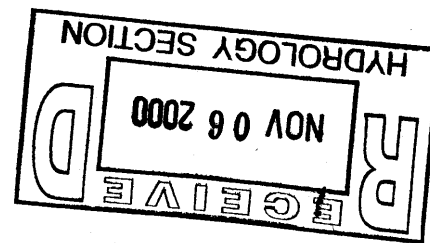


FIRM MAP PANEL #35001C0341 D SCALE: 1" = 500'



CALCULATIONS

DESIGN CRITERIA

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM) REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE ADOPTED BY THE COUNTY OF BERNALILLO
DISCHARGE RATE: $Q = Q_{PEAK} \times AREA$, "Peak Discharge Rates for Small Watersheds"
VOLUMETRIC DISCHARGE: $VOLUME = E_{Weighted} \times AREA$
P100 = 2.2 Inches, Zone 1 Time of Concentration, TC = 10 Minutes
DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR Where [] = 10 YEAR VALUES

EXISTING CONDITIONS

LOT AREA = 0.50 ACRES, WHERE EXCESS PRECIP. "Composite" = 1.0 in. [0.40]
PEAK DISCHARGE, Q100 = 1.32 CFS [0.73] WHERE UNIT PEAK DISCHARGE "Weighted" = 2.65 CFS/AC. [1.2]
THEREFORE: VOLUME 100 = 1815 CF [871]

DEVELOPED CONDITIONS

DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

| | AREA | LAND TREATMENT | Q Peak | E |
|-------------------------|---------------|----------------|------------|-----------|
| UNDEVELOPED/POUD | 0.05 Ac.(10%) | A | 1.29[0.24] | 1.1[0.08] |
| LANDSCAPING | 0.10 Ac.(20%) | B | 2.03[0.76] | 0.6[0.22] |
| GRAVEL & COMPACTED SOIL | 0.12 Ac.(24%) | C | 2.87[1.49] | 0.9[0.44] |
| ROOF - PAVEMENT | 0.23 Ac.(46%) | D | 4.40[2.90] | 1.9[1.24] |
| | 0.50 Ac. | | | |

THEREFORE: $E_{Weighted} = 1.33 \text{ in.} [0.73]$ &
Q100 = 1.62 CFS VOLUME 100 = 2414 CF
Q10 = 0.9 CFS VOLUME 10 = 1325 CF

DETERMINE POND SIZE

STORAGE VOLUME (Required) = Volume Generated By New Improvements
10-Day
= 5000 SF X 1.97 in. /12 + 1.47 in.(5000)/12 = 1433 CF

NOTE: NO COMPENSATORY DISPLACEMENT OF VOLUME IS REQUIRED SINCE THE PROPOSED PARKING LOT WILL BE CONSTRUCTED AT OR BELOW GRADE.

GRADING AND DRAINAGE PLAN

THE CHURCH FACILITY PROJECT IS LOCATED IN THE SOUTHWEST VALLEY AREA OF BERNALILLO COUNTY, 2 MILES SOUTH OF THE DOWNTOWN CORE OF ALBUQUERQUE. THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERNALILLO COUNTY FLOOD HAZARD ORDINANCE, NO. 88-46, AND STORM DRAINAGE ORDINANCE NO. 96-5. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE PLAN SHOWS:

1. EXISTING CONTOURS, SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS AND IMPROVEMENTS (Existing Residence, and Assembly Hall, And Fencing)
2. PROPOSED IMPROVEMENTS: NEW 5000 SF ASPHALT PARKING LOT AND TURNOUT, NEW GRADE ELEVATIONS, AND RETENTION PONDING.
3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
4. QUANTIFICATION AND ACCEPTANCE OF UPSTREAM OFF-SITE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS.

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORM RUNOFF AND EROSION, AND ESSENTIALLY ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE PROPERTY. PRESENTLY, THE SITE IS BOUNDED ON THE NORTH AND EAST BY THE PAVED COUNTY ROADWAY, MONTROSE PLACE. DEVELOPED RESIDENTIAL

PROPERTY IS ADJACENT ON THE WEST. ISLETA BOULEVARD IS A TWO-LANE PAVED ROADWAY ON THE SOUTH WITHIN A 60 FEET WIDE RIGHT-OF-WAY.

THE SITE IS GENERALLY FLAT TYPICAL OF VALLEY AREAS. OFF SITE IRRIGATION FLOWS ENTER THE SITE ON THE SOUTHERN PORTION OF THE SITE, AND ARE QUANTIFIED ON THE PLAN.

THE SITE IS ENCUMBERED BY A DESIGNATED, ZONE X, FEMA FLOODPLAIN. (Subject to Less Than 1 Foot Flood Depth)

HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. RETENTION OF STORM RUN-OFF, DEVELOPED FLOWS IS REQUIRED SINCE DOWNSTREAM CAPACITY IS LIMITED TO HISTORIC FLOWS.

