

GENERAL LEGEND

EXISTING CONTOUR	
PROPOSED CONTOUR	24
EXISTING SPOT ELEVATION	48.55
PROPOSED SPOT ELEVATION	56.4
FLOWLINE	
FLOW DIRECTION ARROW	
PROPOSED CONCRETE	
TOP OF CURB ELEVATION	TC
TOP OF WALL ELEVATION	TW
FLOWLINE ELEVATION	FL
TOP OF ASPHALT	TA
POWER POLE	PP
ROOF DRAIN/DOWN SPOUT	D.S.
RECORD DRAWING ELEV	x 71.4

BENCH MARK

A.C.S. BENCHMARK REFERENCE:
STATION "9-F18", A BRASS CAP
IN MEDIAN ON SAN MATEO BLVD.
NORTH OF MONTGOMERY ROAD.
ELEVATION = 5209.56

LEGAL DESCRIPTION

LOT 1, BLOCK G OF THE PLAT OF
CASHWAY BUILDING MATERIALS, INC.,
ALLWOODS SUBDIVISION.

SINGLE SLOPE ROOF (FIELD CHANGE) DOES NOT
AFFECT OVERALL DRAINAGE PLAN. LIMITATION
ON DISCHARGE WAS TO MCLEOD

CALCULATIONS

THE FOLLOWING CALCULATIONS WERE DEVELOPED
USING THE CITY OF ALBUQUERQUE DPM SECTION 22.2

SITE CHARACTERISTICS:

SITE LOCATION: ZONE 2
PRECIPITATION: P = 2.60 inches

LAND TREATMENT:

UNCOMPACTED SOIL - TREATMENT A
LANDSCAPE - TREATMENT B
COMPACTED SOIL - TREATMENT C
BUILDINGS & PAVING - TREATMENT D

EXCESS PRECIPITATION:

TREATMENT A E = 0.53 inches
TREATMENT B E = 0.78 inches
TREATMENT C E = 1.13 inches
TREATMENT D E = 2.12 inches

PEAK DISCHARGE:

TREATMENT A = 1.56 cfs/acre
TREATMENT B = 2.28 cfs/acre
TREATMENT C = 3.14 cfs/acre
TREATMENT D = 4.70 cfs/acre

AREA DRAINING TO LUMBER

	EXISTING	PROPOSED
TOTAL AREA	0.785 AC.	0.652 AC.
TREATMENT A	0.00 AC. = 0.0%	0.00 AC. = 0.0%
TREATMENT B	0.00 AC. = 0.0%	0.083 AC. = 13.9%
TREATMENT C	0.595 AC. = 100.0%	0.00 AC. = 0.0%
TREATMENT D	0.00 AC. = 0.0%	0.512 AC. = 86.1%

ONSITE - EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:

EXISTING RUNOFF:
WEIGHTED E = $[(0.53)(0.00) + (0.78)(0.00) + (1.13)(0.595) + (2.12)(0.00)] / 0.595$
= 1.13 inches

V100-6hr = $(1.13)(0.595) / 12 = 0.0575$ acre ft = 2,500 cf

DEVELOPED RUNOFF:

WEIGHTED E = $[(0.53)(0.00) + (0.78)(0.083) + (1.13)(0.00) + (2.12)(0.512)] / 0.595$
= 1.93 inches

V100-6hr = $(1.93)(0.595) / 12 = 0.0957$ acre ft = 4,170 cf

ONSITE - PEAK DISCHARGE:

EXISTING DISCHARGE:
Q100 = $(1.56)(0.00) + (2.28)(0.00) + (3.14)(0.595) + (4.70)(0.00) = 1.86$ cfs

DEVELOPED DISCHARGE:

Q100 = $(1.56)(0.00) + (2.28)(0.083) + (3.14)(0.00) + (4.70)(0.512) = 2.59$ cfs

RESULTS:

TOTAL EXISTING VOLUMETRIC RUNOFF FROM SITE = 6,580 cf
TOTAL PROPOSED VOLUMETRIC RUNOFF FROM SITE = 10,740 cf
TOTAL EXISTING PEAK DISCHARGE FROM SITE = 4.98 cfs
TOTAL PROPOSED PEAK DISCHARGE FROM SITE = 6.73 cfs
REQUIREMENTS OF THE APPROVED SUBDIVISION CONCEPTUAL DRAINAGE PLAN (FILE F17-D70) LIMITS DISCHARGE TO MCLEOD TO 4.60 cfs.
THIS REQUIREMENT HAS BEEN MET. THE REMAINING RUNOFF SHALL BE DIRECTED TO LUMBER AVE. AS SUCH THE CONSTRUCTION OF
THE PROPOSED DRAINAGE SWALE SHOWN ON THE CONCEPTUAL PLAN SHALL BE CONSTRUCTED WITH THIS PROJECT. THIS IMPROVEMENT
IS LIKELY TEMPORARY PENDING THE DEVELOPMENT OF THE REMAINING PARCELS IN THE SUBDIVISION. (SEE SHEET 2 OF THIS PLAN)

THIS SITE IS IN SUBSTANTIAL COMPLIANCE WITH THE
APPROVED GRADING AND DRAINAGE PLAN WITH
ENGINEERS SEAL DATED 12/12/97 (WITH THE REVISIONS
AS REFLECTED IN THE RECORD DRAWING ELEVATIONS
SHOWN HEREON). THE SITE DRAINAGE WILL FUNCTION
AS ORIGINALLY PROPOSED.

PROVIDE 4" PVC
DRAIN THROUGH
DUMPSTER ENCLOSURE

SEE SHT. 2 FOR CONTINUATION
OF SWALE GRADING

PROPOSED IMPROVEMENTS SITE PLAN

SITE TBM
SOUTH EDGE OF MANHOLE
RIM IN HARDWARE DRIVE.
ELEVATION = 4982.43

DRAINAGE PLAN

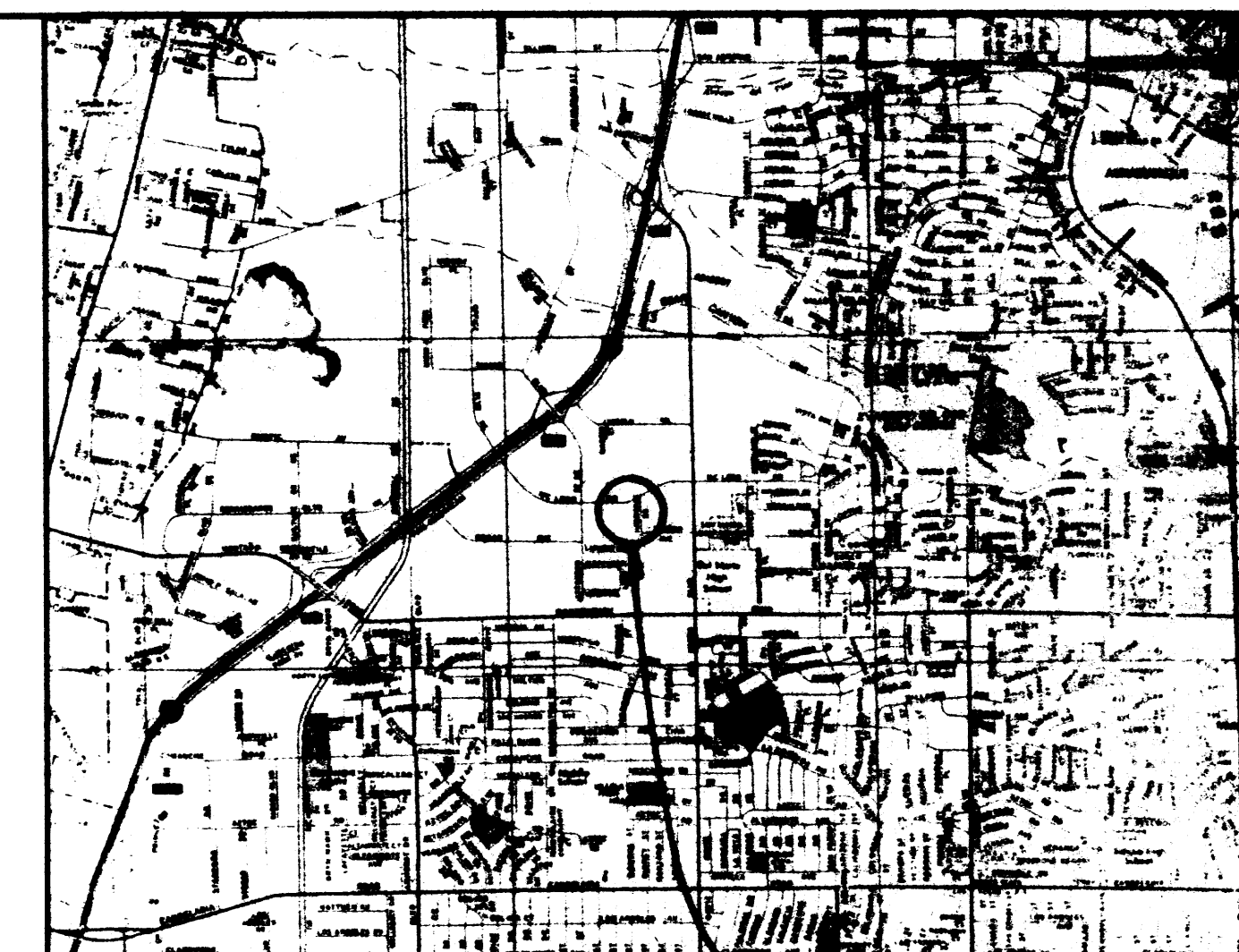
CURRENTLY THE SUBJECT SITE IS UNDEVELOPED. APPROXIMATELY
90 PERCENT OF THE SITE DRAINS TO MCLEOD ROAD AND THE
REMAINING 10 PERCENT DRAINS TO LUMBER AVE. (IN THE UNDEVELOPED
CONDITION).

