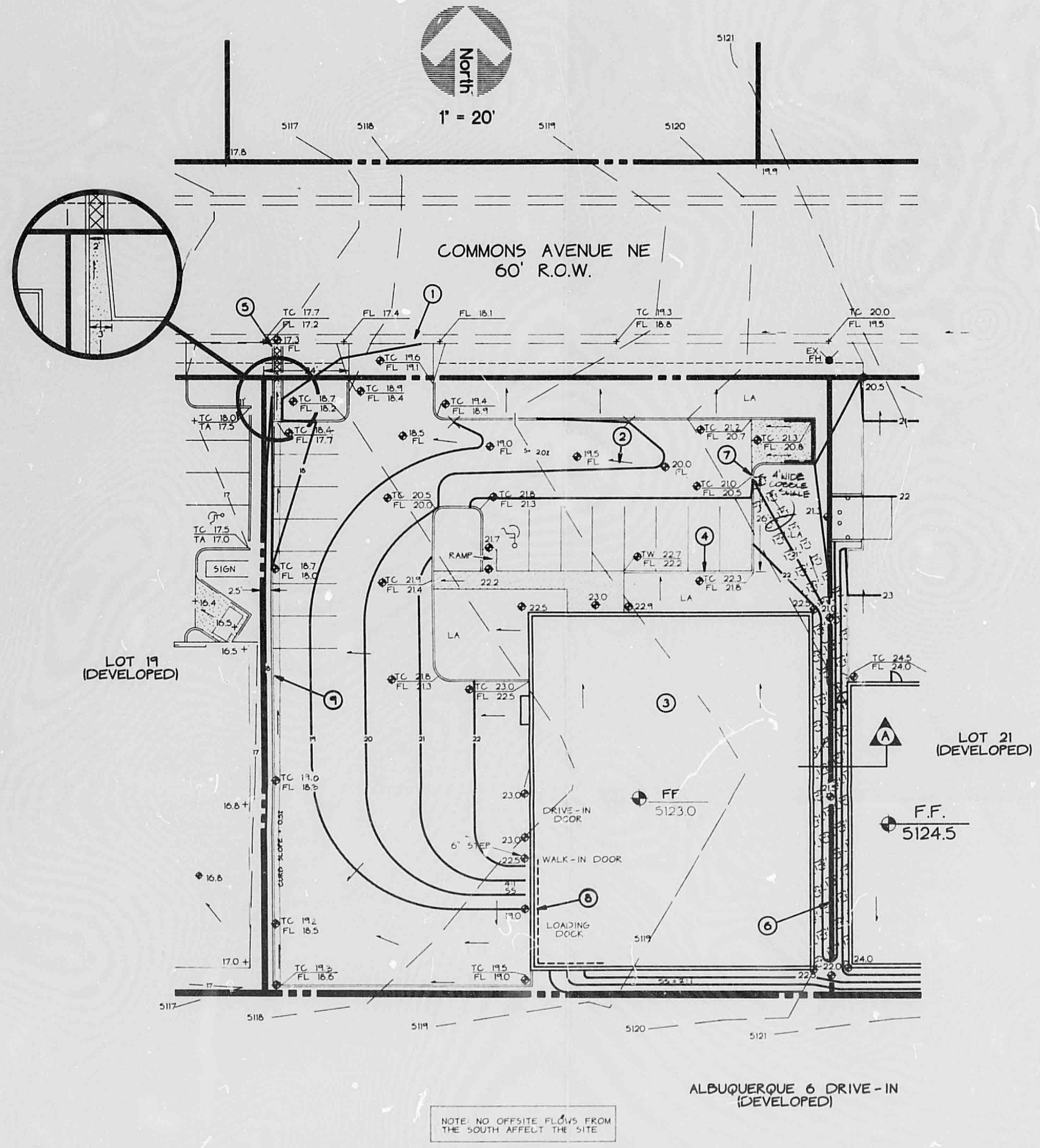
PUBLIC WORKS/HYDROLOGY 1 OF 2

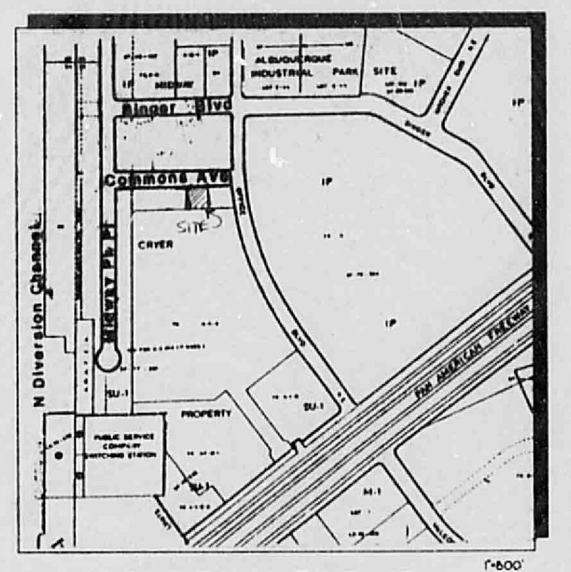
F17/D61R



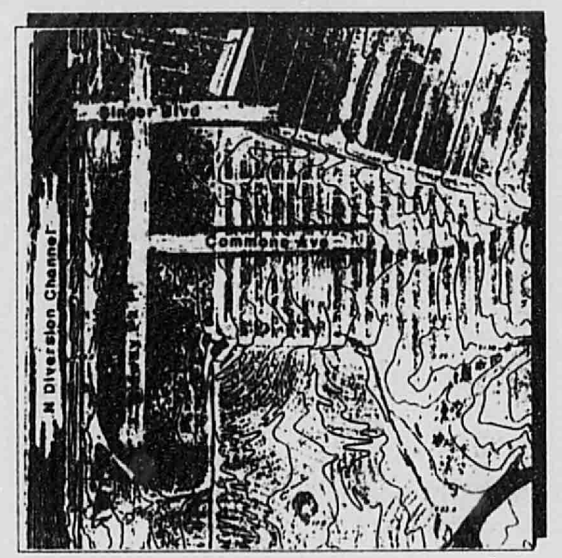
NOTE: NO OFFSITE FLOWS FROM THE SOUTH AFFECT THE SITE.

1. CONSTRUCT 24' WIDE CONCRETE DRIVEWAY ENTRANCE LOCATED AS SHOWN. SEE C.O.A. DWG. 2425.
2. CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN.
3. ALL ROOF FLOWS WILL BE CARRIED IN PIPES TO BE DISCHARGED DIRECTLY TO THE NORTH PARKING AREA.
4. CONSTRUCT 6" HIGH EXTRUDED CONCRETE CURB (TYPICAL UNLESS OTHERWISE NOTED). SEE DETAIL THIS SHEET.
5. CONSTRUCT 21' LONG X 36" WIDE B/B SIDEWALK CULVERT WITH STEEL PLATE TOP IN R.O.W. LOCATED AS SHOWN. SEE C.O.A. DWG. 2236.
6. CONSTRUCT COBBLE LINED SHALLOW SWALE CENTERED ON PROPERTY LINE. SLOPE OF SWALE = 1%. SEE SECTION THIS THIS SHEET. LOTS 20 AND 21 ARE OWNED BY SAME PARTY.
7. PROVIDE 1' WIDE CURB CUT AS SHOWN TO DISCHARGE SWALE FLOWS INTO NORTH PARKING AREA. SEE SECTION A.
8. EXTENDED STEM WALL THIS AREA.
9. STANDARD CURB AND GUTTER - C.O.A. DWG. 2415

KEYED NOTES



VICINITY MAP F-17



FLOOD HAZARD MAP

GENERAL NOTES:

LEGAL: LOT 20, JEFFERSON COMMONS, ALBUQUERQUE, NEW MEXICO

SURVEYOR: RONALD FORSTBAUER SURVRYING, ALBUQUERQUE, NEW MEXICO

B.M.: "SC 27|26 / 34|35", A STANDARD BLM BRASS CAP SET IN CONCRETE PROJECTING 1.0' ABOVE THE GROUND. CAP IS LOCATED APPROXIMATELY 350' NORTHWEST OF THE INTERSECTION OF SINGER AND MIDWAY PARK BLVDS., N.E. ELEVATION = 5,110.41

T.B.M.: "X" ON TOP OF CURB AT THE EXTENSION OF LOTS 19/20 LOT LINE. ELEVATION = 5,117.73

SCOPE:

THE SITE IS AN UNDEVELOPED LOT LOCATED WITHIN THE JEFFERSON COMMONS SUBDIVISION. THE GROUND SLOPES WESTERLY AT 2-1/2%.

PROPOSED IMPROVEMENTS FOR THE SITE INCLUDE AN 8,000 SF SLAB-ON-GRADE BUILDING, AN ASPHALT-PAVED PARKING AREA AND ASSOCIATED WALKS AND LANDSCAPED AREAS.

FREE DISCHARGE OF DEVELOPED FLOWS INTO COMMONS AVENUE N.E. IS ALLOWED AS ESTABLISHED BY THE MASTER DRAINAGE/GRADING PLAN FOR JEFFERSON COMMONS (APPROVED JANUARY 1990 AND REVISED AUGUST 1990). FLOWS WILL BE CARRIED IN THE PARKING AREAS TO THE NORTHWEST CORNER OF THE SITE WHERE THEY WILL DISCHARGE INTO COMMONS AVE. BY MEANS OF A STANDARD SIDEWALK CULVERT.

NO OFFSITE FLOWS AFFECT THE SITE.

CALCULATIONS:

AREA OF SITE: 27,386 SF = 0.63 AC.

Q_{100} AT DISCHARGE POINT (MASTER PLAN, UNDEVELOPED, AREA B):

$Q_{100} = 0.40(4.65)(0.63) = 1.2$ CFS

Q_{100} AT DISCHARGE POINT (MASTER PLAN, DEVELOPED, AREA B):

$Q_{100} = 0.81(4.65)(0.63) = 2.4$ CFS

FLOW CAPACITY OF SIDEWALK CULVERT

PER MANNING'S EQUATION, A 24"-WIDE CONCRETE CHANNEL AT SLOPE = 2% AND N = 0.015 CARRIES A MAXIMUM FLOW RATE OF 2.4 CFS AT A DEPTH OF 3" OK

SIDEWALK CULVERT INLET CAPACITY

USING WEIR FORMULA, $Q_{100} = CLH^{3/2}$, WITH C = 2.61, L = AND H = 0.5'

Q_{100} = 2.8 CFS RUNNING FULL > 2.4 CFS REQUIRED OK

NOTICE TO CONTRACTOR

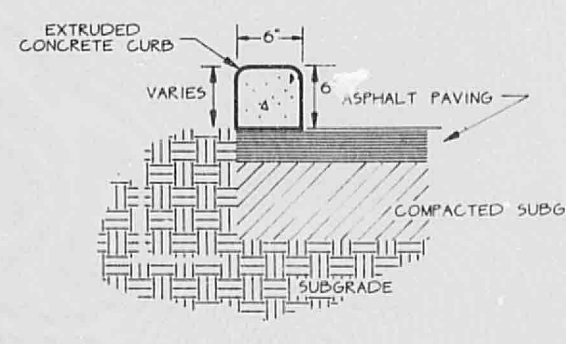
1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. 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 WITHIN A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXCAVATION PERMIT FOR SIDEWALK CULVERT/DRAIN.
8. PROOF OF ACCEPTANCE WILL BE REQUIRED PRIOR TO SIGN OFF FOR CERTIFICATE OF OCCUPANCY (C.O.).

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL: ____________________ HYDROLOGY SECTION ____ DATE

INSPECTION APPROVAL: ____________________ CONSTRUCTION SECTION ____ DATE

ACCEPTANCE: ____________________ CONSTRUCTION SECTION/PERMITS ____ DATE



GENERAL NOTES
1. PROVIDE CONTRACTION JOINTS @ 10' O.C. MAX. PROVIDE EXPANSION JOINTS ADJACENT TO BLDGS, WALLS AND CURB RETURNS
2. EDGES SHOULD BE REMOVED WITH 3/8" EDGING TOOL

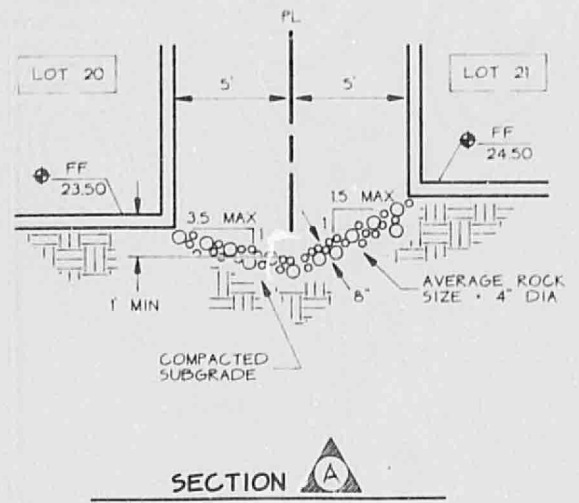
EXTRUDED CONCRETE CURB

D:\CHANT\JEFF\20\DG 08/06/93 22:31

LEGEND

▨	SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED)	LA	LANDSCAPED AREA
		TGW	TOP OF GRADE WALL
☐	PROPOSED ASPHALT	TRW	TOP OF RETAINING WALL
	BUILDING (EXISTING, PROPOSED)	TA	TOP OF ASPHALT
		TC	TOP OF CURB
▬ ▪ ▬	PROPERTY LINE	FL	FLOW LINE
x 65.7	EXISTING SPOT ELEVATION	FF	FINISHED FLOOR
20	EXISTING CONTOUR	R/W	RIGHT OF WAY
⊕ 75.2	PROPOSED SPOT ELEVATION	PL	PROPERTY LINE
20	PROPOSED CONTOUR	PP	POWER POLE
→	SURFACE FLOW DIRECTION (EXISTING, PROPOSED)		

R AUG 17
HYDROLOGY DIVISION



SECTION A

COBBLE-LINED SWALE (LOOKING NORTH)

NTS

REVISIONS
2/17/93

DESIGNED BJB
DRAWN BJB
CHECKED CLW

C.L. WEISS ENGINEERING, INC.
POST OFFICE BOX 97 SANDIA PARK, N.M. 87047 - (505) 281-1800
1100 ALVARADO DR NE ALBUQUERQUE, N.M. 87110 - (505) 266-3444

JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

AUGUST 6, 1993

SHEET 1 OF 1

R# 25 DATE 3-19-02 OP EQP

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the **Public Works Department** and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS115-1977)

1/15/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/07/02

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

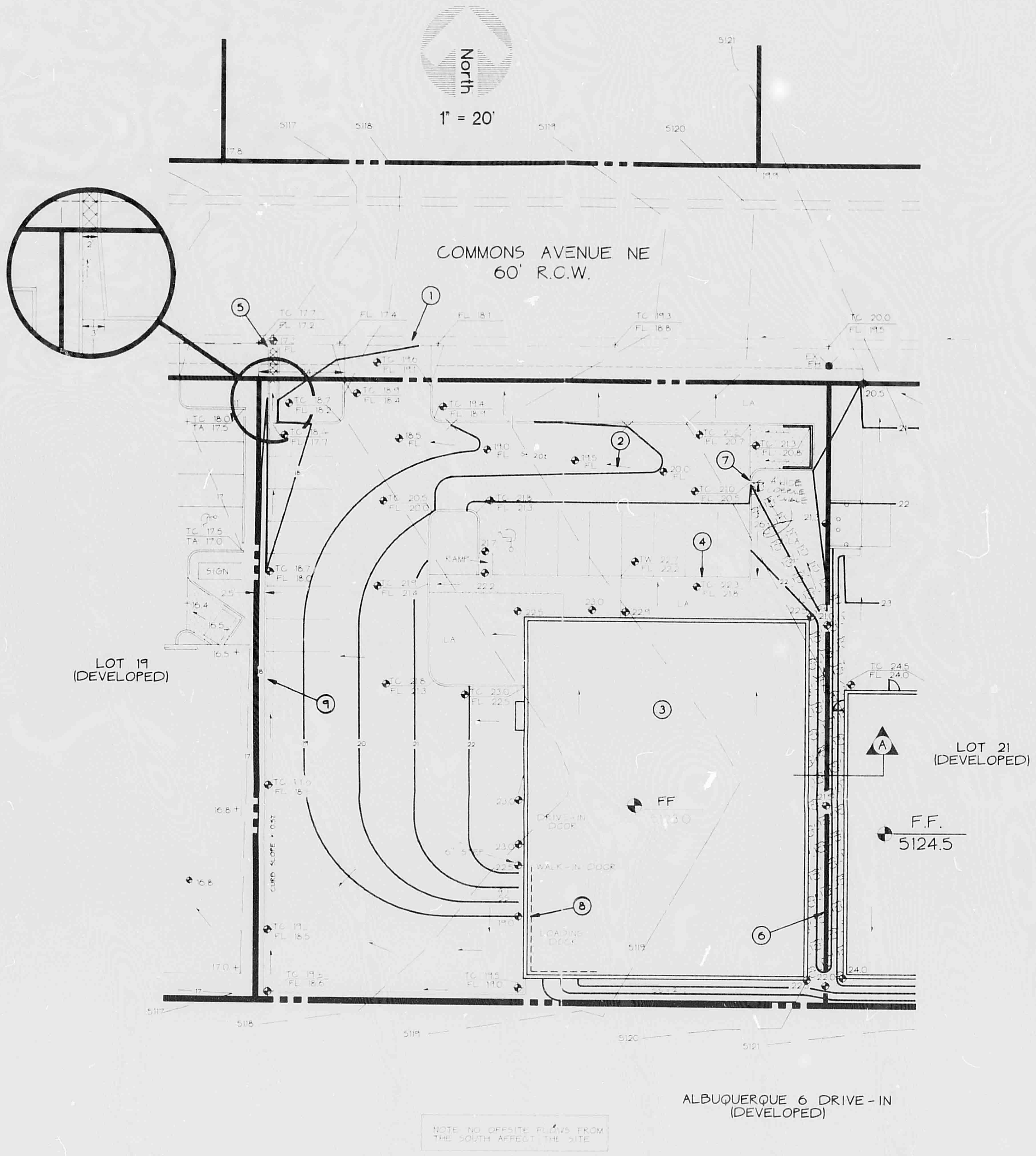
CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

