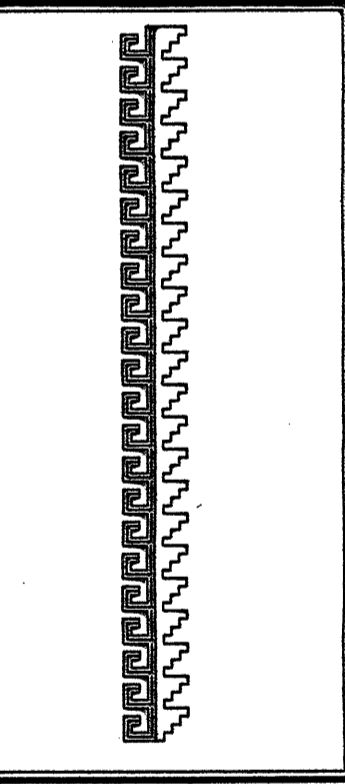


|            |             |
|------------|-------------|
| JOB NO:    | XXXXXX      |
| DATE:      | AUGUST 2015 |
| REVISIONS: |             |
|            | 08/29/2015  |
|            |             |
|            |             |

Sheet Title  
**GRADING AND DRAINAGE PLAN**  
Drawn By: HTH & BJM Checked By: BP



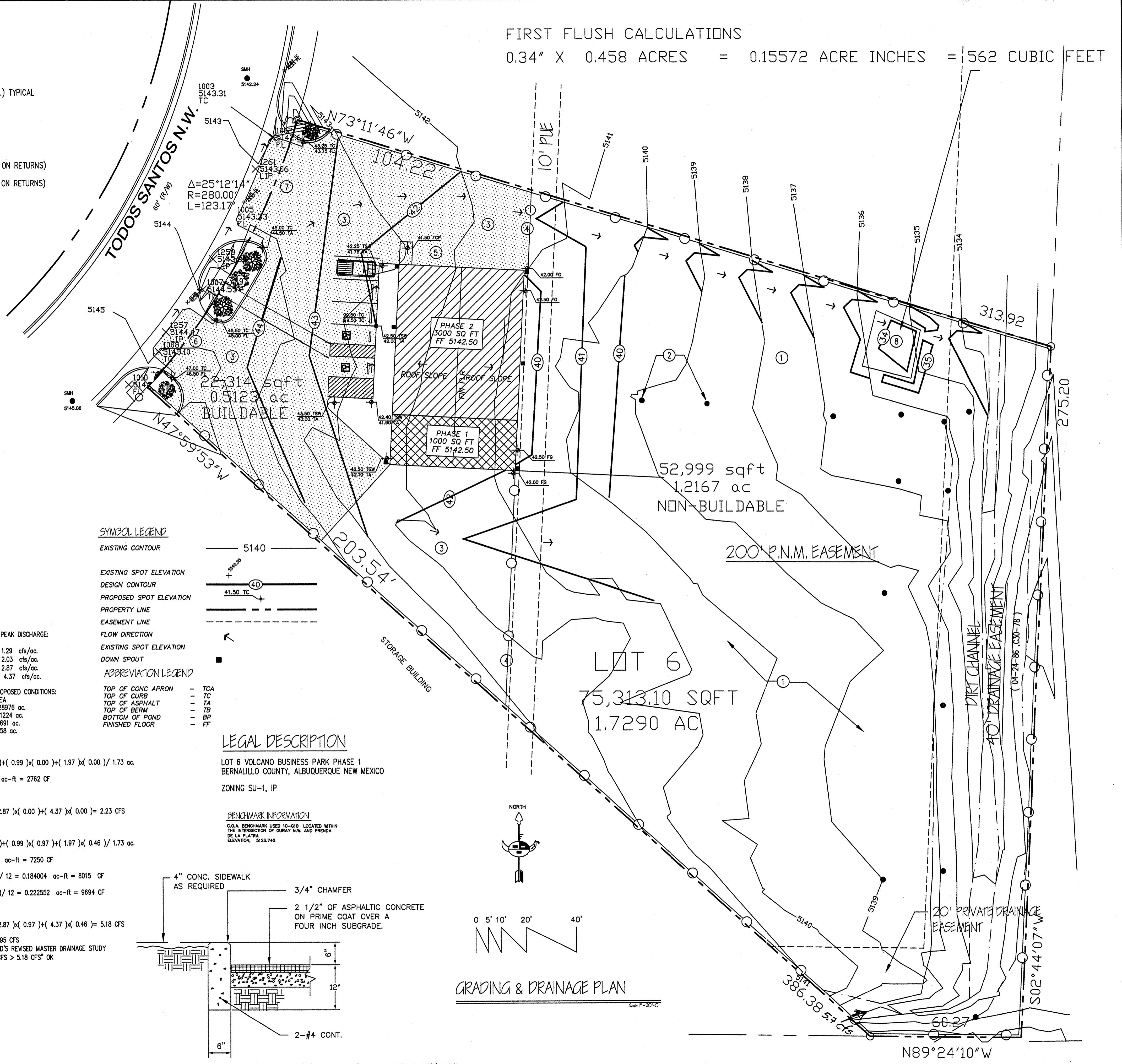
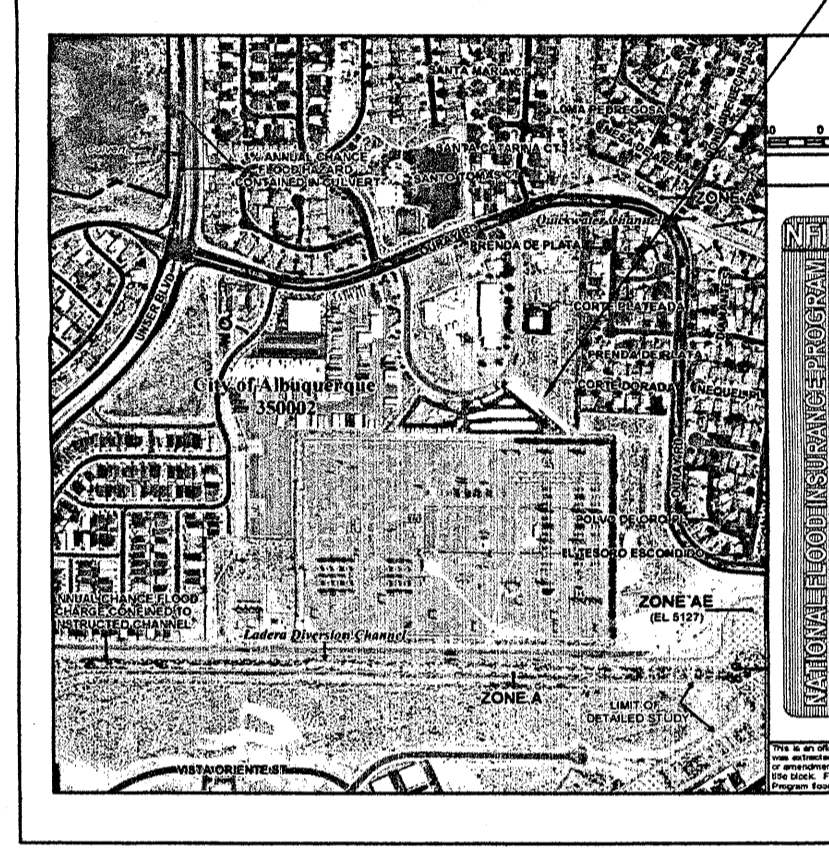
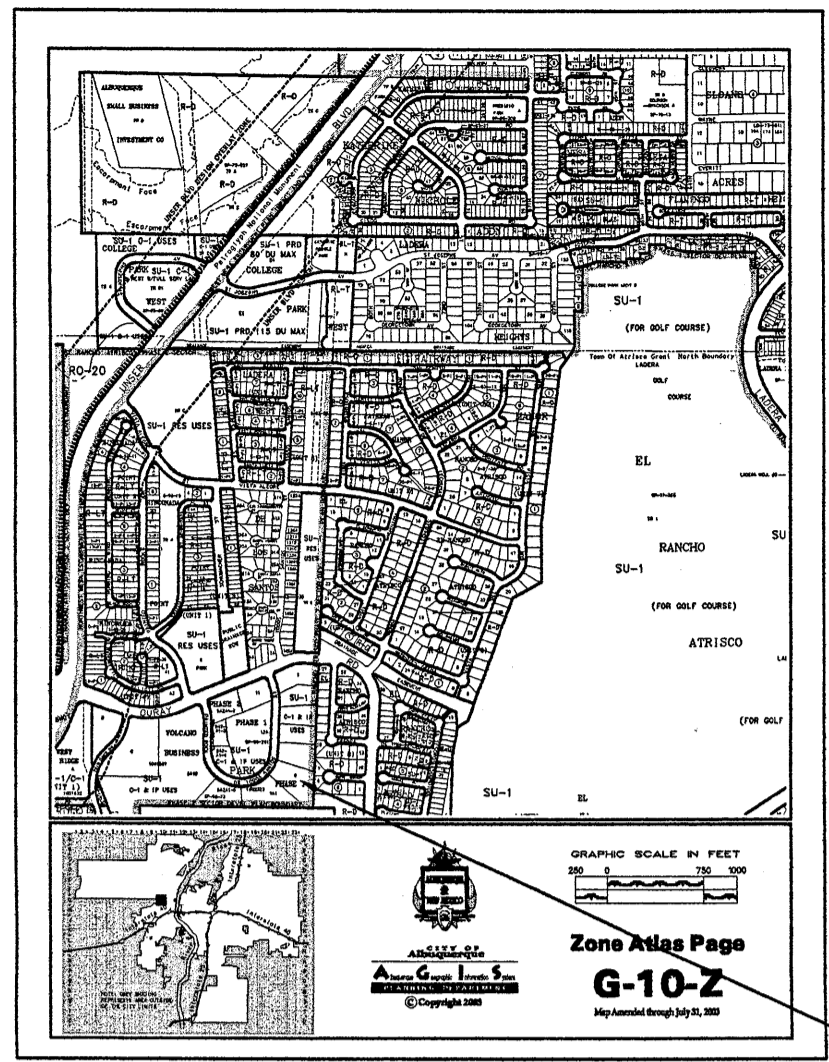
Job Title  
**GUTIERREZ TRUCKING  
MAINTENANCE FACILITY  
3006 TODOS SANTOS STREET N.W.  
ALBUQUERQUE, NEW MEXICO**