A CONCEPTUAL GRADING AND DRAINAGE PLAN WAS PREPARED AND
APPROVED FOR THIS SUBDIVISION - COA FILE F17-D70. DUE TO LIMITED
DOWNSTREAM CAPACITY ON MCLEOD ROAD, DISCHARGE WAS LIMITED TO
THE DESIGN STORM RUNOFF IN AN UNDEVELOPED CONDITION. THIS PEAK
DISCHARGE LIMITATION WAS 4.6 cfs. THIS PLAN ACTUAL REDUCES THE
PEAK DISCHARGE IN A DESIGN STORM TO MCLEOD.

THE DESIGN STORM RUNOFF THAT WILL DISCHARGE FROM THIS SITE IS
SLIGHTLY HIGHER THAN THAT IDENTIFIED ON THE CONCEPTUAL PLAN.
THERE IS AMPLE CAPACITY IN THE DRAINAGE SWALE, LUMBER AVE. AND
THE DOWNSTREAM STORM DRAIN FACILITIES FOR THIS RUNOFF.

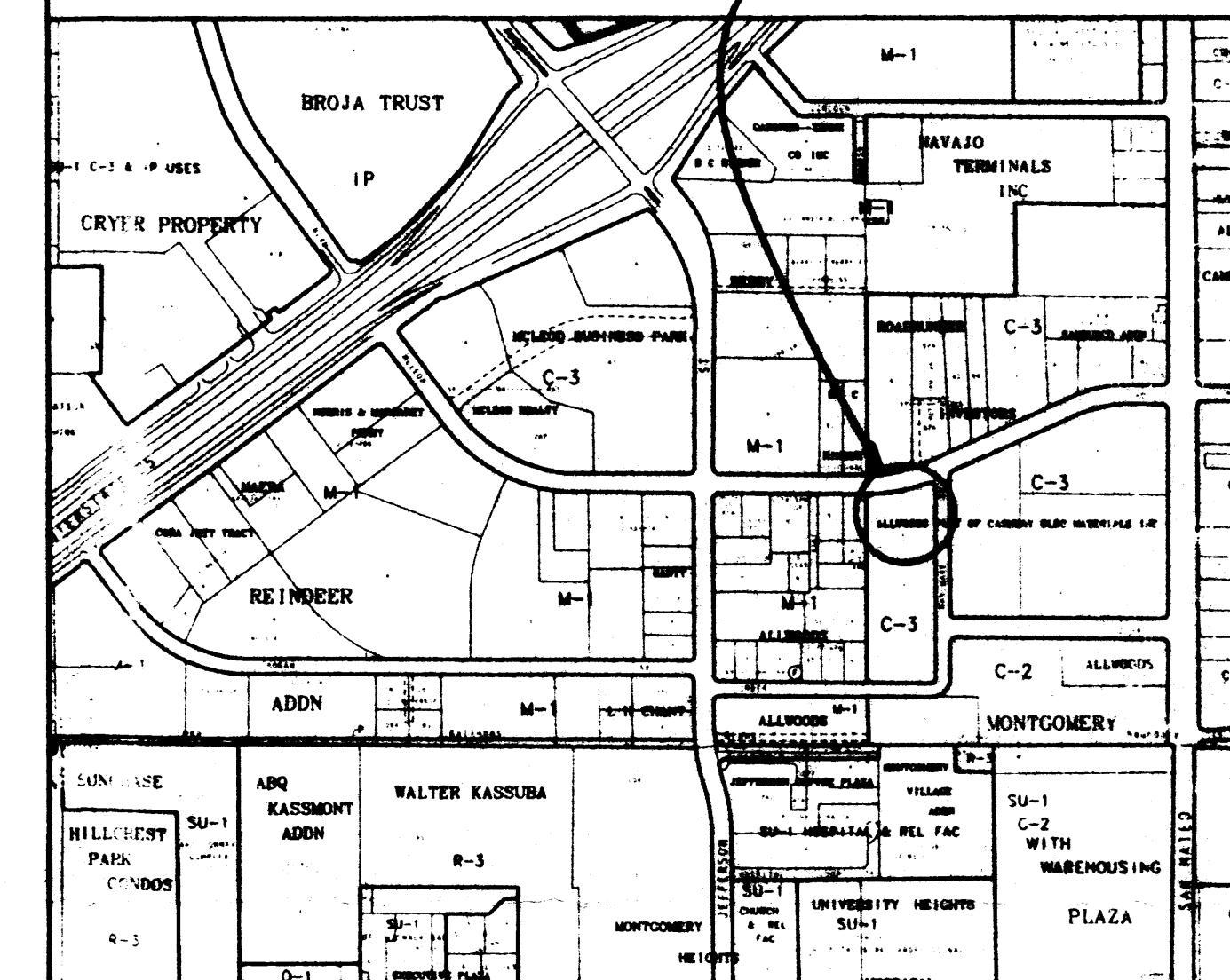
THE CONCEPTUAL PLAN IDENTIFIES THE CONSTRUCTION OF A DRAINAGE
SWALE WITHIN A PRIVATE DRAINAGE EASEMENT ALONG THE WESTERN
BOUNDARY OF BLOCK G. THE DEVELOPMENT OF THIS PARCEL WILL
REQUIRE THAT THIS SWALE BE CONSTRUCTED NOW. SEE SHEET 2
OF THIS PLAN FOR DETAILS OF THIS CONSTRUCTION. ALL FOUR PARCELS
ARE IN COMMON OWNERSHIP, SEGO LIMITED PARTNERSHIP.

THE EXISTING SURVEY INFORMATION SHOWN HEREON WAS PREPARED FROM
A FIELD SURVEY DONE BY RIO GRANDE SURVEYING CO., INC., IN AUGUST
OF 1997. A SUBSEQUENT FIELD REVIEW BY THIS OFFICE REVEALED THAT
THE INFORMATION SHOWN HEREON IS CONSISTENT WITH THE ACTUAL
CONDITIONS THAT EXIST IN THE FIELD.



