

GENERAL NOTES

1. 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.
2. 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.
3. 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.
4. 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.

5. THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY BERNALILLO COUNTY FOR THE COMPLETION OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION, AND ALL CURRENT UPDATES.
7. 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.
8. TWO WORKING DAYS PRIOR TO A EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT 260-1990 FOR LOCATION OF EXISTING UTILITIES.
9. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTION. SHOULD A CONFLICT EXIST, CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
10. BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE.
11. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

CALCULATIONS

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

SITE CHARACTERISTICS:  
SITE LOCATION: ZONE 2 (TABLE 1)  
PRECIPITATION: P = 2.35 inches (TABLE 2)

LAND TREATMENT:  
UNCOMPACTED SOIL - TREATMENT A (TABLE 4)  
LANDSCAPE - TREATMENT B (TABLE 4)  
COMPACTED SOIL - TREATMENT C (TABLE 4)  
BUILDINGS & PAVING - TREATMENT D (TABLE 4)

EXCESS PRECIPITATION:  
TREATMENT A E = 0.48 inches (TABLE 8)  
TREATMENT B E = 0.72 inches (TABLE 8)  
TREATMENT C E = 1.07 inches (TABLE 8)  
TREATMENT D E = 2.08 inches (TABLE 8)

PEAK DISCHARGE:  
TREATMENT A = 1.40 cfs/acre (TABLE 9)  
TREATMENT B = 2.17 cfs/acre (TABLE 9)  
TREATMENT C = 3.02 cfs/acre (TABLE 9)  
TREATMENT D = 4.70 cfs/acre (TABLE 9)

EXISTING			PROPOSED		
TOTAL AREA	=	0.603 AC.			
TREATMENT A	=	0.000 AC. = 0.0%	0.000 AC. =	0.0%	
TREATMENT B	=	0.012 AC. = 2.0%	0.051 AC. =	8.5%	
TREATMENT C	=	0.156 AC. = 25.9%	0.000 AC. =	0.0%	
TREATMENT D	=	0.435 AC. = 72.1%	0.552 AC. =	91.5%	

ONSITE - EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:  
EXISTING RUNOFF:  
 $WEIGHTED E = [(0.72)(0.012) + (1.07)(0.156) + (2.08)(0.435)]/0.603$   
 $= 1.79 \text{ inches}$   
 $V_{100-6hr} = (1.79)(0.603)/12 = 0.090 \text{ acre}ft = 3,920 \text{ cf}$   
DEVELOPED RUNOFF:  
 $WEIGHTED E = [(0.72)(0.051) + (2.08)(0.552)]/0.603$   
 $= 1.96 \text{ inches}$   
 $V_{100-6hr} = (1.96)(0.603)/12 = 0.098 \text{ acre}ft = 4,269 \text{ cf}$

ONSITE - PEAK DISCHARGE:  
EXISTING DISCHARGE:  
 $Q_{100} = (2.17)(0.012) + (3.02)(0.156) + (4.70)(0.435) = 2.54 \text{ cfs}$   
DEVELOPED DISCHARGE:  
 $Q_{100} = (2.17)(0.051) + (4.70)(0.552) = 2.71 \text{ cfs}$

RESULTS:  
DEVELOPED VOLUMETRIC RUNOFF:  
 $4,269 - 3,920 = 349 \text{ cf INCREASE IN RUNOFF VOLUME}$   
DEVELOPED PEAK DISCHARGE:  
 $2.71 - 2.54 = 0.17 \text{ cfs INCREASE IN PEAK DISCHARGE}$

OFFSITE CONSIDERATION, PAVING ADJACENT ALLEY:  
TREATMENT C TO TREATMENT D (AREA = 0.068 ACRES)  
INCREASE IN VOLUMETRIC RUNOFF:  
 $V_{100} = (2.08)(1.07)(0.068)/12 = 0.006 \text{ acre}ft$   
 $= 261 \text{ cf}$   
INCREASE IN PEAK DISCHARGE:  
 $Q_{100} = (4.70)(3.02)(0.068) = 0.11 \text{ cfs}$

BENCH MARK

ACS ALUMINUM DISK STAMPED "ACS BM, 23-J14"  
SET IN THE TOP OF CURB AT THE W.N.W. CURB RETURN  
AT THE INTERSECTION OF LOMAS AND 4th NW.