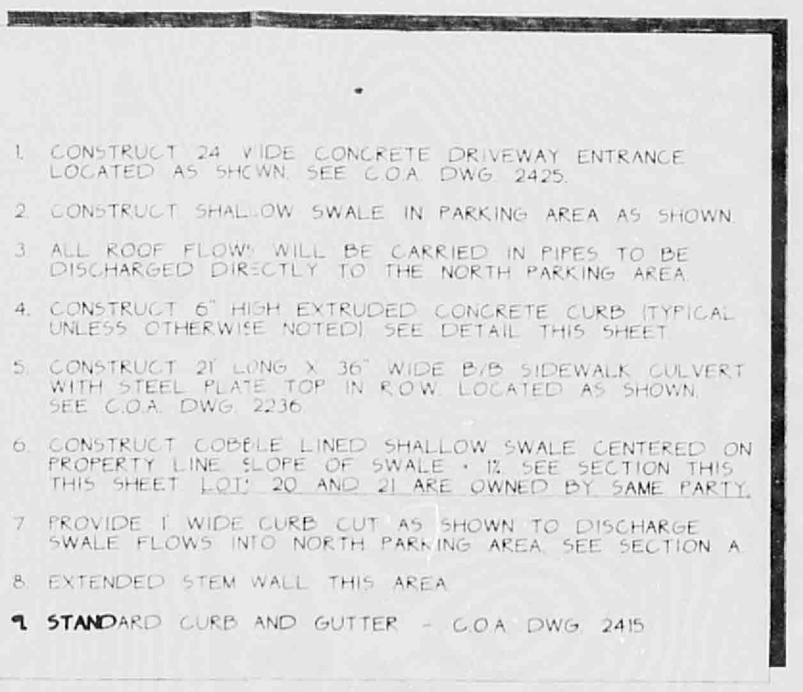
PLANS/PLATS ON FILE

FILE DESC: f17/D61R

PLANS/PLATS 4

F 30 D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D F





KEYED NOTES

1. CONSTRUCT 24' WIDE CONCRETE DRIVEWAY ENTRANCE LOCATED AS SHOWN. SEE C.O.A. DWG. 2425.
2. CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN.
3. ALL ROOF FLOWS WILL BE CARRIED IN PIPES TO BE DISCHARGED DIRECTLY TO THE NORTH PARKING AREA.
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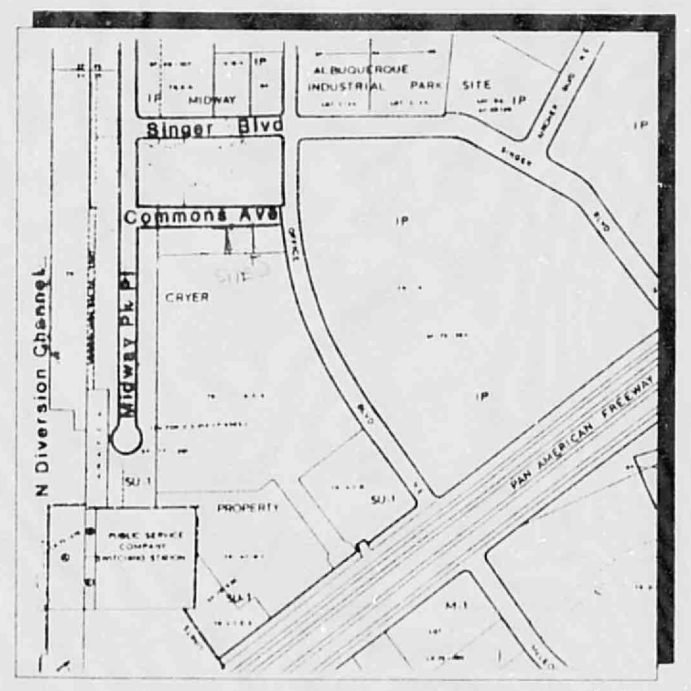
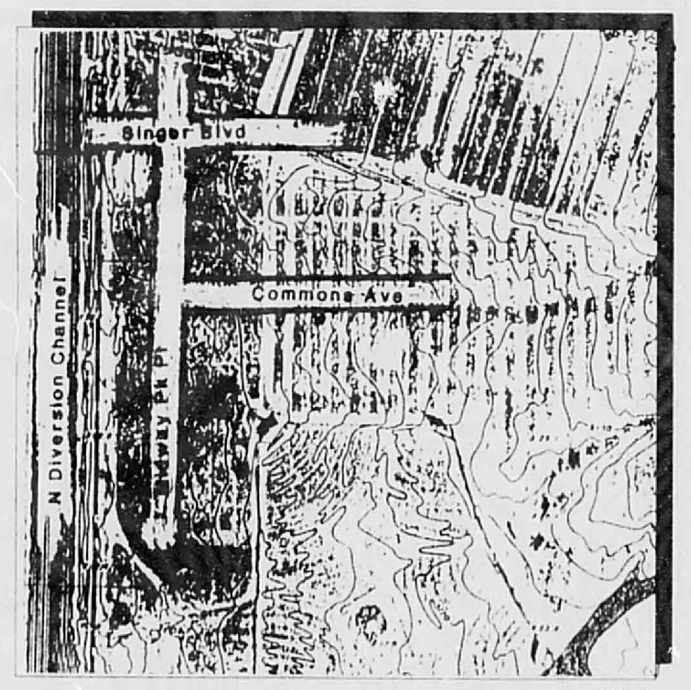


VICINITY MAP F-17



FLOOD HAZARD MAP

GENERAL NOTES:

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SURVEYOR: RONALD FORSTBAUER SURVEYING, ALBUQUERQUE, NEW MEXICO

B.M.: "5C 27|26 / 34|35" A STANDARD BLM BRASS CAP SET IN CONCRETE PROJECTING 1.0' ABOVE THE GROUND. CAP IS LOCATED APPROXIMATELY 350' NORTHWEST OF THE INTERSECTION OF SINGER AND MIDWAY PARK BLVDS. NE. ELEVATION = 5,110.41

T.B.M.: X ON TOP OF CURB AT THE EXTENSION OF LOTS 19/20 LOT LINE. ELEVATION = 5,117.73

SCOPE:

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NO OFFSITE FLOWS AFFECT THE SITE.

CALCULATIONS:

AREA OF SITE: 27,386 SF = 0.63 AC

Q_{100} AT DISCHARGE POINT (MASTER PLAN, UNDEVELOPED, AREA B)

$Q_{100} = 0.40(4.65)(0.63) = 1.2$ CFS

Q_{100} AT DISCHARGE POINT (MASTER PLAN, DEVELOPED, AREA B)

$Q_{100} = 0.81(4.65)(0.63) = 2.4$ CFS

FLOW CAPACITY OF SIDEWALK CULVERT:

PER MANNING'S EQUATION, A 24" WIDE CONCRETE CHANNEL AT SLOPE = 2% AND N = 0.015 CARRIES A MAXIMUM FLOW RATE OF 2.4 CFS AT A DEPTH OF 3". OK

SIDEWALK CULVERT INLET CAPACITY:

USING WEIR FORMULA $Q_{100} = CLH^{3/2}$ WITH C = 2.6, L = [illegible] AND H = 0.5

Q_{100} = 2.8 CFS RUNNING FULL > 2.4 CFS REQUIRED. OK

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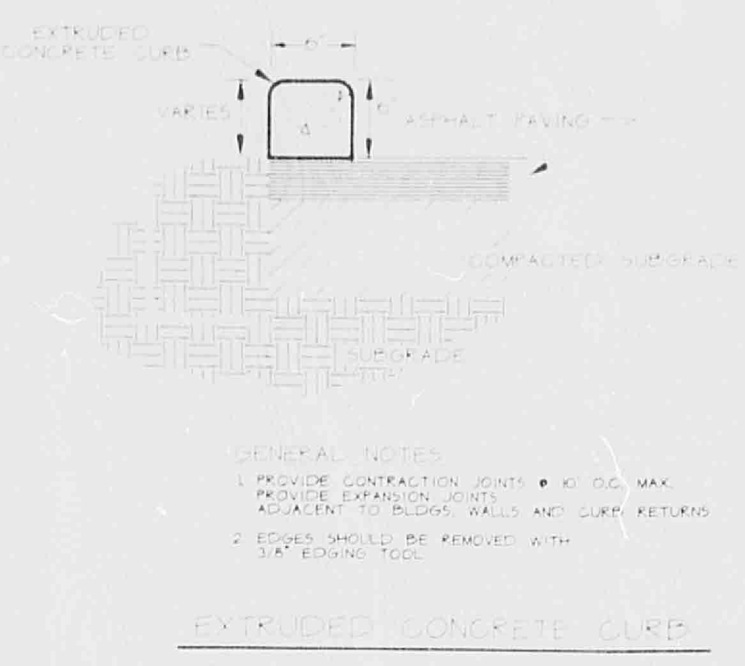
DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

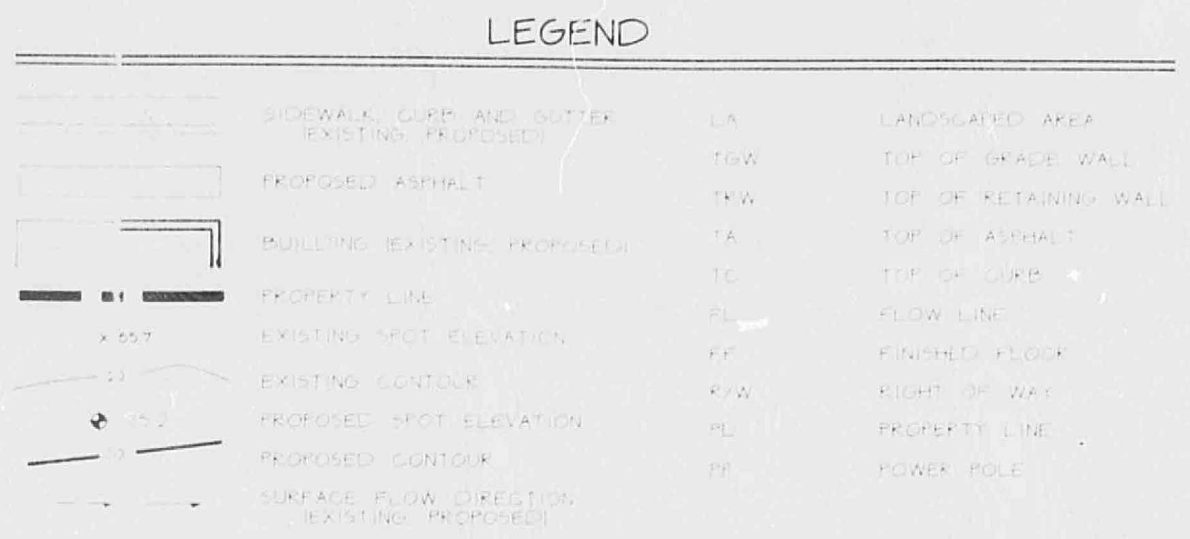
DESIGN APPROVAL: ____________________
HYDROLOGY SECTION — DATE

INSPECTION APPROVAL: ____________________
CONSTRUCTION SECTION — DATE

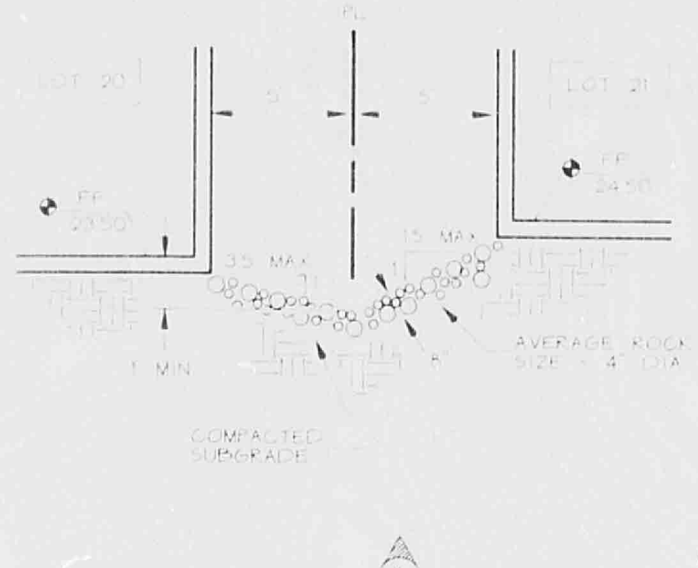
ACCEPTANCE: ____________________
CONSTRUCTION SECTION/PERMITS — DATE



EXTRUDED CONCRETE CURB



LEGEND



SECTION A

REVISIONS

DESIGNED BJB
DRAWN BJB
CHECKED C.L.W.

C.L. WEISS ENGINEERING, INC.
POST OFFICE BOX 97 SANDIA PARK, N.M. 87047 - (505) 281-1800
1100 ALVARADO DR. NE ALBUQUERQUE, N.M. 87110 - (505) 266-3444

JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

AUGUST 6, 1993

SHEET 1 OF 1

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST
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R# 25 DATE 3-19-02 OP E.P.

CITY OF ALBUQUERQUE

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1/15/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
07/08/02

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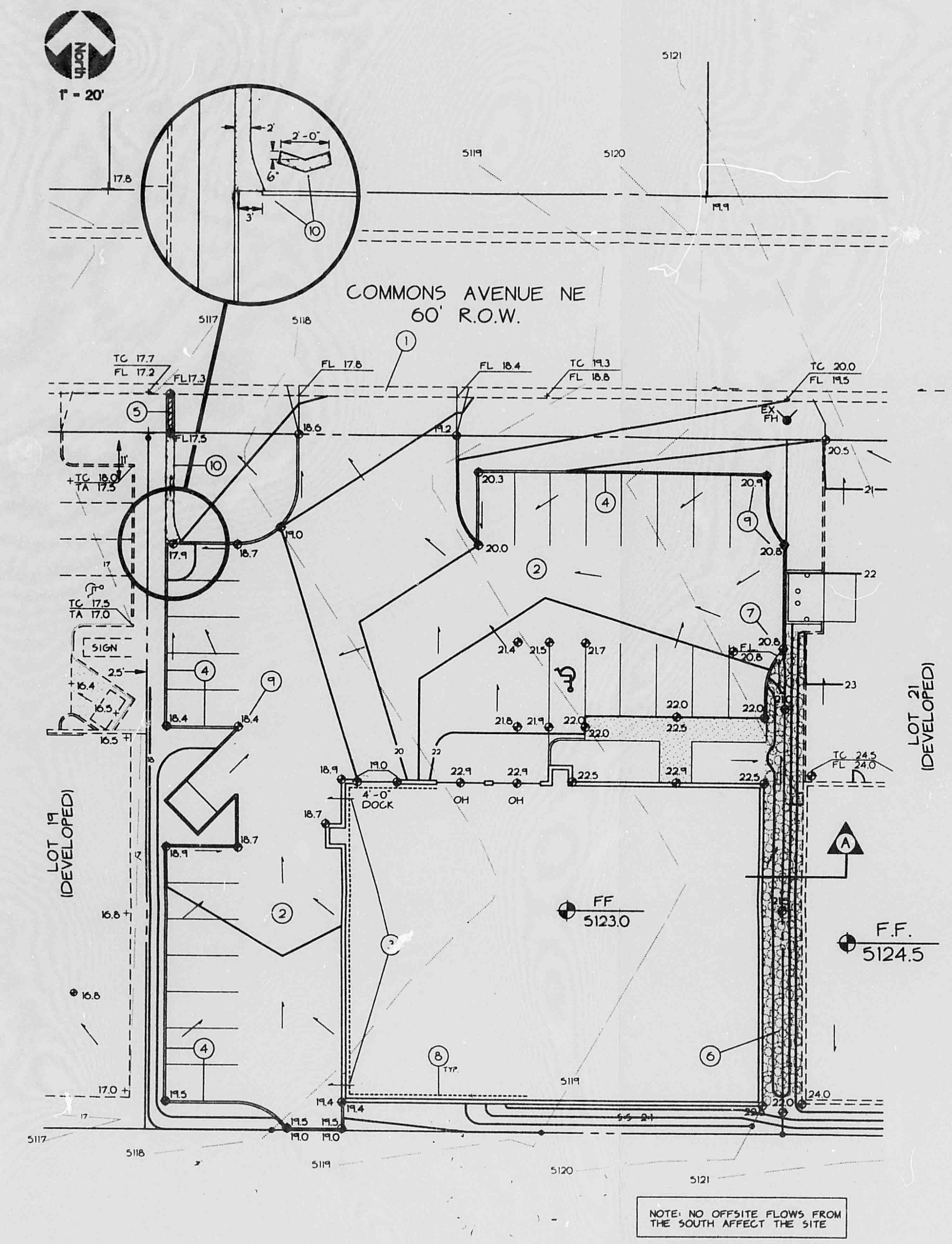
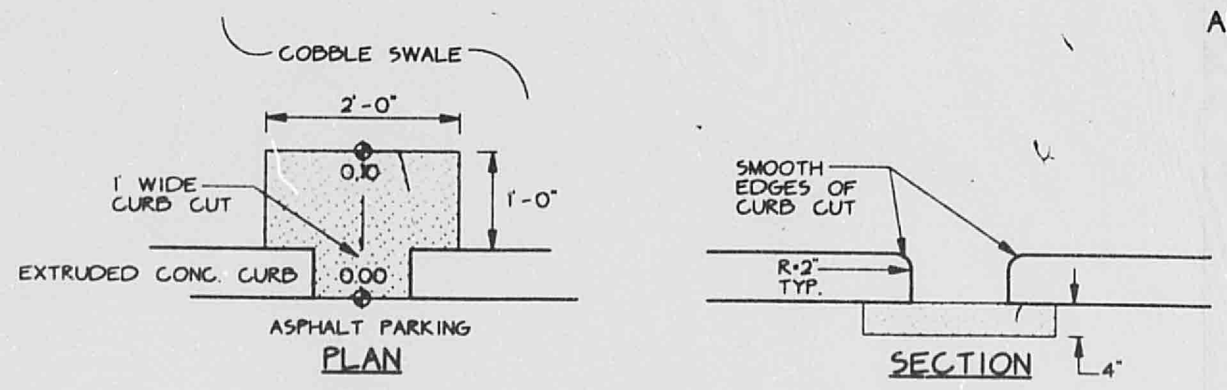
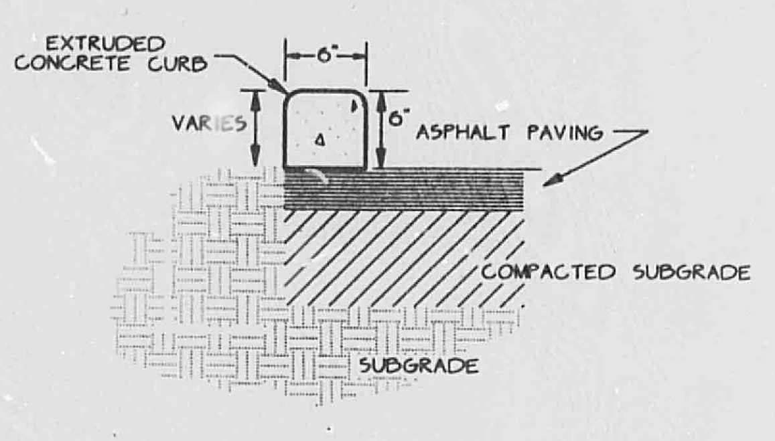
CITY OF ALBUQUERQUE C D



NOTE: NO OFFSITE FLOWS FROM THE SOUTH AFFECT THE SITE



CURB CUT WITH CONCRETE DRAIN PAN



GENERAL NOTES

1. PROVIDE CONTRACTION JOINTS @ 10' O.C. MAX. PROVIDE EXPANSION JOINTS ADJACENT TO BLDGS. WALLS AND CURB RETURNS
2. EDGES SHOULD BE REMOVED WITH 3/8" EDGING TOOL

EXTRUDED CONCRETE CURB

D:\CHANT\JC\20\DG_20 02/15/96 17:29:32

KEYED NOTES

① CONSTRUCT 40' WIDE CONCRETE DRIVEWAY ENTRANCE LOCATED AS SHOWN. SEE C.O.A. DWG. 2425.

② CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN.

③ ALL ROOF FLOWS WILL BE CARRIED IN PIPES TO BE DISCHARGED DIRECTLY TO THE WEST PARKING AREA.

④ CONSTRUCT 6" HIGH EXTRUDED CONCRETE CURB (TYPICAL UNLESS OTHERWISE NOTED). SEE DETAIL THIS SHEET.

⑤ CONSTRUCT 9.5' LONG X 36" WIDE B/B CONCRETE SIDEWALK CULVERT WITH STEEL PLATE TOP IN R.O.W. LOCATED AS SHOWN. SEE C.O.A. DWG. 2236.

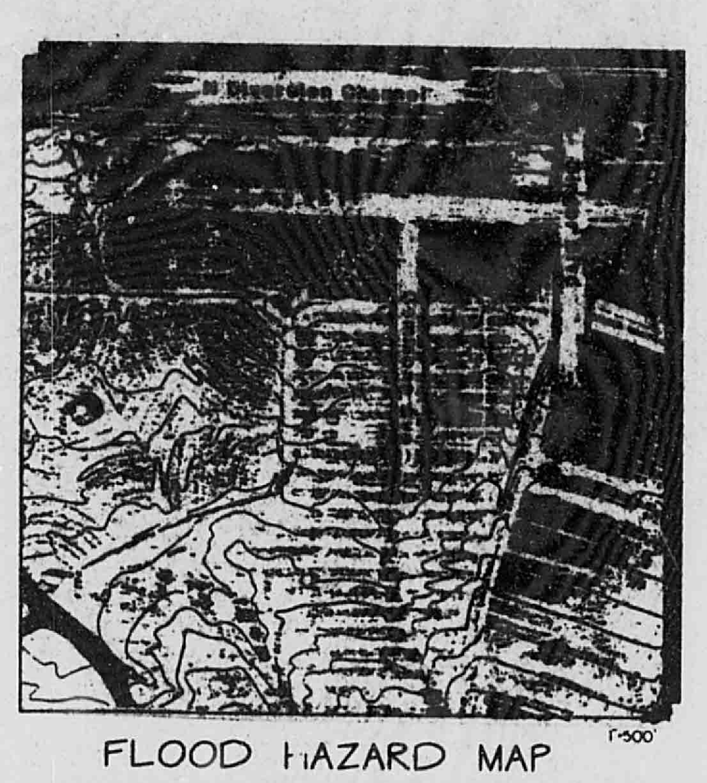
⑥ CONSTRUCT COBBLE LINED SHALLOW SWALE CENTERED ON PROPERTY LINE. SLOPE OF SWALE = 1%. SEE SECTION THIS THIS SHEET. LOTS 20 AND 21 ARE OWNED BY SAME PARTY. SEE SECTION A THIS SHEET.

⑦ PROVIDE 1' WIDE CURB CUT AS SHOWN TO DISCHARGE SWALE FLOWS INTO NORTH PARKING AREA. SEE DETAIL THIS SHEET.

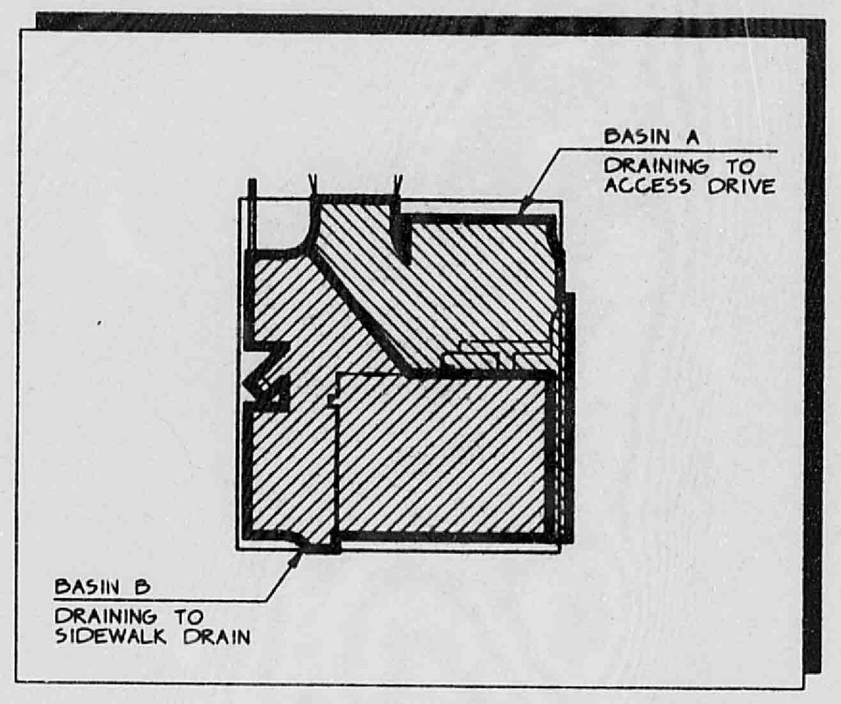
⑧ EXTENDED STEM WALL THIS AREA.

⑨ SPOT ELEVATIONS LOCATED WITHIN ASPHALT AREA REPRESENT TOP OF ASPHALT. ADD 0.5' FOR TOP OF CURB ELEVATION. (TYPICAL)

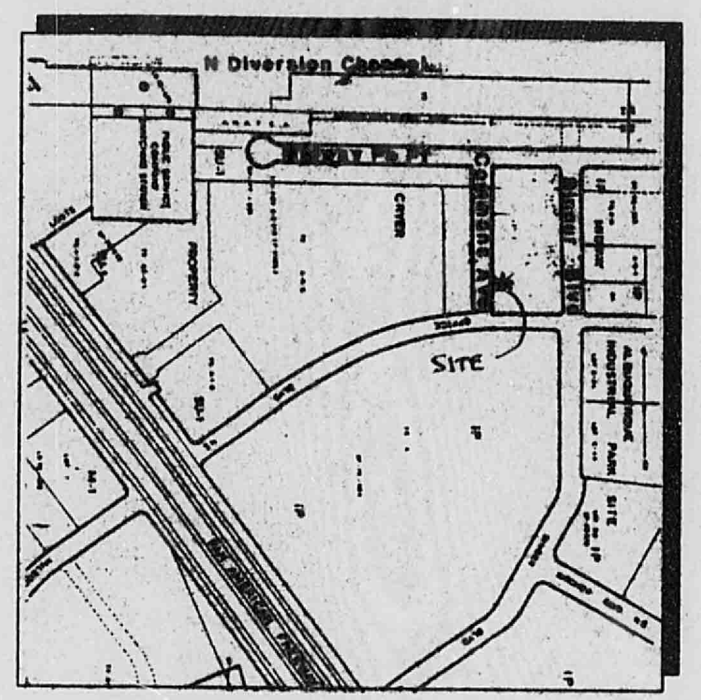
⑩ CONSTUCT 28' LF BY 6" DEEP ASPHALT LINED SWALE TO CARRY FLOWS TO SIDEWALK CULVERT. SEE DETAIL INSERT AT LEFT.



FLOOD HAZARD MAP



BASIN MAP



VICINITY MAP F-17

NOTICE TO CONTRACTOR

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DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL: Bernie J Montoya 2/27/96
HYDROLOGY SECTION DATE

INSPECTION APPROVAL: ______
CONSTRUCTION SECTION DATE

ACCEPTANCE: ______
CONSTRUCTION SECTION/PERMITS DATE

LEGEND

- - - ———	SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED)	LA	LANDSCAPED AREA
▭	PROPOSED ASPHALT	TGW	TOP OF GRADE WALL
▭	BUILDING (EXISTING, PROPOSED)	TRW	TOP OF RETAINING WALL
▬ ▬ ▬	PROPERTY LINE	TA	TOP OF ASPHALT
x 65.7	EXISTING SPOT ELEVATION	TC	TOP OF CURB
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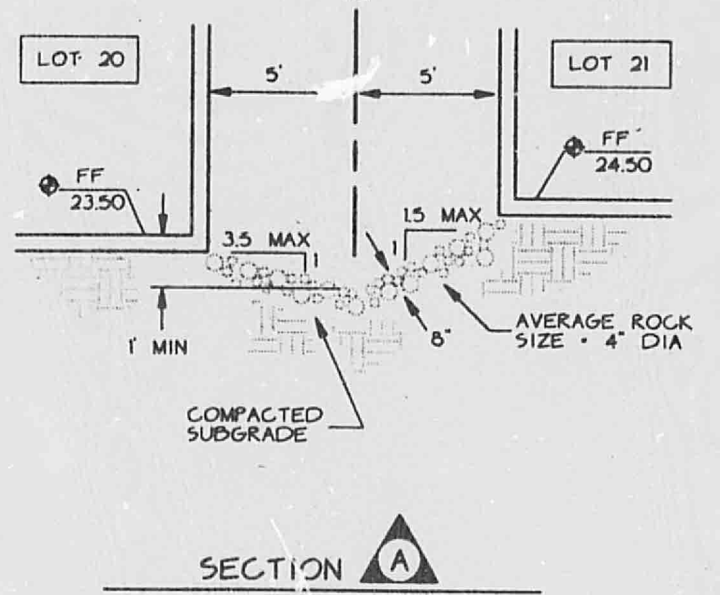
- → ——→	SURFACE FLOW DIRECTION (EXISTING, PROPOSED)	PL	PROPERTY LINE
		PP	POWER POLE



SECTION A

COBBLE-LINED SWALE (LOOKING NORTH) NTS

GENERAL NOTES:

LEGAL: LOT 20, JEFFERSON COMMONS, ALBUQUERQUE, NEW MEXICO

SURVEYOR: FORSTBAUER SURVRYING, ALBUQUERQUE, NEW MEXICO

B.M.: "SC 27|26 / 34|35", A STANDARD BLM BRASS CAP SET IN CONCRETE PROJECTING 1.0' ABOVE THE GROUND. CAP IS LOCATED APPROXIMATELY 350' NORTHWEST OF THE INTERSECTION OF SINGER AND MIDWAY PARK BLVDS. N.E. ELEVATION = 5110.41'

T.B.M.: 'X' ON TOP OF CURB AT THE EXTENSION OF LOTS 19/20 LOT LINE. ELEVATION = 5,117.73.

SCOPE:

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FREE DISCHARGE OF DEVELOPED FLOWS INTO COMMONS AVENUE N.E. IS ALLOWED AS ESTABLISHED BY THE MASTER DRAINAGE/GRADING PLAN FOR JEFFERSON COMMONS (APPROVED JANUARY 1990 AND REVISED AUGUST 1990). FLOWS WILL BE CARRIED IN THE PARKING AREAS TO THE NORTHWEST CORNER OF THE SITE WHERE THEY WILL DISCHARGE INTO COMMONS AVE. BY MEANS OF A STANDARD SIDEWALK CULVERT.

NO OFFSITE FLOWS AFFECT THE SITE.

CALCULATIONS:

Calculations are based on the Drainage Design Criteriafor City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE: 27386 SF = 0.63 Ac.

HISTORIC FLOWS:
On-Site Historic Land Condition

Area a =	0	SF
Area b =	0	SF
Area c =	27386	SF
Area d =	0	SF
Total Area =	27386	SF

DEVELOPED FLOWS:
On-Site Developed Land Condition

Area a =	0	SF
Area b =	2739	SF
Area c =	0	SF
Area d =	24647	SF
Total Area =	27386	SF

EXCESS PRECIPITATION:
Precip. Zone 2
Ea = 0.53
Eb = 0.78
Ec = 1.13
Ed = 2.12

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted } E = \frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$$

Historic E =	1.13 in.	Developed E =	1.99 in.

On-Site Volume of Runoff: V360 = E*A / 12

Historic V360 =	2579 CF	Developed V360 =	4532 CF

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560
For Precipitation Zone 2
Qpa = 1.56
Qbb = 2.28
Qpc = 3.14
Qpd = 4.70

Historic Qp =	2.0 CFS	Developed Qp =	2.8 CFS

Flows to be discharged to Commons Ave by means of a standard sidewalk culvert or through the access drive. See basins below.

BASIN A - DRAINING TO ACCESS DRIVE

From field inspection and FEMA contour map analysis:
Area of off-site flows = 9185 SF = 0.2 Ac. Precip. Zone 2
The following calculations are based on Treatment areas as shown in table to the right taken from the approved Drainage / Grading Plan (PWD-91-39)

Off-Site Weighted Excess Precipitation (see formula above)
Weighted E = 1.99 in.
Off-Site Volume of Runoff (see formula above)
V360 = 1520 CF
Off-Site Peak Discharge Rate: (see formula above)
Qp = 0.9 cfs

TREATMENT	
A =	0%
B =	10%
C =	0%
D =	90%

BASIN B - DRAINING TO SIDEWALK CULVERT

From field inspection and FEMA contour map analysis:
Area of off-site flows = 15064 SF = 0.3 Ac. Precip. Zone 2
The following calculations are based on Treatment areas as shown in table to the right taken from the approved Drainage / Grading Plan (PWD-91-39)

Off-Site Weighted Excess Precipitation (see formula above)
Weighted E = 1.99 in.
Off-Site Volume of Runoff (see formula above)
V360 = 2493 CF
Off-Site Peak Discharge Rate: (see formula above)
Qp = 1.5 cfs

TREATMENT	
A =	0%
B =	10%
C =	0%
D =	90%

Asphalt Swale to Sidewalk Culvert

Left Side Slope	=	2	Discharge	=	1.5 cfs	
Right Side Slope	=	2	Manning's n	=	0.015	
Channel Slope	=	0.0200'/'	Depth	=	0.41	OK
			Design Depth	=	0.5'	

Sidewalk Culvert Design

Bottom Width (ft)	=	1	Discharge	=	1.5	
Manning's n	=	0.012	Depth	=	0.27	OK
Channel Slope	=	0.0200'/'	Design Depth	=	0.5'	

Curb Opening Capacity (to asphalt swale): Using Weir Formula Q100 = C*L*H^3/2

C	=	2.61	Q100	=	2.8	running full
L (ft)	=	3	Qrequired	=	1.5	OK
H (ft)	=	0.5				

FEB 2 2
OLOGY DIVISION

CHRISTOPHER L. WEISS

REVISIONS
2/17/93
DESIGNED BJB
DRAWN BJB
CHECKED CLW

C.L. WEISS ENGINEERING, INC.
POST OFFICE BOX 97 SANDIA PARK, N.M. 87047 - (505) 281-1800
1100 ALVARADO DR. NE ALBUQUERQUE, N.M. 87110 - (505) 268-3444

JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

FEBRUARY 14, 1996

SHEET 1 OF 1

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST
POSSIBLE REPRODUCTION DUE
TO THE POOR QUALITY OF THE
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R# 25 DATE 3-19-02 OP E.J.P.

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the Public Works Department and was created in the normal course of business.

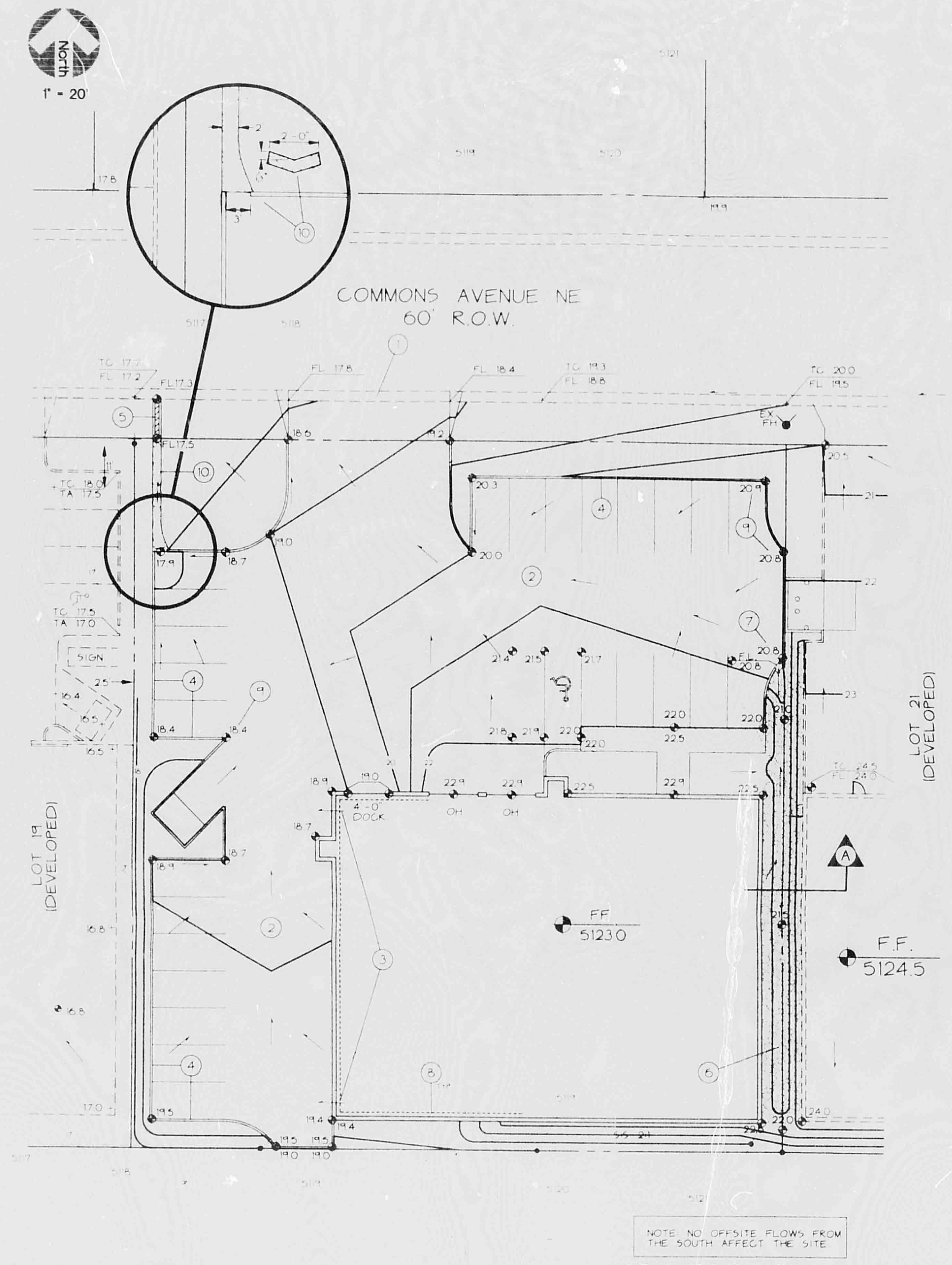
The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS115-1977)