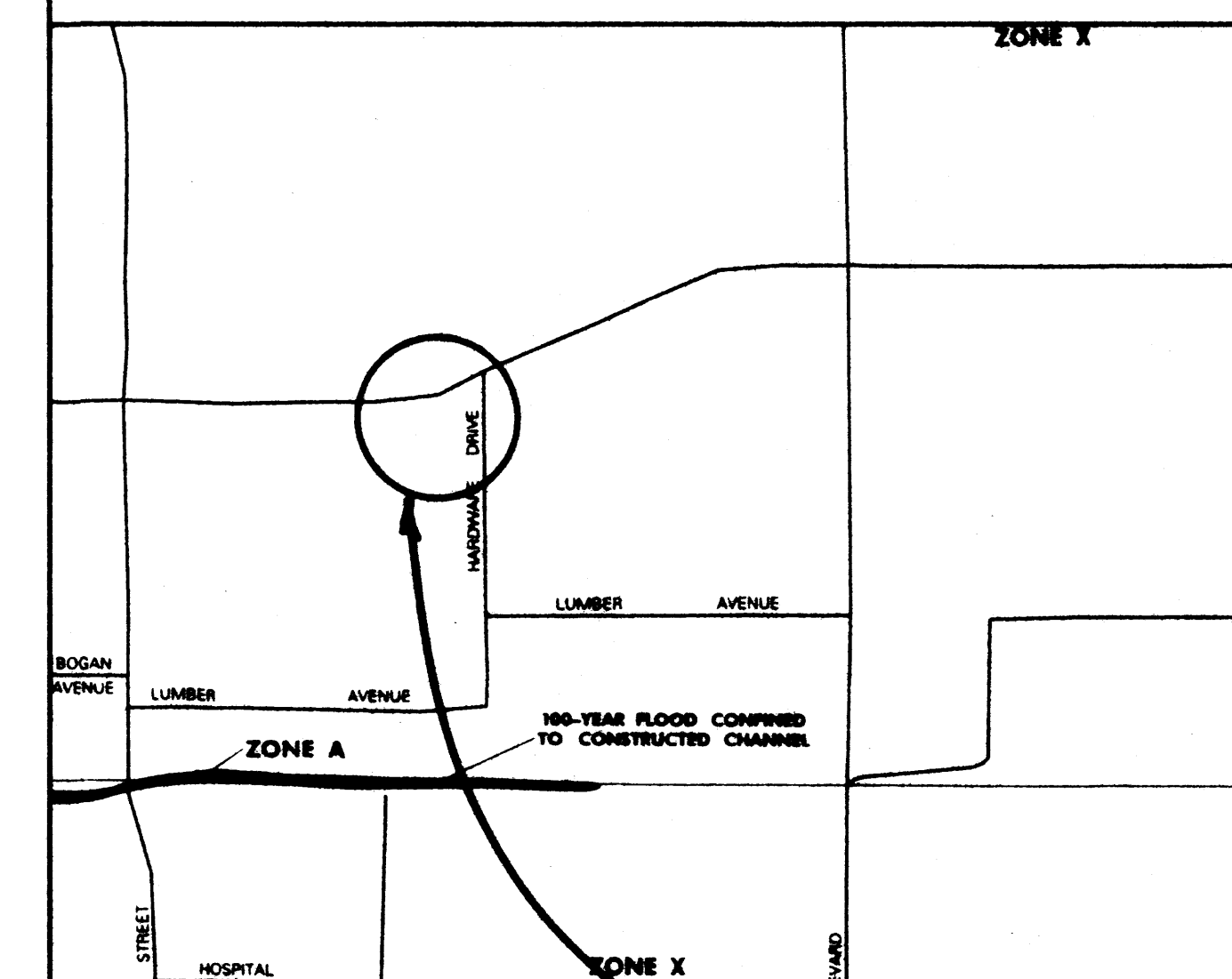
LOCATION MAP

PROJECT LOCATION



ZONE MAP

F-17

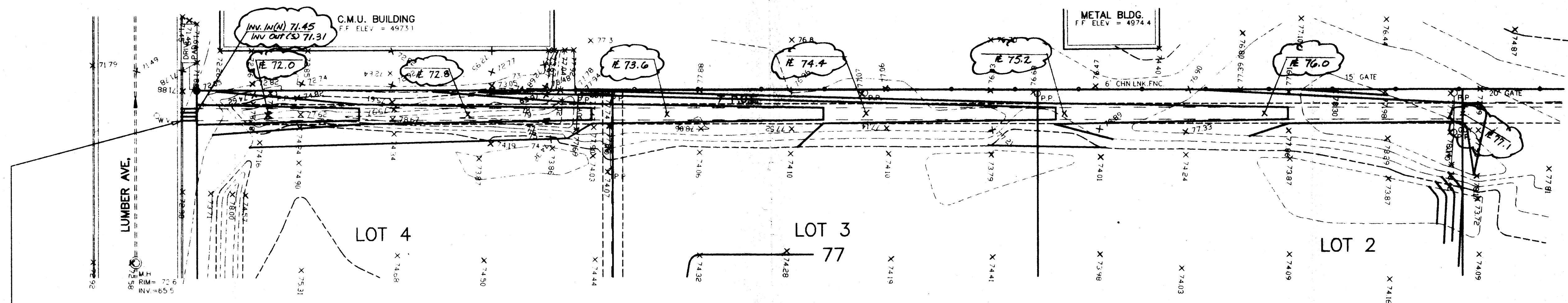


FLOOD BOUNDARY MAP

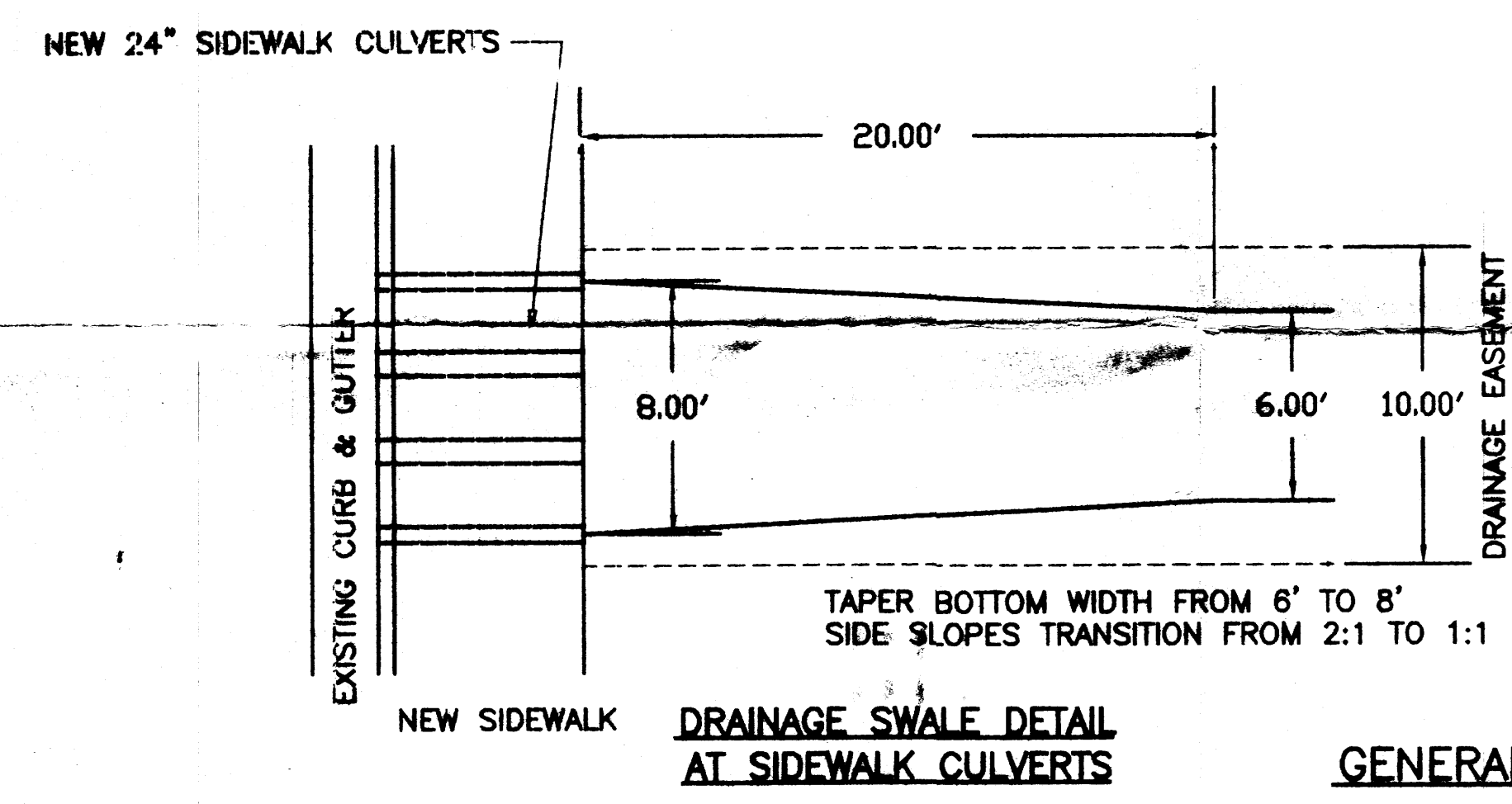
PROJECT LOCATION

<div style="text-align: right;">RECEIVED</div> <div style="text-align: center;">JUN 30 1998</div>			
LOT 1 BLK G CASHWAY SUBDIVISION GRADING AND DRAINAGE PLAN			
KEMPER-VAUGHAN CONSULTING ENGINEERS			
3700 COORS RD. N.W. • ALBUQUERQUE, NEW MEXICO 87120 • (505) 831-4520			
Designed KRK	Drawn SE	Checked KRK	Sheet 1 of 2
File LOT 1 BLK G		Date NOVEMBER 1997	

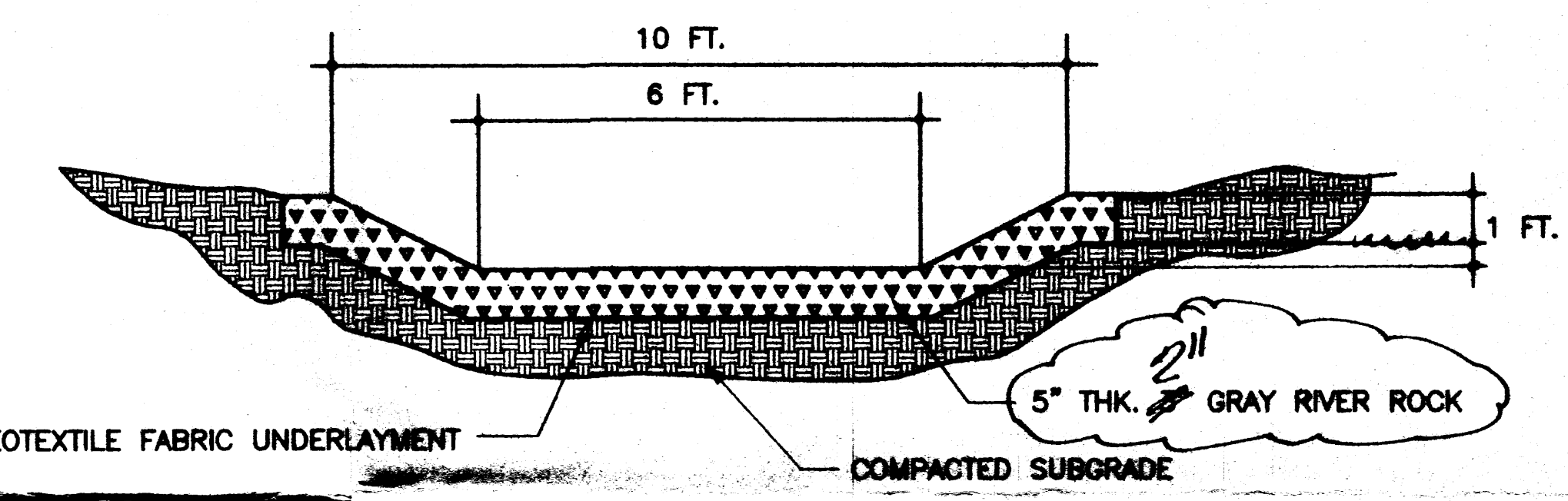
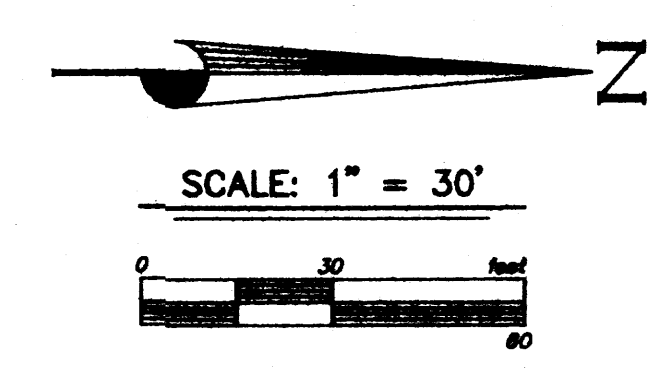
THIS SITE IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN WITH ENGINEERS SEAL DATED 12/12/97 (WITH THE REVISIONS AS REFLECTED IN THE RECORD DRAWING ELEVATIONS SHOWN HEREON). THE SITE DRAINAGE WILL FUNCTION AS ORIGINALLY PROPOSED.



INSTALL 3-24" SIDEWALK CULVERTS
INV IN - 71.35
INV OUT - MATCH EXISTING FLOWLINE
SEE C.O.A. STD. DETAIL #2236



	NAME	DATE
HYDROLOGY		
INSPECTOR		
A.C.E./FIELD		



GENERAL LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- FLOWLINE
- FLOW DIRECTION ARROW

DRAINAGE SWALE CAPACITY

SWALE BOTTOM SLOPE = .85%
MANNING'S COEFFICIENT n=0.045
SIDE SLOPES = 2:1
BOTTOM WIDTH = 6.0 FT.

DEPTH OF FLOW (FT.)	VELOCITY (fps)	FLOW RATE (cfs)
0.1	0.64	0.4
0.2	0.99	1.3
0.3	1.27	2.5
0.4	1.51	4.1
0.5	1.72	6.0
0.6	1.91	8.3
0.7	2.09	10.8
0.8	2.25	13.7
0.9	2.40	16.9
1.0	2.54	20.4

GENERAL NOTES

- PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE TO RESOLVE THE CONFLICT WITH A MINIMUM AMOUNT OF DELAY.
