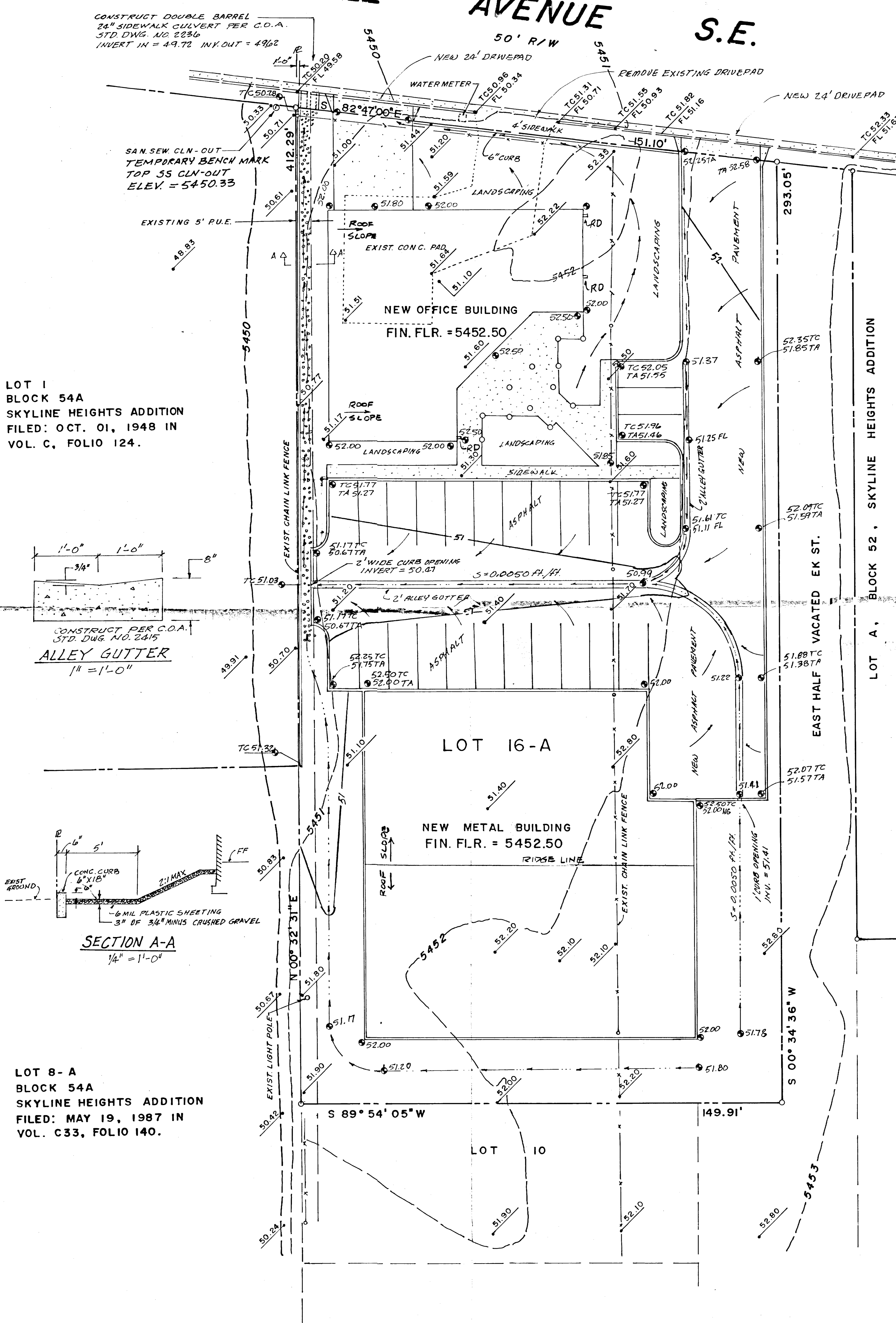
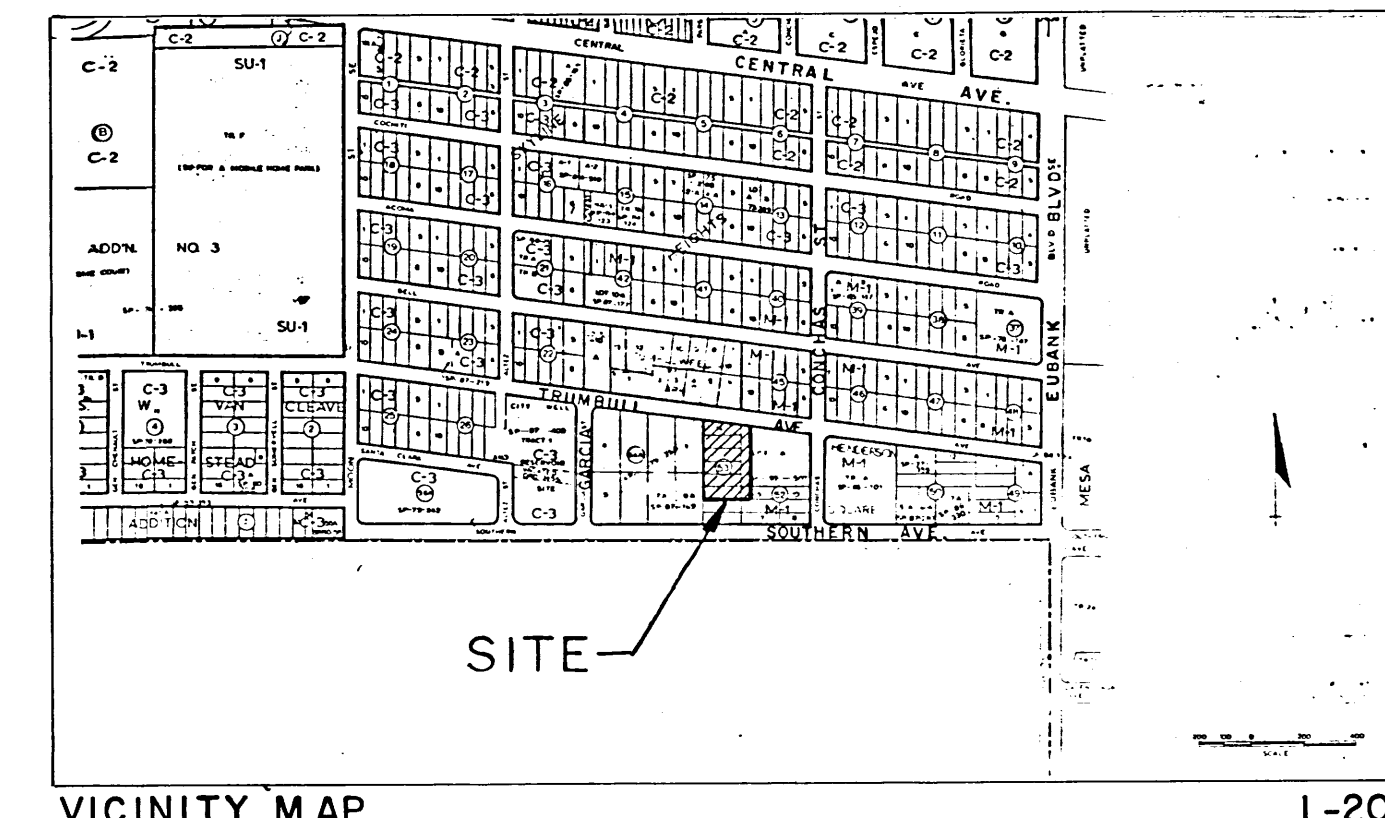
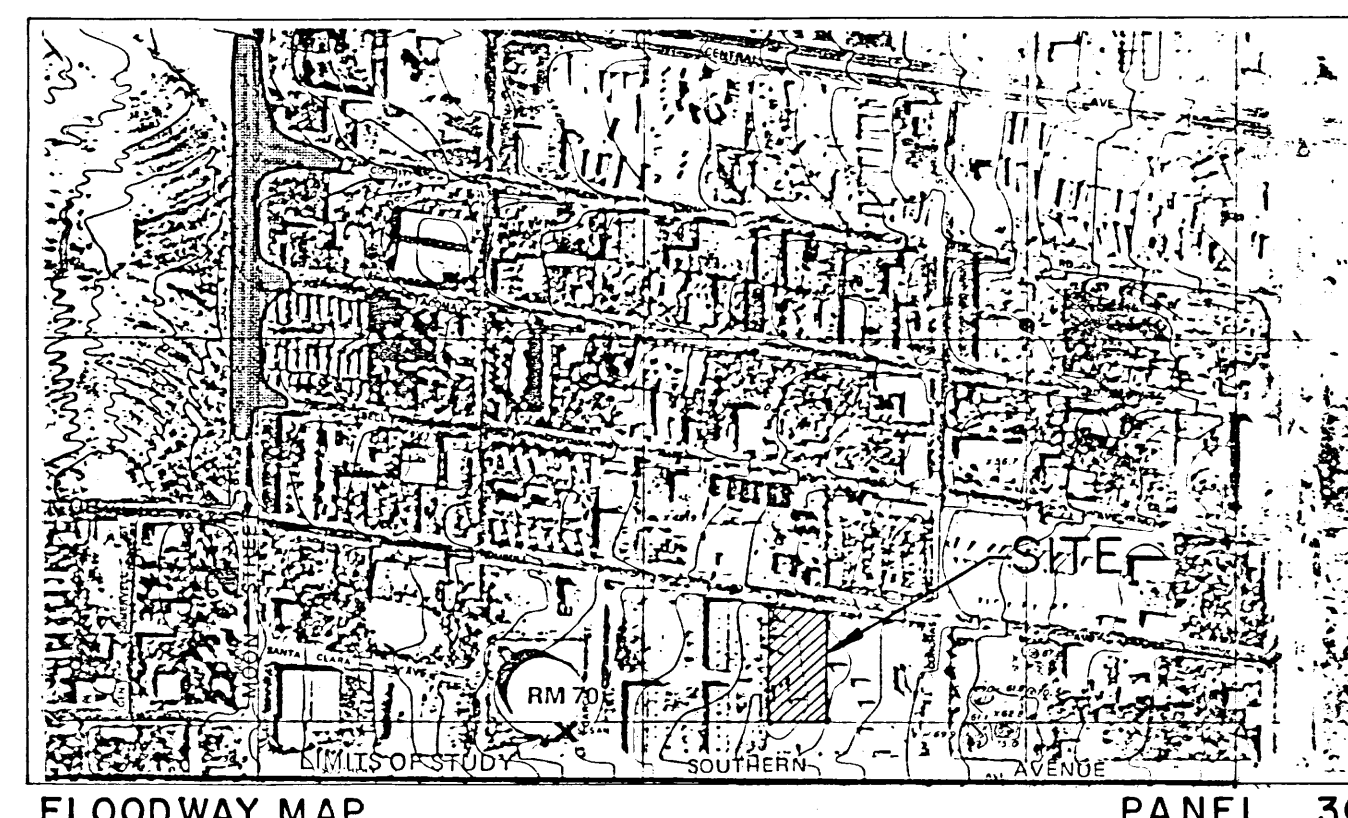