SHEET NO. 1 OF 1  
**GD**

FIRST FLUSH CALCULATIONS  
0.34" X 0.458 ACRES = 0.15572 ACRE INCHES = 562 CUBIC FEET

**KEYED NOTES**

- 1 GRAVEL CRUSHER FINES PAVING IN FENCED YARD TYP OR ASPHALT MILLINGS
- 2 EXISTING HIGH VOLTAGE POWERLINE POWERPOLE (5 EA.) TYPICAL
- 3 ASPHALT PAVING SURFACE
- 4 25' WIDE ROLLING GATE
- 5 SWANSON ROLL AWAY BIN ON A 5'X9' CONCRETE PAD
- 6 NEW 45' WIDE CURB CUT PER COA 2426 (15' RADIUS ON RETURNS)
- 7 NEW 30' WIDE CURB CUT PER COA 2426 (15' RADIUS ON RETURNS)
- 8 FIRST FLUSH POND 562 CU FT
- 9 DEPRESSED LANDSCAPE AREA



**CALCULATIONS**

|                             |                      |
|-----------------------------|----------------------|
| PROJECT AREA = 1.729        |                      |
| OUTLETTAGE MAINTENANCE SHOP |                      |
| ZONE 1                      |                      |
| PRECIPITATION:              | 360 = 2.20 in.       |
|                             | 1440 = 2.66 in.      |
|                             | 10day = 3.67 in.     |
| EXCESS PRECIPITATION:       | PEAK DISCHARGE:      |
| TREATMENT A 0.44 in.        | 1.29 cfs/ac.         |
| TREATMENT B 0.67 in.        | 2.03 cfs/ac.         |
| TREATMENT C 0.99 in.        | 2.87 cfs/ac.         |
| TREATMENT D 1.97 in.        | 4.37 cfs/ac.         |
| EXISTING CONDITIONS:        | PROPOSED CONDITIONS: |
| TREATMENT A 1.729 ac.       | AREA 0.28976 ac.     |
| TREATMENT B 0 ac.           | 0.01224 ac.          |
| TREATMENT C 0 ac.           | 0.9691 ac.           |
| TREATMENT D 0 ac.           | 0.458 ac.            |

EXISTING EXCESS PRECIPITATION:  
 $Weighted E = (0.44 \times 1.73) + (0.67 \times 0.00) + (0.99 \times 0.00) + (1.97 \times 0.00) / 1.73 ac = 0.44 in.$   
 $V100-360 = (0.44 \times 1.73) / 12 = 0.063397 ac-ft = 2762 CF$

EXISTING PEAK DISCHARGE:  
 $Q100 = (1.29 \times 1.73) + (2.03 \times 0.00) + (2.87 \times 0.00) + (4.37 \times 0.00) = 2.23 CFS$

