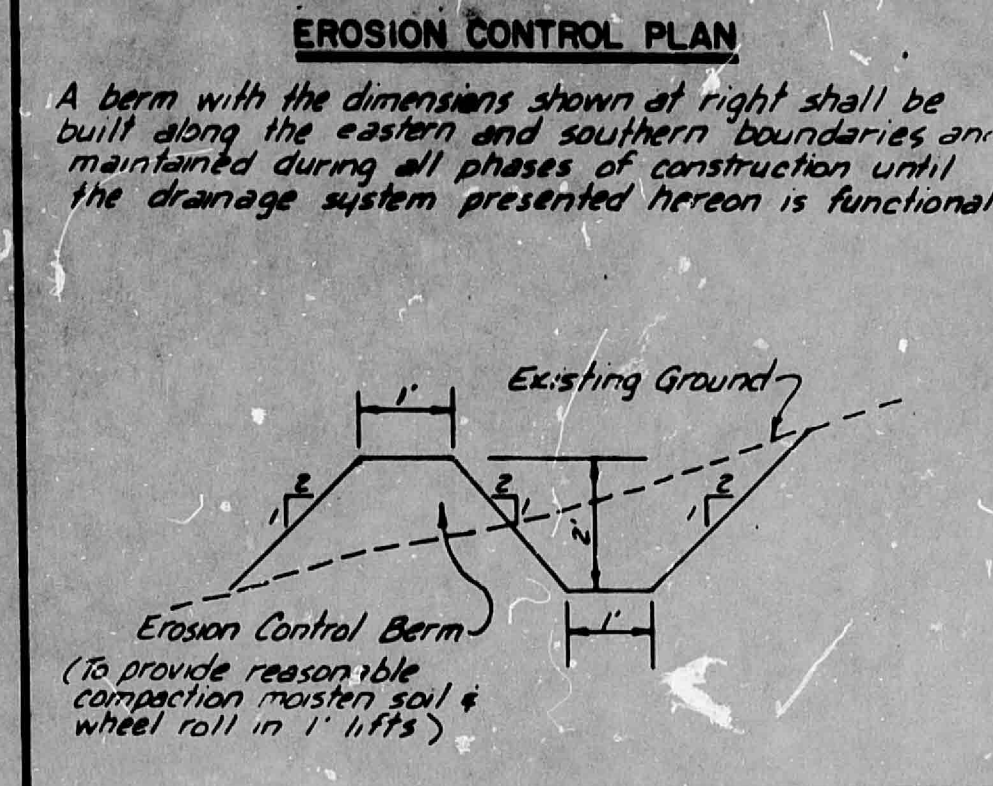
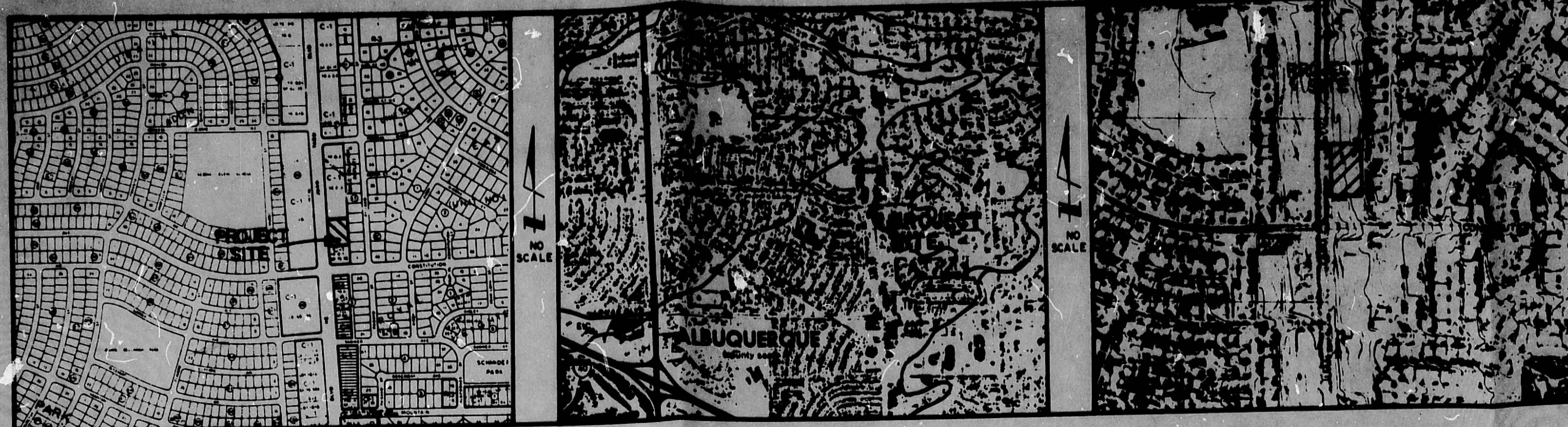




