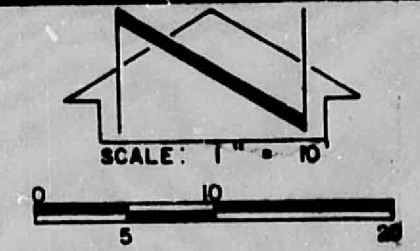


LEGEND

- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SWALE
- EXISTING TOP OF CURB
- EXISTING FLOW LINE
- CONCRETE
- BASIN BOUNDARY
- PROPOSED WALL
- EXISTING WALL
- PATTERNED CONCRETE
- PROPOSED ASPHALT PAVING
- HIGHPOINT

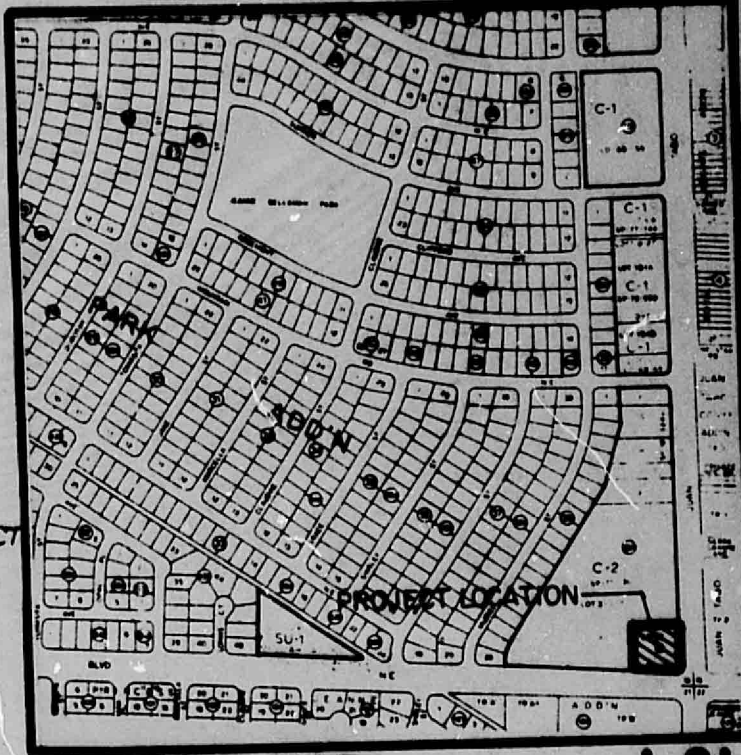


PROJECT BENCHMARK:
ACS STATION 5+22.4
ELEVATION = 5665.05 FEET (MSLD)

TBM:
TOP OF WALL ELEVATION AT THE NORTHWEST CORNER OF THE PROJECT SITE
ELEVATION = 5670.09 FEET (MSLD)

LEGAL ADDRESS:
LOT 2 BLOCK 88 DALE J. BELLA MAH'S PRINCESS JEANNE PARK

STREET ADDRESS:
801 JUAN TABO BLVD N.E.



VICINITY MAP
SCALE 1" = 800'

Drainage Plan

The following items concerning the Jack In The Box Drainage Plan are contained herein:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located at the northwest corner of the intersection of Juan Tabo Boulevard N.E. and Lomas Boulevard N.E. At present, the site is developed as a service station which is no longer in operation. Adjacent sites are also developed.

Based upon a pre-design conference with Mr. Brian G. Burnett, Hydrology Section, on May 23, 1983, limited downstream capacity exists, therefore, the runoff generated by the developed site must be routed through a positive discharge pond. The discharge of runoff from the site will be via one four-inch PVC curb penetration which discharges onto Lomas Boulevard N.E. Overflow runoff will leave the site via the westerly existing driveway.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' 0" intervals, 2) continuity between existing and proposed elevations, 3) the limit and character of existing improvements on the site, 4) the limit and character of the proposed new improvements, and 5) two positive discharge ponding areas. As shown by this plan, the proposed improvements include the construction of a restaurant along with adjacent paving and landscaping. In order to accommodate these proposed improvements, the existing paving and building improvements on the site must be removed. At present, runoff flows from northeast to southwest across the site and onto Lomas Boulevard N.E. Once the runoff enters Lomas Boulevard N.E. it flows to the west. This pattern of runoff will not be altered by development.