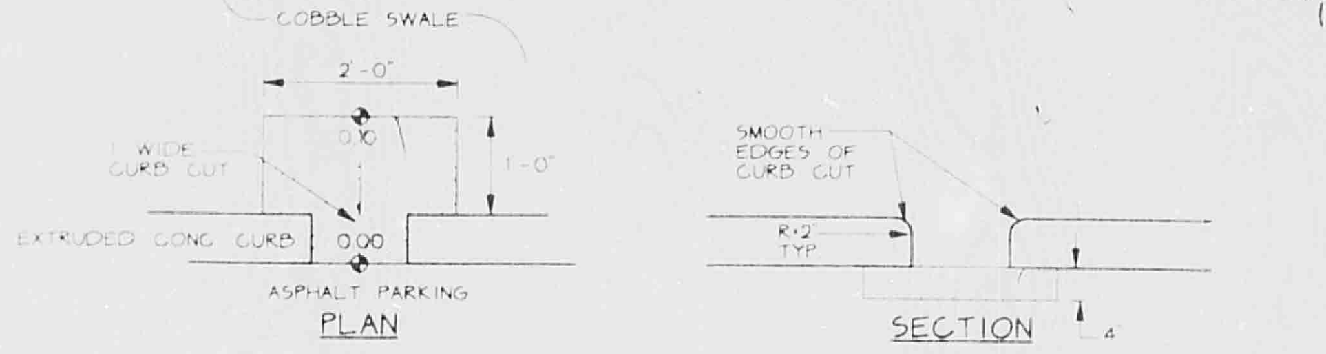
3/15/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

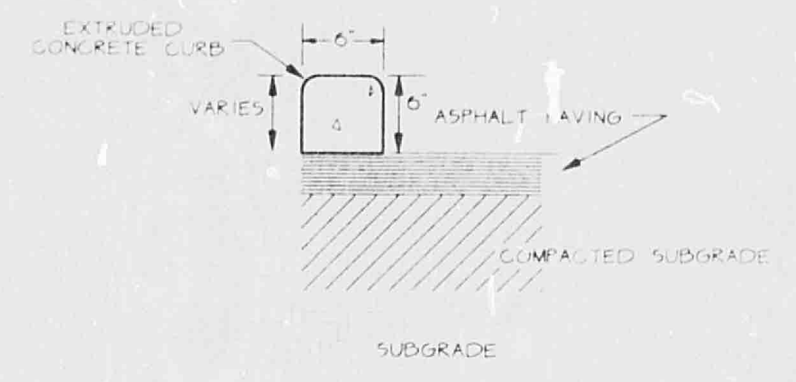
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 07/08/02

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D





CURB CUT WITH CONCRETE DRAIN PAN



GENERAL NOTES

1. PROVIDE CONTRACTION JOINTS @ 10' O.C. MAX. PROVIDE EXPANSION JOINTS ADJACENT TO BLDGS, WALLS AND CURB RETURNS.
2. EDGES SHOULD BE REMOVED WITH 3/8" EDGING TOOL.

EXTRUDED CONCRETE CURB

① CONSTRUCT 40' WIDE CONCRETE DRIVEWAY ENTRANCE LOCATED AS SHOWN. SEE C.O.A. DWG. 2425.

② CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN.

③ ALL ROOF FLOWS WILL BE CARRIED IN PIPES TO BE DISCHARGED DIRECTLY TO THE WEST PARKING AREA.

④ CONSTRUCT 6" HIGH EXTRUDED CONCRETE CURB (TYPICAL UNLESS OTHERWISE NOTED). SEE DETAIL THIS SHEET.

⑤ CONSTRUCT 9.5' LONG X 36" WIDE B/B CONCRETE SIDEWALK CULVERT WITH STEEL PLATE TOP IN R.O.W. LOCATED AS SHOWN. SEE C.O.A. DWG. 2236.

⑥ CONSTRUCT COBBLE LINED SHALLOW SWALE CENTERED ON PROPERTY LINE. SLOPE OF SWALE = 1%. SEE SECTION THIS THIS SHEET. LOTS 20 AND 21 ARE OWNED BY SAME PARTY. SEE SECTION A THIS SHEET.

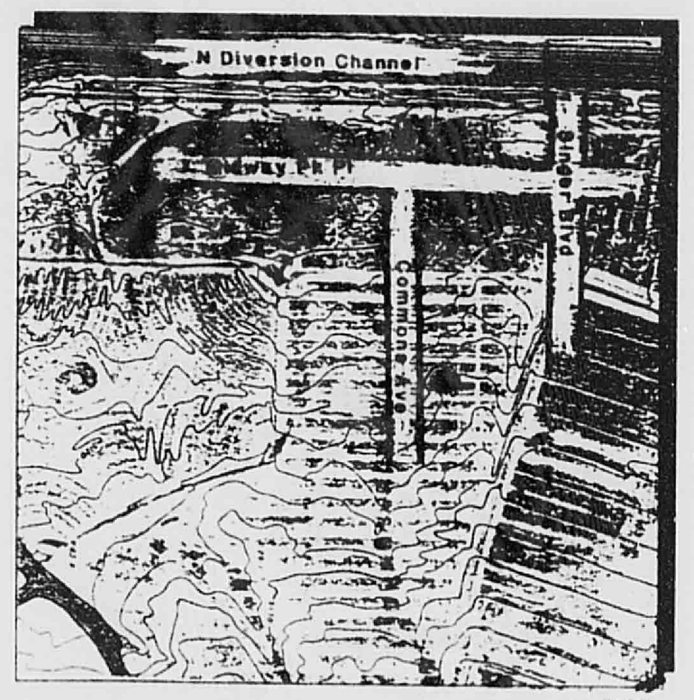
⑦ PROVIDE 1' WIDE CURB CUT AS SHOWN TO DISCHARGE SWALE FLOWS INTO NORTH PARKING AREA. SEE DETAIL THIS SHEET.

⑧ EXTENDED STEM WALL THIS AREA.

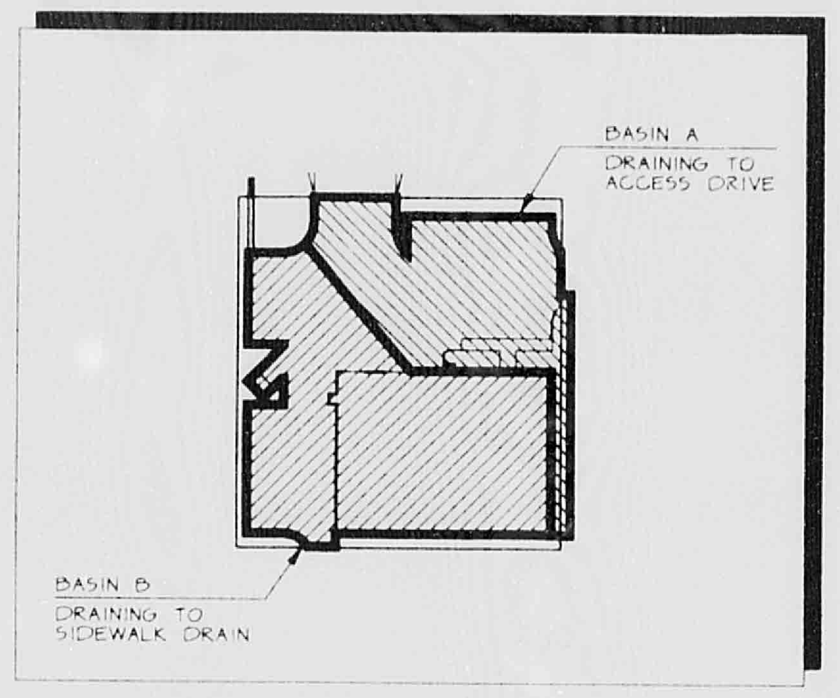
⑨ SPOT ELEVATIONS LOCATED WITHIN ASPHALT AREA REPRESENT TOP OF ASPHALT. ADD 0.5' FOR TOP OF CURB ELEVATION (TYPICAL).

⑩ CONSTUCT 28 LF BY 6" DEEP ASPHALT LINED SWALE TO CARRY FLOWS TO SIDEWALK CULVERT. SEE DETAIL INSERT AT LEFT.

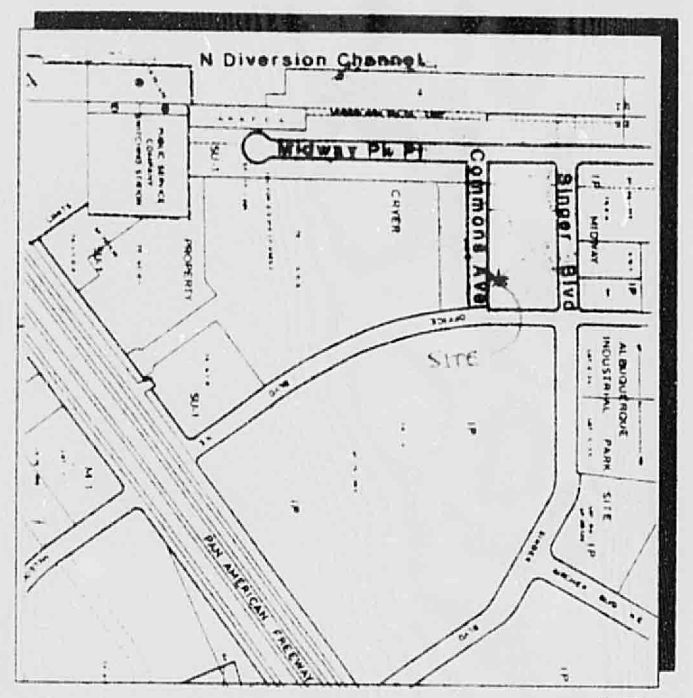
KEYED NOTES



FLOOD HAZARD MAP



BASIN MAP



VICINITY MAP F-17

NOTICE TO CONTRACTOR

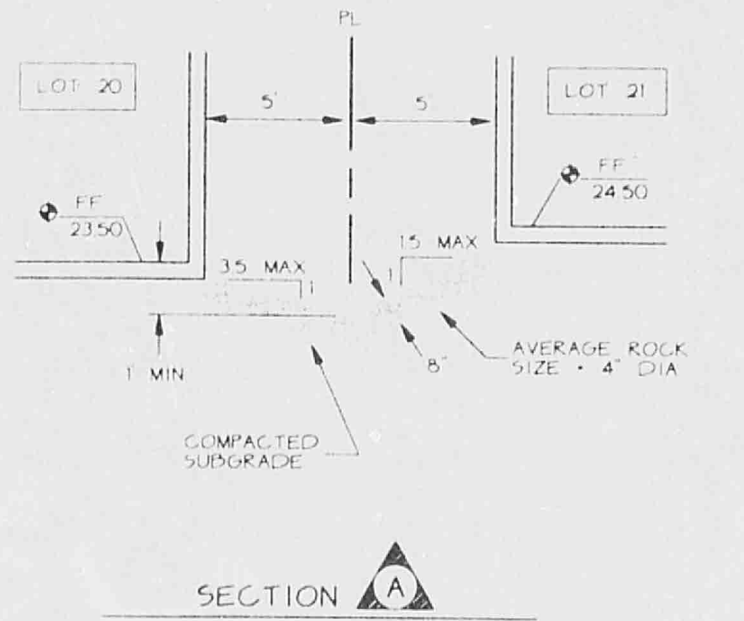
1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. 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 WITHIN A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXCAVATION PERMIT FOR SIDEWALK CULVERT/DRAIN.
8. PROOF OF ACCEPTANCE WILL BE REQUIRED PRIOR TO SIGN OFF FOR CERTIFICATE OF OCCUPANCY (C.O.)

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL: Bernie J Montoya 2/27/96
HYDROLOGY SECTION — DATE

INSPECTION APPROVAL: ______
CONSTRUCTION SECTION — DATE

ACCEPTANCE: ______
CONSTRUCTION SECTION/PERMITS — DATE



SECTION Ⓐ
COBBLE-LINED SWALE (LOOKING NORTH)
NTS

LEGEND

Symbol	Description	Abbreviation	Meaning
— — —	SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED)	LA	LANDSCAPED AREA
▭	PROPOSED ASPHALT	TGW	TOP OF GRADE WALL
▭	BUILDING (EXISTING, PROPOSED)	TRW	TOP OF RETAINING WALL
▬ ▪ ▬	PROPERTY LINE	TA	TOP OF ASPHALT
x 55.7	EXISTING SPOT ELEVATION	TC	TOP OF CURB
20	EXISTING CONTOUR	FL	FLOW LINE
⊕ 75.2	PROPOSED SPOT ELEVATION	FF	FINISHED FLOOR
— 30 —	PROPOSED CONTOUR	R/W	RIGHT OF WAY
→	SURFACE FLOW DIRECTION (EXISTING, PROPOSED)	PL	PROPERTY LINE
		PP	POWER POLE

GENERAL NOTES:

LEGAL: LOT 20, JEFFERSON COMMONS, ALBUQUERQUE, NEW MEXICO

SURVEYOR: FORSTBAUER SURVRYING, ALBUQUERQUE, NEW MEXICO

B.M.: "SC $\frac{27 | 26}{34 | 35}$". A STANDARD BLM BRASS CAP SET IN CONCRETE PROJECTING 1.0' ABOVE THE GROUND. CAP IS LOCATED APPROXIMATELY 350' NORTHWEST OF THE INTERSECTION OF SINGER AND MIDWAY PARK BLVDS. N.E. ELEVATION = 5110.41

T.B.M.: 'X' ON TOP OF CURB AT THE EXTENSION OF LOTS 19/20 LOT LINE. ELEVATION = 5,117.73

SCOPE:

THE SITE IS AN UNDEVELOPED LOT LOCATED WITHIN THE JEFFERSON COMMONS SUBDIVISION. THE GROUND SLOPES WESTERLY AT 2-1/2%.

PROPOSED IMPROVEMENTS FOR THE SITE INCLUDE AN 8,000 SF SLAB-ON-GRADE BUILDING, AN ASPHALT-PAVED PARKING AREA AND ASSOCIATED WALKS AND LANDSCAPED AREAS.

FREE DISCHARGE OF DEVELOPED FLOWS INTO COMMONS AVENUE NE IS ALLOWED AS ESTABLISHED BY THE MASTER DRAINAGE/GRADING PLAN FOR JEFFERSON COMMONS (APPROVED JANUARY 1990 AND REVISED AUGUST 1990). FLOWS WILL BE CARRIED IN THE PARKING AREAS TO THE NORTHWEST CORNER OF THE SITE WHERE THEY WILL DISCHARGE INTO COMMONS AVE. BY MEANS OF A STANDARD SIDEWALK CULVERT.

NO OFFSITE FLOWS AFFECT THE SITE.

CALCULATIONS:

Calculations are based on the Drainage Design Criteriafor City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE: 27386 SF = 0.63 Ac

HISTORIC FLOWS: On-Site Historic Land Condition		**DEVELOPED FLOWS:** On-Site Developed Land Condition		**EXCESS PRECIPITATION:**	
Area a =	0 SF	Area a =	0 SF	Precip. Zone	2
Area b =	0 SF	Area b =	2739 SF	Ea =	0.53
Area c =	27386 SF	Area c =	0 SF	Eb =	0.78
Area d =	0 SF	Area d =	24647 SF	Ec =	1.13
Total Area =	27386 SF	Total Area =	27386 SF	Ed =	2.12

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted } E = \frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$$

Historic E =	1.13 in.	Developed E =	1.99 in.