- ALL WORK ON THIS PLAN SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OWNER OR FROM EXISTING PLANS, AND THIS INFORMATION MAY BE INCOMPLETE, OR OBSOLETE AT THE TIME OF CONSTRUCTION. THE ENGINEER HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THESE LOCATIONS, LINE SIZES OR MATERIAL TYPE, MAKES NO REPRESENTATION THEREOF, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND INSTALLATION IN OR NEAR THE AREA IN ADVANCE OF AND DURING ANY EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND FACILITIES. IN PLANNING AND CONDUCTING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE CONTRACTOR SHALL INSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHTS-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AND BY WETTING THE SOIL TO KEEP IT FROM BLOWING.

- THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE CITY OF ALB. FOR THE COMPLETION OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AND ALL CURRENT UPDATES.
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR PERMIT.
- TWO WORKING DAYS PRIOR TO AN EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE A 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- 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 WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.



LOT 1 BLK G CASHWAY SUBDIVISION
GRADING AND DRAINAGE PLAN

KEMPER-VAUGHAN
CONSULTING ENGINEERS

3700 COORS RD. N.W. • ALBUQUERQUE, NEW MEXICO 87120 • (505) 831-4520

Designed KRK	Drawn	Checked KRK	Sheet of
File LOT 1 BLK G		Date NOVEMBER 1997	2 2

GENERAL LEGEND

EXISTING CONTOUR	---
PROPOSED CONTOUR	— 24 —
EXISTING SPOT ELEVATION	x 48.55
PROPOSED SPOT ELEVATION	56.4
FLOWLINE	→
FLOW DIRECTION ARROW	→
PROPOSED CONCRETE	▨
TOP OF CURB ELEVATION	TC
TOP OF WALL ELEVATION	TW
FLOWLINE ELEVATION	FL
TOP OF ASPHALT	TA
POWER POLE	PP
ROOF DRAIN/DOWN SPOUT	D.S.