The calculations which appear below analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume 2. The calculations demonstrate that a minor decrease in peak runoff and total runoff volume are anticipated due to the proposed development of this site. Although the volume of ponding provided is somewhat less than that required by hydrograph analysis, the attempt has been made to detain as much runoff as possible. It should also be noted that the proposed improvements will not only attenuate the peak discharge of runoff from the site, but will also reduce the total volume of runoff generated by this site.

Calculations

Ground Cover Information

1. From SCS Bernalillo County Soil Survey, Plate 32: 2. Volume: $V = CP_A(1/12)$
Tg8 Tijeras Gravelly Fine Sandy Loam
Hydrologic Soil Group B
where C varies
 $P_2 = 2.46$ in (DPM Plate 22.2D-1)
 $A = 38,365$ sf
2. Existing Condition
 $A_{total} = 38,365$ sf = 0.88 Ac
 $A_{imp} = 35,500$ sf
 $X = \text{impervious} = 35,500/38,365 = 93\%$
 $C' = 0.89$ (DPM Plate 22.2C-1)
3. Developed Condition
 $A_{total} = 38,365$ sf = 0.88 Ac
 $A_{imp} = 29,370$ sf
 $X = \text{impervious} = 29,370/38,365 = 77\%$
 $C' \text{ factor} = 0.74$ (DPM Plate 22.2C-1)

Existing Condition

$Q_{100} = C'IA = 0.89 (5.20)(0.88) = 4.1$ cfs
 $V_{100} = CP_A = 0.89 (2.46/12)(38,365) = 7000$ cf

Developed Condition

$Q_{100} = C'IA = 0.74 (5.20)(0.88) = 3.4$ cfs
 $V_{100} = CP_A = 0.74 (2.46/12)(38,365) = 5820$ cf

$Q_{release} = CA/2gh = 0.6$ cfs
where $C = 0.75$ (assumed)
 $A = 0.0873$ (4" pipe)
 $g = 32.2$ ft/sec
 $h = 66.90 - 65.65 - 2/12 = 1.1'$

Rational Method

1. Discharge: $Q = CIA$
where C varies
 $i = P_2 (6.84) T_c^{-0.51} = 5.20$ in/hr
 $P_2 = 2.46$ in (DPM Plate 22.2D-1)
 $T_c = 10$ min (minimum)
 $A = \text{area} = 0.88$ Ac

By hydrograph analysis, $V_{required} = 644$ cf
By average end-area method, $V_{pond} = 299$ cf