On-Site Volume of Runoff: V360 = E*A / 12

Historic V360 =	2579 CF	Developed V360 =	4532 CF

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560

For Precipitation Zone 2

Qpa = 1.56
Qbb = 2.28
Qpc = 3.14
Qpd = 4.70

Historic Qp =	2.0 CFS	Developed Qp =	2.8 CFS

Flows to be discharged to Commons Ave by means of a standard sidewalk culvert or through the access drive. See basins below

BASIN A - DRAINING TO ACCESS DRIVE

From field inspection and FEMA contour map analysis:

Area of off-site flows = 9185 SF = 0.2 Ac Precip. Zone 2

The following calculations are based on Treatment areas as shown in table to the right taken from the approved Drainage / Grading Plan (PWD-91-39)

Off-Site Weighted Excess Precipitation (see formula above)
Weighted E = 1.99 in
Off-Site Volume of Runoff (see formula above)
V360 = 1520 CF
Off-Site Peak Discharge Rate: (see formula above)
Qp = 0.9 cfs

TREATMENT	
A =	0%
B =	10%
C =	0%
D =	90%

BASIN B - DRAINING TO SIDEWALK CULVERT

From field inspection and FEMA contour map analysis:

Area of off-site flows = 15064 SF = 0.3 Ac Precip. Zone 2

The following calculations are based on Treatment areas as shown in table to the right taken from the approved Drainage / Grading Plan (PWD-91-39)

Off-Site Weighted Excess Precipitation (see formula above)
Weighted E = 1.99 in
Off-Site Volume of Runoff (see formula above)
V360 = 2493 CF
Off-Site Peak Discharge Rate: (see formula above)
Qp = 1.5 cfs

TREATMENT	
A =	0%
B =	10%
C =	0%
D =	90%

Asphalt Swale to Sidewalk Culvert

Left Side Slope =	2	Discharge =	1.5 cfs	
Right Side Slope =	2	Manning's n =	0.015	
Channel Slope =	0.0200'/'	Depth =	0.41	OK
		Design Depth =	0.5'	

Sidewalk Culvert Design

Bottom Width (ft) =	1	Discharge =	1.5	
Manning's n =	0.012	Depth =	0.27	OK
Channel Slope =	0.0200'/'	Design Depth =	0.5'	

Curb Opening Capacity (to asphalt swale): Using Weir Formula Q100 = C*L*H^3/2

C =	2.61	Q100 =	2.8	running full
L (ft) =	3	Qrequired =	1.5	OK
H (ft) =	0.5			

REVISIONS
2/17/93
DESIGNED BJB
DRAWN BJB
CHECKED CLW

C.L. WEISS ENGINEERING, INC.
POST OFFICE BOX 97 SANDIA PARK, N.M. 87047 - (505) 281-1800
1100 ALVARADO DR NE ALBUQUERQUE, N.M. 87110 - (505) 266-3444

JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

FEBRUARY 14, 1996

SHEET 1 OF 1

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST
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CITY OF ALBUQUERQUE

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1/15/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
07/08/02

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CITY OF ALBUQUERQUE

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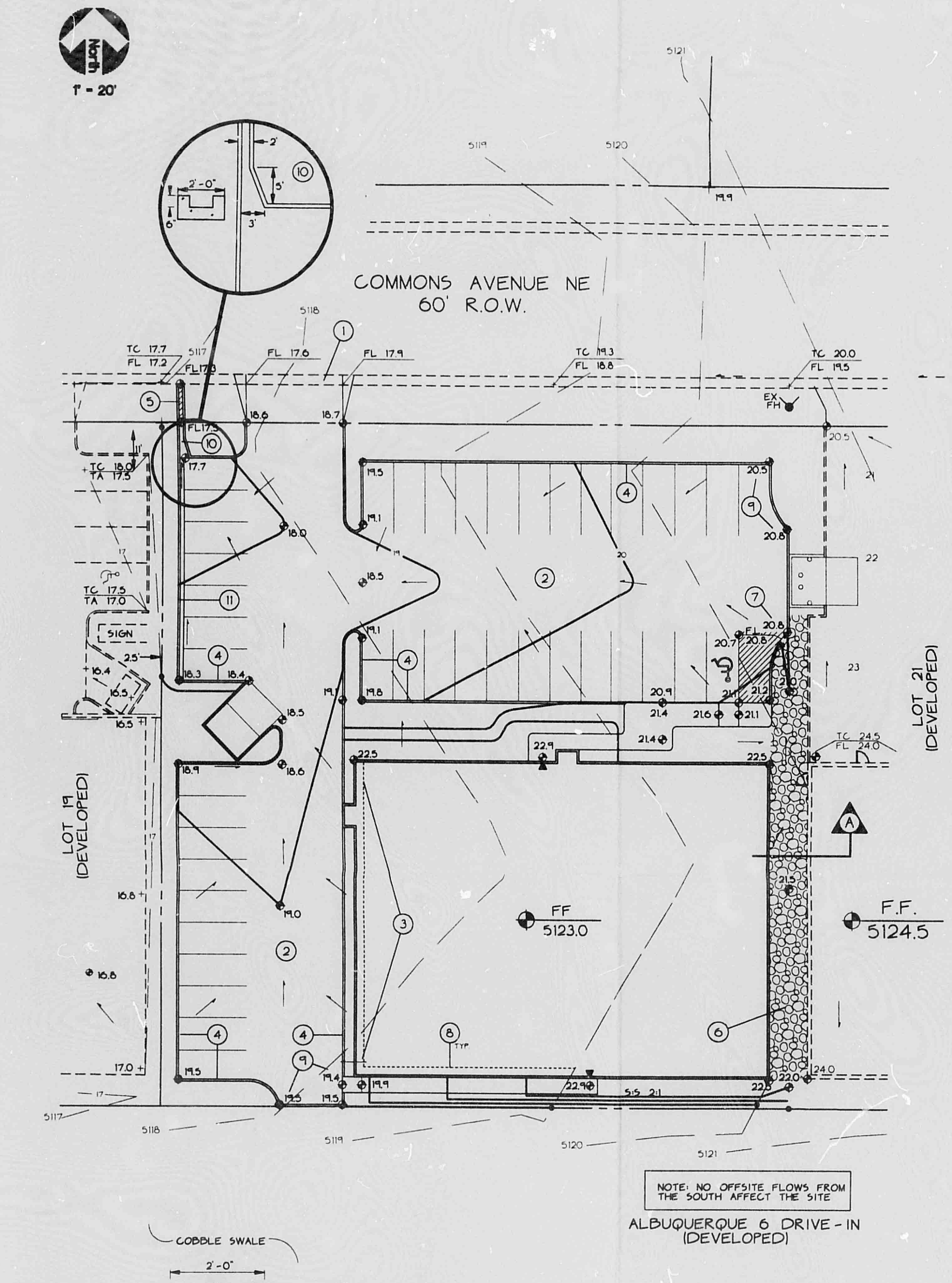
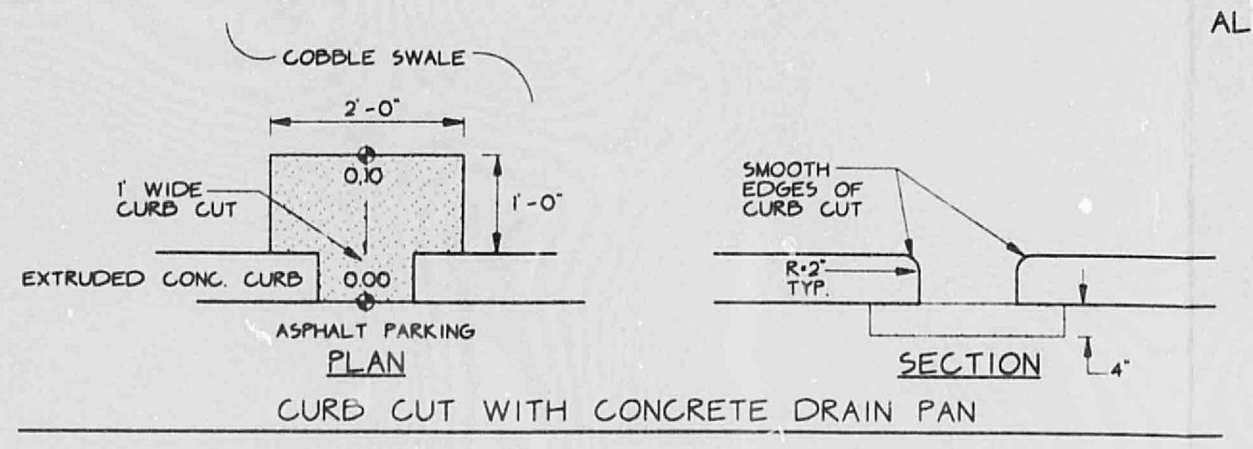
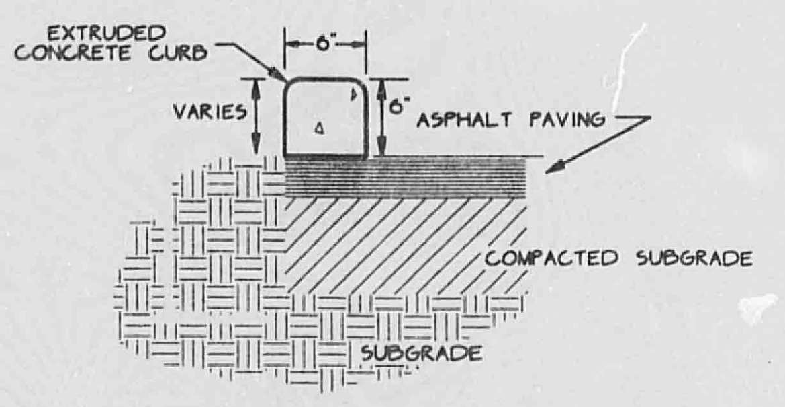
PUBLIC WORKS/HYDROLOGY 2 OF 2

F17/D61R





CURB CUT WITH CONCRETE DRAIN PAN



GENERAL NOTES

1. PROVIDE CONTRACTION JOINTS @ 10' O.C. MAX. PROVIDE EXPANSION JOINTS ADJACENT TO BLDGS. WALLS AND CURB RETURNS
2. EDGES SHOULD BE REMOVED WITH 3/8" EDGING TOOL

EXTRUDED CONCRETE CURB

D:\CHANT\JC\20\DG_20 06/24/96 14:51:06

LEGEND

SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED)	
PROPOSED ASPHALT	
BUILDING (EXISTING, PROPOSED)	
PROPERTY LINE	
x 65.7	EXISTING SPOT ELEVATION
20	EXISTING CONTOUR
75.2	PROPOSED SPOT ELEVATION
30	PROPOSED CONTOUR
SURFACE FLOW DIRECTION (EXISTING, PROPOSED)	

LA	LANDSCAPED AREA
TGW	TOP OF GRADE WALL
TRW	TOP OF RETAINING WALL
TA	TOP OF ASPHALT
TC	TOP OF CURB
FL	FLOW LINE
FF	FINISHED FLOOR
R/W	RIGHT OF WAY
PL	PROPERTY LINE
PP	POWER POLE
▲	BUILDING ACCESS POINT

① CONSTRUCT 24' WIDE CONCRETE DRIVEWAY ENTRANCE LOCATED AS SHOWN. SEE C.O.A. DWG. 2425.

② CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN.

③ ALL ROOF FLOWS WILL BE CARRIED IN PIPES TO BE DISCHARGED DIRECTLY TO THE WEST PARKING AREA.

④ CONSTRUCT 6" HIGH EXTRUDED CONCRETE CURB (TYPICAL UNLESS OTHERWISE NOTED). SEE DETAIL THIS SHEET.

⑤ CONSTRUCT 9.5' LONG X 1' WIDE CONCRETE SIDEWALK CULVERT WITH STEEL PLATE TOP IN R.O.W. LOCATED AS SHOWN. SEE C.O.A. DWG. 2236.

⑥ CONSTRUCT COBBLE LINED SHALLOW SWALE CENTERED ON PROPERTY LINE. SLOPE OF SWALE = 1%. SEE SECTION THIS THIS SHEET. LOTS 20 AND 21 ARE OWNED BY SAME PARTY. SEE SECTION A THIS SHEET.

⑦ PROVIDE 1' WIDE CURB CUT AS SHOWN TO DISCHARGE SWALE FLOWS INTO NORTH PARKING AREA. SEE DETAIL THIS SHEET.

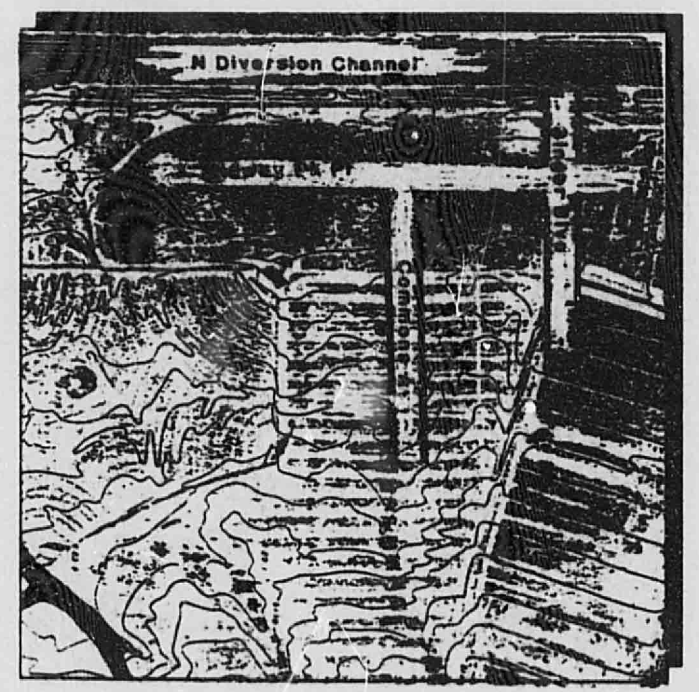
⑧ EXTENDED STEM WALL THIS AREA.

⑨ SPOT ELEVATIONS LOCATED WITHIN ASPHALT AREA REPRESENT TOP OF ASPHALT. ADD 0.5' FOR TOP OF CURB ELEVATION. (TYPICAL)

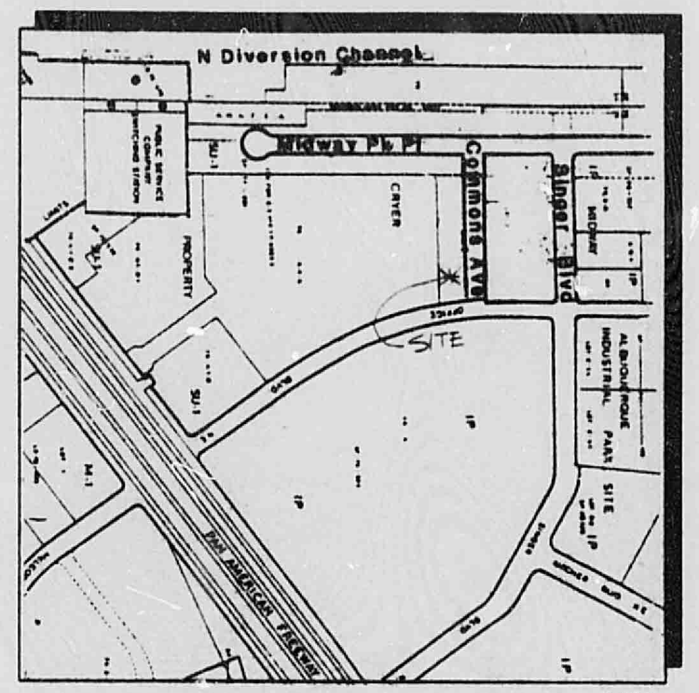
⑩ CONSTUCT 9' LONG X 1' WIDE X 6" DEEP CONCRETE 'U' SHAPED CHANNEL TO CARRY FLOWS TO SIDEWALK CULVERT. FLAIR ENTRANCE TO 3' WIDE. SEE DETAIL INSERT AT LEFT.

⑪ CONSTRUCT STANDARD CURB AND GUTTER THIS AREA.

KEYED NOTES



FLOOD HAZARD MAP



VICINITY MAP F-17

NOTICE TO CONTRACTOR

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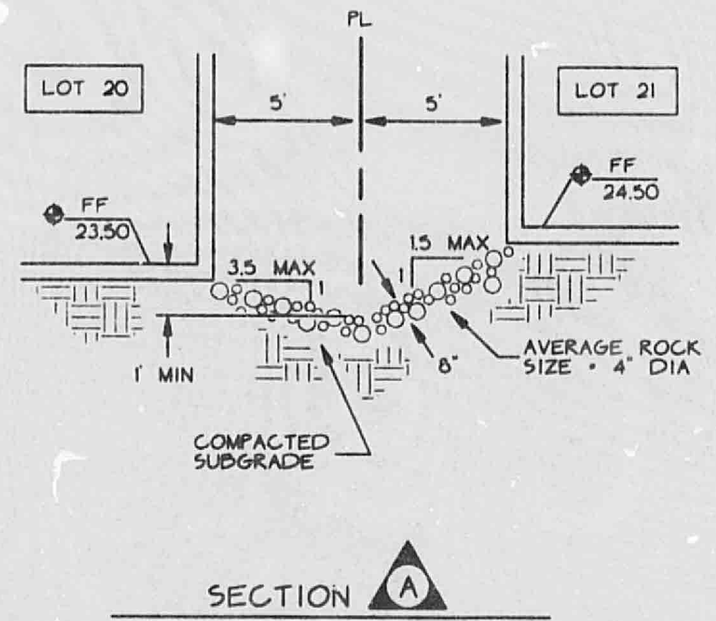
5. BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXCAVATION PERMIT FOR SIDEWALK CULVERT/DRAIN.
8. PROOF OF ACCEPTANCE WILL BE REQUIRED PRIOR TO SIGN OFF FOR CERTIFICATE OF OCCUPANCY (C.O.).

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL: Bernie J Montoya 7/17/96
HYDROLOGY SECTION DATE

INSPECTION APPROVAL: ____________________
CONSTRUCTION SECTION DATE

ACCEPTANCE: ____________________
CONSTRUCTION SECTION/PERMITS DATE



SECTION A

COBBLE-LINED SWALE (LOOKING NORTH) NTS

GENERAL NOTES:

LEGAL: LOT 20, JEFFERSON COMMONS, ALBUQUERQUE, NEW MEXICO

SURVEYOR: FORSTBAUER SURVRYING, ALBUQUERQUE, NEW MEXICO

B.M.: "SC 27|26 / 34|35", A STANDARD BLM BRASS CAP SET IN CONCRETE PROJECTING 1.0' ABOVE THE GROUND. CAP IS LOCATED APPROXIMATELY 350' NORTHWEST OF THE INTERSECTION OF SINGER AND MIDWAY PARK BLVDS. N.E. ELEVATION = 5110.41'

T.B.M.: 'X' ON TOP OF CURB AT THE EXTENSION OF LOTS 19/20 LOT LINE. ELEVATION = 5,117.73.

SCOPE:

THE SITE IS AN UNDEVELOPED LOT LOCATED WITHIN THE JEFFERSON COMMONS SUBDIVISION. THE GROUND SLOPES WESTERLY AT 2-1/2%.

PROPOSED IMPROVEMENTS FOR THE SITE INCLUDE AN 8,000 SF SLAB-ON-GRADE BUILDING, AN ASPHALT-PAVED PARKING AREA AND ASSOCIATED WALKS AND LANDSCAPED AREAS.

FREE DISCHARGE OF DEVELOPED FLOWS INTO COMMONS AVENUE N.E. IS ALLOWED AS ESTABLISHED BY THE MASTER DRAINAGE/GRADING PLAN FOR JEFFERSON COMMONS (APPROVED JANUARY 1990 AND REVISED AUGUST 1990). FLOWS WILL BE CARRIED IN THE PARKING AREAS TO THE NORTHWEST CORNER OF THE SITE WHERE THEY WILL DISCHARGE INTO COMMONS AVE. BY MEANS OF A STANDARD SIDEWALK CULVERT.

NO OFFSITE FLOWS AFFECT THE SITE.

CALCULATIONS:

Calculations are based on the Drainage Design Criteriafor City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE: 27386 SF = 0.63 Ac.

HISTORIC FLOWS:			DEVELOPED FLOWS:			EXCESS PRECIPITATION:	
On-Site Historic Land Condition			On-Site Developed Land Condition			Precip. Zone	2
Area a =	0	SF	Area a =	0	SF	Ea =	0.53
Area b =	0	SF	Area b =	4797	SF	Eb =	0.78
Area c =	27386	SF	Area c =	0	SF	Ec =	1.13
Area d =	0	SF	Area d =	22589	SF	Ed =	2.12
Total Area =	27386	SF	Total Area =	27386	SF		

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted } E = \frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$$

Historic E =	1.13 in.	Developed E =	1.89 in.