TRUMBULL AVENUE S.E.



SCALE 1" = 20'

LEGEND

SYMBOL	DESCRIPTION
● 52.22	EXISTING SPOT ELEVATION
— 54.52	NEW SPOT ELEVATION
— 52	EXISTING CONTOUR
— 52	NEW CONTOUR
---	PROPERTY LINE
---	SWALE
---	SHEET FLOW
TC	TOP OF CURB
TA	TOP OF ASPHALT

- 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 STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1988, AS REVISED.
 - TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, INC., 260-1990, FOR LOCATION OF 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.
 - MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
 - THE ADDRESS OF THE PROPERTY SERVED IS TRUMBULL AVENUE, N.E.

APPROVALS:

HYDROLOGY	NAME	DATE
INSPECTOR	NAME	DATE
CONSTRUCTION	NAME	DATE

ENGINEER'S CERTIFICATION:

I hereby certify that I have inspected the as-constructed facility and that, with the following exceptions, the as-constructed facility is in substantial conformance with the approved grading and drainage plan with engineer's stamp dated 9/29/95 and revision date of 10/18/95:

- Only a single 24" sidewalk culvert was constructed rather than a double 24" sidewalk culvert as shown on the plan.
- The channel, Section A-A, has not been constructed as originally shown on the approved plan.
- The swale around the NE corner of the building to convey runoff to the driveway has not been constructed as shown on the plan.

A 30-day temporary Certificate of Occupancy is requested to permit the owner to occupy the building at this time and have time to complete the drainage improvements as per plan. As the facilities now function, there is no possibility of runoff from the site entering the property to the west.

Frank D. Lovelady 9/16/95
Frank D. Lovelady, N.M.P.E. 6512 (Date)

EXISTING CONDITIONS:

The site is located on Trumbull Avenue 1,200 feet west of Eubank Boulevard, S.E. The area in which the site is located is presently developed as light industrial. The terrain slopes gently from east to west. Trumbull Avenue is paved with standard curb and gutter. The lot to the east, Lot A, Block 52, is developed with all runoff leaving the lot by a 4" PVC pipe through the curb into Trumbull Avenue, so there is no off-site flow from this lot. The site does not lie within a designated flood hazard zone. There is, however, a flood zone downstream from the site which is a result of an inadequately-sized storm drain line in Moon Street. A parallel 54" diameter wash line was constructed to drain the City of Albuquerque reservoir at Garcia and Southern. This line also has inlets in Moon Street which increases the capacity of the Moon Street storm drain. However, no map revision has been done so the flood hazard area in Moon Street is still considered to exist.

PROPOSED CONDITIONS:

It is proposed to develop the site as shown on the grading plan.

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.

PRECIPITATION ZONE:

The site is east of San Mateo Boulevard but west of Eubank Boulevard and is, therefore, in Precipitation Zone 3.

PEAK DISCHARGE PER ACRE, EXCESS PRECIPITATION AND AREAS:

The existing site is in an industrial area and has been graded at one time. It is considered to be Land Use "C". The developed land treatment areas are shown in the following table:

Treatment	100-yr 10-yr	100-yr	10-yr	%	Sq. Ft.	Acres	%	Sq. Ft.	Acres
A	1.87	0.58	0.66	0.19	0.0	0.0	0.0	0.0	0.0
B	2.60	1.19	0.92	0.36	0.0	0.0	12.9	5,813	0.133
C	3.45	2.00	1.29	0.62	95.4	43,007	0.987	18.5	8,344
D	5.02	3.39	2.36	1.50	4.6	2,075	0.048	68.6	30,925
Totals					100.0	45,082	1.035	100.0	45,082

WEIGHTED UNIT PEAK DISCHARGE VALUES:

Existing	$Q_{W100} = 0.954 \times 3.45 + 0.046 \times 5.02 = 3.52 \text{ cfs/acre}$ $Q_{W10} = 0.954 \times 2.00 + 0.046 \times 3.39 = 2.06 \text{ cfs/acre}$
Developed	$Q_{W100} = 0.129 \times 2.60 + 0.185 \times 3.45 + 0.686 \times 5.02 = 4.42 \text{ cfs/acre}$ $Q_{W10} = 0.129 \times 1.19 + 0.185 \times 2.00 + 0.686 \times 3.39 = 2.85 \text{ cfs/acre}$

CONSTRUCTION NOTES:

- THIS PLAN SHOWS ELEVATIONS AND DISPOSITION OF STORM WATER RUNOFF ONLY. NO DIMENSIONS ARE SHOWN ON THE PLAN. FOR DIMENSIONS OF BUILDING AND PARKING LAYOUT, SEE ARCHITECTURAL SITE PLAN.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

LEGAL DESCRIPTION:

Present Legal Description:
All of Lots 11 through 16, Block 53 of Skyline Heights Addition together with the west half (1/2) of vacated EK Street per quit claim deed filed march 04, 1960 in book D530, Page 551

Legal Description Upon Completion of Replat:
Lot 16-A, Block 53 of Skyline Heights Addition

WEIGHTED EXCESS PRECIPITATION:

Existing	$EW_{100} = 0.959 \times 1.29 + 0.046 \times 2.36 = 1.34 \text{ in.}$
	$EW_{10} = 0.959 \times 0.62 + 0.046 \times 1.50 = 0.66 \text{ in.}$
Developed	$EW_{100} = 0.129 \times 0.92 + 0.185 \times 1.29 + 0.686 \times 2.36 = 1.98 \text{ in.}$
	$EW_{10} = 0.129 \times 0.36 + 0.185 \times 0.62 + 0.686 \times 1.50 = 1.19 \text{ in.}$

SUMMARY OF VOLUMES AND PEAK DISCHARGE RATES

	V100	V10	Q100	Q10
EXISTING	5,034	2,480	3.64	2.13
DEVELOPED	7,439	4,471	4.57	2.95
INCREASE	2,405	1,991	0.93	0.82

DOWNSTREAM CAPACITY:

The site will drain into Trumbull Avenue. Approximately 750' west of that point, at Altez Street, there are inlets on both sides of Trumbull Avenue. The inlet on the south side of the street will intercept flow from the site. Any flow passing these inlets will continue down Trumbull Avenue to Moon Street where there are 6 inlets in the intersection. This intersection is not actually in the Moon Street flood zone which begins just south of Bell Street. A 54" RCP storm drain line has been installed in Moon Street parallel to the existing 36" RCP storm drain line and the two lines are interconnected at manholes. The new line is a "wash" line for the City Reservoirs at Garcia and Trumbull. The distance from Altez Street to Eubank Boulevard is roughly 2,100 feet. The site is, therefore, in the lower 1/3 of the watershed and runoff from the site will have entered the storm sewer and passed the flood zone before peak flows arrive. Any continuation of the watershed east of Eubank Boulevard that may have existed will now be eliminated by the storm drain under construction in Eubank Blvd. The site is an infill site. For these reasons, unrestricted discharge is warranted for this site.

OFF-SITE FLOW:

The property south of the site is almost flat but does have some slope in a northwesterly direction. However, it appears to pass south of the SW corner of the site. Lot A to the east drains to Trumbull Street. An area of approximately 45' X 180' = 8,100 sf, or 0.186 acre, may drain into the site just north of the SE corner. It is assumed that the peak discharge per acre is the same as was used for this site, or 4.42 cfs / acre. $Q_{100} = 4.42 \times 0.186 = 0.82$ cfs.