LEGAL DESCRIPTION

LOTS 1-7 & N. 10' LOT 8, BLOCK 6  
FRANCISCO ARMIJO Y OTERO ADDITION

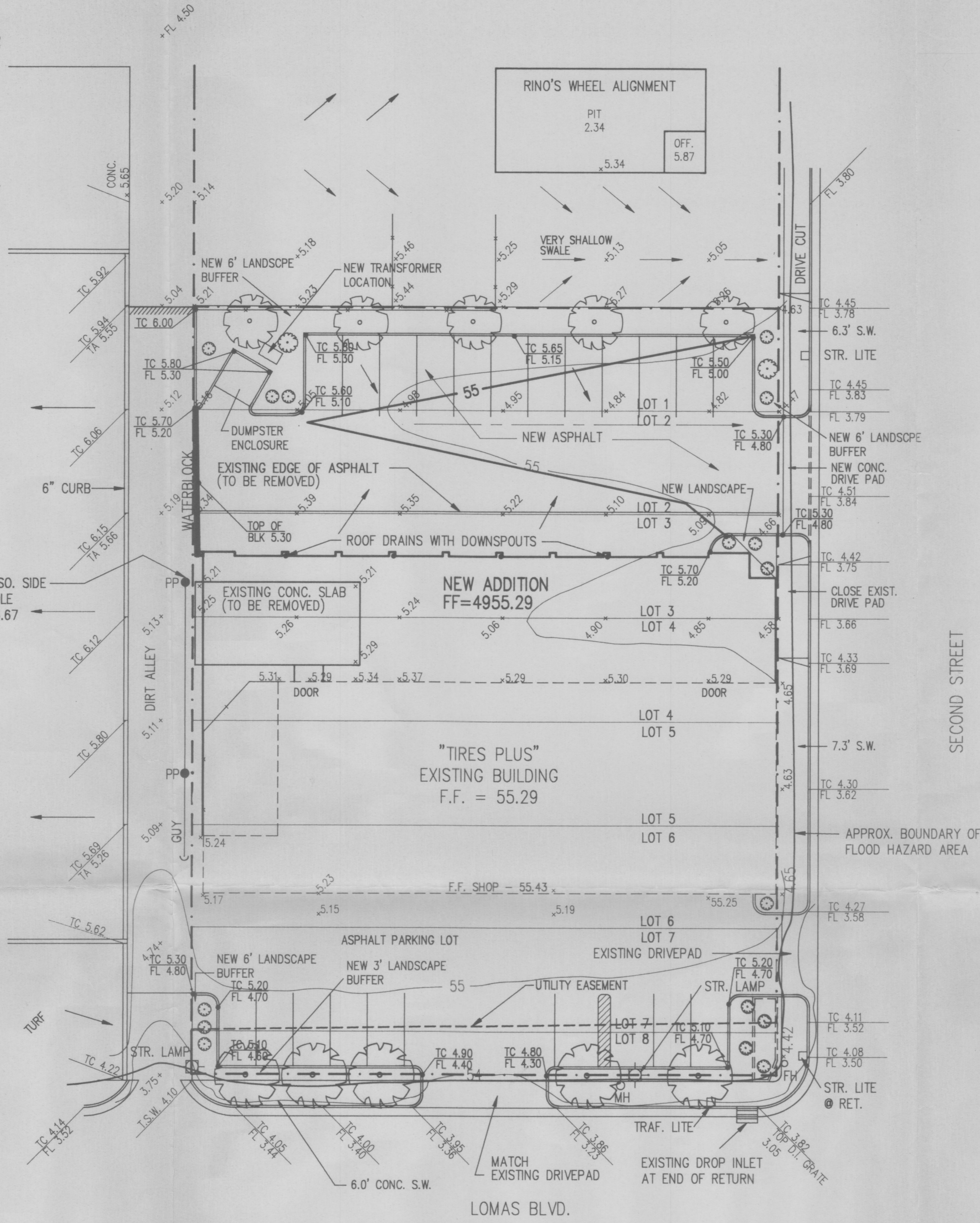
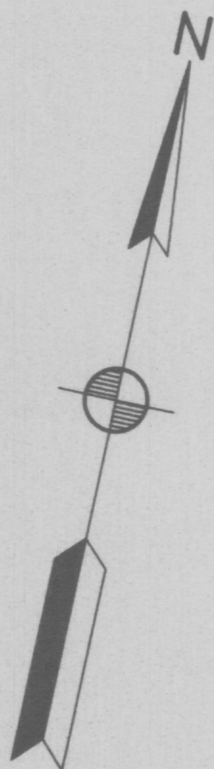
LEGEND