On-Site Volume of Runoff: V360 = E*A / 12

Historic V360 =	2579 CF	Developed V360 =	4303 CF

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560

For Precipitation Zone 2

Qpa =	1.56	Qpc =	3.14
Qbb =	2.28	Qpd =	4.70
Historic Qp =	2.0 CFS	Developed Qp =	2.7 CFS

Flows to be discharged to Commons Ave by means of a standard sidewalk culvert. See calculations below.

CALCULATIONS FOR SIDEWALK CULVERT

Sidewalk Culvert Design

Bottom Width (ft) =	1	Discharge =	2.7 cfs	
Manning's n =	0.013	Depth =	0.44'	OK
Channel Slope =	0.0200'/'	Design Depth =	0.5'	

Curb Opening Capacity (to asphalt swale): Using Weir Formula Q100 = C*L*H^3/2

C =	2.61	Q100 =	2.8	running full
L (ft) =	3.0	Qrequired =	2.7	OK
H (ft) =	0.5			

CHRISTOPHER L. WEISS
6-25-96

REVISIONS
2/17/93

DESIGNED BJB
DRAWN BJB
CHECKED CLW

C.L.WEISS ENGINEERING, INC.
POST OFFICE BOX 97 SANDIA PARK, N.M. 87047 - (505) 281-1800
1100 ALVARADO DR. NE ALBUQUERQUE, N.M. 87110 - (505) 268-3444

JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

FEBRUARY 14, 1996

SHEET 1 OF 1

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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R# 25 DATE 3-19-02 OP E.Q.P.

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the **Public Works Department** and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS115-1977)

1/15/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
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STATE OF NEW MEXICO
07/08/02

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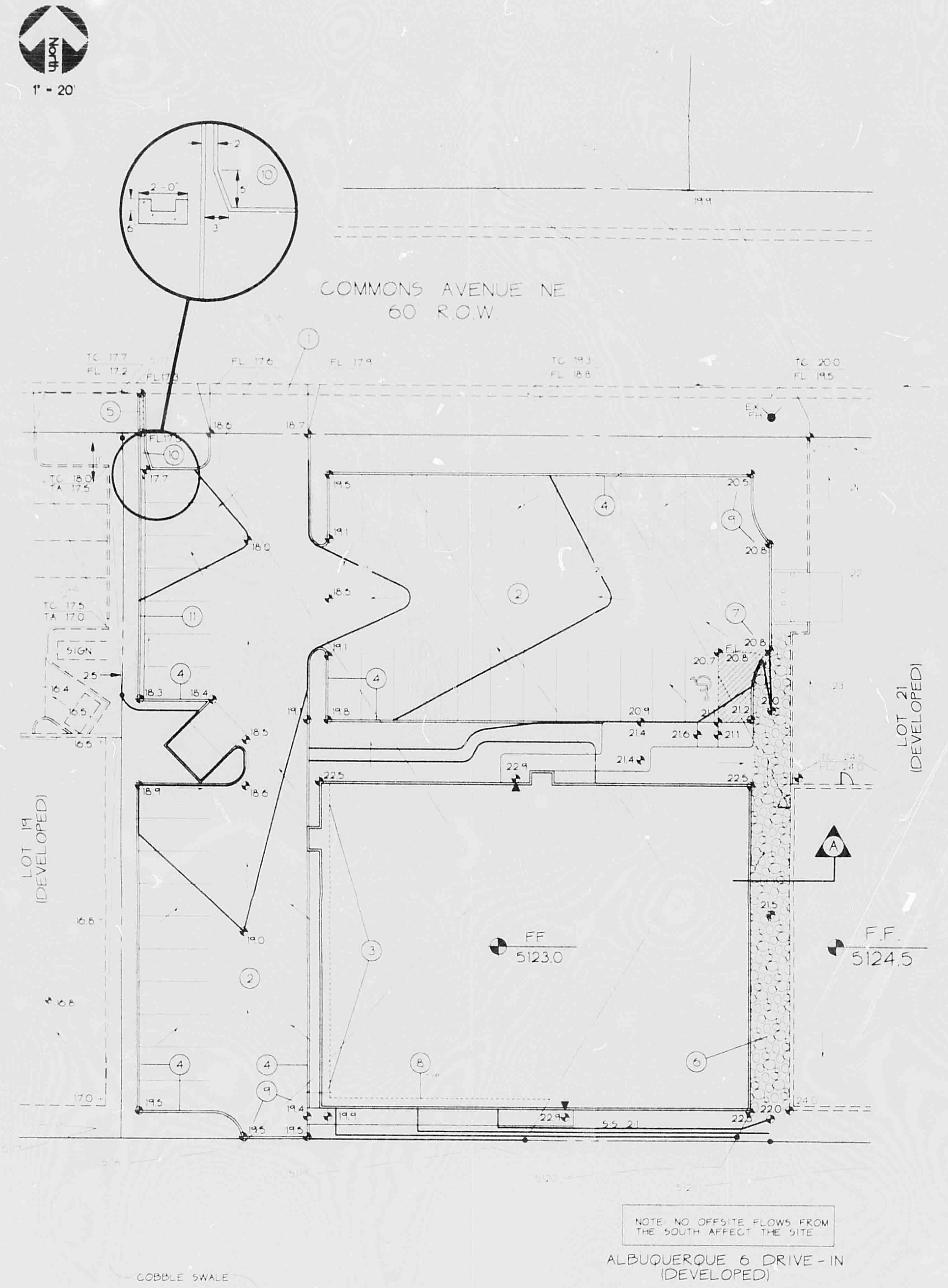
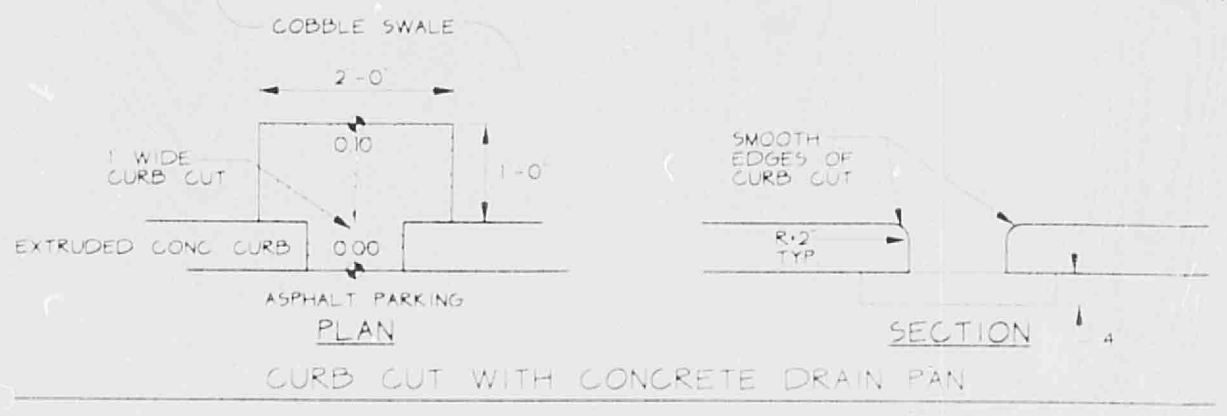
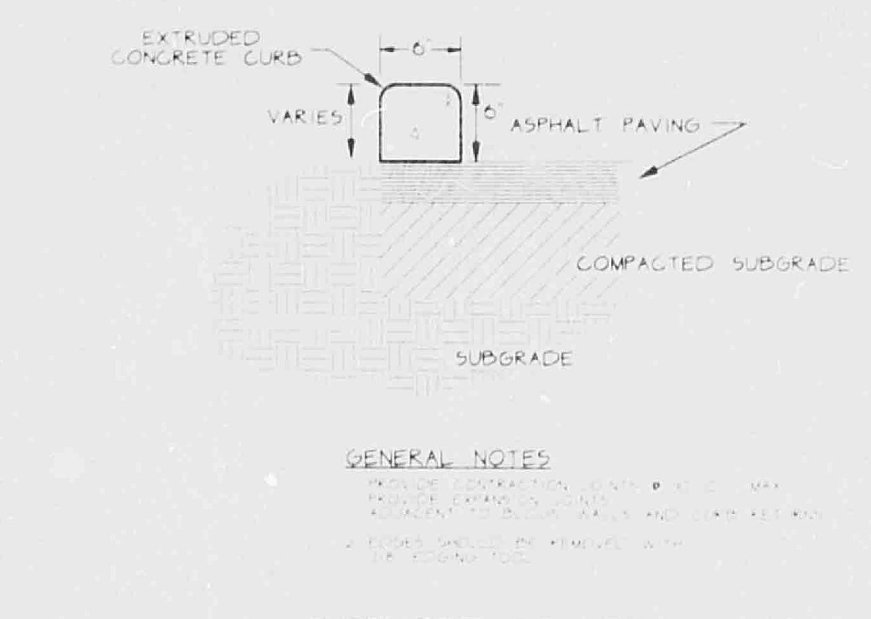




CURB CUT WITH CONCRETE DRAIN PAN



EXTRUDED CONCRETE CURB

LEGEND

	SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED)	LA	LANDSCAPED AREA
	PROPOSED ASPHALT	TGW	TOP OF GRADE WALL
	BUILDING (EXISTING, PROPOSED)	TRW	TOP OF RETAINING WALL
	PROPERTY LINE	TA	TOP OF ASPHALT
	EXISTING SPOT ELEVATION	TC	TOP OF CURB
	EXISTING CONTOUR	FL	FLOW LINE
75.2	PROPOSED SPOT ELEVATION	FF	FINISHED FLOOR
	PROPOSED CONTOUR	R/W	RIGHT OF WAY
	SURFACE FLOW DIRECTION (EXISTING, PROPOSED)	PL	PROPERTY LINE
		PP	POWER POLE
		▲	BUILDING ACCESS POINT

① CONSTRUCT 24' WIDE CONCRETE DRIVEWAY ENTRANCE LOCATED AS SHOWN. SEE C.O.A. DWG. 2425.

② CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN.

③ ALL ROOF FLOWS WILL BE CARRIED IN PIPES TO BE DISCHARGED DIRECTLY TO THE WEST PARKING AREA.

④ CONSTRUCT 6" HIGH EXTRUDED CONCRETE CURB (TYPICAL UNLESS OTHERWISE NOTED). SEE DETAIL THIS SHEET.

⑤ CONSTRUCT 9.5' LONG X 1' WIDE CONCRETE SIDEWALK CULVERT WITH STEEL PLATE TOP IN R.O.W. LOCATED AS SHOWN. SEE C.O.A. DWG. 2236.

⑥ CONSTRUCT COBBLE LINED SHALLOW SWALE CENTERED ON PROPERTY LINE. SLOPE OF SWALE = 1%. SEE SECTION THIS THIS SHEET. LOTS 20 AND 21 ARE OWNED BY SAME PARTY. SEE SECTION A THIS SHEET.

⑦ PROVIDE 1' WIDE CURB CUT AS SHOWN TO DISCHARGE SWALE FLOWS INTO NORTH PARKING AREA. SEE DETAIL THIS SHEET.

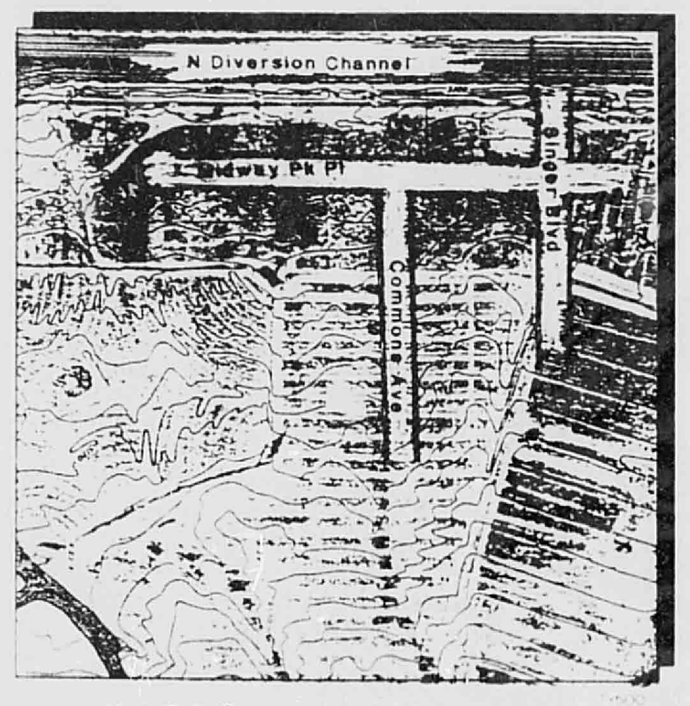
⑧ EXTENDED STEM WALL THIS AREA.

⑨ SPOT ELEVATIONS LOCATED WITHIN ASPHALT AREA REPRESENT TOP OF ASPHALT. ADD 0.5' FOR TOP OF CURB ELEVATION (TYPICAL).

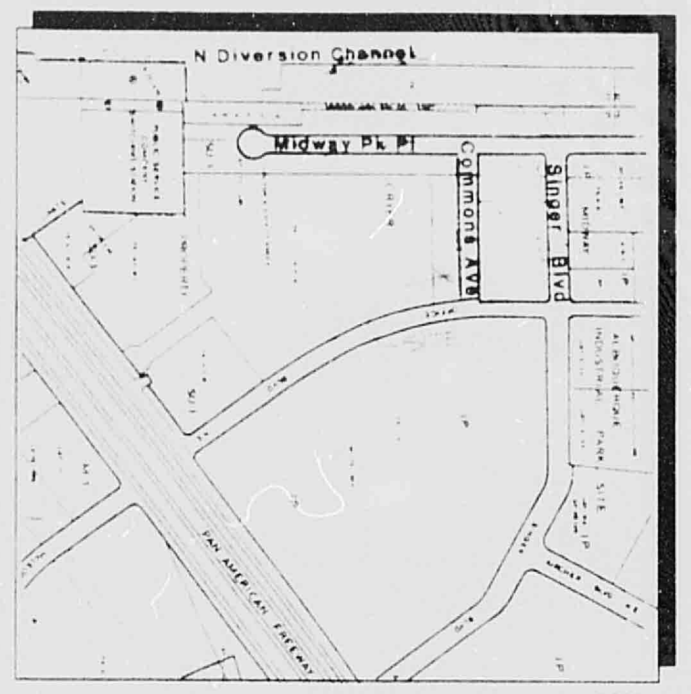
⑩ CONSTUCT 9' LONG X 1' WIDE X 6" DEEP CONCRETE 'U' SHAPED CHANNEL TO CARRY FLOWS TO SIDEWALK CULVERT. FLAIR ENTRANCE TO 3' WIDE. SEE DETAIL INSERT AT LEFT.

⑪ CONSTRUCT STANDARD CURB AND GUTTER THIS AREA.

KEYED NOTES



FLOOD HAZARD MAP



VICINITY MAP F-17

NOTICE TO CONTRACTOR

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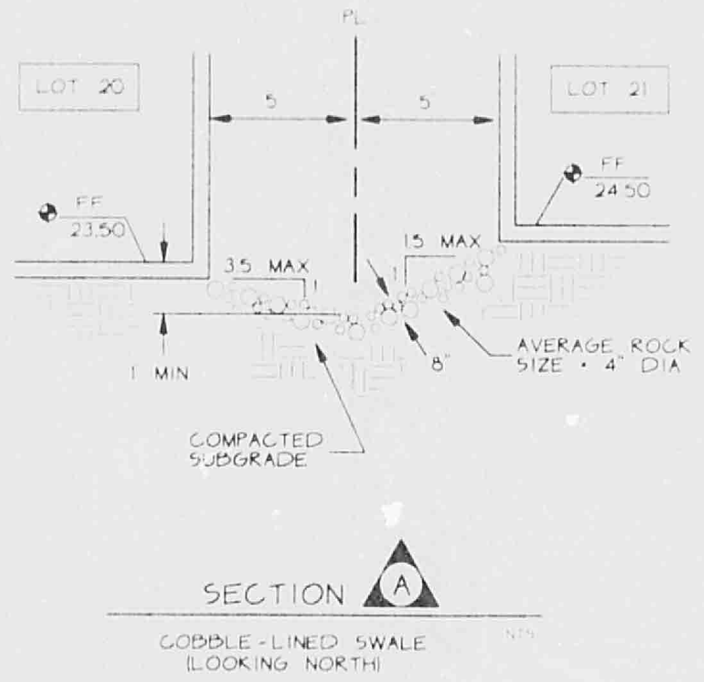
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITHIN A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXCAVATION PERMIT FOR SIDEWALK CULVERT/DRAIN.
8. PROOF OF ACCEPTANCE WILL BE REQUIRED PRIOR TO SIGN OFF FOR CERTIFICATE OF OCCUPANCY (C.O.)

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL: Bernie J Montoya 7/17/96
HYDROLOGY SECTION DATE

INSPECTION APPROVAL: ______
CONSTRUCTION SECTION DATE

ACCEPTANCE: ______
CONSTRUCTION SECTION/PERMIT DATE



SECTION A
COBBLE-LINED SWALE (LOOKING NORTH)

GENERAL NOTES:

LEGAL: LOT 20, JEFFERSON COMMONS, ALBUQUERQUE, NEW MEXICO

SURVEYOR: FORSTBAUER SURVRYING, ALBUQUERQUE, NEW MEXICO

B.M.: 'SC 27|26 / 34|35' A STANDARD BLM BRASS CAP SET IN CONCRETE PROJECTING 1.0' ABOVE THE GROUND. CAP IS LOCATED APPROXIMATELY 350' NORTHWEST OF THE INTERSECTION OF SINGER AND MIDWAY PARK BLVDS. N.E. ELEVATION = 5110.41

T.B.M.: 'X' ON TOP OF CURB AT THE EXTENSION OF LOTS 19/20 LOT LINE. ELEVATION = 5,117.73

SCOPE:

THE SITE IS AN UNDEVELOPED LOT LOCATED WITHIN THE JEFFERSON COMMONS SUBDIVISION. THE GROUND SLOPES WESTERLY AT 2-1/2%.

PROPOSED IMPROVEMENTS FOR THE SITE INCLUDE AN 8,000 SF SLAB-ON-GRADE BUILDING, AN ASPHALT-PAVED PARKING AREA AND ASSOCIATED WALKS AND LANDSCAPED AREAS.

FREE DISCHARGE OF DEVELOPED FLOWS INTO COMMONS AVENUE NE. IS ALLOWED AS ESTABLISHED BY THE MASTER DRAINAGE/GRADING PLAN FOR JEFFERSON COMMONS (APPROVED JANUARY 1990 AND REVISED AUGUST 1990). FLOWS WILL BE CARRIED IN THE PARKING AREAS TO THE NORTHWEST CORNER OF THE SITE WHERE THEY WILL DISCHARGE INTO COMMONS AVE. BY MEANS OF A STANDARD SIDEWALK CULVERT.

