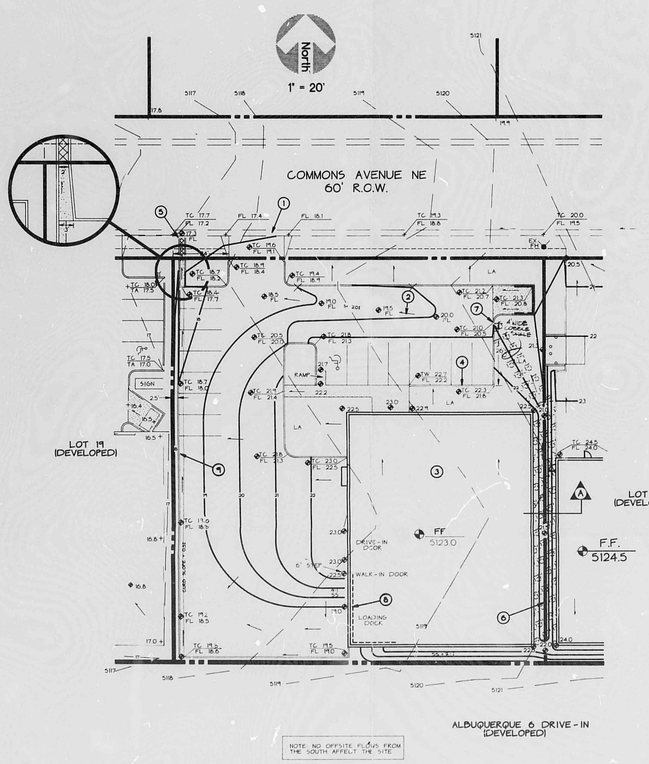
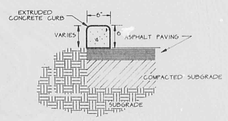
PUBLIC WORKS/HYDROLOGY

F17/D61R



NOTE: NO OFFSITE FLOWS FROM THE SOUTH AFFECT THE SITE



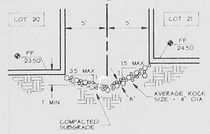
GENERAL NOTES
1. PROVIDE CONTRACTION JOINTS @ 10' O.C. MAX. AND EXPANSION JOINTS @ BUILDING WALLS AND CURB RETURNS ADJACENT TO BUILDING WALLS.
2. EDGES SHOULD BE REMOVED WITH 1/8" ROUNDING TOOL

EXTRUDED CONCRETE CURB

LEGEND

	SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED)	LA	LANDSCAPED AREA
	PROPOSED ASPHALT	TGW	TOP OF GRADE WALL
		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
10	EXISTING CONTOUR	R/W	RIGHT OF WAY
175.2	PROPOSED SPOT ELEVATION	PL	PROPERTY LINE
10	PROPOSED CONTOUR	PP	POWER POLE
	SURFACE FLOW DIRECTION (EXISTING, PROPOSED)		

AUG 17
HYDROLOGY SECTION

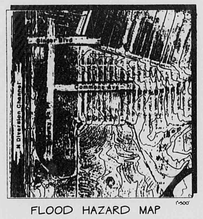


SECTION A
COBBLE-LINED SWALE
(LOOKING NORTH)
NTS

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 FLOW 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 2' LONG X 30' WIDE BUD SIDEWALK CULVERT WITH STEEL PLATE TOP IN R.O.W. LOCATED AS SHOWN SEE C.O.A. DWG. 2236.
6. CONSTRUCT CONCRETE LINED SHALLOW SWALE CENTERED ON PROPERTY LINE-SLOPE OF SWALE - IS 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 SURVEYING, ALBUQUERQUE, NEW MEXICO

B.M. "SC 27 / 26 / 34 / 35" - A STANDARD B.L.M. BRASS CAP SET IN CONCRETE PROJECTING 0.3' ABOVE THE GROUND. CAP IS LOCATED APPROXIMATELY 1300' NORTHWEST OF THE INTERSECTION OF WYNGATE AND MIDWAY PARK BLVDS. N.E. ELEVATION = 5,101.41

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 2.12%.

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 UNDEVELOPED 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 1992. FLOWS WILL BE CARRIED IN THE PARKING AREAS TO THE NORTHWEST CORNER OF THE SITE AND DISCHARGED ACROSS THE SIDEWALK INTO COMMONS AVE. BY MEANS OF A STANDARD SIDEWALK CULVERT.

NO OFFSITE FLOWS AFFECT THE SITE.

CALCULATIONS:

AREA OF SITE: 27,380 SF = 0.63 AC.

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

$Q_{100} = 0.4014 \times 5.80 \times 0.31 = 1.2$ CFS

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

$Q_{100} = 0.814 \times 6.58 \times 0.31 = 2.4$ CFS

FLOW CAPACITY OF SIDEWALK CULVERT

PER MANNING'S EQUATION, A 24"-WIDE CONCRETE CHANNEL AT 2.12% SLOPE WITH A 3" DEPTH OF FLOW CARRIES A MAXIMUM FLOW RATE OF 2.4 CFS AT A DEPTH OF 3". OK

SIDEWALK CULVERT INLET CAPACITY

USING WEIR FORMULA $Q_{100} = C L H^{3/2}$ WITH C = 2.11, L = 1' AND H = 1.5'
$Q_{100} = 2.8$ 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 CONSTRUCTION. 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

C.L. WEISS ENGINEERING, INC.
POST OFFICE BOX 87 SANDIA PARK, N.M. 87047 - (505) 281-1800
1100 ALVARADO DR. NE ALBUQUERQUE, N.M. 87110 - (505) 266-3444

REVISIONS
ZONE
DRAWN D.D.
CHECKED C.L.W.

JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

AUGUST 6, 1993

SHEET 1 OF 1

R# 25 DATE 3-19-12 OP KP

CITY OF ALBUQUERQUE

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DIRECTOR

NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 6/12/2015

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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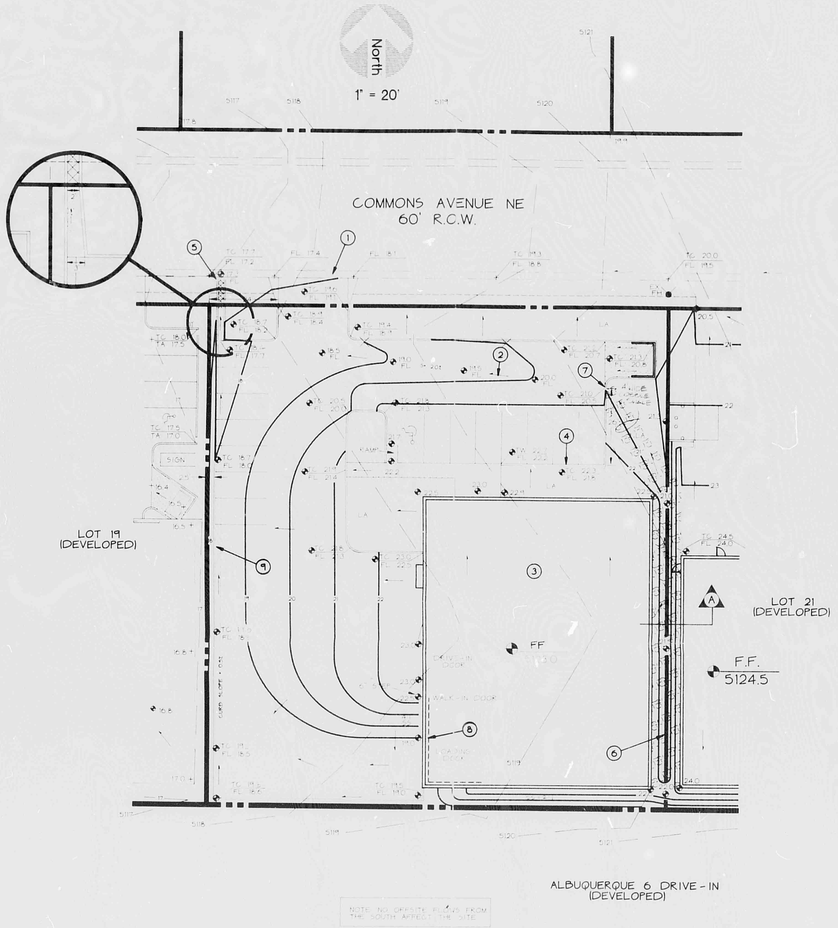
PLANS/PLATS ON FILE

FILE DESC: F17/D6/R

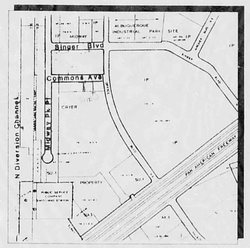
PLANS/PLATS 4

F30 D24 C20 B16 A12 CITY OF ALBUQERQUE C D F

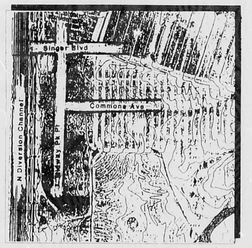


1. CONSTRUCT 24' WIDE CONCRETE DRIVEWAY ENTRANCE LOCATED AS SHOWN. SEE C.O.A. DWG. 2425.
2. CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN.
3. ALL ROOF FLOW WILL BE CARRIED IN PIPES TO BE DISCHARGED DIRECTLY TO THE NORTH PARKING AREA.
4. CONSTRUCT 6" HIGH EXTRUDED CONCRETE CURB (TYPICAL UNLESS OTHERWISE NOTED) SEE DETAIL THIS SHEET.
5. CONSTRUCT 21 LINEAL X 36" WIDE R/B SIDEWALK CULVERT WITH STEEL PLATE TOP IN R.O.W. LOCATED AS SHOWN. SEE C.O.A. DWG. 2236.
6. CONSTRUCT CONCRETE LINED SHALLOW SWALE CENTERED ON PROPERTY LINE. SLOPE OF SWALE = 1%. SEE SECTION 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 SURVEYING, ALBUQUERQUE, NEW MEXICO.

B.M.: N: 1514.68' E: 1514.68' A STANDARD B.L.M. BRASS CAP SET IN CONCRETE PAD PROJECTING ABOVE THE GROUND AT APPROXIMATELY THE INTERSECTION OF SINGER AND MIDWAY PARK BLVD. ELEVATION = 5115.01

T.B.M.: X ON TOP OF CURB AT THE EXTENSION OF LOTS 19/20 LOT LINE. ELEVATION = 5119.11

SCOPE:

THE SITE IS AN UNDEVELOPED LOT LOCATED WITHIN THE JEFFERSON COMMONS SUBDIVISION. THE AREA INCLUDES 2.388 ACRES (104,000 S.F.).

PROPOSED IMPROVEMENTS FOR THE SITE INCLUDE ALL ROUGH GRADING, SLAB ON GRADE BUILDING, AN ASPHALT PAVED PARKING AREA AND ASSOCIATED WALKS AND LANDSCAPED AREAS.

FREE DISCHARGE OF DEVELOPED FLOWS INTO COMMONS AVENUE SE IS ALLOWED AS PER SHEET BY THE MASTER DRAINAGE GRADING PLAN FOR JEFFERSON COMMONS APPROVED JANUARY 1985 AND REVISED AUGUST 1985. 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 = 2.388 AC (103,999 S.F.)

Q100 AT DISCHARGE POINT MASTER PLAN UNDEVELOPED AREA (B)
Q100 = 0.0408(43560)(2.388) = 4.2 CFS

Q100 AT DISCHARGE POINT MASTER PLAN DEVELOPED AREA (B)
Q100 = 0.0914(43560)(2.388) = 9.4 CFS

FLOW CAPACITY OF SIDEWALK CULVERT

PER MANNING'S EQUATION, A 21 LINEAL CONCRETE CHANNEL AT SLOPE = 1% AND n = 0.015 WILL PASS 9.4 CFS WITH d = 0.24' (2.9") AT A DEPTH OF 0.24'. OK

SIDEWALK CULVERT INLET CAPACITY

LONG WEIR FORMULA Q100 = CLH^3/2 WITH C = 2.6 AND L = 3.0' (36") AND H = 0.24' Q100 = 2.6(3.0)(0.24)^3/2 = 2.9 CFS RUNNING FULL > 2.4 CFS REQUIRED. OK

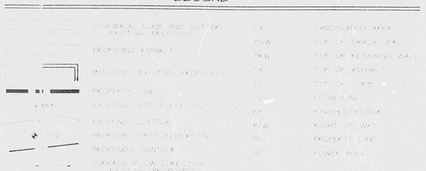
NOTICE TO CONTRACTOR

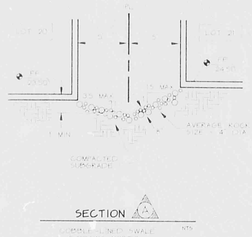
1. ALL EXCAVATION / CONSTRUCTION PERMITS WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE PRESENTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, 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 (NM 1214 FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL CONFLICTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITHIN A MINIMUM AMOUNT OF TIME.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET TYPE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. CONTRACTOR TO PERSONALLY FOR OBTAINING EXCAVATION PERMIT FOR GENERAL CONSTRUCTION.
8. PRIOR TO ACCEPTANCE WILL BE REQUIRED PRIOR TO SIGN OFF FOR CERTIFICATE OF OCCUPANCY (C.O.).