BENCH MARK

A.C.S. BENCHMARK REFERENCE:
STATION "9-F18", A BRASS CAP
IN MEDIAN ON SAN MATEO BLVD.
NORTH OF MONTGOMERY ROAD.
ELEVATION = 5209.56

LEGAL DESCRIPTION

LOT 1, BLOCK G OF THE PLAT OF
CASHWAY BUILDING MATERIALS, INC.,
ALLWOODS SUBDIVISION.

CALCULATIONS

THE FOLLOWING CALCULATIONS WERE DEVELOPED
USING THE CITY OF ALBUQUERQUE DPM SECTION 22.2

SITE CHARACTERISTICS:

SITE LOCATION: ZONE 2
PRECIPITATION: P = 2.60 inches

LAND TREATMENT:
UNCOMPACTED SOIL - TREATMENT A
LANDSCAPE - TREATMENT B
COMPACTED SOIL - TREATMENT C
BUILDINGS & PAVING - TREATMENT D

EXCESS PRECIPITATION:

TREATMENT A E = 0.53 inches
TREATMENT B E = 0.78 inches
TREATMENT C E = 1.13 inches
TREATMENT D E = 2.12 inches

PEAK DISCHARGE:

TREATMENT A = 1.56 cfs/acre
TREATMENT B = 2.28 cfs/acre
TREATMENT C = 3.14 cfs/acre
TREATMENT D = 4.70 cfs/acre

AREA DRAINING TO LUMBER

	EXISTING	PROPOSED
TOTAL AREA	= 0.595 AC.	
TREATMENT A	= 0.00 AC. = 0.0%	0.00 AC. = 0.0%
TREATMENT B	= 0.00 AC. = 0.0%	0.083 AC. = 13.9%
TREATMENT C	= 0.595 AC. = 100.0%	0.00 AC. = 0.0%
TREATMENT D	= 0.00 AC. = 0.0%	0.512 AC. = 86.1%

ONSITE - EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:

EXISTING RUNOFF:
WEIGHTED E = [(0.53)(0.00) + (0.78)(0.00) + (1.13)(0.595) + (2.12)(0.00)] / 0.595
= 1.13 inches

V100-6hr = (1.13)(0.595) / 12 = 0.0575 acre ft = 2,500 cf

DEVELOPED RUNOFF:

WEIGHTED E = [(0.53)(0.00) + (0.78)(0.083) + (1.13)(0.00) + (2.12)(0.512)] / 0.595
= 1.93 inches

V100-6hr = (1.93)(0.595) / 12 = 0.0957 acre ft = 4,170 cf

ONSITE - PEAK DISCHARGE:

EXISTING DISCHARGE:
Q100 = (1.56)(0.00) + (2.28)(0.00) + (3.14)(0.595) + (4.70)(0.00) = 1.86 cfs

DEVELOPED DISCHARGE:

Q100 = (1.56)(0.00) + (2.28)(0.083) + (3.14)(0.00) + (4.70)(0.512) = 2.59 cfs

RESULTS:

TOTAL EXISTING VOLUMETRIC RUNOFF FROM SITE = 6,580 cf
TOTAL PROPOSED VOLUMETRIC RUNOFF FROM SITE = 10,740 cf
TOTAL EXISTING PEAK DISCHARGE FROM SITE = 4.98 cfs
TOTAL PROPOSED PEAK DISCHARGE FROM SITE = 6.73 cfs
REQUIREMENTS OF THE APPROVED SUBDIVISION CONCEPTUAL DRAINAGE PLAN (FILE F17-D70) LIMITS DISCHARGE TO MCLEOD TO 4.60 cfs. THIS REQUIREMENT HAS BEEN MET. THE REMAINING RUNOFF SHALL BE DIRECTED TO LUMBER AVE. AS SUCH THE CONSTRUCTION OF THE PROPOSED DRAINAGE SWALE SHOWN ON THE CONCEPTUAL PLAN SHALL BE CONSTRUCTED WITH THIS PROJECT. THIS IMPROVEMENT IS LIKELY TEMPORARY PENDING THE DEVELOPMENT OF THE REMAINING PARCELS IN THE SUBDIVISION. (SEE SHEET 2 OF THIS PLAN)

PROVIDE 4" PVC
DRAIN THROUGH
DUMPSTER ENCLOSURE

SEE SHT. 2 FOR CONTINUATION
OF SWALE GRADING

PROPOSED IMPROVEMENTS SITE PLAN

AREA DRAINING TO MCLEOD

	EXISTING	PROPOSED
TOTAL AREA	= 0.994 AC.	
TREATMENT A	= 0.00 AC. = 0.0%	0.00 AC. = 0.0%
TREATMENT B	= 0.00 AC. = 0.0%	0.220 AC. = 22.1%
TREATMENT C	= 0.994 AC. = 100.0%	0.00 AC. = 0.0%
TREATMENT D	= 0.00 AC. = 0.0%	0.774 AC. = 77.9%

ONSITE - EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:

EXISTING RUNOFF:
WEIGHTED E = [(0.53)(0.00) + (0.78)(0.00) + (1.13)(0.994) + (2.12)(0.00)] / 0.994
= 1.13 inches

V100-6hr = (1.13)(0.994) / 12 = 0.0936 acre ft = 4,080 cf

DEVELOPED RUNOFF:

WEIGHTED E = [(0.53)(0.00) + (0.78)(0.220) + (1.13)(0.00) + (2.12)(0.774)] / 0.994
= 1.82 inches

V100-6hr = (1.82)(0.994) / 12 = 0.1507 acre ft = 6,570 cf

ONSITE - PEAK DISCHARGE:

EXISTING DISCHARGE:
Q100 = (1.56)(0.00) + (2.28)(0.00) + (3.14)(0.994) + (4.70)(0.00) = 3.12 cfs

DEVELOPED DISCHARGE:

Q100 = (1.56)(0.00) + (2.28)(0.220) + (3.14)(0.00) + (4.70)(0.774) = 4.14 cfs

DRAINAGE PLAN

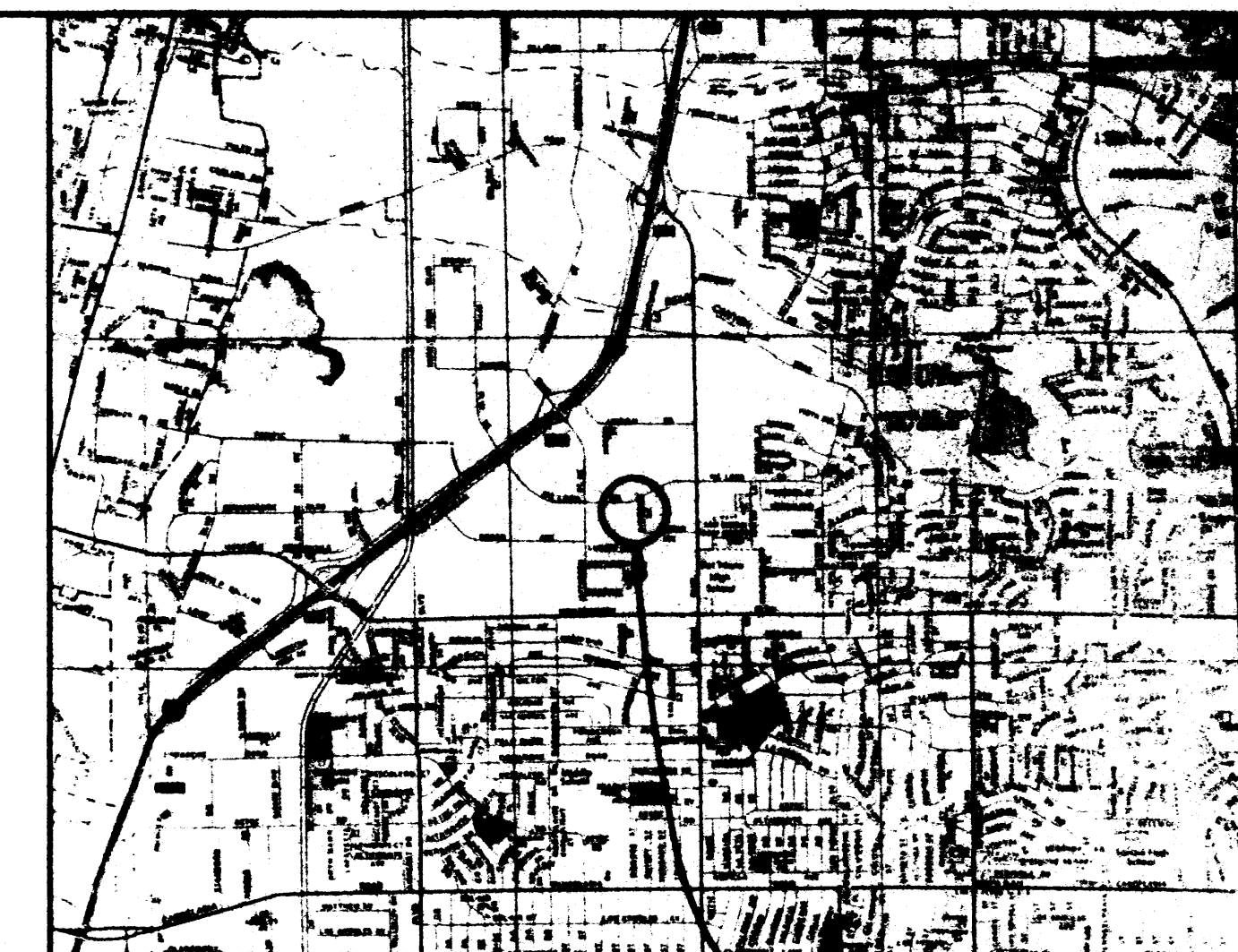
CURRENTLY THE SUBJECT SITE IS UNDEVELOPED. APPROXIMATELY 90 PERCENT OF THE SITE DRAINS TO MCLEOD ROAD AND THE REMAINING 10 PERCENT DRAINS TO LUMBER AVE. (IN THE UNDEVELOPED CONDITION).

A CONCEPTUAL GRADING AND DRAINAGE PLAN WAS PREPARED AND APPROVED FOR THIS SUBDIVISION - COA FILE F17-D70. DUE TO LIMITED DOWNSTREAM CAPACITY ON MCLEOD ROAD, DISCHARGE WAS LIMITED TO THE DESIGN STORM RUNOFF IN AN UNDEVELOPED CONDITION. THIS PEAK DISCHARGE LIMITATION WAS 4.6 cfs. THIS PLAN ACTUAL REDUCES THE PEAK DISCHARGE IN A DESIGN STORM TO MCLEOD.

THE DESIGN STORM RUNOFF THAT WILL DISCHARGE FROM THIS SITE IS SLIGHTLY HIGHER THAN THAT IDENTIFIED ON THE CONCEPTUAL PLAN. THERE IS AMPLIFIED CAPACITY IN THE DRAINAGE SWALE, LUMBER AVE. AND THE DOWNSTREAM STORM DRAIN FACILITIES FOR THIS RUNOFF.

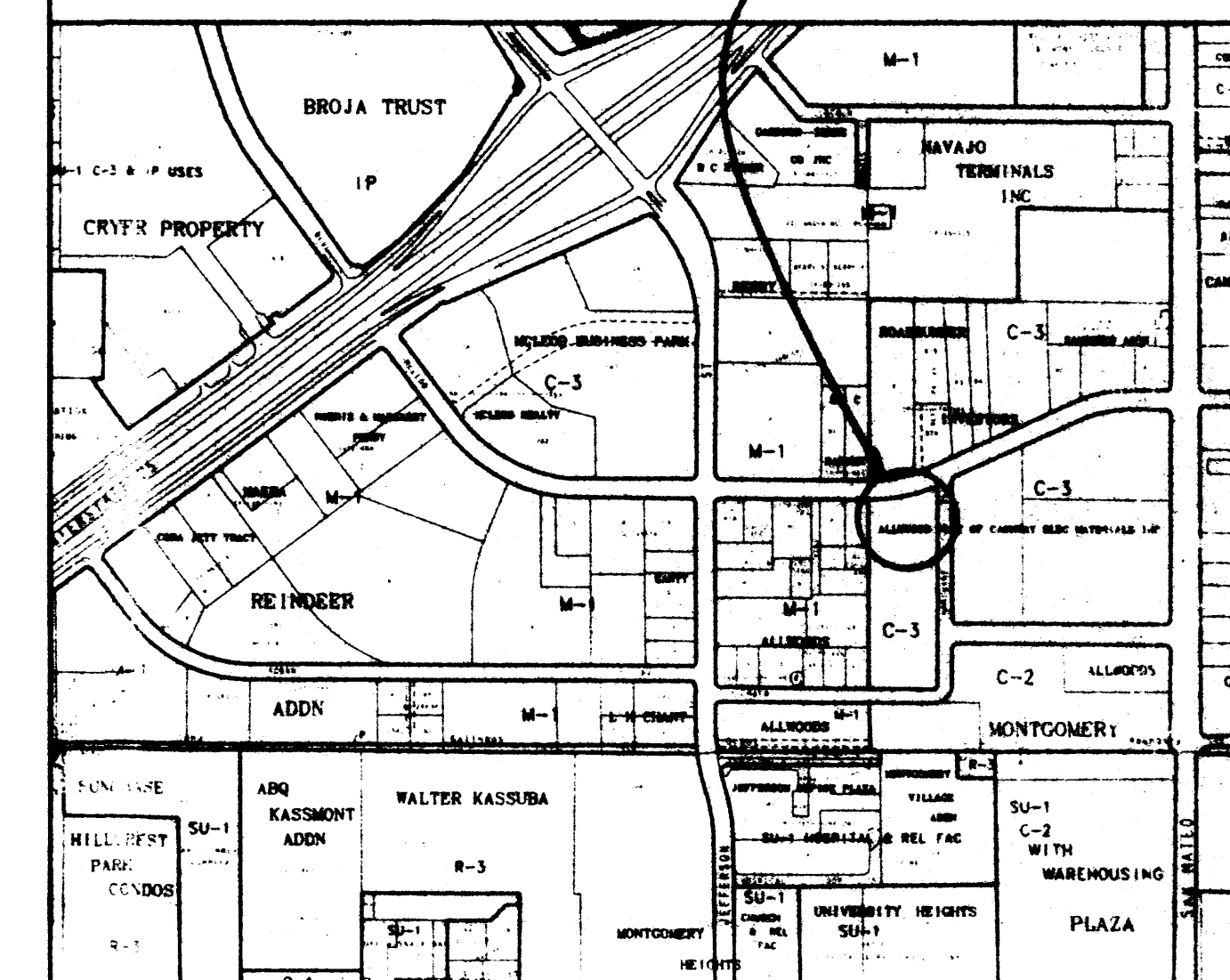
THE CONCEPTUAL PLAN IDENTIFIES THE CONSTRUCTION OF A DRAINAGE SWALE WITHIN A PRIVATE DRAINAGE EASEMENT ALONG THE WESTERN BOUNDARY OF BLOCK G. THE DEVELOPMENT OF THIS PARCEL WILL REQUIRE THAT THIS SWALE BE CONSTRUCTED NOW. SEE SHEET 2 OF THIS PLAN FOR DETAILS OF THIS CONSTRUCTION. ALL FOUR PARCELS ARE IN COMMON OWNERSHIP, SEGO LIMITED PARTNERSHIP.