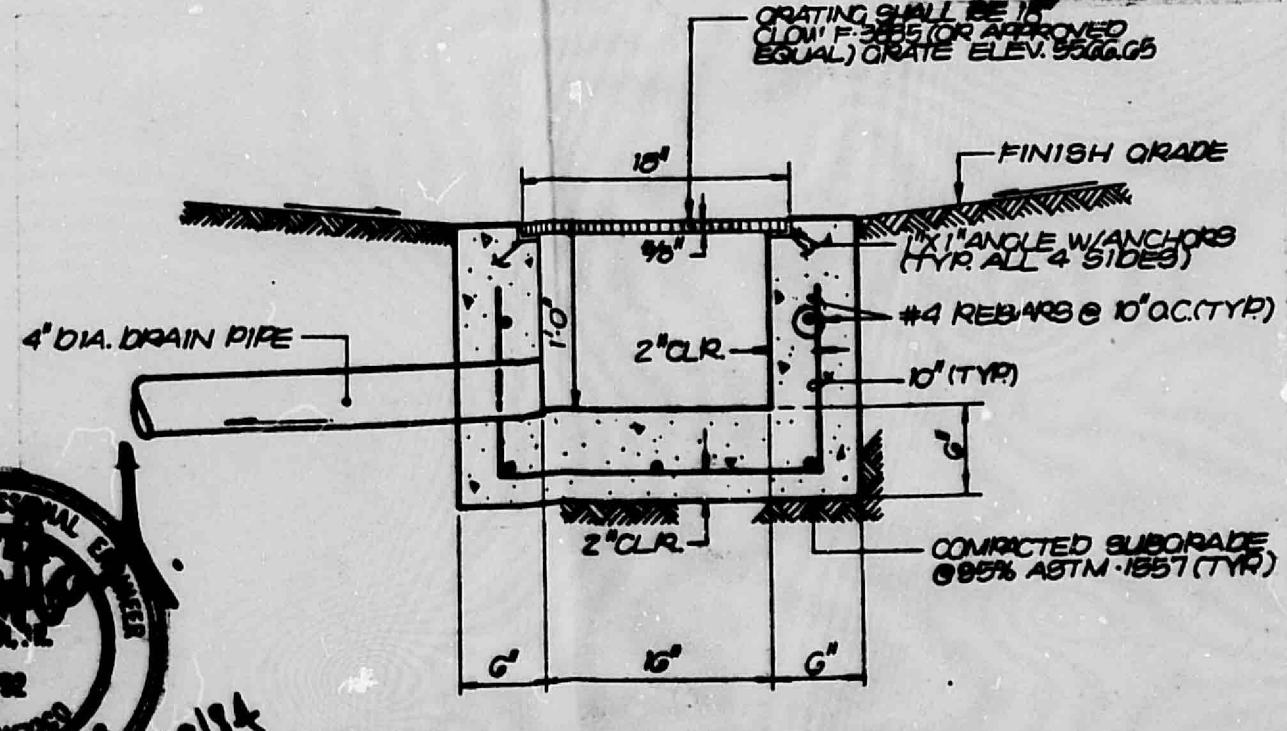
$V_{pond} = 1/2[(A_{66.95} + A_{66.90})(66.90 - 65.65) + (A_{72.70} + A_{73.20})(73.20 - 72.72)]$
 $= 1/2[(0+1870)(0.25) + (0+260)(0.50)] = 299$ cf

Comparison

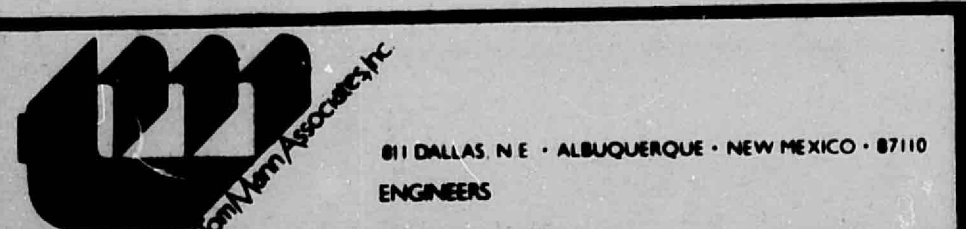
$AQ_{100} = 4.1 - 3.4 = 0.7$ cfs (decrease)
 $AV_{100} = 7000 - 5820 = 1180$ cf (decrease)

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS 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.
3. 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.



TYPICAL INLET SECTION
SCALE: 1" = 1'



NO.	DATE	BY	REVISIONS
1	1/84	JGH	REVISE DWG TO CORRECT PROBLEM DUE TO CONSTRUCTION

DESIGNED BY: J.M.
DRAWN BY: J.M.C.
APPROVED: T.T.M.

JOB NO.
30712
DATE
6-83

REVISED GRADING & DRAINAGE PLAN
JACK IN THE BOX

REVISED PLAN
Approved 4/2/84
J21