PROPOSED EXCESS PRECIPITATION:  
 $Weighted E = (0.44 \times 0.29) + (0.67 \times 0.01) + (0.99 \times 0.97) + (1.97 \times 0.46) / 1.73 ac = 1.16 in.$   
 $V100-360 = (1.16 \times 1.73) / 12.0 = 0.166447 ac-ft = 7250 CF$   
 $V100-1440 = (0.17 \times 0.46) + (2.66 - 2.20) / 12 = 0.184004 ac-ft = 8015 CF$   
 $V100-10day = (0.17 \times 0.46) + (3.67 - 2.20) / 12 = 0.222552 ac-ft = 9694 CF$

PROPOSED PEAK DISCHARGE:  
 $Q100 = (1.29 \times 0.29) + (2.03 \times 0.01) + (2.87 \times 0.97) + (4.37 \times 0.46) = 5.18 CFS$   
 DIFFERENCE 5.18 CFS - 2.23 CFS = 2.95 CFS  
 ALLOWABLE FREE DISCHARGE PER LARRY READ'S REVISED MASTER DRAINAGE STUDY DATED SEPTEMBER 25, 2003 Q = 7.46 CFS > 5.18 CFS OK

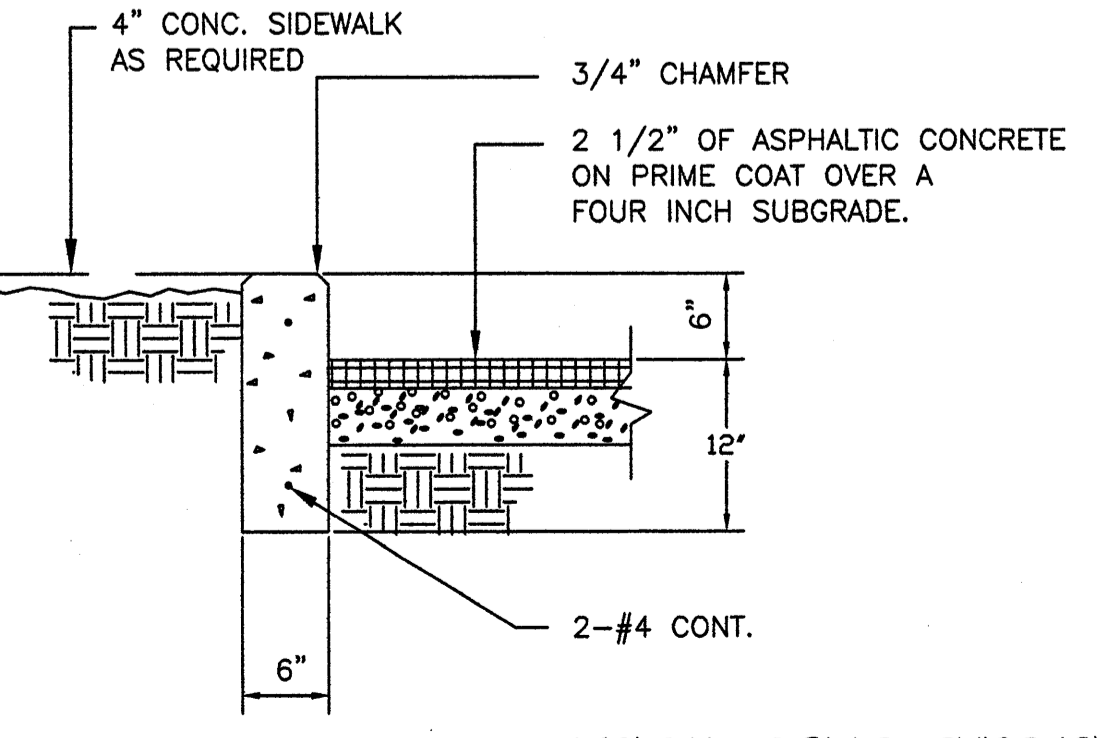
**SYMBOL LEGEND**

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- DESIGN CONTOUR
- PROPOSED SPOT ELEVATION
- PROPERTY LINE
- EASEMENT LINE
- FLOW DIRECTION
- EXISTING SPOT ELEVATION
- DOWN SPOUT
- ABBREVIATION LEGEND
- TOP OF CONC APRON - TCA
- TOP OF CURB - TC
- TOP OF ASPHALT - TA
- TOP OF BERM - TB
- BOTTOM OF POND - BP
- FINISHED FLOOR - FF

