

VICINITY MAP
SCALE: 1" = 800'

Construction Notes:

- Two (2) working days prior to any excavation, contractor must contact New Mexico One Call Service, 260-1990, for location of existing utilities.
- Prior to construction, the contractor shall excavate and verify the horizontal and vertical location of all potential obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
- All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning safety and health.
- All construction within public right-of-way shall be performed in accordance with applicable City of Albuquerque Standards and Procedures.
- If any utility lines, pipelines, or underground utility lines are shown on these drawings, they are shown in an approximate manner only, and such lines may exist where none are shown. If any such existing lines are shown, the location is based upon information provided by the owner of said utility, and the information may be incomplete, or may be obsolete by the time construction commences. The engineer has undertaken no field verification of the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines, makes no representation pertaining thereto, and assumes no responsibility or liability therefor. The contractor shall inform itself of the location of any utility line, pipeline, or underground utility line in or near the area of the work in advance of and during excavation work. The contractor is fully responsible for any and all damage caused by its failure to locate, identify and preserve any and all existing utilities, pipelines, and underground utility lines. In planning and conducting excavation, the contractor shall comply with state statutes, municipal and local ordinances, rules and regulations, if any, pertaining to the location of these lines and facilities.
- The design of planters and landscaped areas is not part of this plan. All planters and landscaped areas adjacent to the building(s) shall be provided with positive drainage to avoid any ponding adjacent to the structure. For construction details, refer to landscaping plan.
- Backfill compaction shall be according to ARTERIAL street use.
- Maintenance of these facilities shall be the responsibility of the owner of the property served.
- The design of planters and landscaped areas is not part of this plan. All planters and landscaped areas adjacent to the building(s) shall be provided with positive drainage to avoid any ponding adjacent to the structure. For construction details, refer to landscaping plan.

APPROVALS	NAME	DATE
A.C.E. / DESIGN	<i>Jeff Mortensen</i>	12/6/93
INSPECTOR		
A.C.E. / FIELD		

Erosion Control Measures:

- The contractor shall ensure that no soil erodes from the site into public right-of-way or onto private property. This can be achieved by constructing temporary berms at the property lines and wetting the soil to keep it from blowing.
- The contractor shall promptly clean up any material excavated within the public right-of-way so that the excavated material is not susceptible to being washed down the street.
- The contractor shall secure "Topsoil Disturbance Permit" prior to beginning construction.

PROJECT BENCHMARK = T.B.M.

STATION MARK IS A STANDARD N.M.S.H.C. BRASS TABLET, STAMPED "STA. 6+2", SET IN TOP OF A CONCRETE POST FLUSH WITH THE GROUND, LOCATED IN THE INTERSECTION OF GIBSON BLVD AND LOUISIANA BLVD. IN THE CENTER OF THE MEDIAN STRIP. ELEVATION = 5334.767 FEET (MSLD)

