

GRADING & DRAINAGE DETAILS

GRADING AND DRAINAGE PLAN

PURPOSE AND SCOPE

Pursuant to the established Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Grading and Drainage Plan outlines the drainage management criteria for controlling developed runoff from the project site. The project consists of the construction of a 3,364-sf addition to the Immanuel Lutheran Church, located at 303 Gold SE, in Albuquerque, New Mexico. Proposed site improvements include paving, landscaping, utility, grading, and drainage improvements.

EXISTING CONDITIONS

The project site is approximately 0.70-acre in size and is located at 300 Gold Avenue Se, between Edith Boulevard and Arno Street SE. The site is presently an undeveloped dirt lot, presently being used for surface parking and auxiliary uses. The property once consisted of single family residences that have since been torn down. The site is located east of the current Immanuel Lutheran Church, and north of an existing single family residence. A playground and basketball court are located immediately south the proposed building addition. The proposed parking lot site is currently used as irrigated open space.

Site topography slopes from east to west at approximately 3.5-percent. The improved perimeter streets divert all off-site storm water runoff. On-site flows drain westward to the vacated alley, which conveys runoff south to Silver Avenue. The parking lot site also drains southward to Silver Avenue. The existing church buildings drain north and east to Gold Avenue and Arno Street. The existing building located due west from the building addition site drains east to the vacated alley. A portion of the existing gymnasium drains onto the proposed parking lot site.

As shown by the attached FIRM Panel, this site is not impacted by a mapped Flood Hazard Zone.

PROPOSED CONDITIONS

As shown by the Plan, the project consists of the construction of a 6,364-sf building addition and remote parking lot, with associated site improvements. The Plan shows the elevations and detail necessary to properly grade and construct the required paving and drainage improvements. Flow arrows give the direction of drainage flows and the project hydrology is tabulated for both existing and proposed conditions.

As shown by the Plan, the site will discharge all developed runoff to the existing perimeter streets. The perimeter streets convey all excess runoff to existing public drop inlets and 72-inch storm drain located at Broadway Boulevard SE. On-site flows from the existing Church buildings will be accepted by the proposed site storm drain and conveyed to the project outfall points. As shown by the Plan, Basin "A" and Basin "B" which consists mainly of the building addition will drain through curb penetrations to Gold Avenue and Edith Blvd. Basin "C" drains south to Silver, and Basin "D" drains through a new driveway to Silver.

Since this is an infill site free discharge of developed runoff is considered appropriate. As shown by the Project Hydrology the calculated increase in peak flowrate to be discharged from the site is 0.2 cfs. The calculated increase in volume is 706 cubic feet.

EROSION CONTROL

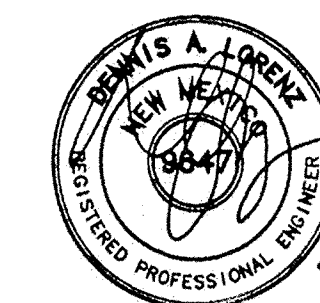
Since the disturbed area is determined to be less than 1.0-acre a Storm Water Pollution Prevention Plan and Notice of Construction is not required. However, temporary erosion control will be required during the construction phase to protect downstream property. Improvements to the floodplain will be required to ensure proper function. This includes the placement of silt fencing along the construction boundaries to mitigate sediment deposition into the adjoining properties and public streets. It is the Contractor's responsibility to properly maintain these facilities during the construction phase of the project.

CALCULATIONS

Calculations are provided which define the 100-year/6 hour design storm falling with the project area under existing and proposed condition. Hydrology is per "Section 22.2, Part A, DPM, Vol 2" updated July 1997.

ZONE = 2 P380 = 2.38"								
EXISTING								
BASIN	A	Aa	Ab	Ac	Ad	E	V 380	Q 380
A	0.11	0.00	0.00	0.11	0.00	1.13	0.0104	0.4
B	0.03	0.00	0.00	0.03	0.00	1.13	0.0039	0.1
C	0.04	0.00	0.00	0.04	0.10	1.26	0.0074	0.2
D	0.24	0.00	0.18	0.00	0.06	1.12	0.0224	0.7
SITE	1.22	0.00	0.18	0.88	0.18	1.21	0.1226	4.0
DEVELOPED								
BASIN	A	Aa	Ab	Ac	Ad	E	V 380	Q 380
A	0.11	0.00	0.00	0.02	0.09	1.92	0.0176	0.5
B	0.03	0.00	0.00	0.03	0.21	0.0083	0.1	0.1
C	0.04	0.00	0.08	0.65	0.13	1.26	0.0082	0.8
D	0.24	0.00	0.08	0.18	0.06	1.38	0.0276	2.8
SITE	1.22	0.00	0.06	0.95	0.31	1.37	0.1288	4.8

COMPARISON

$$\begin{aligned}\Delta Q &= +0.2 \text{ CFS} \\ \Delta \text{VOL} &= +0.0162 \text{ AF} \\ &= 706 \text{ CF}\end{aligned}$$


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REVISIONS		
No.	DATE	DESCRIPTION

SHEET TITLE:

**GRADING & DRAINAGE
DETAILS**

DESIGNED:	SCALE:
CHECKED:	JOB NO: 03555
DATE: 05-25-2004	COMP. FILE:

C0.2