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

SECTION APPROVAL: HYDROLOGY SECTION — DATE
INSPECTION APPROVAL: CONSTRUCTION SECTION — DATE
ACCEPTANCE: CONSTRUCTION SECTION/OVERALL — DATE

EXISTING CONCRETE CURB





C.L. WEISS ENGINEERING, INC.
POST OFFICE BOX 97 SANDIA PARK, NM 87047 (505) 281-1800
1100 ALVARADO DR NE ALBUQUERQUE, NM 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
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R# 35 DATE 3-17-02 OF 27

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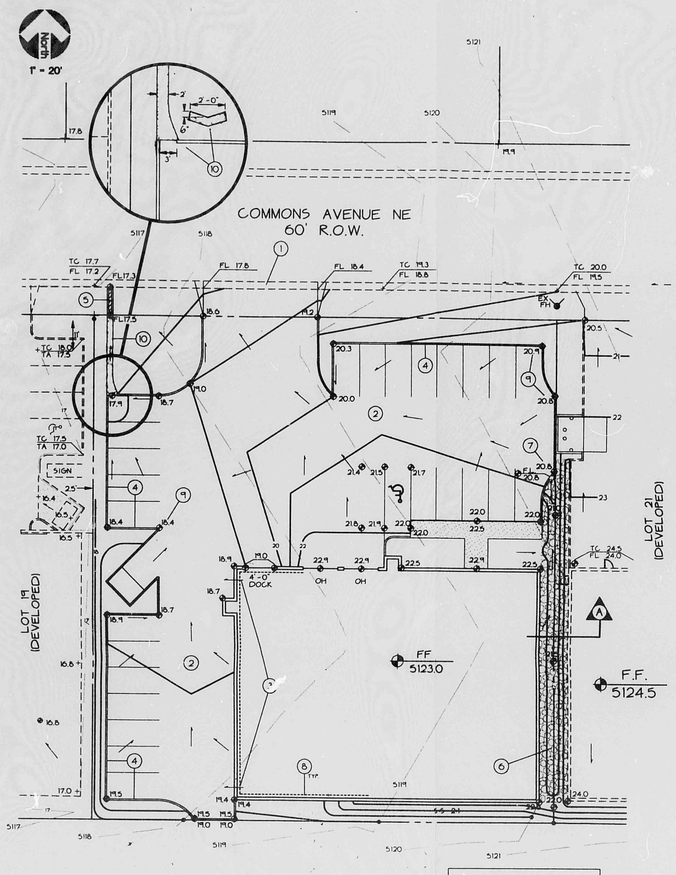
DIRECTOR

NOTARY PUBLIC

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

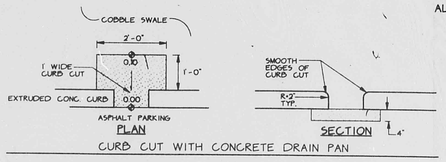
D24 C20 B16 A12

CITY OF ALBUQERQUE C D

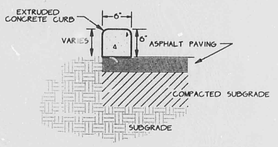


ALBUQUERQUE 6 DRIVE-IN (DEVELOPED)

NOTE: NO OFFSITE FLOWS FROM THE SOUTH AFFECT THE SITE



CURB CUT WITH CONCRETE DRAIN PAN



GENERAL NOTES

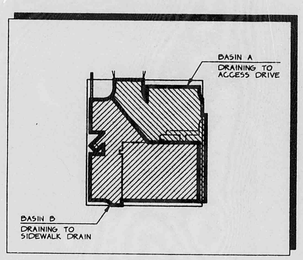
1. PROVIDE CONTRACTION JOINTS @ 10' O.C. MAX. PROVIDE EXPANSION JOINTS ADJACENT TO BLDGS. WALLS AND CURB RETURNS
2. EDGES SHOULD BE REMOVED WITH 1/8" EDGING TOOL

EXTRUDED CONCRETE CURB

D:\CHANT\CV20\DG_20 02/15/96 17:29:32

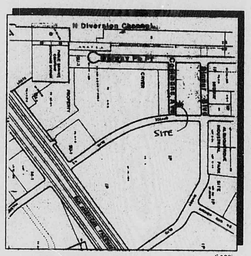
1. CONSTRUCT 40' WIDE CONCRETE DRIVEWAY ENTRANCE LOCATED AS SHOWN. SEE C.O.A. DWG. 2425.
2. CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN.
3. ALL ROOF FLOWS WILL BE CARRIED IN PIPES TO BE DISCHARGED DIRECTLY TO THE WEST PARKING AREA.
4. CONSTRUCT 6" HIGH EXTRUDED CONCRETE CURB (TYPICAL UNLESS OTHERWISE NOTED). SEE DETAIL THIS SHEET.
5. CONSTRUCT 9.5' LONG X 36" WIDE RCP CONCRETE SIDEWALK CULVERT WITH STEEL PLATE TOP IN R.O.W. LOCATED AS SHOWN. SEE C.O.A. DWG. 2226.
6. CONSTRUCT COBBLE LINED SHALLOW SWALE CENTERED ON PROPERTY LINE. SLOPE OF SWALE = ?. 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 L.F. BY 6' DEEP ASPHALT LINED SWALE TO CARRY FLOWS TO SIDEWALK CULVERT. SEE DETAIL INSERT AT LEFT.

