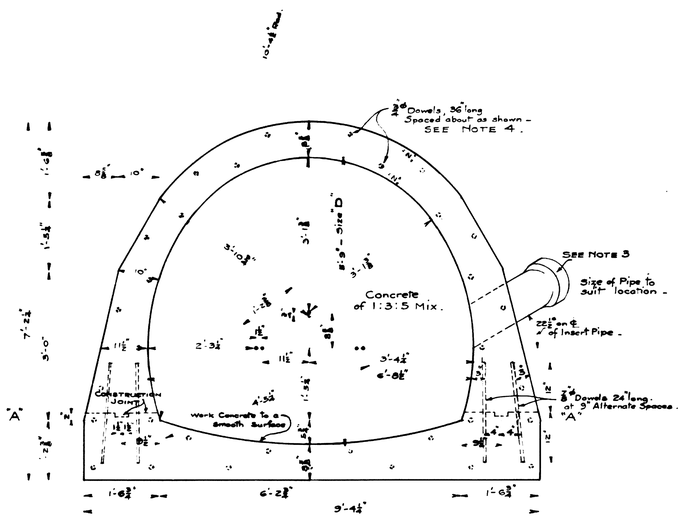
# SEMI-ELLIPTIC CONCRETE SEWER

FOR
BACKFILL OF 20 FEET
OR EQUIVALENT LOAD
OVER TOP OF SEWER.




## SECTION OF CULVERT

Scale:— ¾" = 1'

NOTES:—

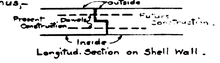
1— When in the opinion of the Engineer the Sub-grade is not sufficiently incompressible to insure safety against deformation of the Sewer, a modification of the concrete base here shown may be required. See Plan for reinforced concrete base for uniform distribution of backfill over subgrade.

2— The Total Load on Sewer including shell above line "A-A" is $162(DH+D^2)$ lbs. H being the height of backfill over Top of Sewer with earth at 100# per cu. ft. and concrete at 150# per cu. ft.

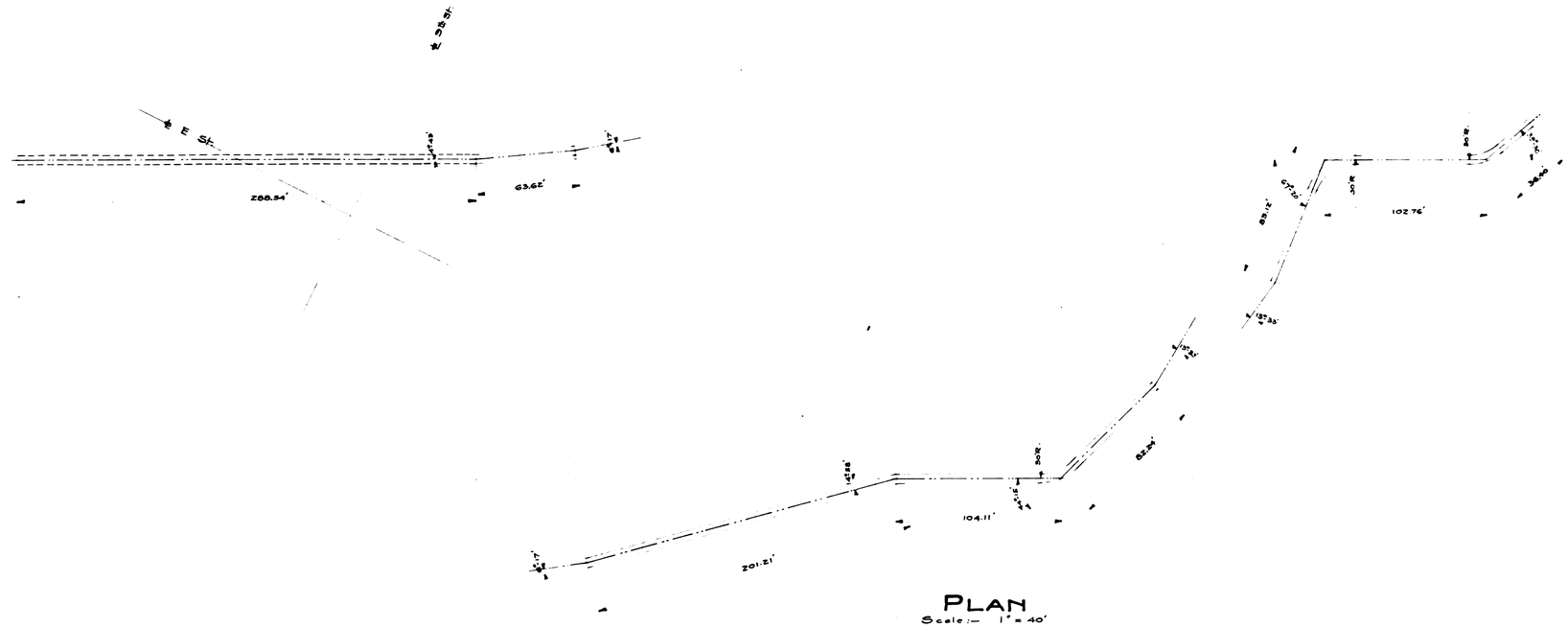
3— Insert full pipe length as shown, (or on opposite side), as required for stubs of inlet sewers, other than at standard structures. Inclination down-stream 45°. Trim pipe to fit inside of sewer.