DRAINAGE CHANNEL CAPACITY:

Design Q = 4.57 cfs + 0.82 cfs = 5.39 cfs (0.45 cfs drains directly to the street through the driveway. Use gravel-lined channel, 5.0' wide flat bottom with a concrete containment curb on the west side and a 2:1 gravel-lined side slope on the east side. Depth of flow = 5" $A = 5.0 \times 0.41 + (0.41 \times 0.82) / 2 = 2.22$ sf $P = 0.41 + 5.0 + (0.41 \times 0.82) / 2 = 6.33$ ft. $R = A/P = 2.22 / 6.33 = 0.3507$ $N = 0.012$ for concrete and 0.023 for gravel $N_w = (0.41 \times 0.013 + 5.92 \times 0.023) / 6.33 = 0.022$ $V = (1.486 / 0.022) (0.3507)^{2/3} (0.0050)^{1/4} = 2.37$ fps $Q = AV = 2.22 \times 2.37 = 5.26$ cfs 5.26 cfs > 4.94 cfs (Adequate)

SIDEWALK CULVERT CAPACITY:

Design Q = 4.94 cfs. Use 2 ea 2'-0" sidewalk culverts. Use Weir Equation $Q = CLH^{3/2}$ $C = 3.0$ $L = 4$ $H = 0.58$ (7") $Q = 3.0 \times 4 \times (0.58)^{3/2} = 5.30$ cfs > 4.94 cfs (Adequate).

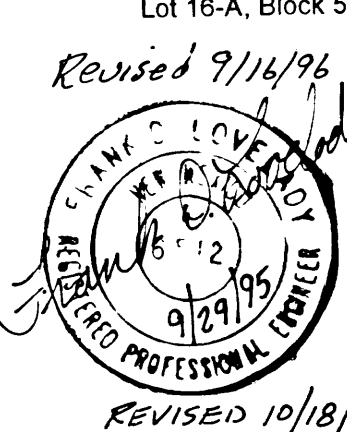
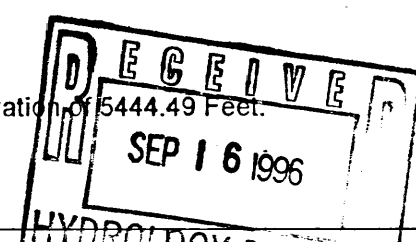
EROSION CONTROL REQUIREMENTS:

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.

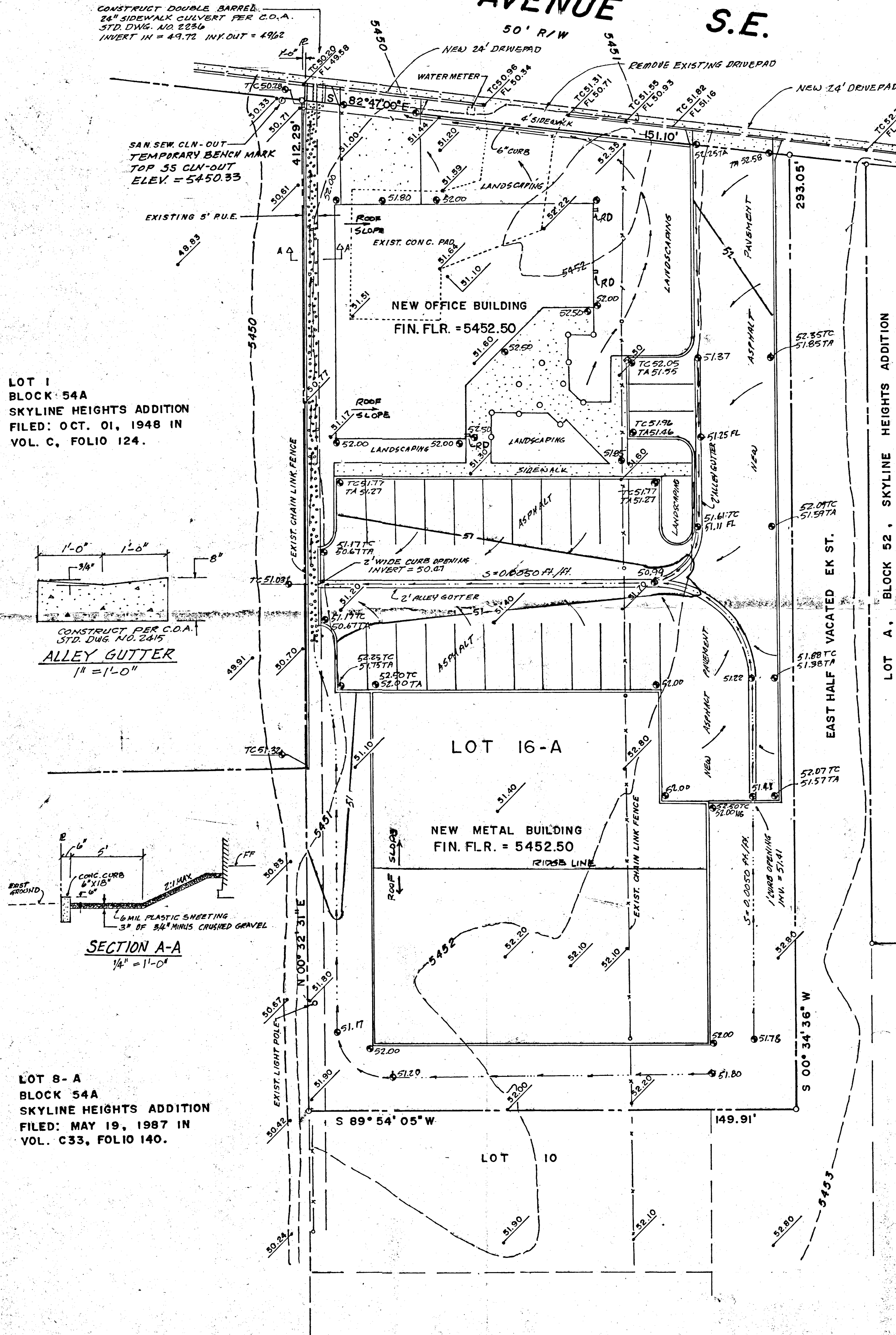
BENCHMARK:

Elevations shown are based on ACS Station "SUSAN", with an Elevation of 5444.49 Feet.



FRANK D. LOVELADY, P.E. 300 ALAMOSA ROAD N.W. ALBUQUERQUE, N.M. 87107 (505) 345-2267		GRADING AND DRAINAGE PLAN OFFICE / WAREHOUSE COMPLEX FOR ALL-AMERICAN FOAM	
Designed: F.D.L.	Drawn: STAFF	Checked: F.D.L.	Scale: 1" = 20'
Date: 9/95		Job No. 500	

TRUMBULL AVENUE S.E.



SCALE 1" = 20'

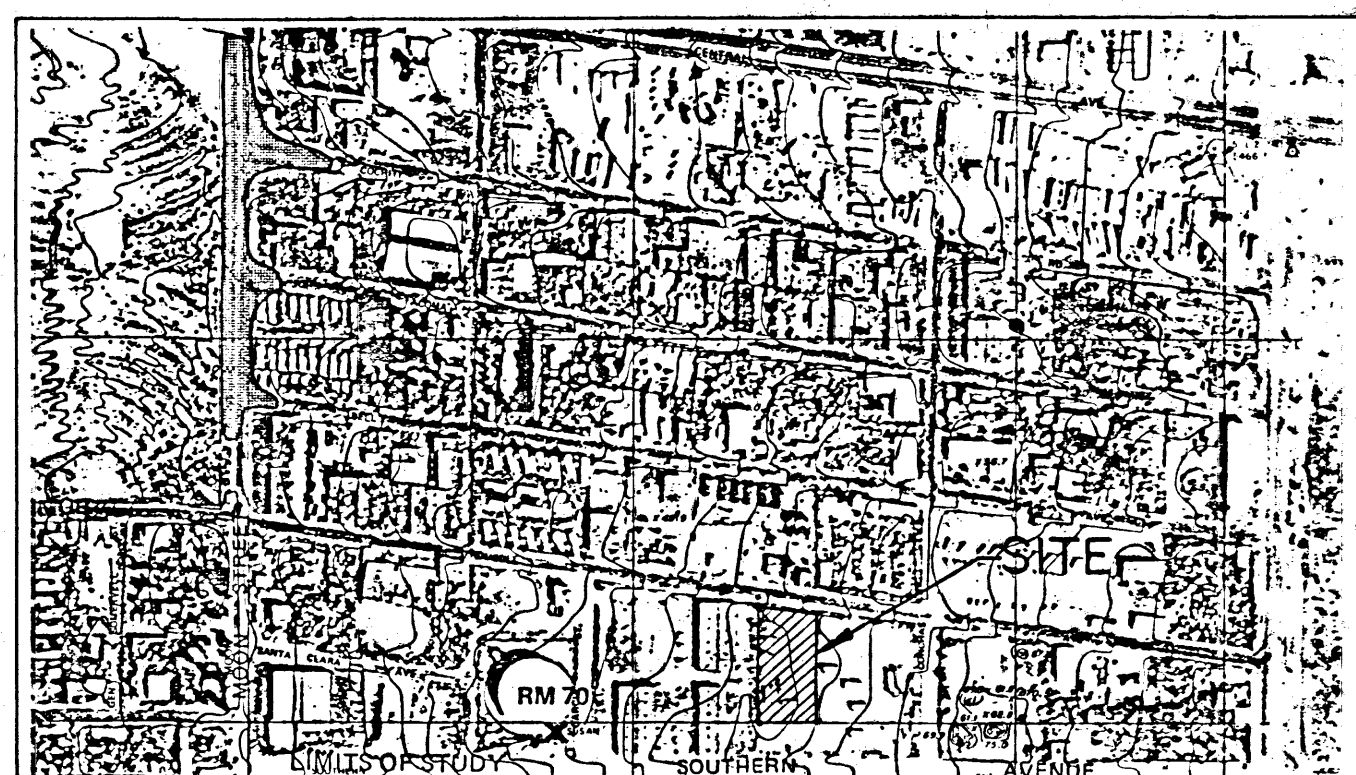
LEGEND

SYMBOL	DESCRIPTION
	EXISTING SPOT ELEVATION
	NEW SPOT ELEVATION
	EXISTING CONTOUR
	NEW CONTOUR
	PROPERTY LINE
	SWALE
	SHEET FLOW
	TOP OF CURB
	TOP OF ASPHALT