**LEGAL DESCRIPTION**

LOT 6 VOLCANO BUSINESS PARK PHASE 1  
 BERNALILLO COUNTY, ALBUQUERQUE NEW MEXICO  
 ZONING SU-1, IP

**BENCHMARK INFORMATION**  
 C.O.A. BENCHMARK USED 10-010 LOCATED WITHIN THE INTERSECTION OF OURAY N.W. AND PRONDA DE LA PLATA. ELEVATION: 5123.745



TYPICAL CONC. CURB DETAIL  
3/4"=1'-0"

**GRADING & DRAINAGE PLAN**

**GRADING/DRAINAGE PLAN**

THE FOLLOWING ITEMS CONCERNING LOT 6, VOLCANO BUSINESS PARK SUBDIVISION (3006 TODOS SANTOS STREET N.W.) ARE CONTAINED HEREON:

**EXISTING CONDITIONS**

AS SHOWN BY THE MONITY MAP, THE SITE CONTAINS 1.73 ACRES MORE OR LESS AND IS LOCATED SOUTH OF THE INTERSECTION OF TODOS SANTOS ST. N.W. AND OURAY RD. N.W. AND EAST OFF OF TODOS SANTOS STREET. THE SITE IN ITS PRESENT CONDITION IS VACANT AND SLOPES FROM WEST TO EAST TOWARDS THE EXISTING 40' FOOT DRAINAGE EASEMENT ACCORDING TO THE FLOOD INSURANCE RATE MAP, PANEL 0326H, REVISED AUGUST 16, 2012, THIS SITE IS NOT LOCATED WITHIN A DESIGNATED FLOOD ZONE.

**PROPOSED CONDITIONS**

AS SHOWN ON THE GRADING/DRAINAGE PLAN, THE PROJECT WILL CONSIST OF TWO PHASES. PHASE ONE WILL BE A 1,000 SQUARE FOOT OFFICE BUILDING AND SHOP ALONG WITH PAVED PARKING AND ASSOCIATED LANDSCAPING AREAS. PHASE TWO WILL CONSIST OF A 3,000 SQUARE FOOT PRE-FAB BUILDING (PLAN DRAWING HAS BEEN REVISED TO INDICATE CONSTRUCTION WITHIN EACH PHASE). THE DEVELOPED RUN-OFF WILL BE DIRECTED EASTWARD TOWARDS THE FIRST FLUSH POND AND THEN ONTO THE EXISTING 40' FOOT DRAINAGE EASEMENT. THE DRAINAGE EASEMENT IS A WELL DEFINED DIRT SWALE, WHICH SLOPES FROM SOUTH TO NORTH. A DRAINAGE REPORT WAS PREPARED BY LARRY READ AND ASSOCIATES FOR ALLRITE ROOFING SYSTEMS (3040 PAINTED ROCK DRIVE N.W.) (G10-029G). THE REPORT INCLUDES AN ANALYSIS OF THE TOTAL BASIN IN WHICH LOT 6 VOLCANO BUSINESS PARK IS A PART OF THIS BASIN. INCLUDED WITH THE SUBMITTAL ARE COPIES FROM THE ABOVE REFERENCED REPORT BY MR. READ. OFF-SITE FLOWS ENTER THE SIDE AT THE FAR SOUTHEAST CORNER OF THE SITE. LOT 7A1 VOLCANO BUSINESS PARK ACCORDING TO MR. READS ANALYSIS IS REQUIRED TO POND THEIR DEVELOPED RUN-OFF WITH A FREE DISCHARGE OF 5.70 CFS ONTO THE EXISTING 40' DRAINAGE EASEMENT AT THE SOUTHEAST CORNER OF LOT 6 VOLCANO BUSINESS PARK WHICH THEN WILL TRAVEL FROM SOUTH TO NORTH ALONG THE EXISTING 40' DRAINAGE EASEMENT. NO OTHER OFF-SITE FLOWS ENTER THE SITE FROM ANY OTHER DIRECTION. THE 100-YEAR HYDROLOGIC CALCULATIONS PROVIDE A QUANTITATIVE ANALYSIS FOR EACH TRACT OF LAND. FOR THE FULLY DEVELOPED CONDITIONS. ALL THE SITES REFERENCED ON THE REPORT HAVE EITHER FREE DISCHARGE OR DISCHARGE RATES SHOWN ON THE TABLES PROVIDED. THE CALCULATIONS WHICH APPEAR HEREON; ANALYSIS THE EXISTING AND PROPOSED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40 ACRES AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2 HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL VOLUME II, DESIGN CRITERIA 1997, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUN-OFF GENERATED.