NO OFFSITE FLOWS AFFECT THE SITE.

CALCULATIONS:

Calculations are based on the Drainage Design Criteriafor City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE: 27386 SF = 0.63 Ac

HISTORIC FLOWS:
On-Site Historic Land Condition

Area a	=	0	SF
Area b	=	0	SF
Area c	=	27386	SF
Area d	=	0	SF
Total Area	=	27386	SF

DEVELOPED FLOWS:
On-Site Developed Land Condition

Area a	=	0	SF
Area b	=	4797	SF
Area c	=	0	SF
Area d	=	22589	SF
Total Area	=	27386	SF

EXCESS PRECIPITATION:
Precip. Zone: 2
Ea = 0.53
Eb = 0.78
Ec = 1.13
Ed = 2.12

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted } E = \frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$$

Historic E	= 1.13 in	Developed E	= 1.89 in

On-Site Volume of Runoff: V360 = E*A / 12

Historic V360	= 2579 CF	Developed V360	= 4303 CF

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560
For Precipitation Zone 2
Qpa = 1.56
Qbb = 2.28
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Historic Qp	= 2.0 CFS	Developed Qp	= 2.7 CFS

Flows to be discharged to Commons Ave by means of a standard sidewalk culvert. See calculations below.

CALCULATIONS FOR SIDEWALK CULVERT

Sidewalk Culvert Design

Bottom Width (ft)	=	1
Manning's n	=	0.013
Channel Slope	=	0.0200'/'

Discharge	=	2.7 cfs	
Depth	=	0.44'	OK
Design Depth	=	0.5'	

Curb Opening Capacity (to asphalt swale): Using Weir Formula: Q100 = C*L*H^3/2

C	=	2.61
L (ft)	=	3.0
H (ft)	=	0.5

Q100	=	2.8	running full
Qrequired	=	2.7	OK

REVISIONS
2/17/93
DESIGNED BJB
DRAWN BJB
CHECKED CLW

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JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

FEBRUARY 14, 1996

SHEET 1 OF 1

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ONCE ON LIGHT
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R# 35 DATE 3-19-02 OP E.P.

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1/15/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
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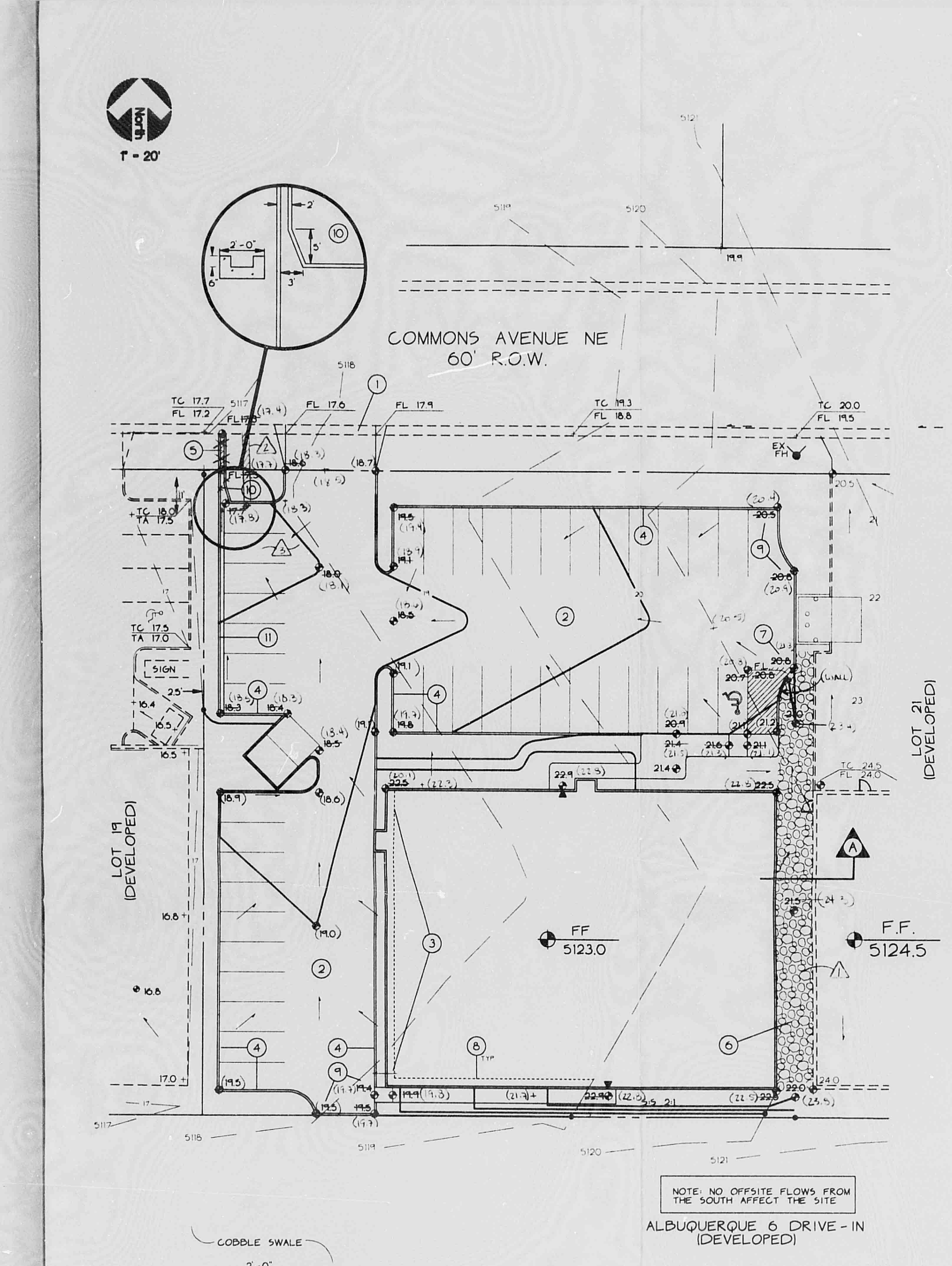

NOTE: NO OFFSITE FLOWS FROM THE SOUTH AFFECT THE SITE

ALBUQUERQUE 6 DRIVE-IN (DEVELOPED)

1. CONSTRUCT 24' WIDE CONCRETE DRIVEWAY ENTRANCE LOCATED AS SHOWN. SEE C.O.A. DWG. 2425.
2. CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN.
3. ALL ROOF FLOWS WILL BE CARRIED IN PIPES TO BE DISCHARGED DIRECTLY TO THE WEST PARKING AREA.
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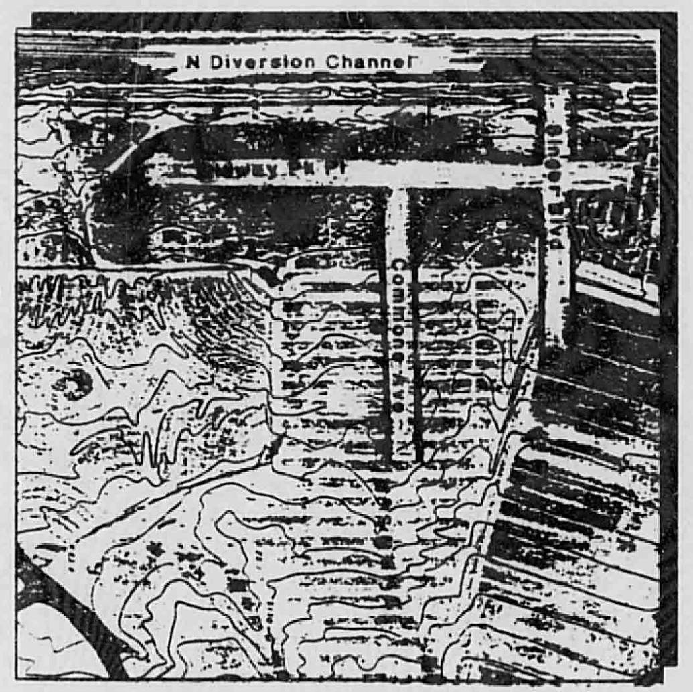
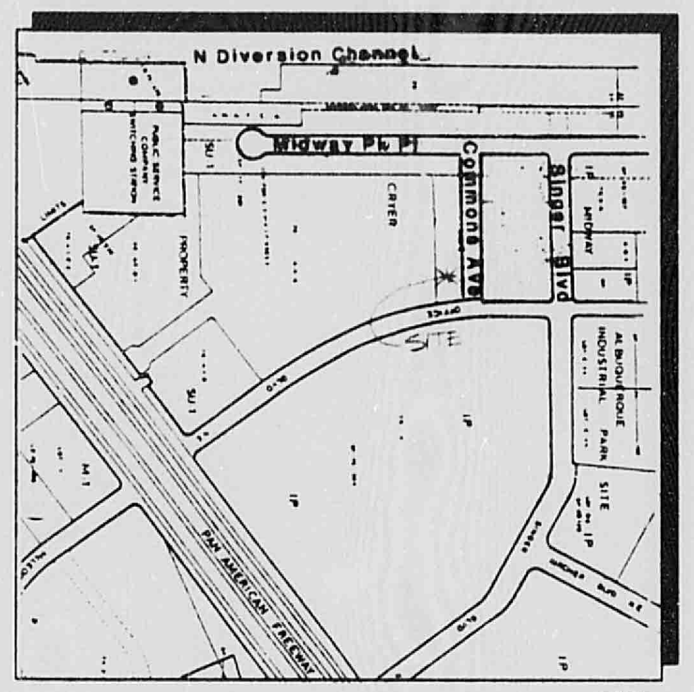
7. PROVIDE 1' WIDE CURB CUT AS SHOWN TO DISCHARGE SWALE FLOWS INTO NORTH PARKING AREA. SEE DETAIL THIS SHEET.
8. EXTENDED STEM WALL THIS AREA.
9. SPOT ELEVATIONS LOCATED WITHIN ASPHALT AREA REPRESENT TOP OF ASPHALT. ADD 0.5' FOR TOP OF CURB ELEVATION. (TYPICAL)
10. CONSTUCT 9' LONG X 1' WIDE X 6" DEEP CONCRETE 'U' SHAPED CHANNEL TO CARRY FLOWS TO SIDEWALK CULVERT. FLAIR ENTRANCE TO 3' WIDE. SEE DETAIL INSERT AT LEFT.
11. CONSTRUCT STANDARD CURB AND GUTTER THIS AREA.

KEYED NOTES



FLOOD HAZARD MAP



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DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL: ____________________ HYDROLOGY SECTION ____ DATE

INSPECTION APPROVAL: ____________________ CONSTRUCTION SECTION ____ DATE

ACCEPTANCE: ____________________ CONSTRUCTION SECTION/PERMITS ____ DATE

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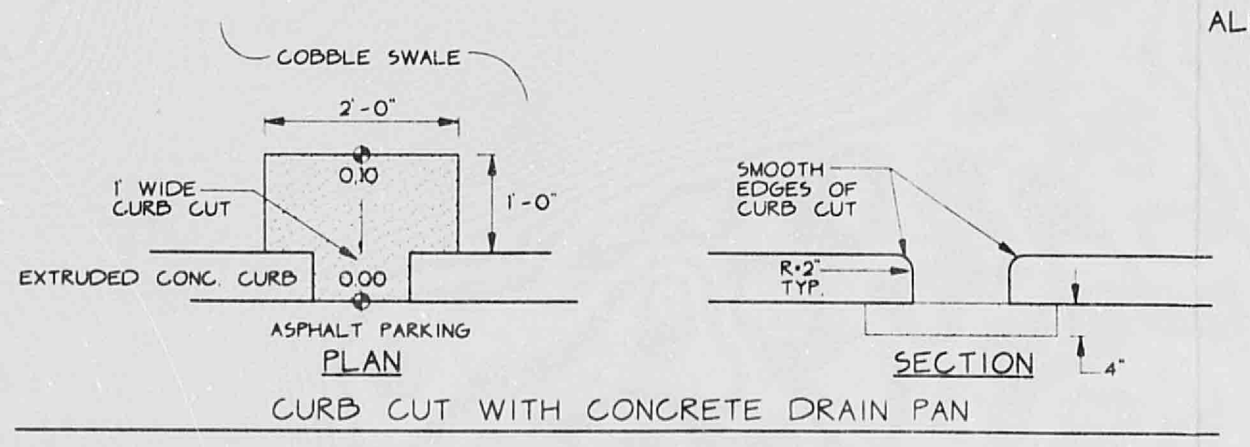

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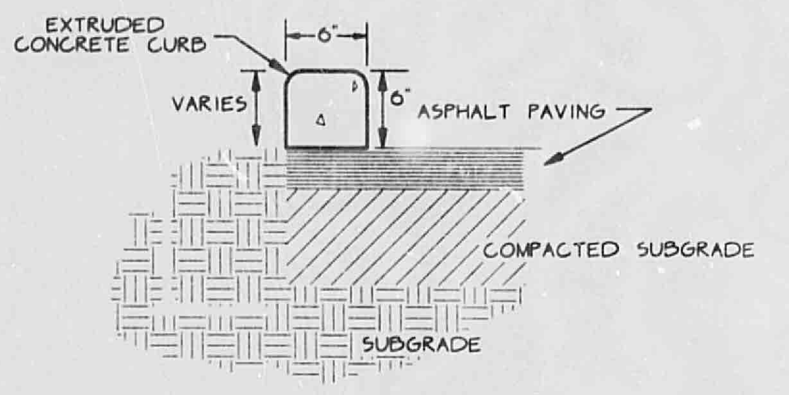

GENERAL NOTES
1. PROVIDE CONTRACTION JOINTS @ 10' O.C. MAX. PROVIDE EXPANSION JOINTS ADJACENT TO BLDGS WALLS AND CURB RETURNS
2. EDGES SHOULD BE REMOVED WITH 3/8" EDGING TOOL

EXTRUDED CONCRETE CURB

D:\CHANT\JC\20\DG_20 06/24/96 14:51:06

LEGEND

- - - ———	SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED)	LA	LANDSCAPED AREA
▭	PROPOSED ASPHALT	TGW	TOP OF GRADE WALL
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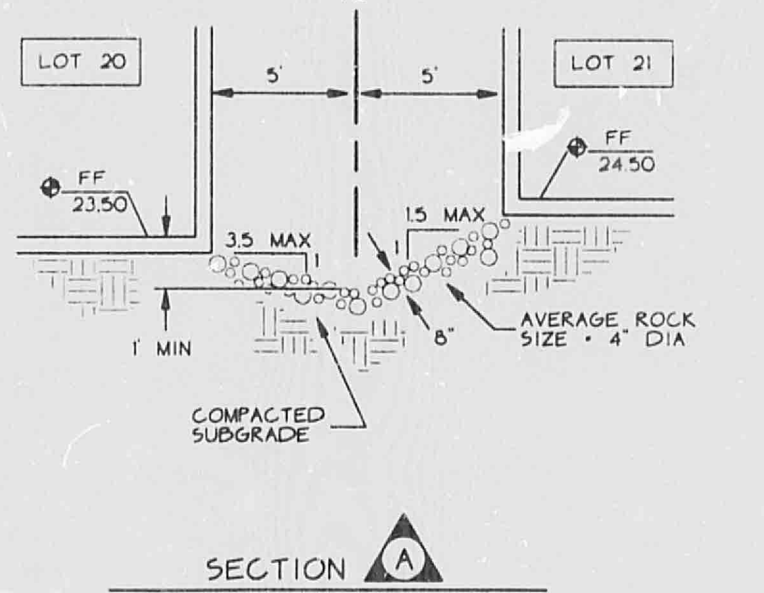

SECTION A
COBBLE-LINED SWALE (LOOKING NORTH)
NTS

NOV 1 2 1996
OGY DIVISION

AREAS OF MODIFICATION BETWEEN APPROVED DRAINAGE GRADING PLAN AND ACTUAL AS-BUILT

1. Gravel area flat. Flows are not released to parking area. No roof flows and Insignificant rainfall will affect this area. No additional work required.
2. Sidewalk culvert relocated as shown. Does not affect Drainage / Grading.
3. Birdbath this area.

I, Christopher L. Weiss, P.E. hereby certify that the as-built information shown is in substantial compliance with the approved drainage / grading plan.