LEGAL DESCRIPTION

PARCEL A LANDS OF KIRTLAND FEDERAL CREDIT UNION

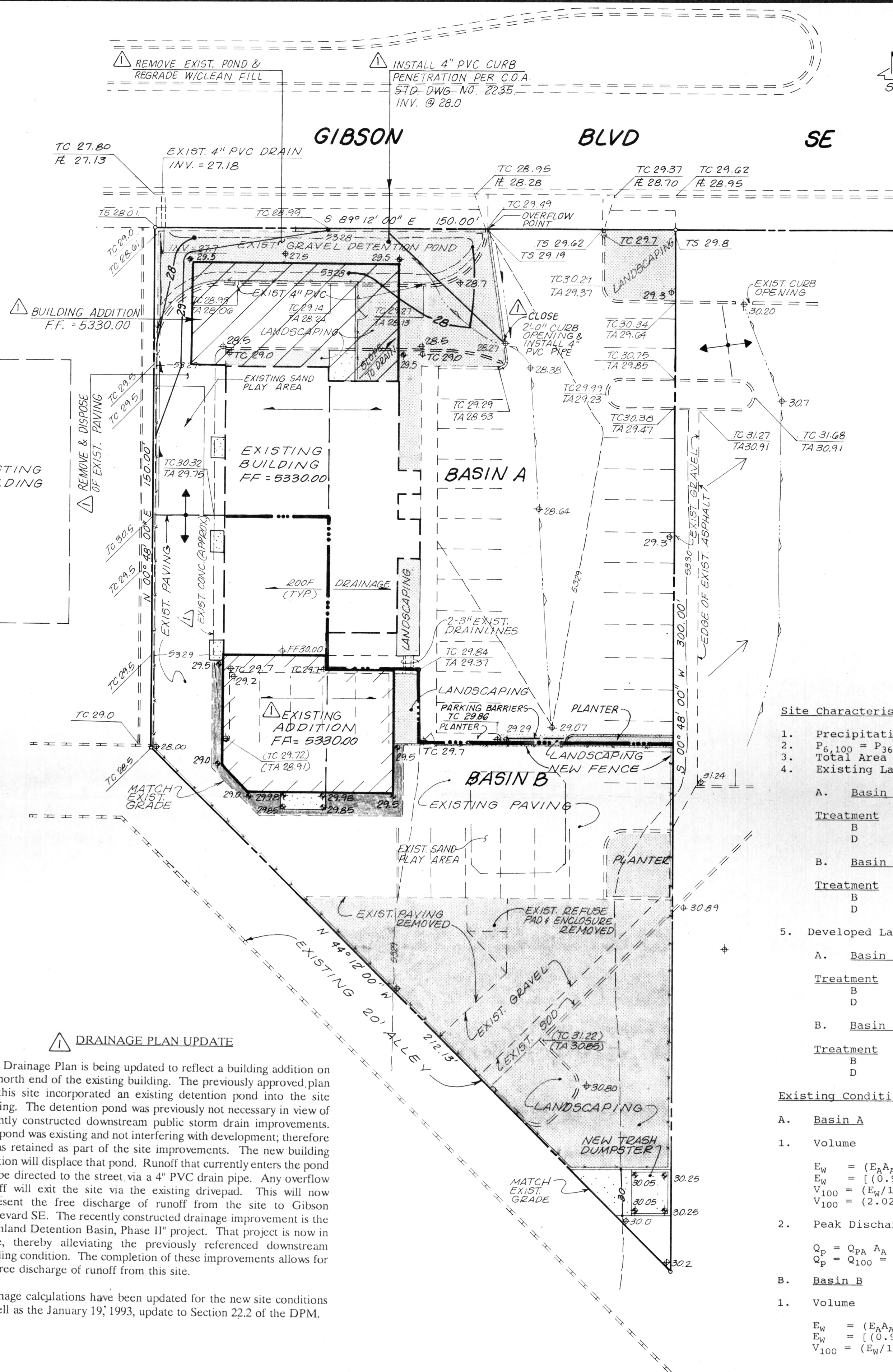
LEGEND

- 5330— EXISTING CONTOUR
- 28— NEW CONTOUR
- ⊕ EXISTING SPOT ELEVATION
- ⬆ NEW SPOT ELEVATION
- TC TOP OF CURB
- TS TOP OF SIDEWALK
- FL FLOW LINE
- EXISTING SHEET FLOW
- ↑ HIGH POINT
- EXISTING DIRECTION OF FLOW
- NEW CONCRETE
- NEW LANDSCAPING
- NEW FENCE
- NEW DIRECTION OF FLOW

DRAINAGE PLAN UPDATE

This Drainage Plan is being updated to reflect a building addition on the north end of the existing building. The previously approved plan for this site incorporated an existing detention pond into the site grading. The detention pond was previously not necessary in view of recently constructed downstream public storm drain improvements. The pond was existing and not interfering with development; therefore it was retained as part of the site improvements. The new building addition will displace that pond. Runoff that currently enters the pond will be directed to the street via a 4" PVC drain pipe. Any overflow runoff will exit the site via the existing driveway. This will now represent the free discharge of runoff from the site to Gibson Boulevard SE. The recently constructed drainage improvement is the "Highland Detention Basin, Phase II" project. That project is now in place, thereby alleviating the previously referenced downstream flooding condition. The completion of these improvements allows for the free discharge of runoff from this site.

Drainage calculations have been updated for the new site conditions as well as the January 19, 1993, update to Section 22.2 of the DPM.



SCALE: 1" = 20'

DRAINAGE PLAN

The following items concerning the Bright Beginnings - Gibson S.E. Drainage Plan are contained hereon:

- Vicinity Map
- Grading Plan
- Calculations

As shown by the Vicinity Map, the site is located on the south side of Gibson Boulevard S.E. just west of the intersection with Louisiana Boulevard S.E. At present, the site is developed as the former Kirtland Federal Credit Union facility. There is an existing building, paving, and landscaping on this site.