KEYED NOTES



BASIN MAP

VICINITY MAP F-17



FLOOD HAZARD MAP

NOTICE TO CONTRACTOR

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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

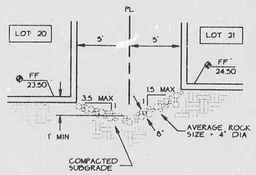
DESIGN APPROVAL: Brian Montoya 2/14/96
HYDROLOGY SECTION — DATE

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 66.7	EXISTING SPOT ELEVATION	TC	TOP OF CURB
70	EXISTING CONTOUR	FL	FLOW LINE
75.2	PROPOSED SPOT ELEVATION	FF	FINISHED FLOOR
70	PROPOSED CONTOUR	R/W	RIGHT OF WAY
	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 27/34 20/35" - 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 BLVD'S. 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 Criteria for City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

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)

Weighted E = (Ea·Aa + Eb·Ab + Ec·Ac + Ed·Ad) / (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	Qpc =	3.14
Qpb =	2.28	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 = 1526 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 DRAIN

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 =	0.02007	Depth =	0.41	OK
		Design Depth =	0.5'	

Sidewalk Culvert Design

Bottom Width (ft) =	1	Discharge =	1.5	
Manning's n =	0.013	Depth =	0.27	OK
Channel Slope =	0.02007	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	Orequired =	1.5 OK
H (ft) =	0.5		

REVISIONS
2/17/93 — DESIGNED: D.D. — DRAWN: D.D. — CHECKED: C.L.W.

C.L. WEISS ENGINEERING, INC.
POST OFFICE BOX 67 SANDIA PARK, N.M. 87047 - (505) 281-1800
1100 ALVARADO DR. NE ALBUQUERQUE, N.M. 87110 - (505) 266-5444

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 ORIGINAL DOCUMENT.

R# 25 DATE 3-19-02 OF EGR

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 (MS1A6-1977)

Chris T. Ashby 11/5/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My commission expires: 07/07/2004

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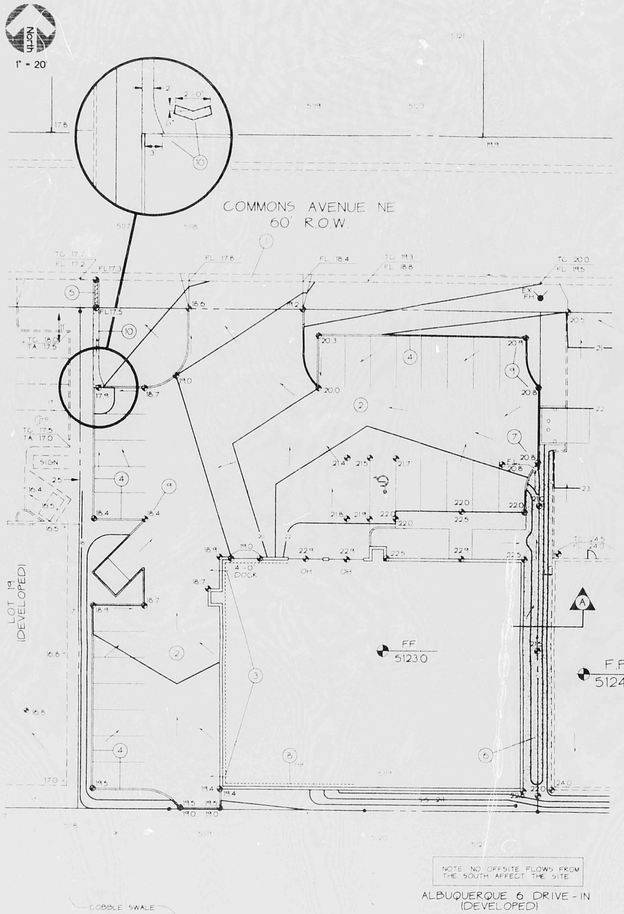
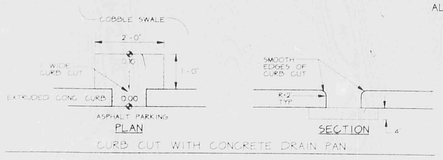
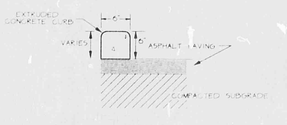


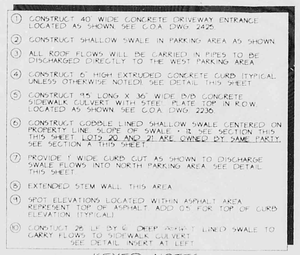
ALBUQUERQUE 6 DRIVE-IN
(DEVELOPED)



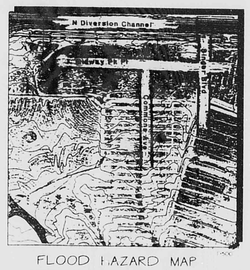
CURB CUT WITH CONCRETE DRAIN PAN



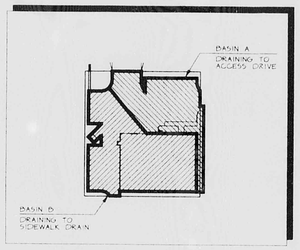
EXTRUDED CONCRETE CURB



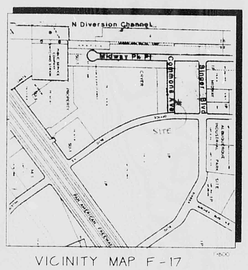
KEYED NOTES



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.
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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

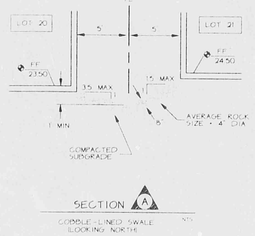
DESIGN APPROVAL _____ DATE 2/27/96
(CONSTRUCTION SECTION)

INSPECTION APPROVAL _____ DATE
(CONSTRUCTION SECTION)

ACCEPTANCE _____ DATE
(CONSTRUCTION SECTION/PWD)

LEGEND

	SIDEWALK, CURB AND GUTTER (EXISTING/PROPOSED)	LA	LANDSCAPED AREA
	PROPOSED ASPHALT	TOW	TOP OF GRADE WALL
	BUILDING (EXISTING/PROPOSED)	TRW	TOP OF RETAINING WALL
	PROPERTY LINE	TA	TOP OF ASPHALT
x 5347	EXISTING SPOT ELEVATION	TC	TOP OF CURB
5347	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



SECTION A
COBBLE LINED SWALE
LOOKING NORTH

GENERAL NOTES:

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

SURVEYOR: FORSTBAUER SURVEYING, ALBUQUERQUE, NEW MEXICO

B.M. "SC 27 | 20 | 14 | 35" A STANDARD BLM BRASS CAP SET IN CONCRETE PROJECTING TO 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 = 5117.73

SCOPE:

THE SITE IS AN UNDEVELOPED LOT LOCATED WITHIN THE JEFFERSON COMMONS SUBDIVISION. THE GROUND SLOPES WESTERLY AT 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 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: On-Site Historic Land Condition			DEVELOPED FLOWS: On-Site Developed Land Condition			EXCESS PRECIPITATION: Precip Zone = 2	
Area a	=	0 SF	Area a	=	0 SF	Ea =	0.53
Area b	=	0 SF	Area b	=	2739 SF	Eb =	0.78
Area c	=	27386 SF	Area c	=	0 SF	Ec =	1.13
Area d	=	0 SF	Area d	=	24647 SF	Ed =	2.12
Total Area	=	27386 SF	Total Area	=	27386 SF		