EXISTING CONTOUR	61
PROPOSED CONTOUR	61
EXISTING SPOT ELEVATION	+499.9
EXISTING CURB ELEVATIONS	TC 4.42 FL 3.75
PROPOSED SPOT ELEVATION	(TOP OF CURB) TC (FLOWLINE) FL
FLOWLINE	→
FLOW DIRECTION ARROW	→
PROPOSED CONCRETE	▨

APPROVALS

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

SCALE  
1"=20'



DRAINAGE PLAN

THE SUBJECT PROPERTY IS LOCATED AT 201 LOMAS BLVD. THE PLANNED IMPROVEMENTS TO THE PARCEL INCLUDE THE CONSTRUCTION OF AN ADDITION TO EXISTING BUILDING AND A NEW PARKING AREA. AS SHOWN ON PANEL 28 OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD BOUNDARY AND FLOODWAY MAP, DATED OCTOBER 14, 1983, THIS SITE IS ADJACENT TO BUT, DOES NOT LIE WITHIN THE DESIGNATED 100 YEAR FLOOD HAZARD AREA. FURTHER, THE F.I.R.M. MAP IDENTIFIES THE ADJACENT FLOOD HAZARD AREA AS ZONE AO (DEPTH 1). THIS SITE IS CONSIDERED TO BE AN INFILL SITE (THIS CAN ALSO BE SEEN ON THE FLOODWAY MAP HEREON).

THE INTENTION OF THIS PLAN IS TO MAINTAIN THE CURRENT DRAINAGE PATTERNS. ALL STORM WATERS EXIT THE SITE TO EITHER LOMAS BLVD. OR SECOND STREET. THIS RUNOFF THEN FLOWS TO THE EXISTING DROP INLET AT THE INTERSECTION OF LOMAS BLVD. AND SECOND STREET WHERE IT ENTERS EXISTING STORM SEWER FACILITIES.

THE SURVEY INFORMATION AND TOPOGRAPHY ON THE PLAN WAS DEVELOPED FROM A SURVEY PERFORMED IN MARCH, 1993, BY RIO GRANDE ENGINEERING AND SURVEY, INC. A SUBSEQUENT FIELD REVIEW OF THE SITE, PERFORMED BY THIS OFFICE, REVEALED THAT ALL THE INFORMATION SHOWN ON THIS PLAN IS CONSISTENT WITH THE ACTUAL CONDITIONS THAT EXIST IN THE FIELD AND THAT NO GRADING OR FILLING APPEARS TO HAVE TAKEN PLACE ON THE PROPERTY.

THE CALCULATIONS SHOWN ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS OF THE 100-YR., 6-HOUR RAINFALL EVENT.



LOCATION MAP

PROJECT LOCATION



ZONE MAP

J-14-Z



FLOOD BOUNDARY MAP

PROJECT LOCATION

TIRES PLUS - 201 LOMAS BLVD., NW, ALBUQUERQUE, NEW MEXICO

**TIRES PLUS ADDITION**  
GRADING AND DRAINAGE PLAN

**KEMPER-VAUGHAN**  
CONSULTING ENGINEERS

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

Designed	KRK	Drawn	KRK	Checked	KRK	Sheet	1	of	1
File		Date	APRIL 1993						