As shown by Panel 36 of 50 of the National Flood Insurance Program Flood Boundary and Floodway Maps for the City of Albuquerque, New Mexico, this site lies adjacent to a designated flood hazard zone. The referenced mapping indicates that the Gibson Boulevard Corridor is subject to flooding from the 100-year rainfall event. The Zone is designated as a "A-0-1 foot depth" zone. The building finished floor elevation is approximately two feet above the corresponding flowline elevation thereby satisfying the Floodplain Ordinance. The proposed addition to the building will have the same finished floor elevation, hence danger of flooding is not anticipated. Furthermore, recently constructed public storm drain improvements within Gibson Boulevard S.E. are believed to have alleviated at least some of the flooding within the roadway and thereby has reduced the flooding potential for this site.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' intervals, 2) the limit and character of the existing improvements, 3) the limit and character of the proposed improvements, and 4) continuity between existing and proposed grades. The project consists of the removal of existing asphalt paving and the construction of a building addition along with new landscaped areas. Due to the fact that the imperviousness of the site is being reduced, the runoff generated by this site will be decreased as a result of construction. The proposed construction will not alter the existing drainage patterns, hence the proposed work will demonstrate compatibility with the previously approved grading and drainage plan. Basin A will continue to drain from south to north with its runoff being routed through an existing graveled detention pond. This pond discharges via an existing 4" PVC drain into Gibson Boulevard S.E. Basin B drains from northeast to southwest into the existing alley which lies along the south property line of the site. Existing paving improvements from the new Kirtland Federal Credit Union encroach upon this property and as a condition for development, will be removed from this property. It will be the responsibility of the owner of that adjacent parcel to prepare and submit a grading and drainage plan to address those paving modifications. It is based upon this requirement that offsite flows will not impact this property.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used to calculate the peak discharge of runoff while the SCS Method has been used to quantify the volume of runoff generated. Both methods have been used in accordance with the City of Albuquerque Development Process Manual, Volume II, coupled with the Mayor's Emergency Rule dated January 14, 1986. As shown by these calculations, the runoff generated by each of the drainage basins will be decreased as the result of the proposed development.

CALCULATIONS

Site Characteristics

- Precipitation Zone = 3
- $P_{6,100} = P_{360} = 2.60$ in
- Total Area (A_T) = 0.77 acres
- Existing Land Treatment

$$V_{100} = (1.74/12)(0.35) = 0.0508 \text{ ac.ft.}; 2,210 \text{ cf}$$

- Peak Discharge

$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$

$$Q_p = Q_{100} = (2.60)(0.15) + (5.02)(0.20) = 1.4 \text{ cfs}$$

Developed Condition

A. Basin A

Treatment	Area (sf/ac)	%
B	4,140/0.10	22
D	14,420/0.32	78

- Volume

$$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$

$$E_w = [(0.92)(0.09) + (2.36)(0.33)] / 0.42 = 2.05 \text{ in}$$

$$V_{100} = (E_w / 12) A_T$$

$$V_{100} = (2.05 / 12)(0.42) = 0.0718 \text{ ac.ft.}; 3,128 \text{ cf}$$

- Peak Discharge

$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$

$$Q_p = Q_{100} = (2.60)(0.09) + (5.02)(0.33) = 1.9 \text{ cfs}$$

5. Developed Land Treatment

A. Basin A

Treatment	Area (sf/ac)	%
B	3,930/0.09	21
D	14,630/0.33	79

B. Basin B

Treatment	Area (sf/ac)	%
B	6,495/0.15	43
D	8,695/0.20	57

- Volume: (No change)

- Peak Discharge: (No change)

Comparison

A. Basin A

- $\Delta V_{100} = 3,128 - 3,075 = 53 \text{ cf}$ (increase)
- $\Delta Q_{100} = 1.9 - 1.9 = 0 \text{ cfs}$ (No change)

B. Basin B

- $\Delta V_{100} = 2,210 - 2,210 = 0$ (No change)
- $\Delta Q_{100} = 1.4 - 1.4 = 0 \text{ cfs}$ (No change)

Existing Condition

A. Basin A

- Volume

$$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$

$$E_w = [(0.92)(0.10) + (2.36)(0.32)] / 0.42 = 2.02 \text{ in}$$

$$V_{100} = (E_w / 12) A_T$$

$$V_{100} = (2.02 / 12)(0.42) = 0.0706 \text{ ac.ft.}; 3,075 \text{ cf}$$

- Peak Discharge

$$Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$$

$$Q_p = Q_{100} = (2.60)(0.10) + (5.02)(0.32) = 1.9 \text{ cfs}$$

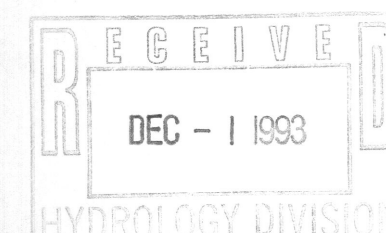
B. Basin B

- Volume

$$E_w = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / A_T$$

$$E_w = [(0.92)(0.15) + (2.36)(0.20)] / 0.35 = 1.74 \text{ in}$$

$$V_{100} = (E_w / 12) A_T$$



DESIGNED BY	NO.	DATE	BY	REVISIONS	JOB NO.
J.G.M.	11/93	J.G.M.	UPDATE PLAN FOR BUILDING ADDITION		900641
DRAWN BY					DATE
M.J.T.					08/90
APPROVED BY					SHEET
J.G.M.					1 OF 1