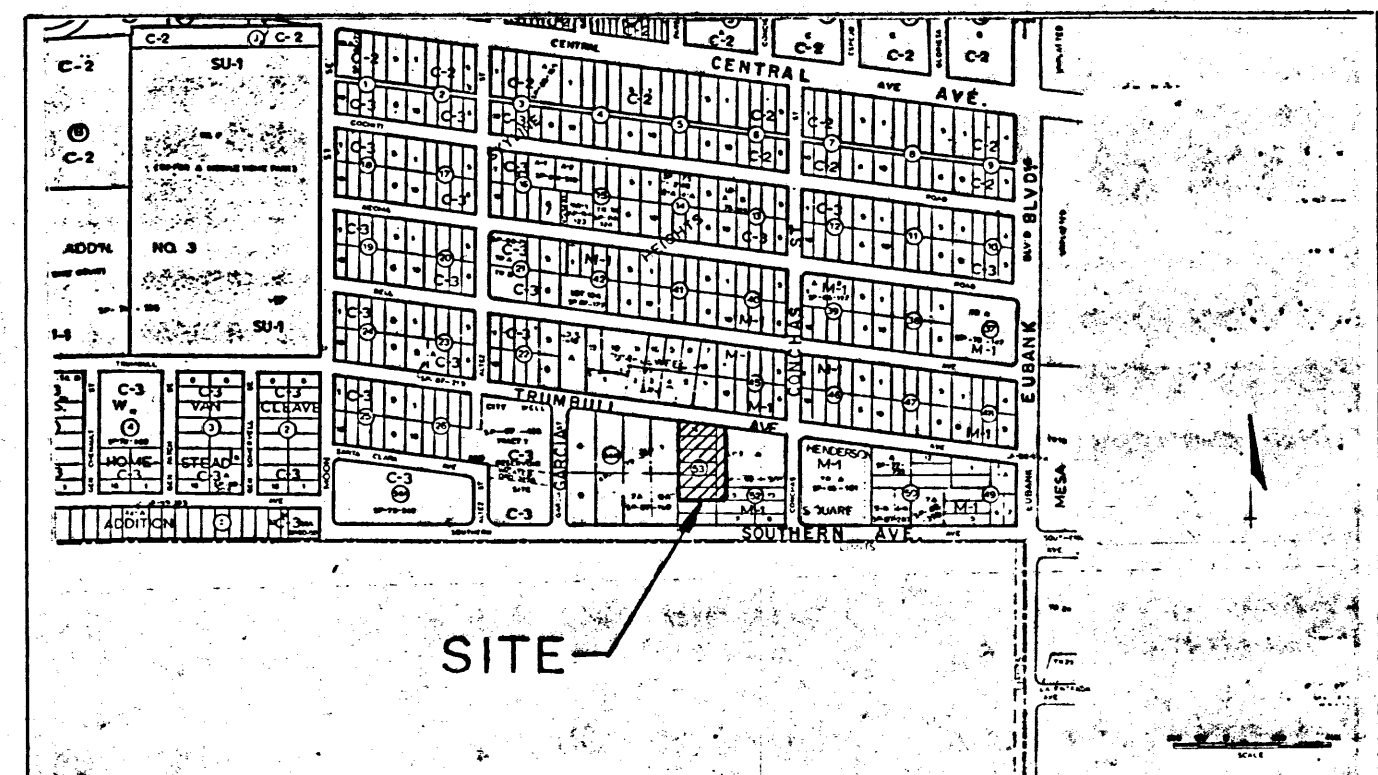
CITY OF ALBUQUERQUE DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY (S.O. 19) NOTICE TO CONTRACTORS

- 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 STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, AS REVISED.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, INC., 260-1990, FOR LOCATION OF 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.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- THE ADDRESS OF THE PROPERTY SERVED IS TRUMBULL AVENUE, N.E.

APPROVALS:
HYDROLOGY _____ NAME _____ DATE _____
INSPECTOR _____ NAME _____ DATE _____
CONSTRUCTION _____ NAME _____ DATE _____



FLOODWAY MAP PANEL 36



VICINITY MAP L-20

EXISTING CONDITIONS:

The site is located on Trumbull Avenue 1,200 feet west of Eubank Boulevard, S.E. The area in which the site is located is presently developed as light industrial. The terrain slopes gently from east to west. Trumbull Avenue is paved with standard curb and gutter. The lot to the east, Lot A, Block 52, is developed with all runoff leaving the lot by a 4" PVC pipe through the curb into Trumbull Avenue, so there is no off-site flow from this lot. The site does not lie within a designated flood hazard zone. There is, however, a flood zone downstream from the site which is a result of an inadequately-sized storm drain line in Moon Street. A parallel 54" diameter wash line was constructed to drain the City of Albuquerque reservoir at Garcia and Southern. This line also has inlets in Moon Street which increases the capacity of the Moon Street storm drain. However, no map revision has been done so the flood hazard area in Moon Street is still considered to exist.

PROPOSED CONDITIONS:

It is proposed to develop the site as shown on the grading plan.

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.

PRECIPITATION ZONE:

The site is east of San Mateo Boulevard but west of Eubank Boulevard and is, therefore, in Precipitation Zone 3.

PEAK DISCHARGE PER ACRE, EXCESS PRECIPITATION AND AREAS:

The existing site is in an industrial area and has been graded at one time. It is considered to be Land Treatment "C". The developed land treatment areas are shown in the following table:

Land Treatment	100-yr	10-yr	10-yr	10-yr	Existing Site Areas	%	Sq. Ft.	Acres	Developed Site Areas	%	Sq. Ft.	Acres
A	1.87	0.58	0.66	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
B	2.60	1.19	0.92	0.36	0.0	0.0	0.0	0.0	12.9	5,813	0.133	
C	3.45	2.00	1.29	0.62	95.4	43,007	0.987	18.5	8,344	0.192		
D	5.02	3.39	2.36	1.50	4.6	2,075	0.048	68.8	30,925	0.710		
Totals					100.0	45,082	1.035	100.0	45,082	1.035		

WEIGHTED UNIT PEAK DISCHARGE VALUES:

Existing	$Q_{W100} = 0.954 \times 3.45 + 0.048 \times 5.02 = 3.52 \text{ cfs/acre}$
	$Q_{W10} = 0.954 \times 2.00 + 0.048 \times 3.39 = 2.08 \text{ cfs/acre}$
Developed	$Q_{W100} = 0.129 \times 2.60 + 0.185 \times 3.45 + 0.686 \times 5.02 = 4.42 \text{ cfs/acre}$
	$Q_{W10} = 0.129 \times 1.19 + 0.185 \times 2.00 + 0.686 \times 3.39 = 2.85 \text{ cfs/acre}$

CONSTRUCTION NOTES:

- THIS PLAN SHOWS ELEVATIONS AND DISPOSITION OF STORM WATER RUNOFF ONLY. NO DIMENSIONS ARE SHOWN ON THE PLAN. FOR DIMENSIONS OF BUILDING AND PARKING LAYOUT, SEE ARCHITECTURAL SITE PLAN.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

LEGAL DESCRIPTION:

Present Legal Description:
All of Lots 11 through 16, Block 53 of Skyline Heights Addition together with the west half (W 1/2) of vacated EK Street per quit claim deed filed March 04, 1960 in book D530, Page 551

Legal Description Upon Completion of Replat:
Lot 16-A, Block 53 of Skyline Heights Addition

WEIGHTED EXCESS PRECIPITATION:

Existing	$E_{W100} = 0.959 \times 1.29 + 0.048 \times 2.36 = 1.34 \text{ in.}$
	$E_{W10} = 0.959 \times 0.62 + 0.048 \times 1.50 = 0.66 \text{ in.}$
Developed	$E_{W100} = 0.129 \times 0.92 + 0.185 \times 1.29 + 0.686 \times 2.36 = 1.98 \text{ in.}$
	$E_{W10} = 0.129 \times 0.36 + 0.185 \times 0.62 + 0.686 \times 1.50 = 1.19 \text{ in.}$

SUMMARY OF VOLUMES AND PEAK DISCHARGE RATES

	V100	V10	Q100	Q10
EXISTING	5,034	2,480	3.64	2.13
DEVELOPED	7,439	4,471	4.57	2.95
INCREASE	2,405	1,991	0.93	0.82

DOWNSTREAM CAPACITY:

The site will drain into Trumbull Avenue. Approximately 750' west of that point, at Altez Street, there are inlets on both sides of Trumbull Avenue. The inlet on the south side of the street will intercept flow from the site. Any flow passing these inlets will continue down Trumbull Avenue to Moon Street where there are 6 inlets in the intersection. This intersection is not actually in the Moon Street flood zone which begins just south of Bell Street. A 54" RCP storm drain line has been installed in Moon Street parallel to the existing 36" RCP storm drain line and the two lines are interconnected at manholes. The new line is a "wash" line for the City Reservoirs at Garcia and Trumbull. The distance from Altez Street to Eubank Boulevard is roughly 2,100 feet. The site is, therefore, in the lower 1/3 of the watershed and runoff from the site will have entered the storm sewer and passed the flood zone before peak flows arrive. Any continuation of the watershed east of Eubank Boulevard that may have existed will now be eliminated by the storm drain under construction in Eubank Blvd. The site is an infill site. For these reasons, unrestricted discharge is warranted for this site.

