

GRADING/DRAINAGE PLAN
THE FOLLOWING ITEMS CONCERNING TRACT A OF LANDS OF ESQUELA DEL SOL (MONTESSORI ESQUELA DEL SOL 1114 7TH ST. NW) ARE CONTAINED HEREON:

1. VICINITY MAP
2. FIRM FLOOD MAP
3. DRAINAGE CALCULATIONS

EXISTING CONDITIONS
AS SHOWN BY THE VICINITY MAP, THE SITE WHICH IS BEING IMPROVED CONTAINS .6104 ACRES AND IS LOCATED AT THE NORTHEAST QUADRANT OF THE INTERSECTION OF 7TH STREET NW AND GRANITE AVENUE NW. THE SITE IS COMPLETELY DEVELOPED WITH BUILDINGS, PARKING, AND PLAYGROUNDS. A 6,746 SQUARE FOOT PARCEL (1549 ACRES) LOCATED EAST OF THE SCHOOL HAS BEEN INCLUDED ON THE REPLAT. AN EXISTING SINGLE FAMILY DWELLING ON THE ABOVE REFERENCED PARCEL HAS BEEN DEMOLISHED AND WILL BE DEVELOPED AS CLASSROOMS. ACCORDING TO THE FLOOD INSURANCE RATE MAP PANEL 0332D, DATED SEPTEMBER 20, 1995, THE SITE IS LOCATED WITHIN A DESIGNATED 500-YEAR FLOOD ZONE.

PROPOSED CONDITIONS
AS SHOWN BY THE GRADING/DRAINAGE PLAN, THE PROJECT WILL CONSIST OF CLASSROOM ADDITIONS ON THE PARCEL INCLUDED ON THE REPLAT AND ADDITIONAL PAVED PARKING ON THE SOUTHWEST SIDE OF THE EXISTING LARGER BUILDING. ON-SITE DEVELOPED FLOWS FROM THE PROPOSED PAVED PARKING WILL BE ROUTED THROUGH THE PROPOSED SIDEWALK CULVERT INTO GRANITE NW. THERE IS AN EXISTING STORM DRAIN INLET LOCATED ON THE EAST NORTHEAST CURB RETURN OF GRANITE AVENUE NW AND 7TH STREET NW. DEVELOPED FLOWS FROM THE CLASSROOM ADDITION WILL BE ROUTED TO A PROPOSED PONDING AREA LOCATED WITHIN AN EXISTING PLAYGROUND AREA LOCATED WEST OF THE PROPOSED CLASSROOMS. DEVELOPED FLOW VOLUME FROM THE CLASSROOM AREA IS 2092 CF. THE PLAYGROUND PONDING AREA WILL PROVIDE 2150 CF. A RETENTION POND IS PROPOSED WITHIN THE PLAYGROUND AREA BECAUSE THE EXISTING GRADES WILL NOT ALLOW FOR THE DEVELOPED FLOWS TO BE ROUTED TO GRANITE AVENUE NW. CONCERN FOR THE CHILDREN'S WELFARE DOES NOT ALLOW FOR THE FINISH FLOOR TO BE ELEVATED SO AS TO OBTAIN SUFFICIENT SLOPE TO DRAIN TO GRANITE AVENUE NW. NO OFF-SITE FLOWS ENTER THE SITE. THE PROCEDURE FOR 40 ACRES AND SMALLER BASINS AS SET FORTH IN THE MANUAL VOLUME II, DESIGN CRITERIA DATED 1997, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUN-OFF GENERATED.

ESQUELA DEL SOL AREA = 0.6104 ac.

ZONE 2
PRECIPITATION: 360 = 2.35in.
1440 = 2.75in.
10day = 3.95in.

EXCESS PRECIPITATION: PEAK DISCHARGE:

TREATMENT A	0.53in.	1.56 cfs/ac.
TREATMENT B	0.78in.	2.28 cfs/ac.
TREATMENT C	1.13in.	3.14 cfs/ac.
TREATMENT D	2.12in.	4.70 cfs/ac.

EXISTING CONDITIONS:		PROPOSED CONDITIONS:	
	AREA		AREA
TREATMENT A	0ac.		0ac.
TREATMENT B	0ac.		0ac.
TREATMENT C	0.51ac.		0.116ac.
TREATMENT D	0.1ac.		0.495ac.