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

Weighted E = (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/12 x A

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	Qpc	=	3.14
Qpb	=	2.28	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
Right Side Slope	=	2
Channel Slope	=	0.0200

Discharge	=	1.5 cfs	
Manning's n	=	0.015	
Depth	=	0.41	OK
Design Depth	=	0.5	

Sidewalk Culvert Design

Bottom Width (ft)	=	1
Manning's n	=	0.012
Channel Slope	=	0.0200

Discharge	=	1.5	
Depth	=	0.27	OK
Design Depth	=	0.5	

Curb Opening Capacity (to asphalt swale) (Using Weir Formula: Q100 = C1*H^3/2)

Q	=	2.61	Q100	=	7.8	(unmet by full
L (ft)	=	3	Grequired	=	1.5	OK
H (ft)	=	0.5				

C.L. WEISS ENGINEERING, INC.
POST OFFICE BOX 67 SANDIA PARK, N.M. 87047 - (505) 281-1800
1100 ALVARADO DR. NE ALBUQUERQUE, N.M. 87110 - (505) 266-3444

REVISIONS	BY	DATE
2-27-96		

DESIGNED: R.W.S.
DRAWN: R.W.S.
CHECKED: C.L.W.

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# 55 DATE 3-17-12 OP EC

CITY OF ALBUQUERQUE

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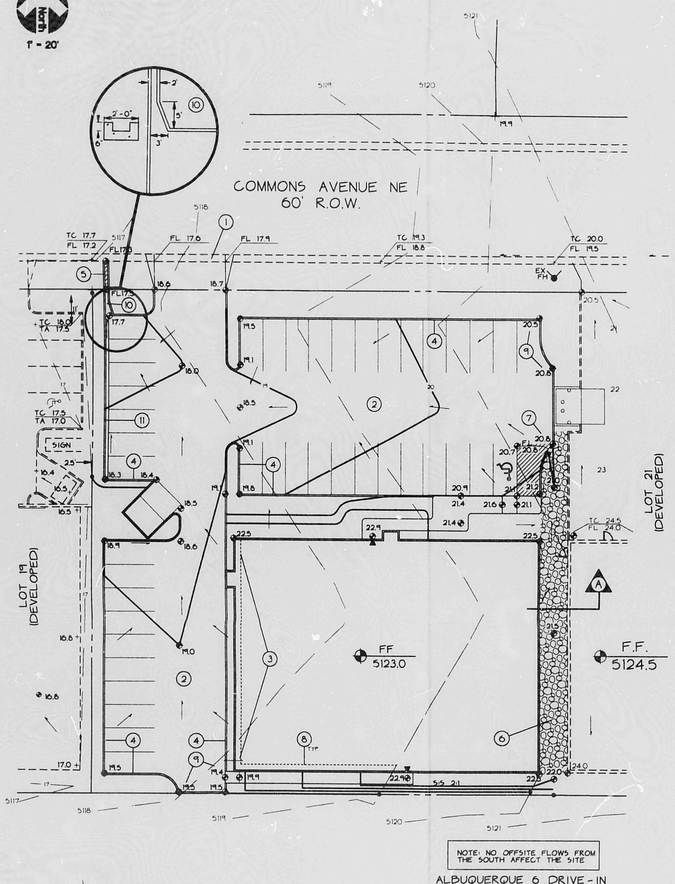
Mgr. T. Ashley 4/5/12
DIRECTOR

Roberta Duran
NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/22/12

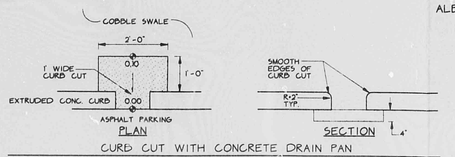
D24 C20 B16 A12 | CITY OF ALBUQUERQUE C D

PUBLIC WORKS/HYDROLOGY 2 OF 2

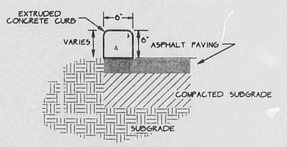
F17/D61R



ALBUQUERQUE 6 DRIVE-IN
(DEVELOPED)



CURB CUT WITH CONCRETE DRAIN PAN



GENERAL NOTES

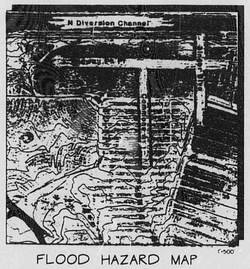
1. PROVIDE CONTRACTION JOINTS @ 10' O.C. MAX. PROVIDE EXPANSION JOINTS ADJACENT TO BUILDING WALLS AND CURB RETURNS
2. ECOBS SHOULD BE REMOVED WITH S-B LOOKING TOOL

EXTRUDED CONCRETE CURB

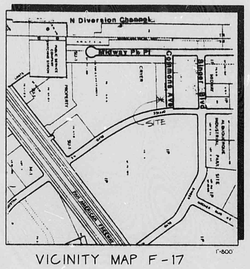
D:\CHANTILLY\DWGS\C-20 06/24/96 14:51:06

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 4.5' 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 0.5' DEEP CONCRETE V 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

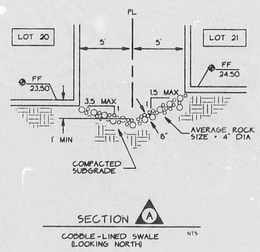
DESIGN APPROVAL: Bruno J Montoya 7/17/96
HYDROLOGY SECTION — DATE

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
		TC	TOP OF CURB
		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)	▲	BUILDING ACCESS POINT



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. 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 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: 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)
Weighted E = (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
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	Required	=	2.7 OK
H (ft)	=	0.5			

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1100 ALVARADO DR. NE ALBUQUERQUE, N.M. 87110 - (505) 268-3444

REVISIONS
2/17/93
DESIGNED D.P.
DRAWN D.P.
CHECKED C.L.W.

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 ORIGINAL DOCUMENT.