THE EXISTING SURVEY INFORMATION SHOWN HEREON WAS PREPARED FROM A FIELD SURVEY DONE BY RIO GRANDE SURVEYING CO., INC., IN AUGUST OF 1997. A SUBSEQUENT FIELD REVIEW BY THIS OFFICE REVEALED THAT THE INFORMATION SHOWN HEREON IS CONSISTENT WITH THE ACTUAL CONDITIONS THAT EXIST IN THE FIELD.



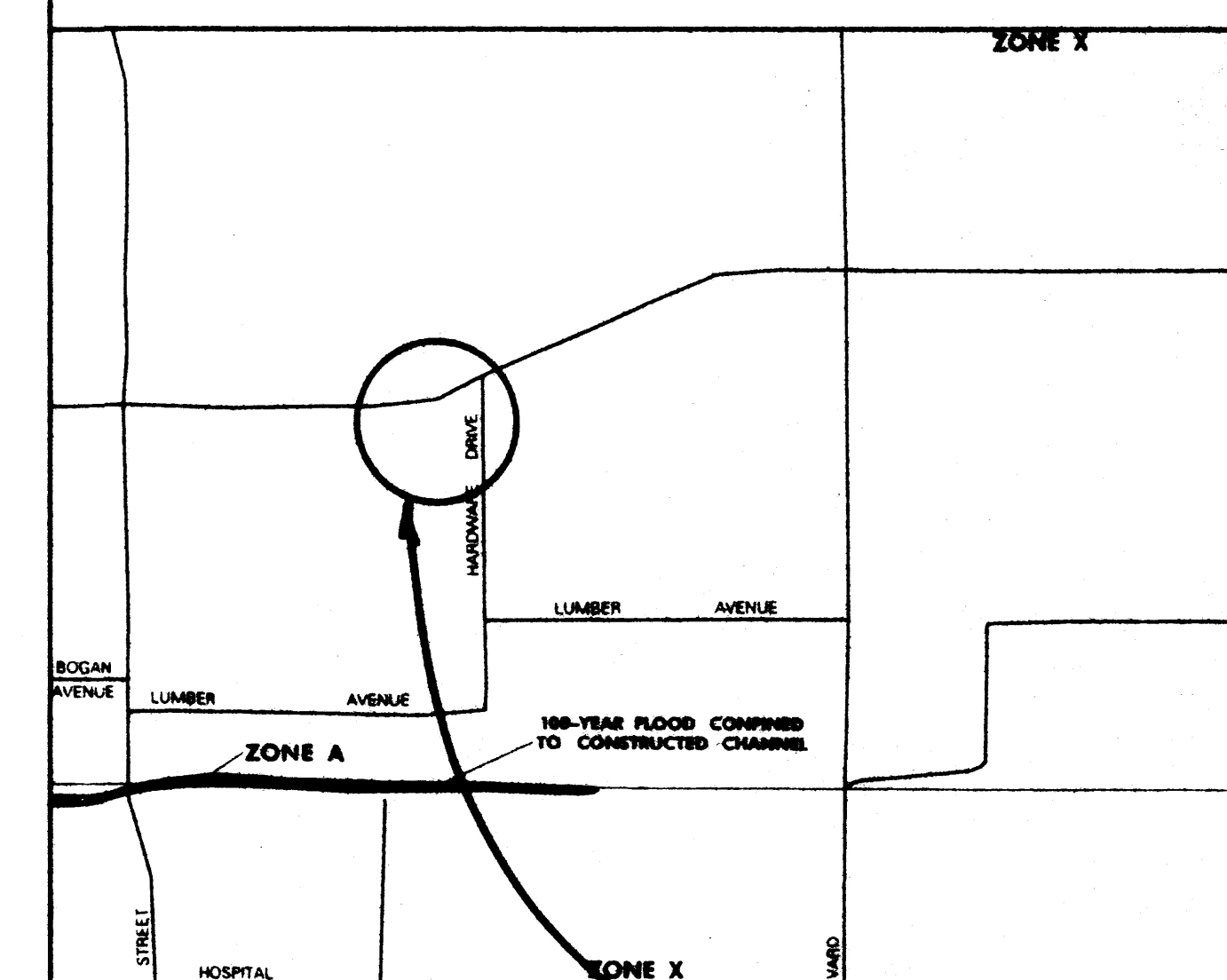
LOCATION MAP

PROJECT LOCATION



ZONE MAP

F-17



RECORD BOUNDARY MAP

PROJECT LOCATION

DEC 12 1997
HYDROLOGY SECTION

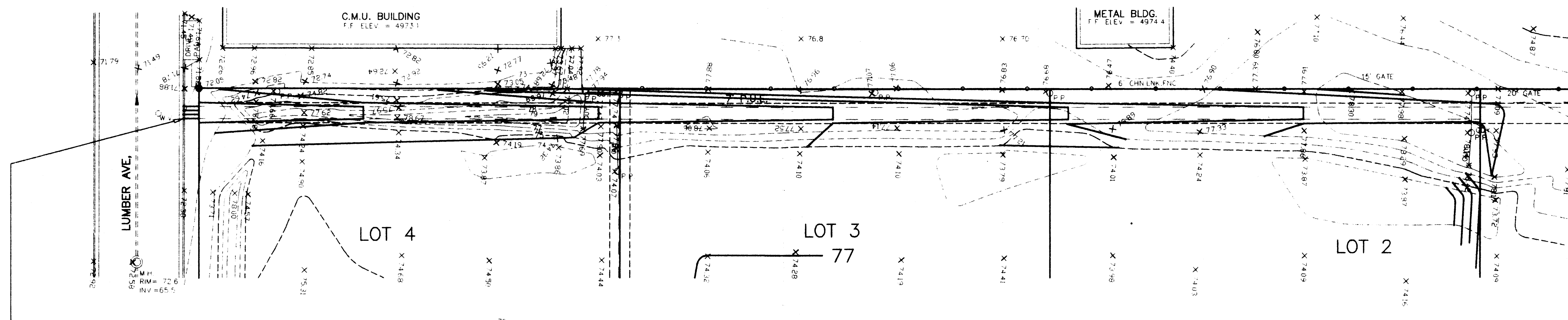
LOT 1 BLK G CASHWAY SUBDIVISION
GRADING AND DRAINAGE PLAN

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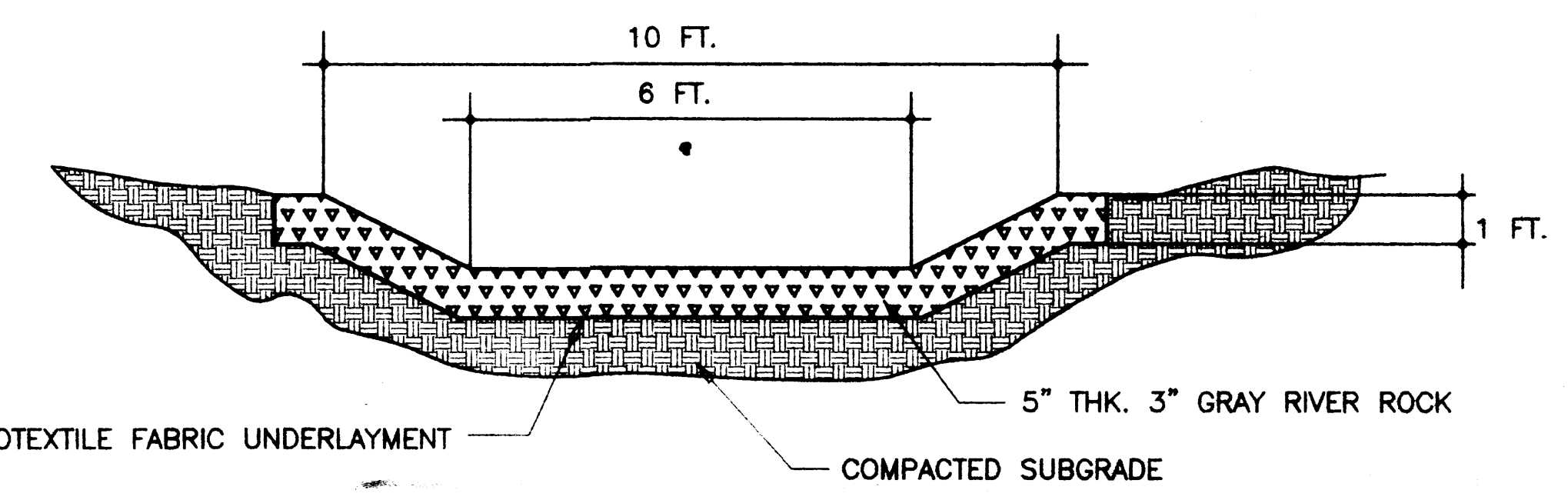
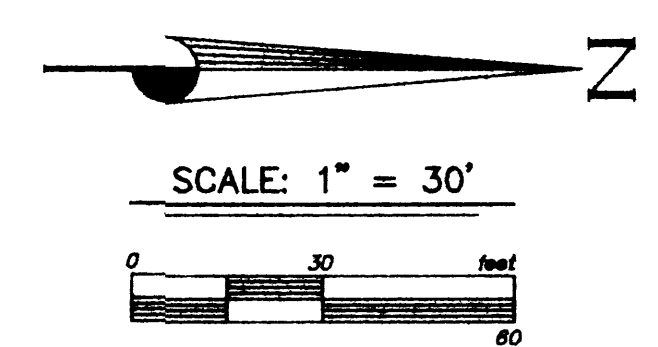
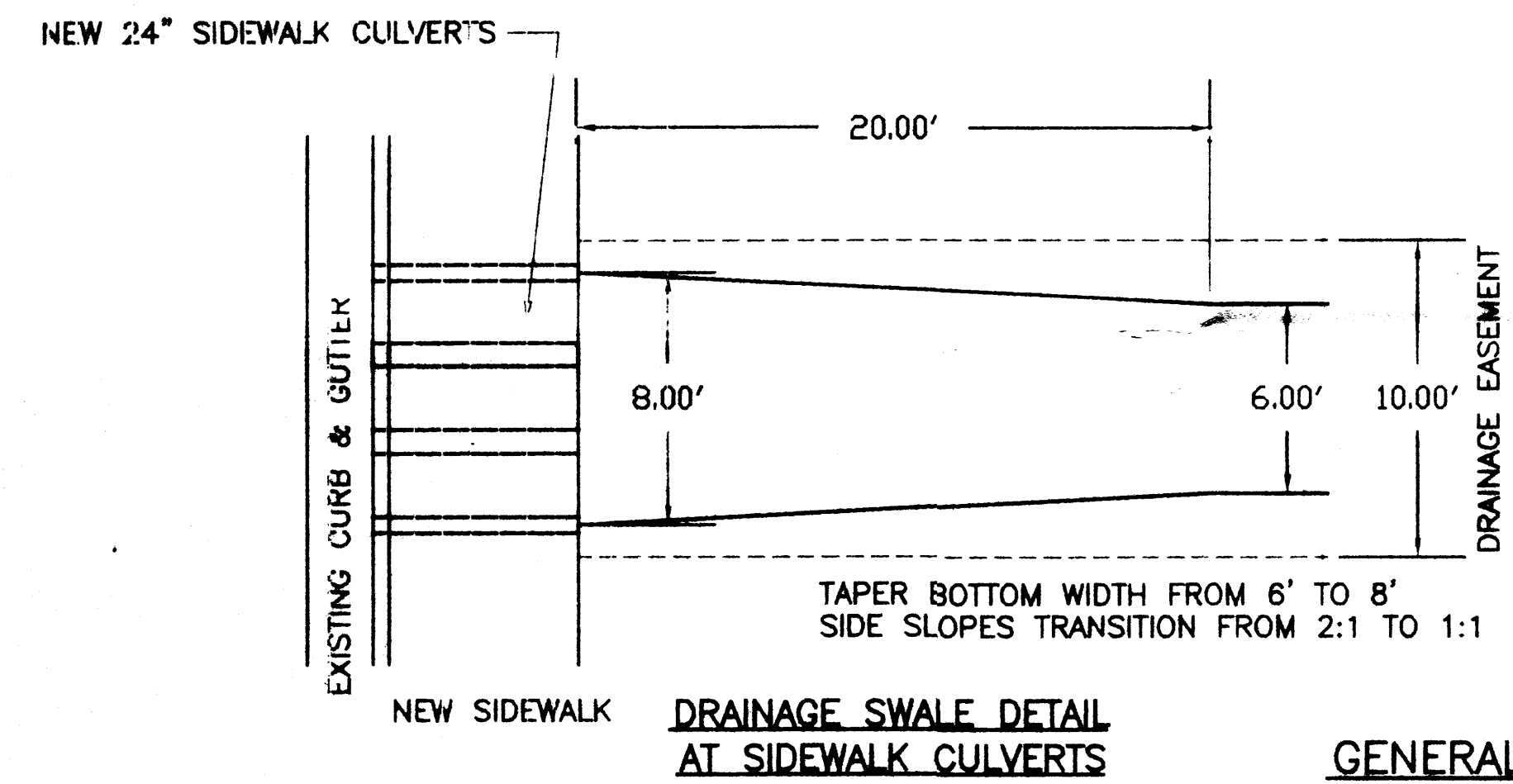
Designed KRK Drawn SE Checked KRK Sheet 1 of 2

File LOT 1 BLK G Date NOVEMBER 1997



INSTALL 3-24" SIDEWALK CULVERTS
 INV IN - 71.35
 INV OUT - MATCH EXISTING FLOWLINE
 SEE C.O.A. STD. DETAIL #2236

	NAME	DATE
HYDROLOGY	Benny Montoya	12/31/97
INSPECTOR		
A.C.E./FIELD		



GENERAL LEGEND

EXISTING CONTOUR	
PROPOSED CONTOUR	77
EXISTING SPOT ELEVATION	48.55
PROPOSED SPOT ELEVATION	56.4
FLOWLINE	
FLOW DIRECTION ARROW	

DRAINAGE SWALE TYP. SECTION

DRAINAGE SWALE CAPACITY

SWALE BOTTOM SLOPE = .85%
 MANNING'S COEFFICIENT n=0.045
 SIDE SLOPES = 2:1
 BOTTOM WIDTH = 6.0FT.

DEPTH OF FLOW (FT.)	VELOCITY (fps)	FLOW RATE (cfs)
0.1	0.64	0.4
0.2	0.99	1.3
0.3	1.27	2.5
0.4	1.51	4.1
0.5	1.72	6.0
0.6	1.91	8.3
0.7	2.09	10.8
0.8	2.25	13.7
0.9	2.40	16.9
1.0	2.54	20.4

GENERAL NOTES

- PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE TO RESOLVE THE CONFLICT WITH A MINIMUM AMOUNT OF DELAY.
- ALL WORK ON THIS PLAN SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OWNER OR FROM EXISTING PLANS, AND THIS INFORMATION MAY BE INCOMPLETE, OR OBSOLETE AT THE TIME OF CONSTRUCTION. THE ENGINEER HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THESE LOCATIONS, LINE SIZES OR MATERIAL TYPE, MAKES NO REPRESENTATION THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND INSTALLATION IN OR NEAR THE AREA IN ADVANCE OF AND DURING ANY EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND FACILITIES. IN PLANNING AND CONDUCTING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE CONTRACTOR SHALL INSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHTS-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AND BY WETTING THE SOIL TO KEEP IT FROM BLOWING.

- THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE CITY OF ALB. FOR THE COMPLETION OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AND ALL CURRENT UPDATES.
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR PERMIT.
- TWO WORKING DAYS PRIOR TO AN EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE A 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- 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 WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

LOT 1 BLK G CASHWAY SUBDIVISION			
GRADING AND DRAINAGE PLAN			
KEMPER-VAUGHAN			
CONSULTING ENGINEERS			
3700 COORS RD. N.W. • ALBUQUERQUE, NEW MEXICO 87120 • (505) 831-4520			
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