4— where a separate or detached portion of sewer is built, or where the sewer is stopped off at the time, requiring a continuation of the sewer construction at some time in the future; ¾" ϕ dowels, 36" long shall be placed in the end of shell of Culvert,— allowing the dowel to project 18" for future bond.

A Step shall be formed by timbers in the end of shell stopped off thus,— allowing the future work when built to bond onto the present construction.




Longitud. Section on Shell Wall.

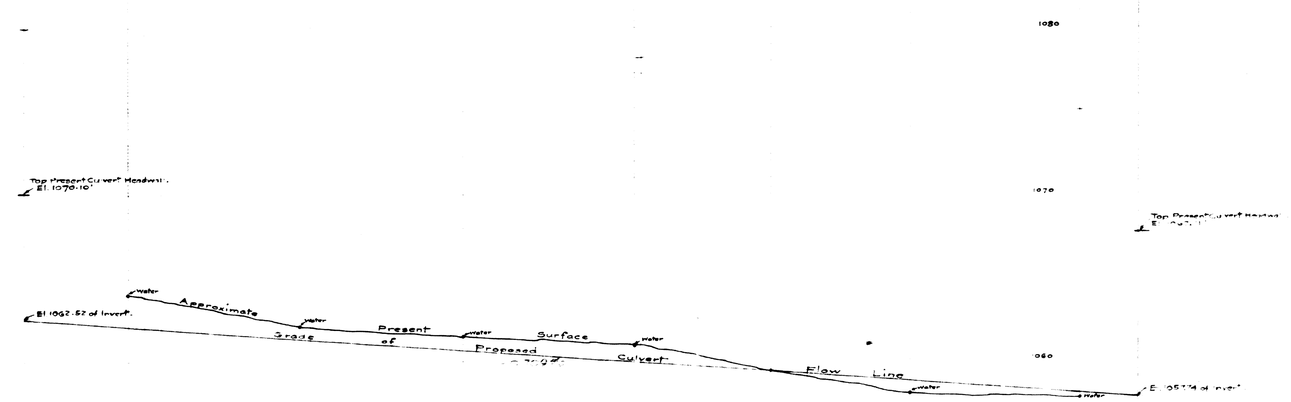



## PLAN

Scale:— 1" = 40'

## DATUM—

All elevations in red ink are in feet, and above a plane which is 1045.28' below the city bench mark as established by Ordinance 383 of the City of San Bernardino, California.




## PROFILE

Black Line shows Present Surface.
Red Line shows Flow Line of Proposed Culvert.

Scale:— Horiz. 1" = 40'
Vert. 1" = 4'