R# 25 DATE 3-19-02 OP KP
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.
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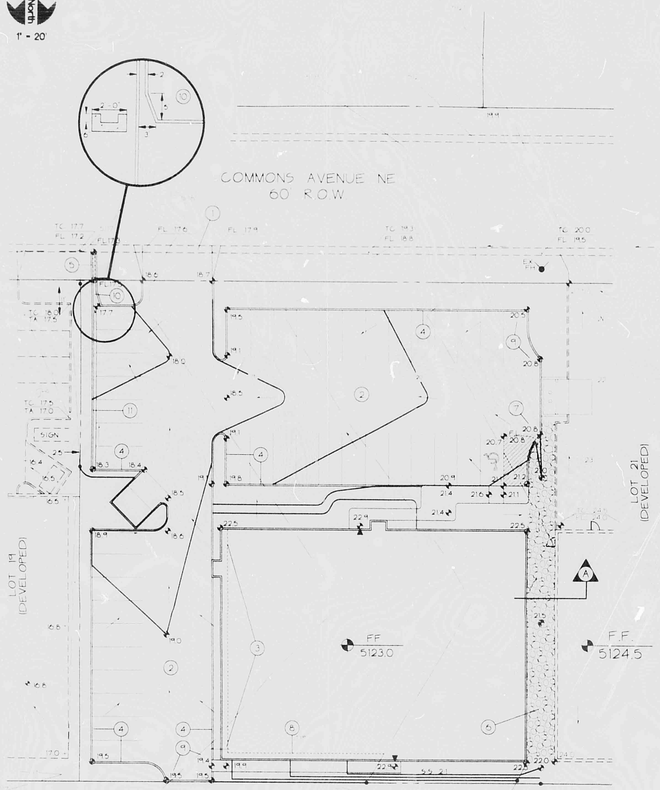
DIRECTOR 4/5/02

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

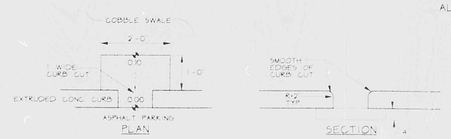
D24 C20 B16 A12 | CITY OF ALBUQUERQUE C D

1" = 20'

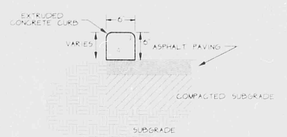


NOTE: NO OFFSITE FLOWS FROM THE SOUTH AFFECT THE SITE

ALBUQUERQUE 6 DRIVE-IN
(DEVELOPED)



CURB CUT WITH CONCRETE DRAIN PAN

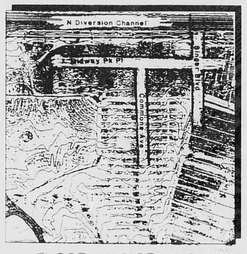


GENERAL NOTES

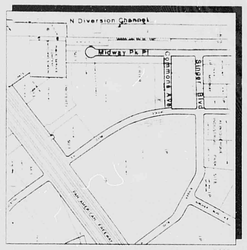
EXTRUDED CONCRETE CURB

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 15'± 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 X IS SEE NECTION 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 11' LONG X 1' WIDE X 2' 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

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 CONSTRUCTIONS. 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 51GA OFF FOR CERTIFICATE OF OCCUPANCY (C.O.).

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

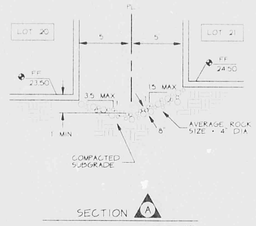
DESIGN APPROVAL: Bruce J. Montoya 7/17/96

INSPECTION APPROVAL: _____ DATE

ACCEPTANCE: _____ DATE

LEGEND

	SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED)	LA	LANDSCAPED AREA
	PROPOSED ASPHALT	TGW	TOP OF GRADE WALL
		TRW	TOP OF RETAINING WALL
	BUILDING (EXISTING, PROPOSED)	TA	TOP OF ASPHALT
	PROPERTY LINE	TC	TOP OF CURB
x 5123.4	EXISTING SPOT ELEVATION	FL	FLOW LINE
	EXISTING CONTOUR	FF	FINISHED FLOOR
5124.2	PROPOSED SPOT ELEVATION	R/W	RIGHT OF WAY
	PROPOSED CONTOUR	PL	PROPERTY LINE
	SURFACE FLOW DIRECTION (EXISTING, PROPOSED)	PP	POWER POLE
		▲	BUILDING ACCESS POINT



SECTION A

GOBBLE-LINED SWALE
(LOOKING NORTH)

GENERAL NOTES

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

SURVEYOR: FORSTBAUER SURVEYING, ALBUQUERQUE, NEW MEXICO

B.M.: SC 27 | 34 | 5K — A STANDARD BLM BRASS CAP SET IN CONCRETE PROJECTING 1.0' ABOVE THE GROUND. CAP IS LOCATED APPROXIMATELY 750' 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 LOT 5 IN 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: 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)

Weighted E = (Ea·Aa + Eb·Ab + Ec·Ac + Ed·Ad) / (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 = (Qa·Aa + Qb·Ab + Qc·Ac + Qd·Ad) / 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 =	3.27 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	=	0.020(V)	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 cubic feet
L (ft)	=	3.0	Required	= 2.7 OK
H (ft)	=	0.5		

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.

R# 35 DATE 5/14/02 OF 27

CITY OF ALBUQUERQUE

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

5/14/02
DIRECTOR

Notary Public
OFFICIAL SEAL
ROBERTA D. ROMERO
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 07/02/05

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1100 ALVARADO DR. NE ALBUQUERQUE, N.M. 87110 · (505) 266-5444