11-8-96

Christopher L. Weiss, P.E. (N.M.P.E. #6653) Date

As-Built Survey provided by Forstbauer Surveying Co • June 1996

11/2/96

CHRISTOPHER L. WEISS 6653
6-25-96
11-8-96

REVISIONS
2/17/93

DESIGNED BJB
DRAWN BJB
CHECKED CLW

C.L. WEISS ENGINEERING, INC.
POST OFFICE BOX 97 SANDIA PARK, N.M. 87047 - (505) 281-1800
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JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

FEBRUARY 14, 1996

SHEET 1 OF 1

PLAN SHOT TWICE
ONCE ON LIGHT
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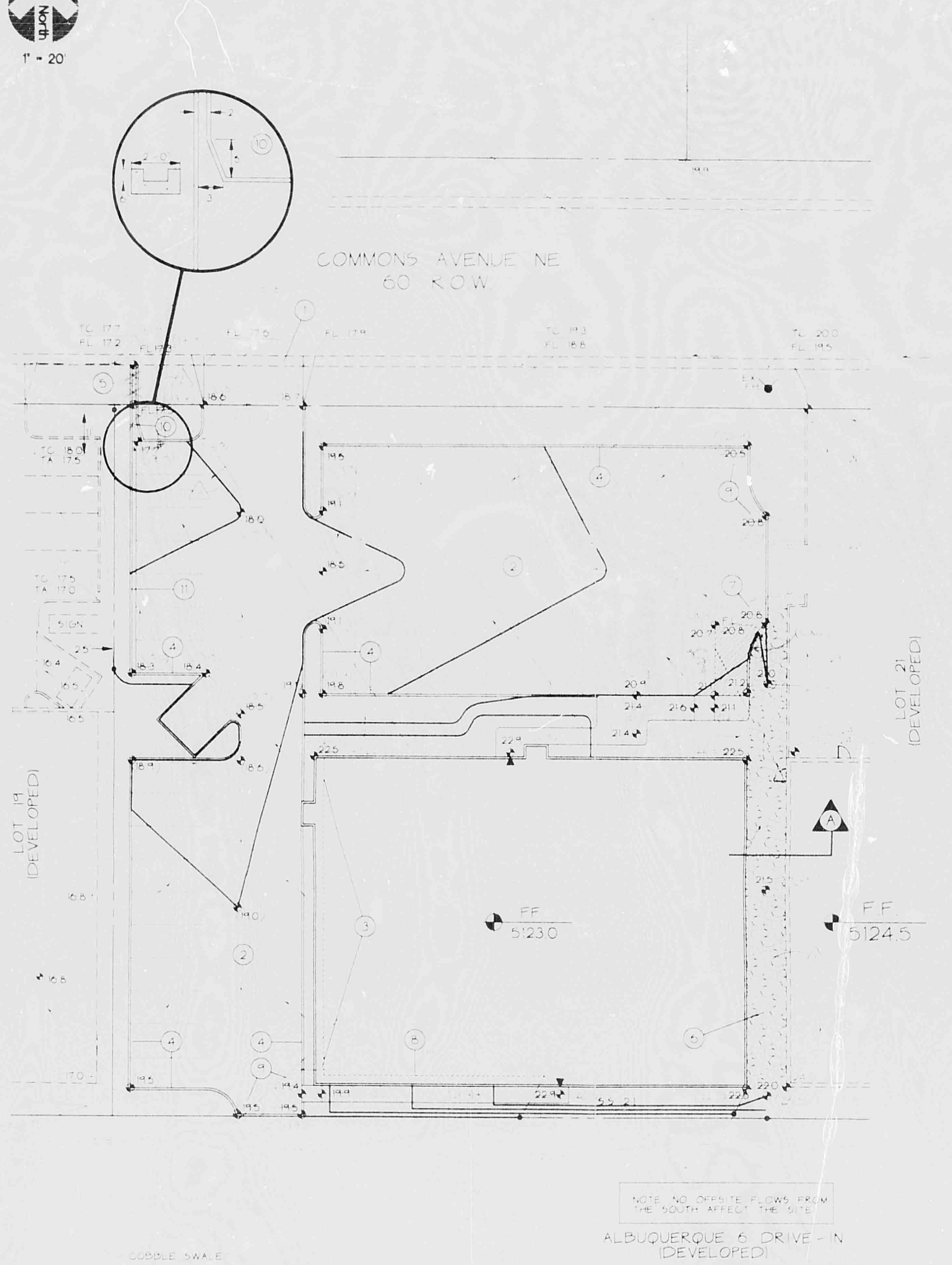
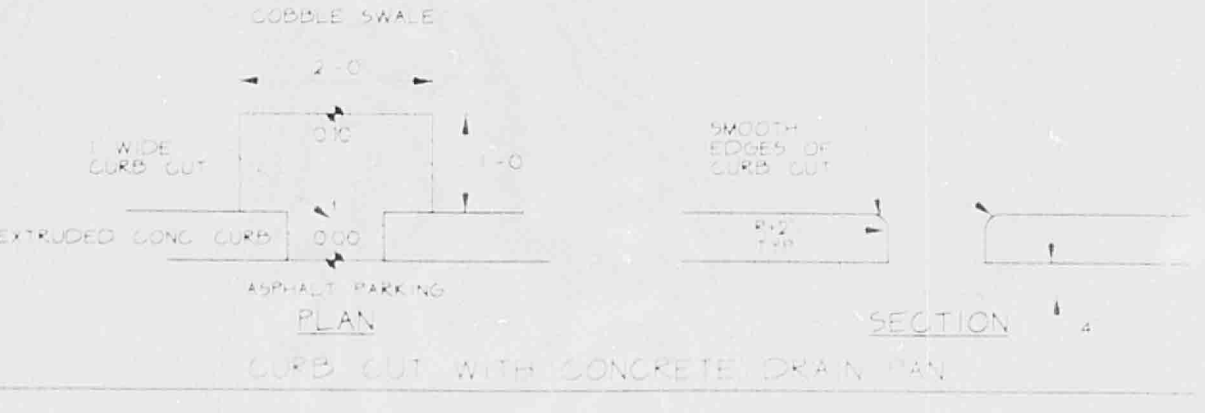
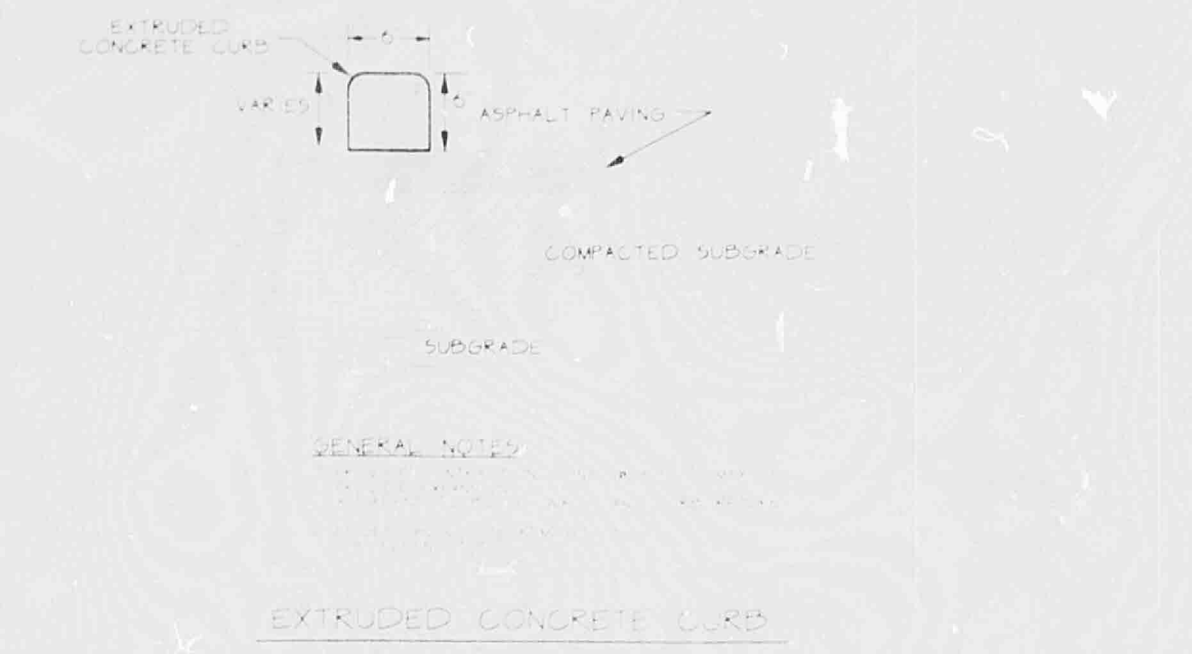
07/08/02

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D

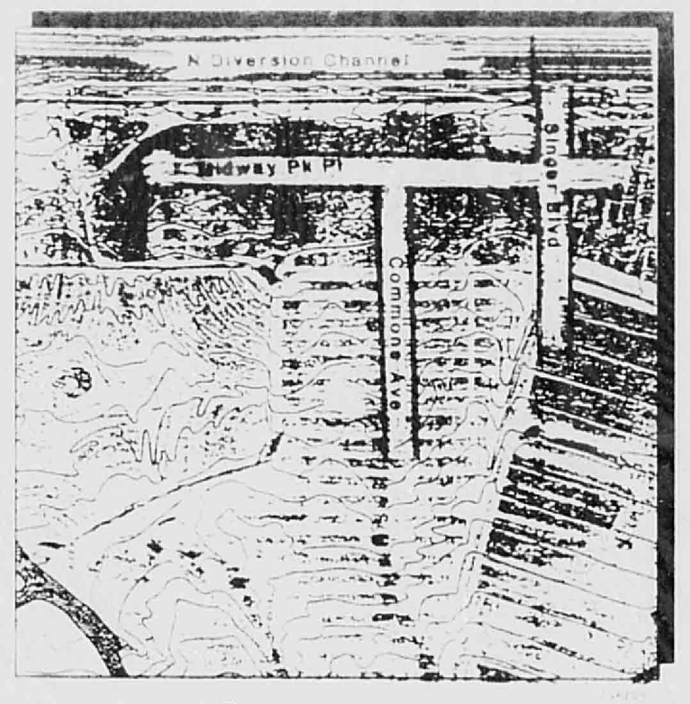


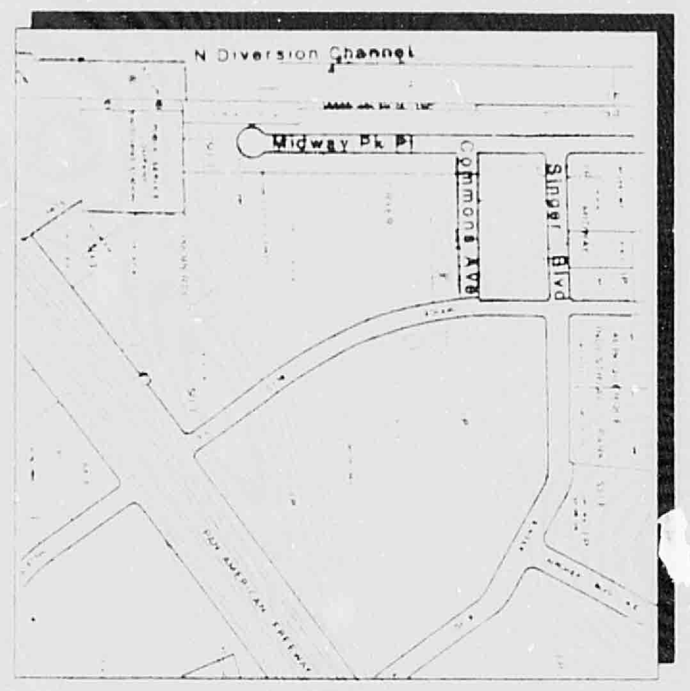




KEYED NOTES

1. CONSTRUCT 24' WIDE CONCRETE DRIVEWAY ENTRANCE LOCATED AS SHOWN. SEE C.O.A. DWG. 2425
2. CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN
3. ALL ROOF FLOWS WILL BE CARRIED IN PIPES TO BE DISCHARGED DIRECTLY TO THE WEST PARKING AREA
4. CONSTRUCT 6" HIGH EXTRUDED CONCRETE CURB (TYPICAL UNLESS OTHERWISE NOTED) SEE DETAIL THIS SHEET
5. CONSTRUCT 9.5' LONG x 1' WIDE CONCRETE SIDEWALK CULVERT WITH STEEL PLATE TOP IN R.O.W. LOCATED AS SHOWN. SEE C.O.A. DWG. 2236
6. CONSTRUCT COBBLE LINED SHALLOW SWALE CENTERED ON PROPERTY LINE. SLOPE OF SWALE • 1%. SEE SECTION THIS THIS SHEET. LOTS 20 AND 21 ARE OWNED BY SAME PARTY. SEE SECTION A THIS SHEET
7. PROVIDE 1' WIDE CURB CUT AS SHOWN TO DISCHARGE SWALE FLOWS INTO NORTH PARKING AREA. SEE DETAIL THIS SHEET
8. EXTENDED STEM WALL THIS AREA
9. SPOT ELEVATIONS LOCATED WITHIN ASPHALT AREA REPRESENT TOP OF ASPHALT. ADD 0.5 FOR TOP OF CURB ELEVATION (TYPICAL)
10. CONSTUCT 9' LONG x 1' WIDE x 6" DEEP CONCRETE U SHAPED CHANNEL TO CARRY FLOWS TO SIDEWALK CULVERT. FLAIR ENTRANCE TO 3' WIDE. SEE DETAIL INSERT AT LEFT
11. CONSTRUCT STANDARD CURB AND GUTTER THIS AREA


FLOOD HAZARD MAP



VICINITY MAP F-17

NOTICE TO CONTRACTOR

1. 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.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. 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 WITHIN A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXCAVATION PERMIT FOR SIDEWALK CULVERT/DRAIN.
8. PROOF OF ACCEPTANCE WILL BE REQUIRED PRIOR TO SIGN OFF FOR CERTIFICATE OF OCCUPANCY (C.O.)

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

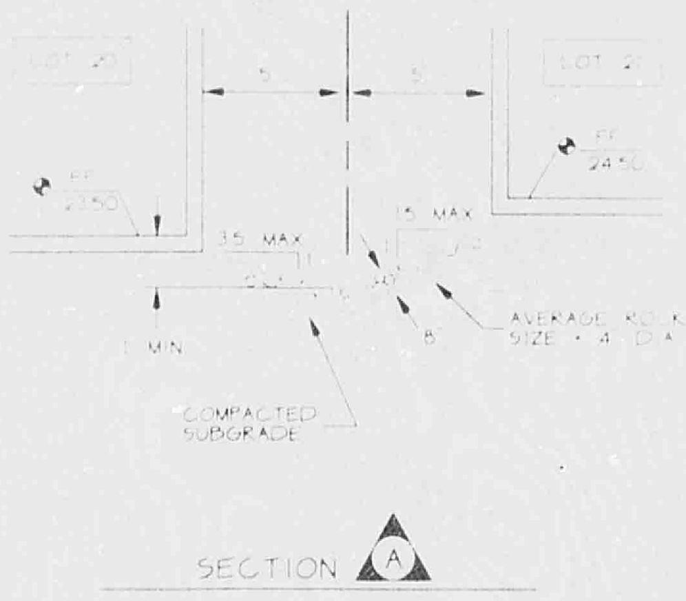
DESIGN APPROVAL ____________________

INSPECTION APPROVAL ____________________

ACCEPTANCE ____________________

LEGEND

	SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED)	LA	LANDSCAPED AREA
	PROPOSED ASPHALT	TGW	TOP OF GRADE WALL
	BUILDING (EXISTING, PROPOSED)	TRW	TOP OF RETAINING WALL
	PROPERTY LINE	TA	TOP OF ASPHALT
	EXISTING SPOT ELEVATION	TC	TOP OF CURB
	EXISTING CONTOUR	FL	FLOW LINE
75.2	PROPOSED SPOT ELEVATION	FF	FINISHED FLOOR
	PROPOSED CONTOUR	R/W	RIGHT OF WAY
	SURFACE FLOW DIRECTION (EXISTING, PROPOSED)	PL	PROPERTY LINE
		PP	POWER POLE
		▲	BUILDING ACCESS POINT



SECTION A
COBBLE LINED SWALE LOOKING NORTH

GENERAL NOTES

LEGAL: LOT 20 JEFFERSON COMMONS, ALBUQUERQUE, NEW MEXICO

SURVEYOR: FORSTBAUER SURVRYING, ALBUQUERQUE, NEW MEXICO

B.M.: SC 27 | 26 / 34 | 35 — A STANDARD BLM BRASS CAP SET IN CONCRETE PROJECTING 10" ABOVE THE GROUND. CAP IS LOCATED APPROXIMATELY 350' NORTHWEST OF THE INTERSECTION OF SINGER AND MIDWAY PARK BLVDS. NE. ELEVATION • 5110.41

T.B.M.: X ON TOP OF CURB AT THE EXTENSION OF LOTS 19/20 LOT LINE. ELEVATION • 5117.73

SCOPE:

THE SITE IS AN UNDEVELOPED LOT LOCATED WITHIN THE JEFFERSON COMMONS SUBDIVISION. THE GROUND SLOPES WESTERLY AT 2-1/2%.

PROPOSED IMPROVEMENTS FOR THE SITE INCLUDE AN 8,000 SF SLAB-ON-GRADE BUILDING, AN ASPHALT-PAVED PARKING AREA AND ASSOCIATED WALKS AND LANDSCAPED AREAS.

FREE DISCHARGE OF DEVELOPED FLOWS INTO COMMONS AVENUE N.E. IS ALLOWED AS ESTABLISHED BY THE MASTER DRAINAGE/GRADING PLAN FOR JEFFERSON COMMONS (APPROVED JANUARY 1990 AND REVISED AUGUST 1990). FLOWS WILL BE CARRIED IN THE PARKING AREAS TO THE NORTHWEST CORNER OF THE SITE WHERE THEY WILL DISCHARGE INTO COMMONS AVE. BY MEANS OF A STANDARD SIDEWALK CULVERT.

NO OFFSITE FLOWS AFFECT THE SITE.

CALCULATIONS:

Calculations are based on the Drainage Design Criteria for City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE: 27386 SF = 0.63 Ac

HISTORIC FLOWS:		**DEVELOPED FLOWS:**		**EXCESS PRECIPITATION:**	
On Site Historic Land Condition		On Site Developed Land Condition		Precip. Zone	2
Area a =	0 SF	Area a =	0 SF	Ea =	0.53
Area b =	0 SF	Area b =	4797 SF	Eb =	0.78
Area c =	27386 SF	Area c =	0 SF	Ec =	1.13
Area d =	0 SF	Area d =	22589 SF	Ed =	2.12
Total Area =	27386 SF	Total Area =	27386 SF		

On Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted } E = \frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$$

Historic E =	1.13 in	Developed E =	1.69 in

On Site Volume of Runoff: V360 = E*A / 12

Historic V360 =	2579 CF	Developed V360 =	4303 CF

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560

For Precipitation Zone 2

Qpa = 1.56 Qpc = 3.14

Qpb = 2.28 Qpd = 4.70

Historic Qp =	2.0 CFS	Developed Qp =	2.7 CFS

Flows to be discharged to Commons Ave by means of a standard sidewalk culvert. See calculations below.

CALCULATIONS FOR SIDEWALK CULVERT

Sidewalk Culvert Design

Bottom Width (ft) =	1	Discharge =	2.7 cfs	
Manning's n =	0.013	Depth =	0.44	OK
Channel Slope =	0.0200	Design Depth =	0.5	

Curb Opening Capacity (to asphalt swale): Using Weir Formula: Q100 = C*L*H^3/2

C =	2.61	Q100 =	2.8 (running full)	
L (ft) =	3.0	Qrequired =	2.7	OK
H (ft) =	0.5			

AREAS OF MODIFICATION BETWEEN APPROVED DRAINAGE GRADING PLAN AND ACTUAL AS-BUILT

1. Gravel area flat. Flows are not released to parking area. No roof flows and Insignificant rainfall will affect this area. No additonal work required.
2. Sidewalk culvert relocated as shown. Does not affect Drainage Grading.
3. Birdbath this area

I, Christopher L. Weiss, P.E. hereby certify that the as-built information shown is in substantial compliance with the approved drainage grading plan.

Christopher L. Weiss P.E. (N.M.P.E. #6653) Date

As-Built Survey provided by Forstbauer Surveying Co. • June 1996

CHRISTOPHER L. WEISS, NEW MEXICO, 6653, REGISTERED PROFESSIONAL ENGINEER

REVISIONS
2/17/93

C.L.WEISS ENGINEERING, INC.
POST OFFICE BOX 97 SANDIA PARK, N.M. 87047 - (505) 281-1800
1100 ALVARADO DR NE ALBUQUERQUE, N.M. 87110 - (505) 266-3444

JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

FEBRUARY 14, 1996

SHEET 1 OF 1

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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R# 25 DATE 3-19-02 OP EQP

CITY OF ALBUQUERQUE

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1/15/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
07/08/02

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D