EXISTING EXCESS PRECIPITATION:

$$\text{Weighted E} = (0.53)(0.00) + (0.78)(0.00) + (1.13)(0.51) + (2.12)(0.10) = 0.61 \text{ ac.}$$
$$= 1.30$$
$$V_{100-360} = (1.30)(0.61)/12 = 0.0660 \text{ ac} = 2877 \text{ cf}$$

EXISTING PEAK DISCHARGE:

$$Q_{100} = (1.56)(0.00) + (2.28)(0.00) + (3.14)(0.51) + (4.70)(0.10) = 2.07 \text{ cfs}$$

PROPOSED EXCESS PRECIPITATION:

$$\text{Weighted E} = (0.53)(0.00) + (0.78)(0.00) + (1.13)(0.12) + (2.12)(0.49) = 0.61 \text{ ac.}$$
$$= 1.93$$
$$V_{100-360} = (1.93)(0.61)/12.0 = 0.0983 \text{ ac} = 4282 \text{ cf}$$

$$V_{100-1440} = (0.10) + (0.49) \times 2.75 - 2.35/12 = 0.1148 \text{ ac} = 5001 \text{ cf}$$
$$V_{100-10day} = (0.10) + (0.49) \times 3.95 - 2.35/12 = 0.1642 \text{ ac} = 7157 \text{ cf}$$

PROPOSED PEAK DISCHARGE:

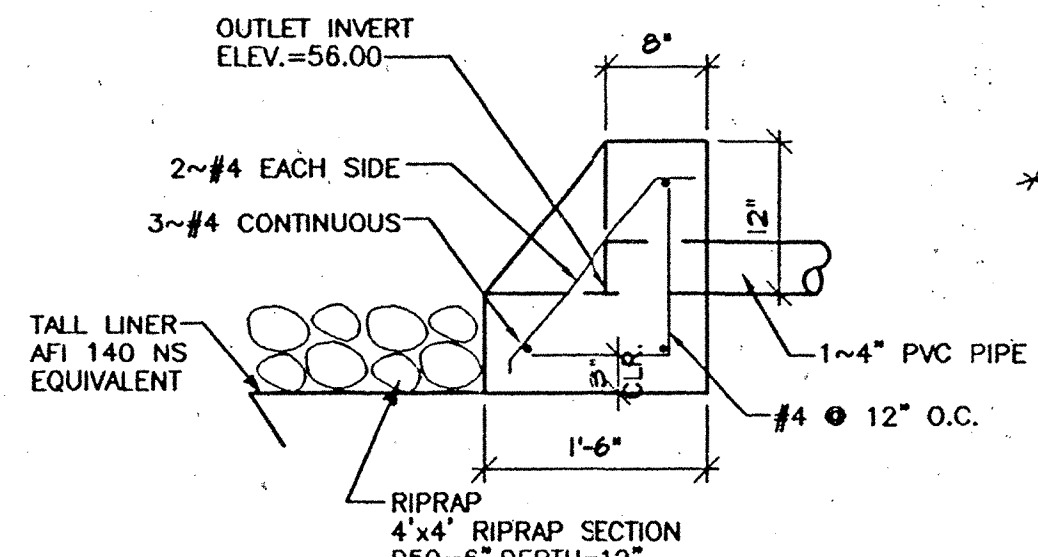
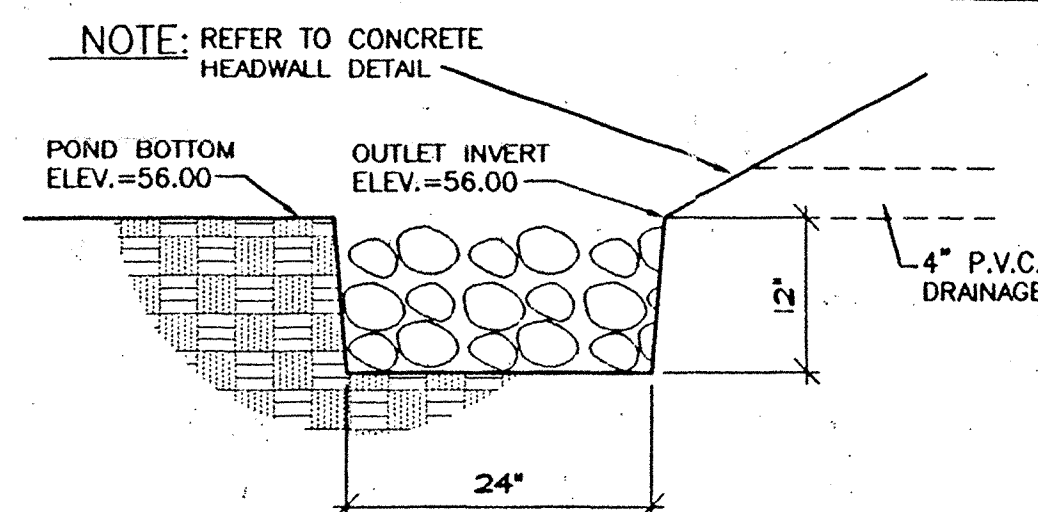
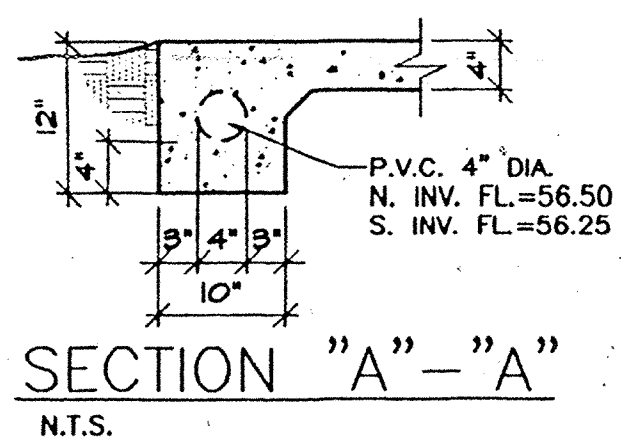
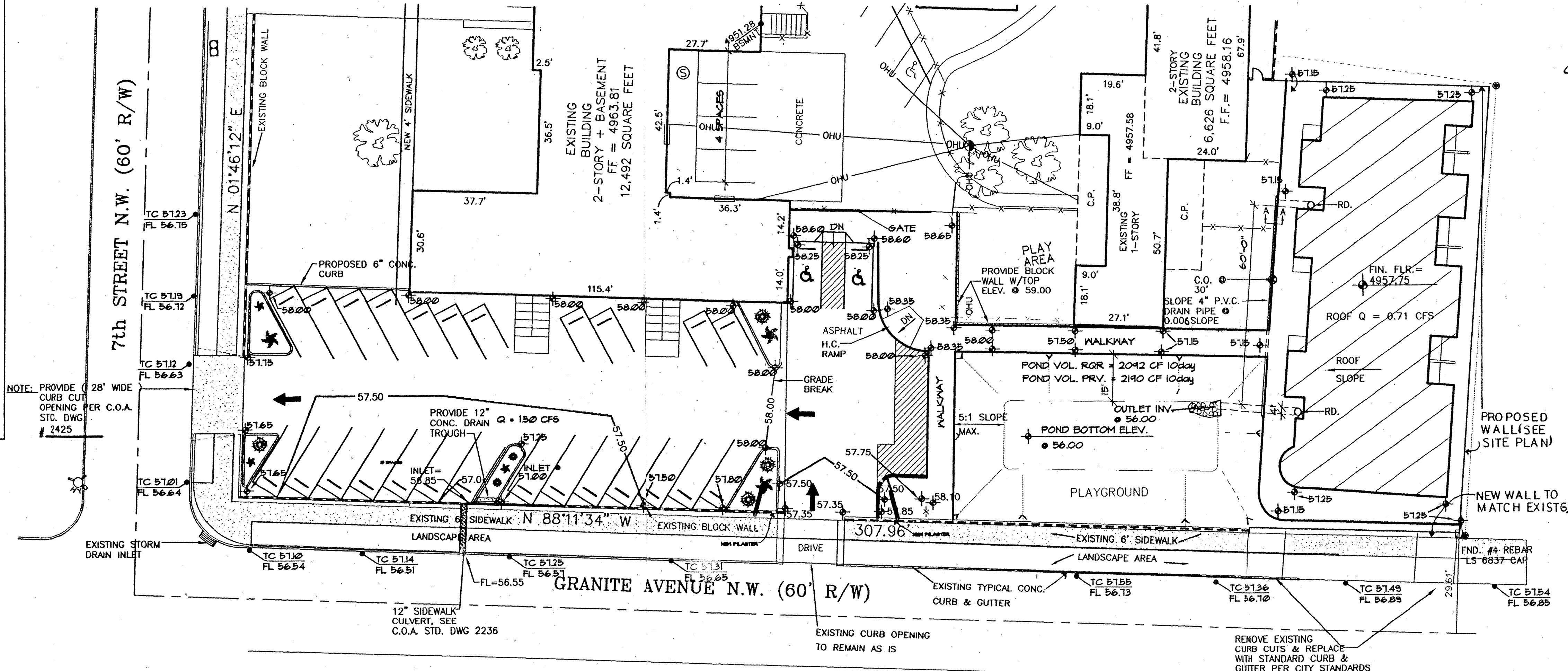
$$Q_{100} = (1.56)(0.00) + (2.28)(0.00) + (3.14)(0.12) + (4.70)(0.49) = 2.68 \text{ cfs}$$