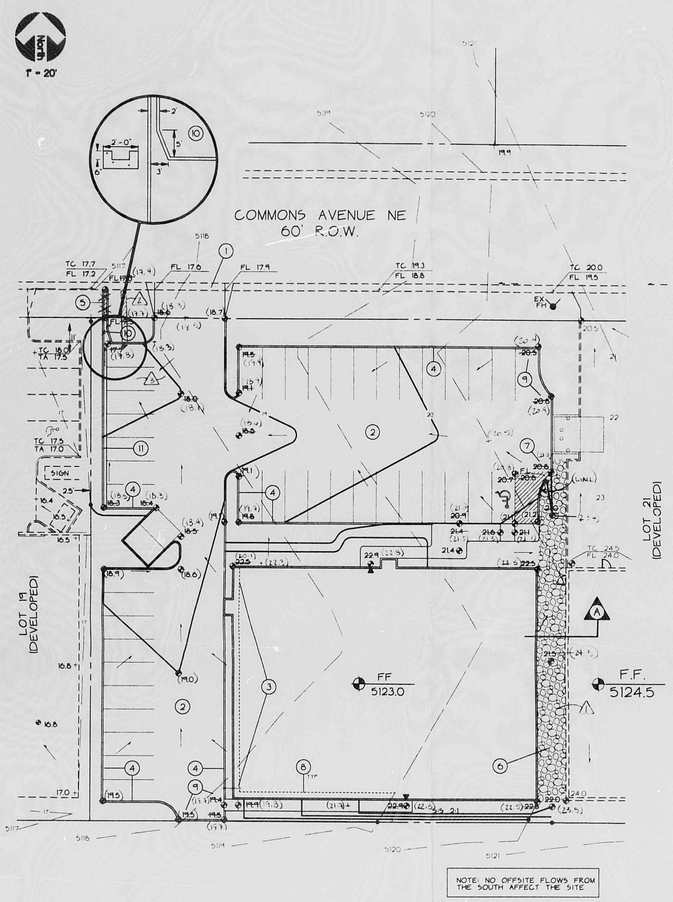
REVISIONS
2/17/43

JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

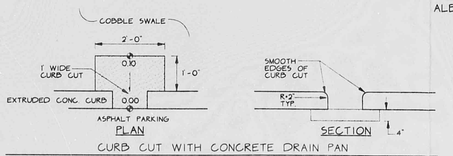
FEBRUARY 14 1996

SHEET 1 OF 1

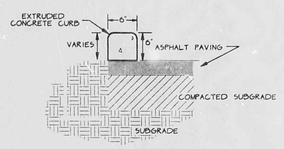
D24 C20 B16 A12 CITY OF ALBUQERQUE C D



ALBUQUERQUE 6 DRIVE - IN
(DEVELOPED)



CURB CUT WITH CONCRETE DRAIN PAN



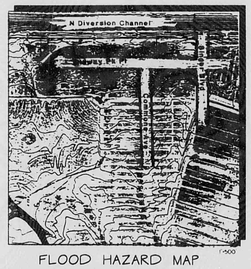
GENERAL NOTES
1. PROVIDE CONTRACTION JOINTS @ 10' O.C. MAX. PROVIDE EXPANSION JOINTS ADJACENT TO BUILDING WALLS AND CURB RETURNS.
2. EDGES SHOULD BE FINISHED WITH 3/8" EDGING TOOL.

EXTRUDED CONCRETE CURB

D:\DRAWINGS\2005-20 06/24/96 14:51:05

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 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

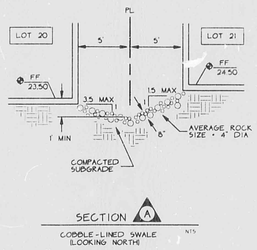
DESIGN APPROVAL: _____ HYDROLOGY SECTION — DATE

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 ELEVATIC	TC	TOP OF CURB
20	EXISTING CONTOUR	FL	FLOW LINE
75.2	PROPOSED SPOT ELEVATION	FF	FINISHED FLOOR
10	PROPOSED CONTOUR	R/W	RIGHT OF WAY
	SURFACE FLOW DIRECTION (EXISTING, PROPOSED)	PL	PROPERTY LINE
+(XX.X)	AS-BUILT INFORMATION	PP	POWER POLE
		▲	BUILDING ACCESS POINT



GENERAL NOTES

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

SURVEYOR: FORSTBAUER SURVEYING, ALBUQUERQUE, NEW MEXICO

B.M.: "SC 27 20 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 BLVD'S. N.E. 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: 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)

Weighted E = (Ea·Aa + Eb·Ab + Ec·Ac + Ed·Ad) / (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
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 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.

Christopher L. Weiss, P.E. (N.M.P.E. #6653) — Date 1-8-96

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

RECEIVED NOV 12 1996 HYDROLOGY DIVISION

REVISIONS 2/17/93 — DESIGNED D.R.; DRAWN D.R.; CHECKED C.L.W.

CHRISTOPHER L. WEISS NEW MEXICO 6653 REGISTERED PROFESSIONAL ENGINEER

C.L. WEISS ENGINEERING, INC.
POST OFFICE BOX 67 BANDA PARK, NM. 87047 - (505) 281-1800
1100 ALVARADO DR. NE ALBUQUERQUE, NM. 8710 - (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 570

CITY OF ALBUQUERQUE
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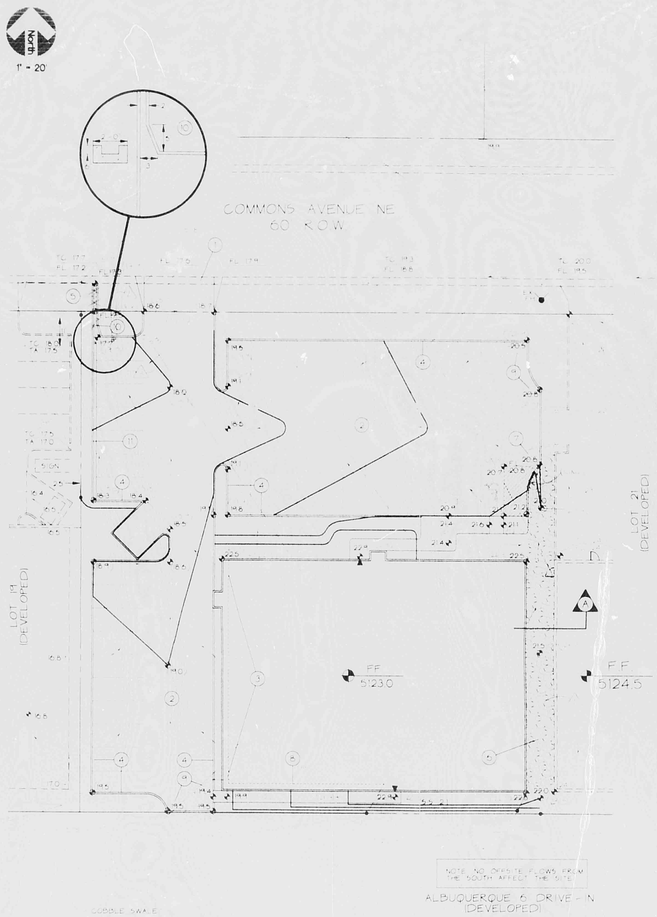
DIRECTOR 4/15/02

NOTARY PUBLIC

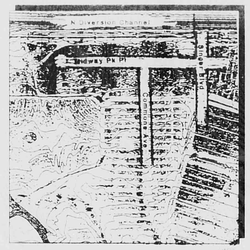
OFFICIAL SEAL Roberta Duran NOTARY PUBLIC STATE OF NEW MEXICO 07/02/02