OFF-SITE FLOW:

The property south of the site is almost flat but does have some slope in a northerly westerly direction. However, it appears to pass south of the SW corner of the site. Lot A to the east drains to Trumbull Street. An area of approximately 45' X 180' = 8,100 sf, or 0.185 acre, may drain into the site just north of the SE corner. It is assumed that the peak discharge per acre is the same q_{W10} as was used for this site, or 4.42 cfs/acre. $Q_{100} = 4.42 \times 0.185 = 0.82 \text{ cfs}$.

DRAINAGE CHANNEL CAPACITY:

Design $Q = 4.57 \text{ cfs} + 0.82 \text{ cfs} = 5.39 \text{ cfs}$ (0.45 cfs drains directly to the street through the driveway. Use gravel-lined channel, 5.0' wide flat bottom with a concrete containment curb on the west side and a 2:1 gravel-lined side slope on the east side. Depth of flow = 5".
 $A = 5.0 \times 0.41 + (0.41 \times 0.82)/2 = 2.22 \text{ sf}$
 $P = 0.41 + 5.0 + (0.41^2 + 0.82^2)/2 = 6.33 \text{ ft. } R = A/P = 2.22/6.33 = 0.3507$
 $N = 0.012 \text{ for concrete and } 0.023 \text{ for gravel. } N_w = (0.41 \times 0.012 + 5.92 \times 0.023)/6.33 = 0.022$
 $V = (1.488/0.022) \times (0.3507)^{2/3} = 3.507 \text{ fps } Q = AV = 2.22 \times 3.51 = 7.80 \text{ cfs}$
 $5.26 \text{ cfs} > 4.94 \text{ cfs}$ (Adequate)

SIDEWALK CULVERT CAPACITY:

Design $Q = 4.94 \text{ cfs}$. Use 2 ea 2'-0" sidewalk culverts. Use Weir Equation $Q = CLH^{3/2}$
 $C = 3.0 \text{ } L = 4 \text{ } H = 0.58' (7") \text{ } Q = 3.0 \times 4 \times (0.58)^{3/2} = 5.30 \text{ cfs} > 4.94 \text{ cfs}$ (Adequate)

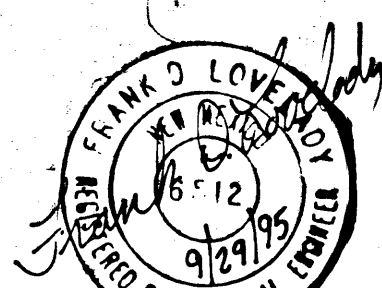
EROSION CONTROL REQUIREMENTS:

The contractor shall be responsible for compliance with the following:

- No sediment-bearing water shall be allowed to discharge from the site during construction.
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- 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.

BENCHMARK:

Elevations shown are based on ACS Station "SUSAN", with an Elevation of 5444.40 Feet.



REVISED 10/18/95

FRANK D. LOVELADY, P.E.
300 ALAMOSA ROAD N.W.
ALBUQUERQUE, N.M. 87107
(505) 345-2267

GRADING AND DRAINAGE PLAN
OFFICE / WAREHOUSE COMPLEX FOR
ALL-AMERICAN FOAM

SHEET
OF
1

Designed: F.D.L. Drawn: STAFF Checked: F.D.L. Scale: 1" = 20' Date: 9/95 Job No. 500

TRUMBULL

AVENUE

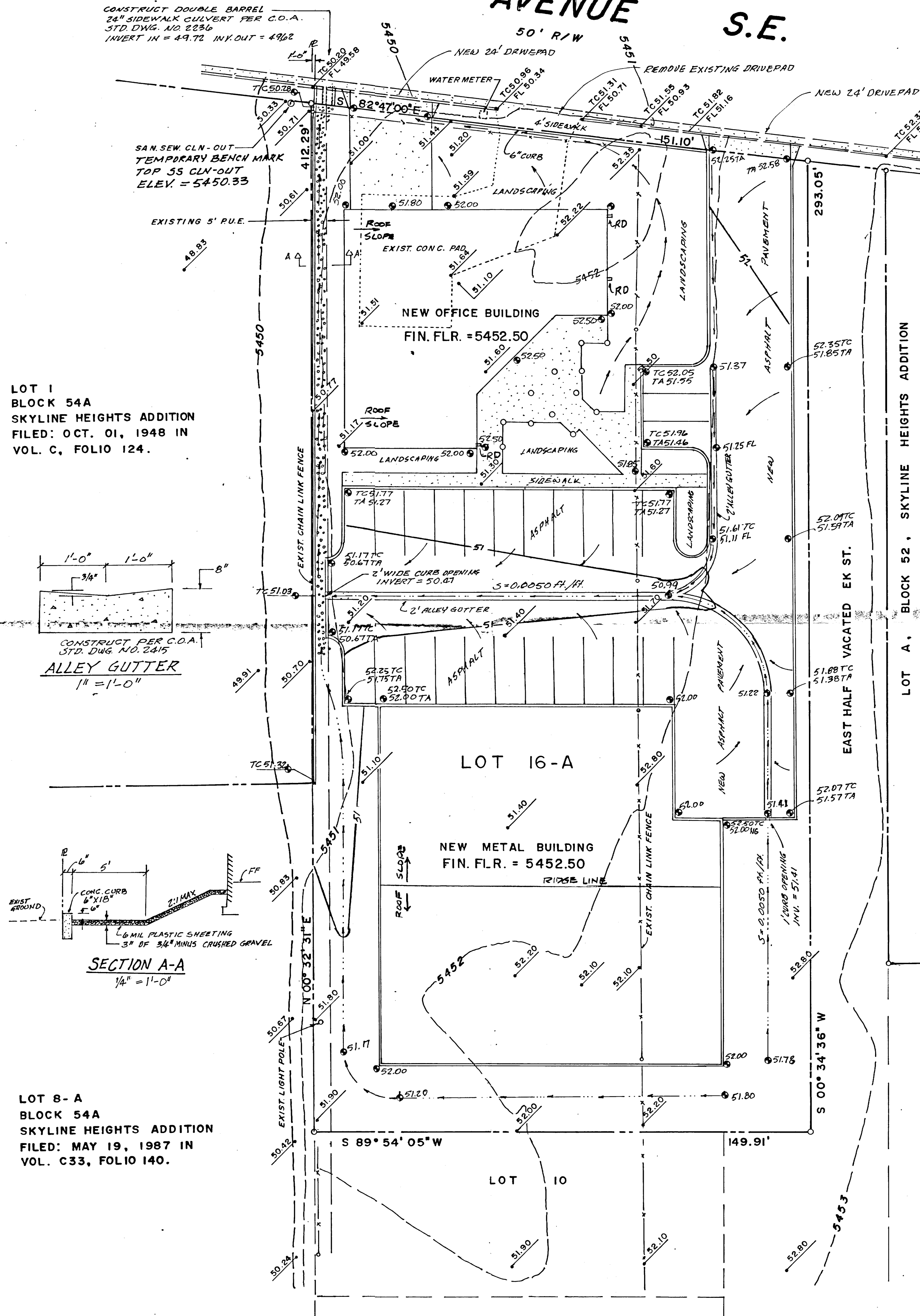
S.E.

LOT 1
BLOCK 54A
SKYLINE HEIGHTS ADDITION
FILED: OCT. 01, 1948 IN
VOL. C, FOLIO 124.

CONSTRUCT PER C.O.A.
STD. DWG. NO. 2415
ALLEY GUTTER
1" = 1'-0"

SECTION A-A
1/4" = 1'-0"

LOT 8-A
BLOCK 54A
SKYLINE HEIGHTS ADDITION
FILED: MAY 19, 1987 IN
VOL. C33, FOLIO 140.



SCALE 1" = 20'

LEGEND

SYMBOL	DESCRIPTION
52.22	EXISTING SPOT ELEVATION
5452	NEW SPOT ELEVATION
52	EXISTING CONTOUR
52	NEW CONTOUR
---	PROPERTY LINE
---	SWALE
---	SHEET FLOW
TC	TOP OF CURB
TA	TOP OF ASPHALT

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.
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- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- THE ADDRESS OF THE PROPERTY SERVED IS TRUMBULL AVENUE, N.E.

APPROVALS:	NAME	DATE
HYDROLOGY		
INSPECTOR	NAME	DATE
CONSTRUCTION	NAME	DATE

EXISTING CONDITIONS:

The site is located on Trumbull Avenue 1,200 feet west of Eubank Boulevard, S.E. The area in which the site is located is presently developed as light industrial. The terrain slopes gently from east to west. Trumbull Avenue is paved with standard curb and gutter. The lot to the east, Lot A, Block 52, is developed with all runoff leaving the lot by a 4" PVC pipe through the curb into Trumbull Avenue, so there is no off-site flow from this lot. The site does not lie within a designated flood hazard zone. There is, however, a flood zone downstream from the site which is a result of an inadequately-sized storm drain line in Moon Street. A parallel 54" diameter wash line was constructed to drain the City of Albuquerque reservoir at Garcia and Southern. This line also has inlets in Moon Street which increases the capacity of the Moon Street storm drain. However, no map revision has been done so the flood hazard area in Moon Street is still considered to exist.