NOTE TO CONTRACTOR:

1. An excavation/construction permit will be required before beginning any work within the City right-of-way. Approved copy of this plan must be submitted at the time of application for permit.
2. All work detailed in this plan to be performed, except as otherwise stated or provided herein, shall be constructed in accordance with City of Albuquerque Standard Specification for Public Works Construction.
3. Two working days prior to any excavation, contractor must contact line locating Services (760-1990) for locating existing sub-surface utilities.
4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical location of all potential constructions; Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay to the subject project.
5. Backfill compaction shall be according to commercial use or soils report(s) recommendations.
6. All work on this project shall be performed in accordance with applicable Federal, State and local laws, rules and regulations concerning construction safety and health.
7. Maintenance of this facilities shall be the responsibility of the owner of the property it serves

EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT OF STORM RUN-OFF DURING CONSTRUCTION, HE SHALL ASSURE THAT THE FOLLOWING MEASURES ARE TAKEN:
 - A. ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY TEMPORARY BERMS, DIKES, SWALES, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUN-OFF FROM LEAVING THE SITE AND ENTERING ADJACENT PROPERTIES.
 - B. ADJACENT PUBLIC RIGHT-OF-WAY SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUN-OFF FROM THE SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER THE PUBLIC STREETS.
2. THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY OR ALL SEDIMENT WITHIN THE PUBLIC STREETS THAT HAVE BEEN ERODED FROM THE SITE AND DEPOSITED THEREON.



ONE PIPE HEADWALL DETAIL N.T.S.

NOTE: PROPOSED GRADE STAKING IS CRITICAL FOR PROPER DRAINAGE CONCEPT TO FUNCTION

SYMBOL LEGEND

PROPOSED CONTOUR — 58.00 —
PROPOSED SPOT ELEVATION — 57.50 —
EXISTING BLOCK WALL —

ABBREVIATION LEGEND

TOP OF CURB — TC = 57.25
FLOWLINE — FL = 56.57
TOP OF WALL — TW = 59.00
EXISTING OR PROPOSED CONCRETE SURFACE —

SCALE: 1" = 20'

SIDEWALK CULVERT CAPACITY

$$Q = Ca (2gh)^{1/2} \quad h=5 \quad C=.67 \quad g=32.2 \quad a=5'$$

$$Q = (.67)(5')(5.6745)$$

$$Q = 1.90 \text{ cfs} > 1.53 \text{ cfs}$$

DRAINAGE FACILITIES WITHIN CITY RIGHT OF WAY

HYDROLOGY APPROVAL _____ DATE _____
INSPECTION APPROVAL _____ DATE _____
ACCEPTANCE _____ DATE _____

LEGAL DESCRIPTION

PLAT OF TRACT A OF LANDS OF ESQUELA DEL SOL, BERNALILLO COUNTY, ALBUQUERQUE, NEW MEXICO.

BENCHMARK:

TOP OF EXISTING MANHOLE JUST EAST OF SITE ON GRANITE AVE. NW; ELEVATION: 4957.31 (M.S.L.), PER CITY OF ALBUQUERQUE ENGINEERING DEPARTMENT INFORMATION.



JOB NO.:
DATE: MAY 2000
REVISIONS:

Sheet Title
GRADING AND DRAINAGE PLAN
Drawn By: BJM
Checked By:

BJM DEVELOPMENT CONSULTANT
DESIGN - PLANNER
Albuquerque, New Mexico

Project Name
MONTESSORI ESQUELA DEL SOL
1114 7TH STREET, N.W.
ALBUQUERQUE, NEW MEXICO

SHEET NO.
GD
C-2