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

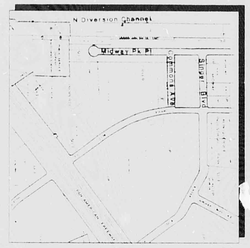


KEYED NOTES

1. CONSTRUCT SHALLOW SWALE IN PARKING AREA AS SHOWN.
2. A KNOCK-OUT WALL IN CURB IN PARKING AREA AS SHOWN TO DISCHARGE DIRECTLY TO THE WEST PARKING AREA.
3. CONSTRUCT 6" HIGH EXTRUDED CONCRETE CURB (TYPICAL UNLESS OTHERWISE NOTED) SEE DETAIL "B" THIS SHEET.
4. CONSTRUCT 7'0" LONG x 1'-6" WIDE CONCRETE SIDEWALK CULVERT WITH STEEL RAILING IN KNOW LOCATED AS SHOWN, SEE C.O.A. DWG. 2236.
5. CONSTRUCT 2'-0" DOUBLE LEAD SHALLOW SWALE CENTERED ON KNOCK-OUT WALL AS SHOWN, SEE DETAIL "A" SHEET THIS SHEET. NOTE: SWALE AND KNOCK-OUT WALL TO BE SAME PARTY WALL SECTION AS LOT LINE WALL.
6. PROVIDE 3" WIDE x 4" DEEP CUT AS SHOWN TO DISCHARGE SWALE FLOWS INTO NORTH PARKING AREA SEE DETAIL THIS SHEET.
7. EXTENDED STEM WALL THIS AREA
8. POST ELEVATIONS LOCATED WITHIN ASPHALT AREA REPRESENT TOP OF ASPHALT ADD 0.5' FOR TOP OF CURB ELEVATION (TYPICAL).
9. CONSTRUCT 4'-0" LONG x 1'-6" WIDE x 6" DEEP CONCRETE SHAPED CHANNEL TO DIRECT FLOWS TO SIDEWALK CULVERT. BLANK ENTRANCE TO 3' WIDE SEE DETAIL UNDER "A" LEFT
10. CONSTRUCT STANDARD CURB AND GUTTER THIS AREA



VICINITY MAP F-17



FLOOD HAZARD MAP

NOTICE TO CONTRACTOR

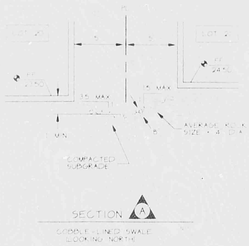
1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL 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 766-1234 FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION 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 IS TO BE REQUIRED PRIOR TO SIGN OFF FOR CERTIFICATE OF OCCUPANCY.

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL

INSPECTION APPROVAL

ACCEPTANCE



GENERAL NOTES

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

SURVEYOR: FORSTBAUER SURVEYING, ALBUQUERQUE, NEW MEXICO.

B.M. : [illegible] A STANDARD BLM BRASS CAP SET IN CONCRETE MONUMENT ABOUT 1' ABOVE THE GROUND. CAP IS DATED APPROXIMATELY 1980 AND IS NORTHWEST OF THE INTERSECTION OF SINGER AND MURRAY PARK IN VON NE. ELEVATION = 5,124.2

T.B.M. : X ON TOP OF CURB AT THE EXTENSION OF LOTS 19 AND 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 +/- %.

PROPOSED IMPROVEMENTS FOR THE SITE INCLUDE AN 8,000 SF MAIN 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 Criteria for City of Albuquerque Section 22.2 DPM, Vol. 2 dated Jan. 1993

ON-SITE

AREA OF SITE: 27,346 SF = 0.63 Ac

HISTORIC FLOWS:		DEVELOPED FLOWS:		EXCESS PRECIPITATION:	
On-Site Historic Land Condition		On-Site Developed Land Condition		Excess Precipitation	
Area a	SF	Area a	SF	Ea =	0.55
Area b	SF	Area b	879 SF	Eb =	0.73
Area c	27,346 SF	Area c	SF	Ec =	0.95
Area d	SF	Area d	26,467 SF	Ed =	0.97
Total Area	27,346 SF	Total Area	27,346 SF		

On-Site Weighted Excess Precipitation 100 Year 6 Hour Storm

Weighted Ep = $(E_a A_a + E_b A_b + E_c A_c + E_d A_d)/A_t$

Historic Ep	0.95 in	Developed Ep	1.93 in		
On-Site Volume of Runoff, V360	2,164 CF				
Historic V360	2,164 CF	Developed V360	4,403 CF		
On-Site Peak Discharge Rate, Qp360	$Q_p = (Q_a A_a + Q_b A_b + Q_c A_c + Q_d A_d)/A_t$ (cfs)				
For Precipitation Zone	1				
Qa =	1.96	Qb =	3.18		
Qc =	4.28	Qd =	4.41		
Historic Qp =	2.46 CFS	Developed Qp =	4.37 CFS		

Flows to be discharged to Commons Avenue from the Developed Swale/Curb Cut (cfs) = 4.37 CFS

CALCULATIONS FOR SIDEWALK CULVERT

Sidewalk Culvert Design:

Throat Width, W =	1	Discharge =	4.37 cfs
Manning's n =	0.013	Depth =	4.4 in
Channel Slope =	0.020 ft/ft	Design Depth =	4.4 in

Curb Opening Capacity (Straight Wall) Using Weir Formula (Q=CLH^1.5)

C =	3.0	Ponding Depth =	4.4 in
L =	3.0 ft	Ponding Depth =	0.37 ft
H =	0.37 ft	Capacity =	1.12 cfs

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

1. Graveled area that flows sheet flow released to parking area. Account flows and insignificant rainfall will affect this area. No additional work required.
2. Sidewalk culvert relocated as shown. Does not affect Drainage Grading
3. Infill with this area

I, Christopher L. Weiss, P.E. hereby certify that this information shown is in substantial compliance with the approved engineer's grading plan.

Christopher L. Weiss, P.E. N.M.P.E. 9302 Date

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

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

REVISIONS:
2/17/93

JEFFERSON COMMONS LOT 20
DRAINAGE / GRADING PLAN

FEBRUARY 14 1992

SHEET 1 OF 1

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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R# 35 DATE 3-19-92 OF 27

CITY OF ALBUQUERQUE

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[signature] 3/5/92
DIRECTOR

[signature]
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My commission expires: 07/07/92

D24 C20 B16 A12 | CITY OF ALBUQERQUE C D