PROPOSED CONDITIONS:

It is proposed to develop the site as shown on the grading plan. It will be necessary to pond within the parking lot to reduce the peak discharge to an acceptable level.

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.

PRECIPITATION ZONE:

The site is east of San Mateo Boulevard but west of Eubank Boulevard and is, therefore, in Precipitation Zone 3.

PEAK DISCHARGE PER ACRE, EXCESS PRECIPITATION AND AREAS:

Land Use	100-yr 10-yr	100-yr 10-yr	% Sd. Fl.	% Sd. Fl.	% Sd. Fl.	% Sd. Fl.	% Sd. Fl.	% Sd. Fl.
A	1.87	0.58	0.66	0.19	0.0	0.0	0.0	0.0
B	2.60	1.19	0.92	0.38	0.0	0.0	12.9	5.813
C	3.45	2.00	1.29	0.62	95.4	43,007	0.987	18.5
D	5.02	3.39	2.36	1.50	4.6	2,075	0.048	68.6
Totals					100.0	45,082	1.035	100.0

WEIGHTED UNIT PEAK DISCHARGE VALUES:

Existing	$Q_{W100} = 0.954 \times 3.45 + 0.046 \times 5.02 = 3.52 \text{ cfs/acre}$
	$Q_{W10} = 0.954 \times 2.00 + 0.046 \times 3.39 = 2.06 \text{ cfs/acre}$
Developed	$Q_{W100} = 0.129 \times 2.60 + 0.185 \times 3.45 + 0.688 \times 5.02 = 4.42 \text{ cfs/acre}$
	$Q_{W10} = 0.129 \times 1.19 + 0.185 \times 2.00 + 0.688 \times 3.39 = 2.85 \text{ cfs/acre}$

CONSTRUCTION NOTES:

- THIS PLAN SHOWS ELEVATIONS AND DISPOSITION OF STORM WATER RUNOFF ONLY. NO DIMENSIONS ARE SHOWN ON THE PLAN. FOR DIMENSIONS OF BUILDING AND PARKING LAYOUT, SEE ARCHITECTURAL SITE PLAN.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

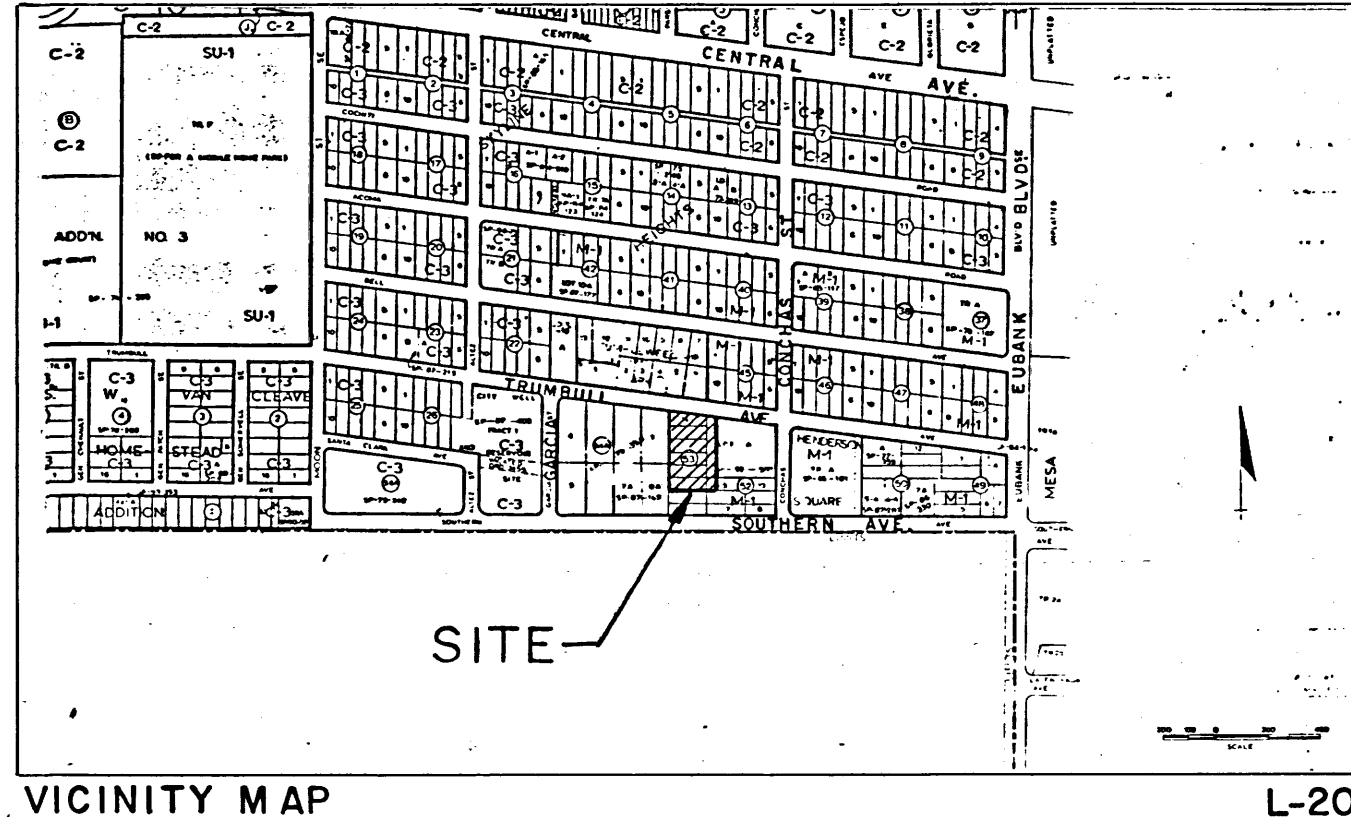
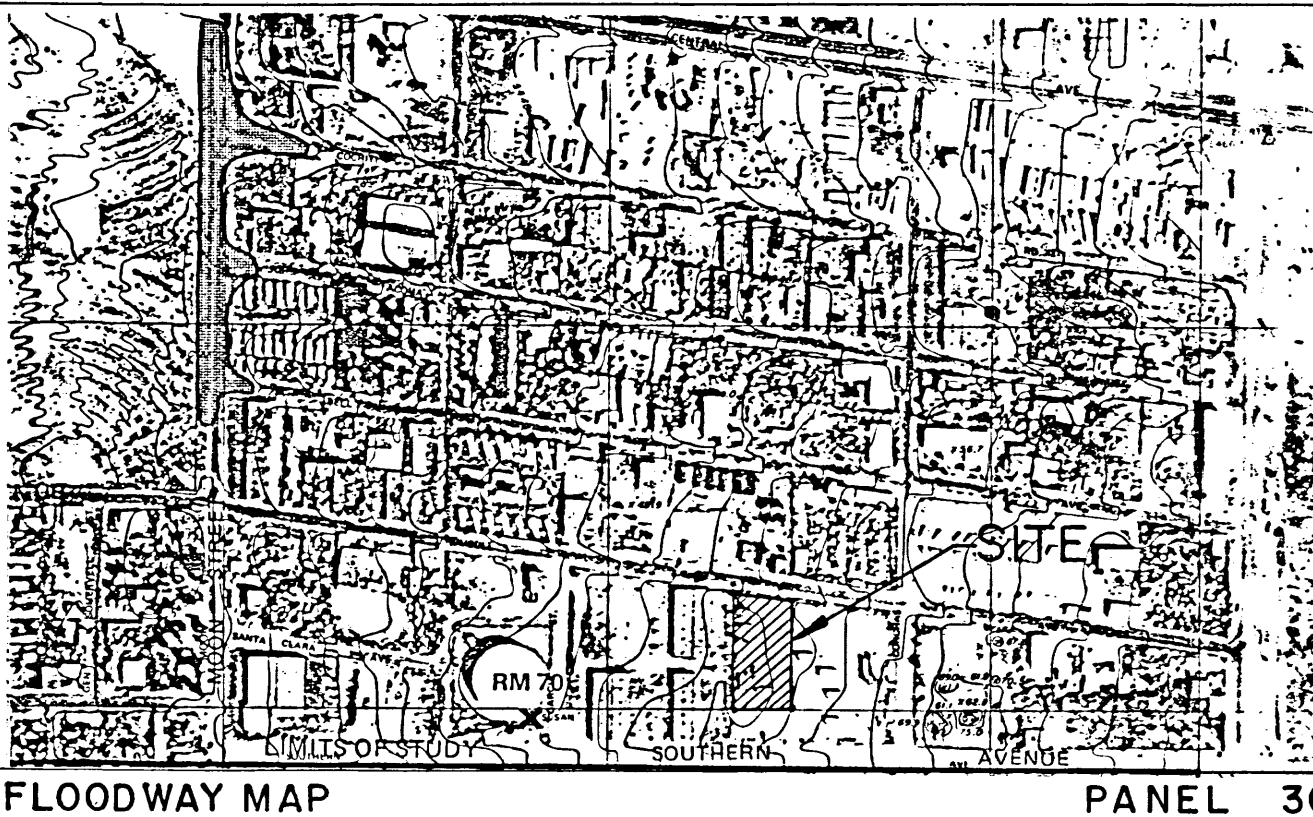
LEGAL DESCRIPTION:

Present Legal Description:
All of Lots 11 through 16, Block 53 of Skyline Heights Addition together with the west half (W 1/2) of vacated EK Street per quit claim deed filed March 04, 1960 in book D530, Page 551

Legal Description Upon Completion of Replat:
Lot 16-A, Block 53 of Skyline Heights Addition



FRANK D. LOVELADY, P.E. 300 ALAMOSA ROAD N.W. ALBUQUERQUE, N.M. 87107 (505) 345-2267			GRADING AND DRAINAGE PLAN OFFICE/WAREHOUSE COMPLEX FOR ALL-AMERICAN FOAM			SHEET OF /
Designed: F.D.L.	Drawn: STAFF	Checked: F.D.L.	Scale: 1" = 20'	Date: 9/95	Job No. 500	



WEIGHTED EXCESS PRECIPITATION:

Existing	$E_{W100} = 0.959 \times 1.29 + 0.046 \times 2.36 = 1.34 \text{ in.}$
	$E_{W10} = 0.959 \times 0.62 + 0.046 \times 1.50 = 0.66 \text{ in.}$
Developed	$E_{W100} = 0.129 \times 0.92 + 0.185 \times 1.29 + 0.688 \times 2.36 = 1.98 \text{ in.}$
	$E_{W10} = 0.129 \times 0.36 + 0.185 \times 0.62 + 0.688 \times 1.50 = 1.19 \text{ in.}$

SUMMARY OF VOLUMES AND PEAK DISCHARGE RATES

	V100	V10	Q100	Q10
EXISTING	5,034	2,480	3.64	2.13
DEVELOPED	7,439	4,471	4.57	2.95
INCREASE	2,405	1,991	0.93	0.82

DOWNSTREAM CAPACITY:

The site will drain into Trumbull Avenue. Approximately 750' west of that point, at Altez Street, there are inlets on both sides of Trumbull Avenue. The inlet on the south side of the street will intercept flow from the site. Any flow passing these inlets will continue down Trumbull Avenue to Moon Street where there are 6 inlets in the intersection. This intersection is not actually in the Moon Street flood zone which begins just south of Bell Street. A 54" RCP storm drain line has been installed in Moon Street parallel to the existing 36" RCP storm drain line and the two lines are interconnected at manholes. The new line is a "wash" line for the City Reservoirs at Garcia and Trumbull. The distance from Altez Street to Eubank Boulevard is roughly 2,100 feet. The site is, therefore, in the lower 1/3 of the watershed and runoff from the site will have entered the storm sewer and passed the flood zone before peak flows arrive. Any continuation of the watershed east of Eubank Boulevard that may have existed will now be eliminated by the storm drain under construction in Eubank Blvd. The site is an infill site. For these reasons, unrestricted discharge is warranted for this site.

OFF-SITE FLOW:

The property south of the site is almost flat but does have some slope in a northwesterly direction. However, it appears to pass south of the SW corner of the site. Lot A to the east drains to Trumbull Street. An area of approximately 45' X 180' = 8,100 sf, or 0.186 acre, may drain into the site just north of the SE corner. It is assumed that the peak discharge per acre is the same q_w as was used for this site, or 4.42 cfs / acre. $Q_{100} = 4.42 \times 0.186 = 0.82 \text{ cfs}$.

DRAINAGE CHANNEL CAPACITY:

Design $Q = 4.57 \text{ cfs} + 0.82 \text{ cfs} = 5.39 \text{ cfs}$ (0.45 cfs drains directly to the street through the driveway. Use gravel-lined channel, 5'0" wide flat bottom with a concrete containment curb on the west side and a 2:1 gravel-lined side slope on the east side. Depth of flow = 5"
 $A = 5.0 \times 0.41 + (0.41 \times 0.82) / 2 = 2.22 \text{ sf}$
 $P = 0.41 + 5.0 + (0.41^2 + 0.82^2) / 2 = 6.33 \text{ ft}$ $R = A/P = 2.22 / 6.33 = 0.3507$
 $N = 0.012 \text{ for concrete and } 0.023 \text{ for gravel}$ $N_w = (0.41 \times 0.013 + 5.92 \times 0.023) / 6.33 = 0.022$
 $V = (1.488 / 0.022) (0.3507)^{2/3} (0.0050)^{1/2} = 2.37 \text{ fps}$ $Q = AV = 2.22 \times 2.37 = 5.26 \text{ cfs}$
 $5.26 \text{ cfs} > 4.94 \text{ cfs}$ (Adequate)

SIDEWALK CULVERT CAPACITY:

Design $Q = 4.94 \text{ cfs}$ Use 2 ea 2'-0" sidewalk culverts. Use Weir Equation $Q = CLH^{3/2}$
 $C = 3.0$ $L = 4 \text{ ft}$ $H = 0.58' (7")$ $Q = 3.0 \times 4 \times (0.58)^{3/2} = 5.30 \text{ cfs} > 4.94 \text{ cfs}$ (Adequate)

EROSION CONTROL REQUIREMENTS:

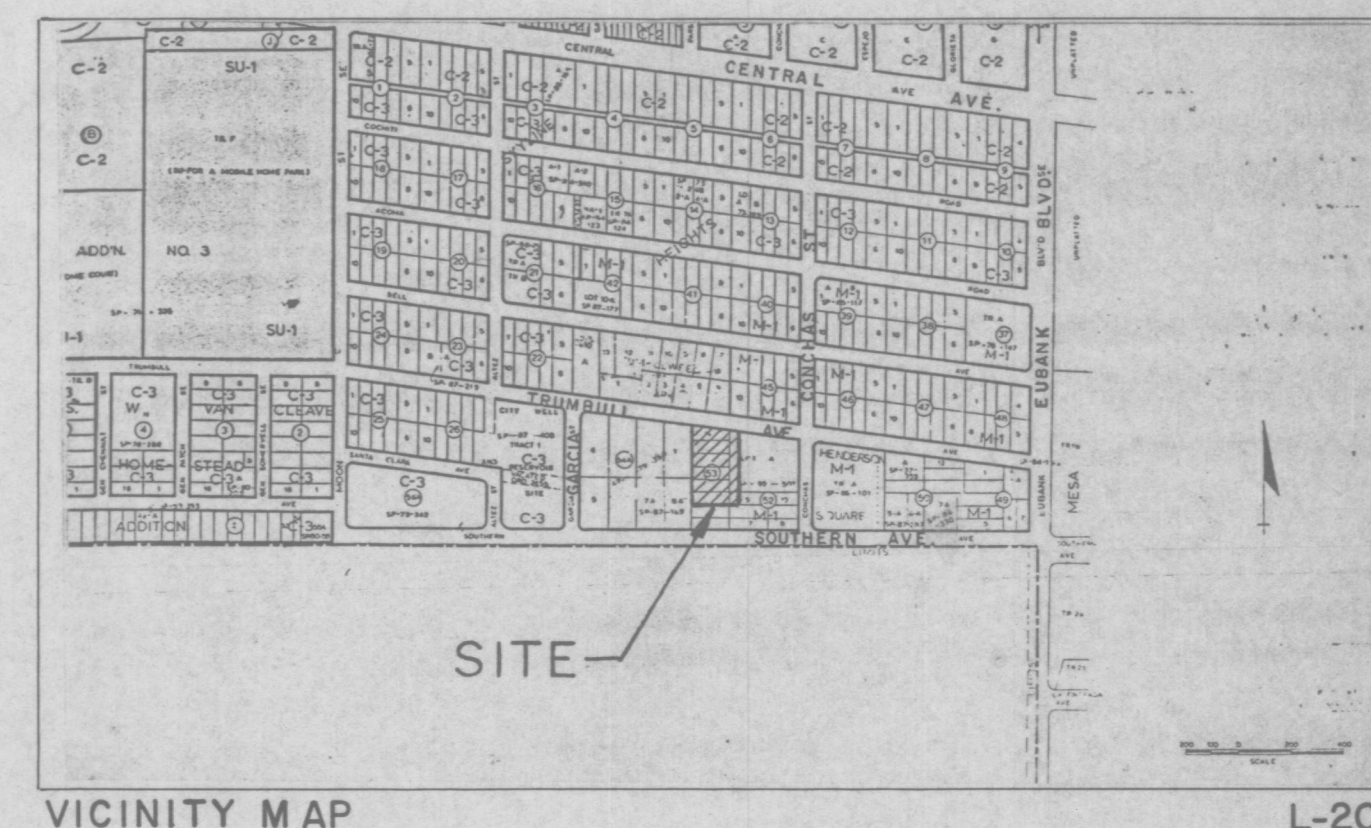
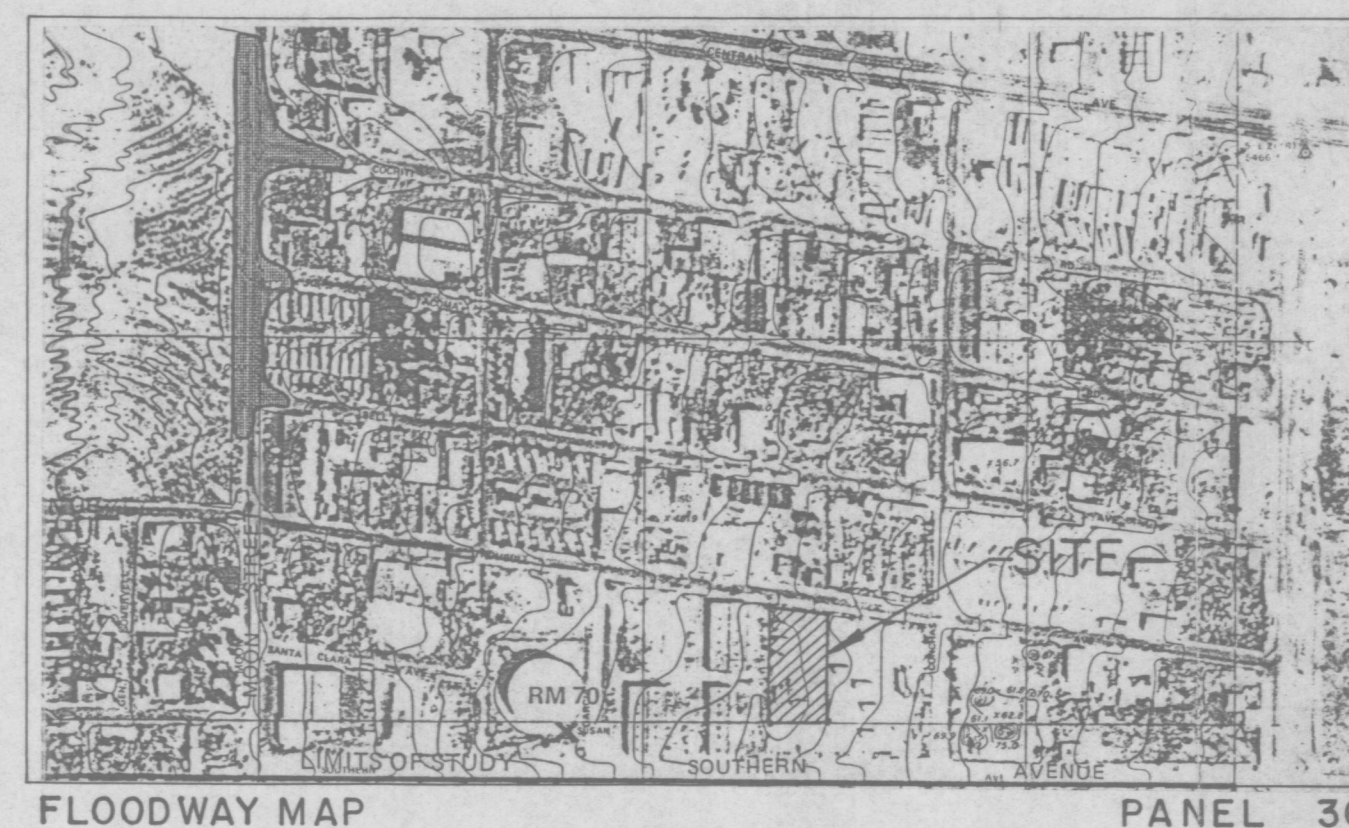
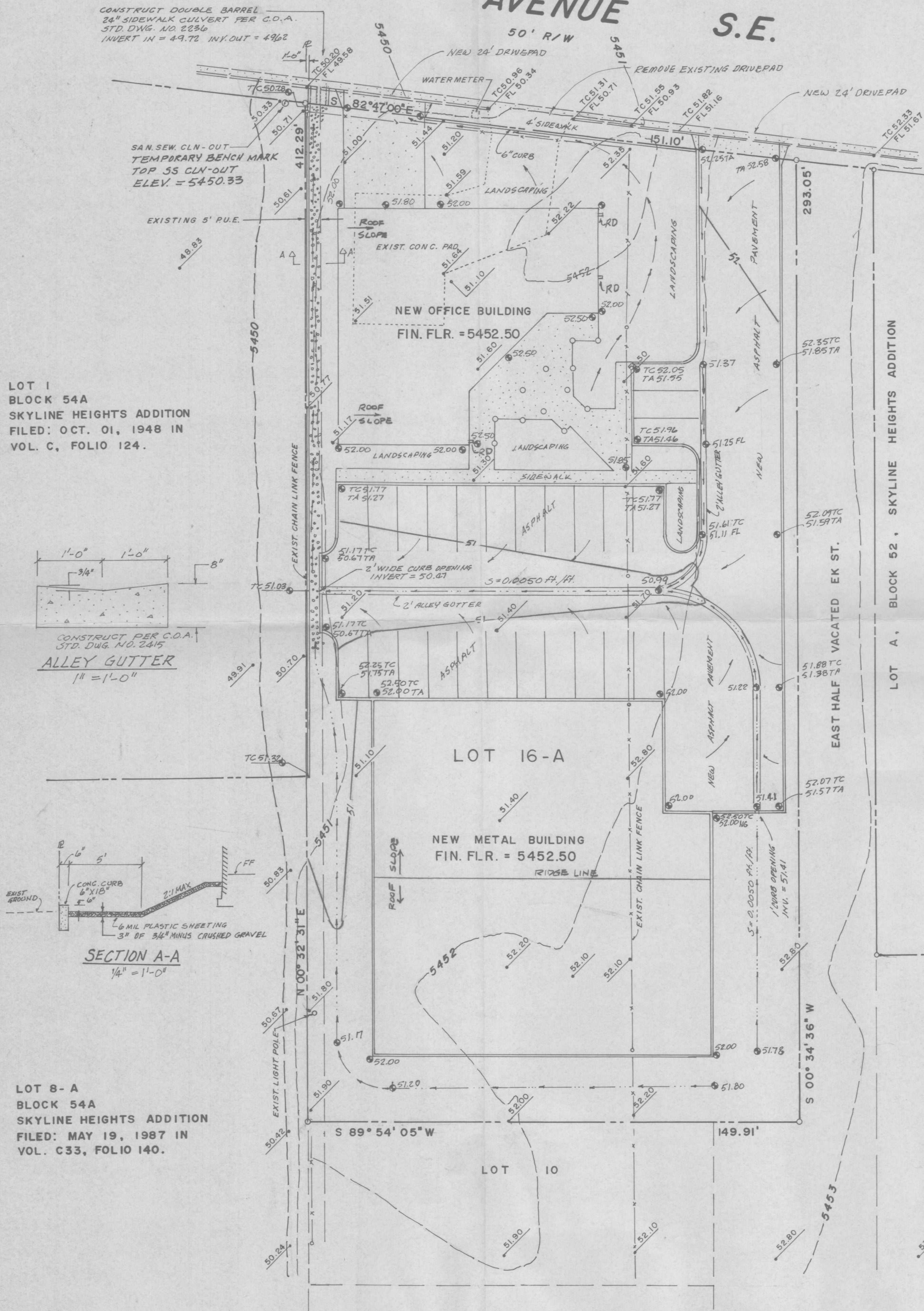
The contractor shall be responsible for compliance with the following:

- 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.

BENCHMARK:

Elevations shown are based on ACS Station "SUSAN", with an Elevation of 5444.49 Feet.

TRUMBULL AVENUE S.E.



SCALE 1" = 20'

EXISTING CONDITIONS:

The site is located on Trumbull Avenue, 1,200 feet west of Eubank Boulevard, S.E. The area in which the site is located is presently developed as light industrial. The terrain slopes gently from east to west. Trumbull Avenue is paved with standard curb and gutter. The lot to the east, Lot A, Block 52, is developed with all runoff leaving the lot by a 4" PVC pipe through the curb into Trumbull Avenue, so there is no off-site flow from this lot. The site does not lie within a designated flood hazard zone. There is, however, a flood zone downstream from the site which is a result of an inadequately-sized storm drain line in Moon Street. A parallel 54" diameter wash line was constructed to drain the City of Albuquerque reservoir at Garcia and Southern. This line also has inlets in Moon Street which increases the capacity of the Moon Street storm drain. However, no map revision has been done so the flood hazard area in Moon Street is still considered to exist.

PROPOSED CONDITIONS:

It is proposed to develop the site as shown on the grading plan.

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.

PRECIPITATION ZONE:

The site is east of San Mateo Boulevard but west of Eubank Boulevard and is, therefore, in Precipitation Zone 3.

PEAK DISCHARGE PER ACRE, EXCESS PRECIPITATION AND AREAS:

The existing site is in an industrial area and has been graded at one time. It is considered to be Land Treatment "C". The developed land treatment areas are shown in the following table:

Land Treatment	100-yr. 10-yr. 10-yr. 10-yr.				Existing Site Areas		Developed Site Areas	
	100-yr.	10-yr.	10-yr.	10-yr.	% Sq. Ft.	% Acres	% Sq. Ft.	% Acres
A	1.87	0.58	0.65	0.19	0.0	0.0	0.0	0.0
B	2.80	1.19	0.92	0.36	0.0	0.0	12.9	5,813
C	3.45	2.00	1.29	0.62	95.4	43,007	0.987	18.5
D	5.02	3.39	2.36	1.50	4.6	2,075	0.048	68.6
Totals					100.0	45,082	1.035	100.0

WEIGHTED UNIT PEAK DISCHARGE VALUES:

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OFF-SITE FLOW:

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BENCHMARK:

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FRANK D. LOVELADY, P.E.
300 ALAMOSA ROAD N.W.
ALBUQUERQUE, N.M. 87107
(505) 345-2267
REVISED 10/18/95

FRANK D. LOVELADY, P.E. 300 ALAMOSA ROAD N.W. ALBUQUERQUE, N.M. 87107 (505) 345-2267				GRADING AND DRAINAGE PLAN OFFICE / WAREHOUSE COMPLEX FOR ALL-AMERICAN FOAM		SHEET OF /	
Designed: FDL.	Drawn: STAFF	Checked: FDL.	Scale: 1" = 20'	Date: 9/95	Job No. 500		