Site Location

The site is located north of the intersection of Juan Tabo Boulevard and Constitution Avenue on the east side of Juan Tabo Boulevard. The vicinity map shown on this sheet identifies the site location.

Existing Conditions

The site slopes naturally to the west at approximately five percent (5%) and is covered by native grasses. No outstanding physical feature or development occurs on the site.

Adjacent development includes a self-service gas station to the south and a residential subdivision to the east. The tract of land immediately to the north is currently undeveloped.

The existing drainage pattern for the site is the free discharge of runoff to Juan Tabo Boulevard. The SCS soil type for the site is Tigeras and the hydrological soil group is Type "B" (See Soil Map this sheet). The site currently receives no offsite flows. An existing 6" high block wall on the east property line blocks runoff from the intersection and the gas station at the south property line has been graded to drain to the Juan Tabo-Constitution intersection.

The Flood Insurance Map provided on this sheet indicates that flood areas do not exist in the immediate vicinity of the site.

Proposed Conditions

The existing undeveloped peak discharge to Juan Tabo Boulevard from the site will be increased under the proposed development conditions. This increase, however, will be diminished by (a) establishing a ponding area onsite with a minimum discharge rate, (b) reducing the free discharge area of runoff, and (c) providing a minimum discharge gutter system for the building.

Using the Rational method to determine peak discharge rates during 100-year storms, we find that the undeveloped site develops only 2.57 cfs. The developed site, without the minimizing measures mentioned above, discharges at 6.95 cfs, an increase of 270% over the undeveloped rate. However, the gutter system of the building's roof effectively reduces the peak discharge of this relatively large area to a negligible rate. When this is taken into account, the site's peak discharge to Juan Tabo is reduced to 4.81 cfs for an increase of only 94% over the undeveloped rate.

The ponding area has been designed to store approximately 1000 cubic feet, not enough to hold the 100-year storm, but certainly a positive factor when combined with ponding area of the building roof. The following reasons justify the use of the proposed drainage management plan and the designed pond:

- (1) As much ponding as possible has been provided without violating maximum recommended parking and driveway slopes;
- (2) The proximity of the site to the large 54" storm sewer system and catch basin in Juan Tabo provides early removal of the site's runoff discharge;
- (3) The site's 4.81 cfs discharge is only 3% of the existing storm sewer's capacity in Juan Tabo;
- (4) The MDS calls for future storm sewer lines to be installed in Juan Tabo, south of Constitution Avenue, which will resolve any capacity problems which may now exist;
- (5) The nature of commercial development minimizes land available for landscaping which could be used for ponding purposes. If little landscaping area, ponding would have to be within parking area for this site. To provide 100-year storm ponding, the major portion of available parking area would be inundated. Of all parking spaces required for site, only 17 spaces would remain;
- (6) Full ponding of the 100-year storm would require approximately 480 linear feet of 5-7 foot high retaining walls. The plan as submitted requires only 180 linear feet;
- (7) Inspection of adjacent sites along Juan Tabo, some very recent, indicates many sites with only slight ponding while some appeared to have none.

CALCULATIONS

Onsite Hydrology

Existing
Site Area = 1.43 acres
% Impervious = 9%
then C = 0.34 (DPM Plate 22.2 C-1)
6-hr. Rain = 2.5" (100-year)
Rainfall intensity, I = 5.28"
use Tc = 10 mins.
then Q = C(A(I + peak discharge))
Q = 0.34 (5.28) 1.43 = 2.57 cfs

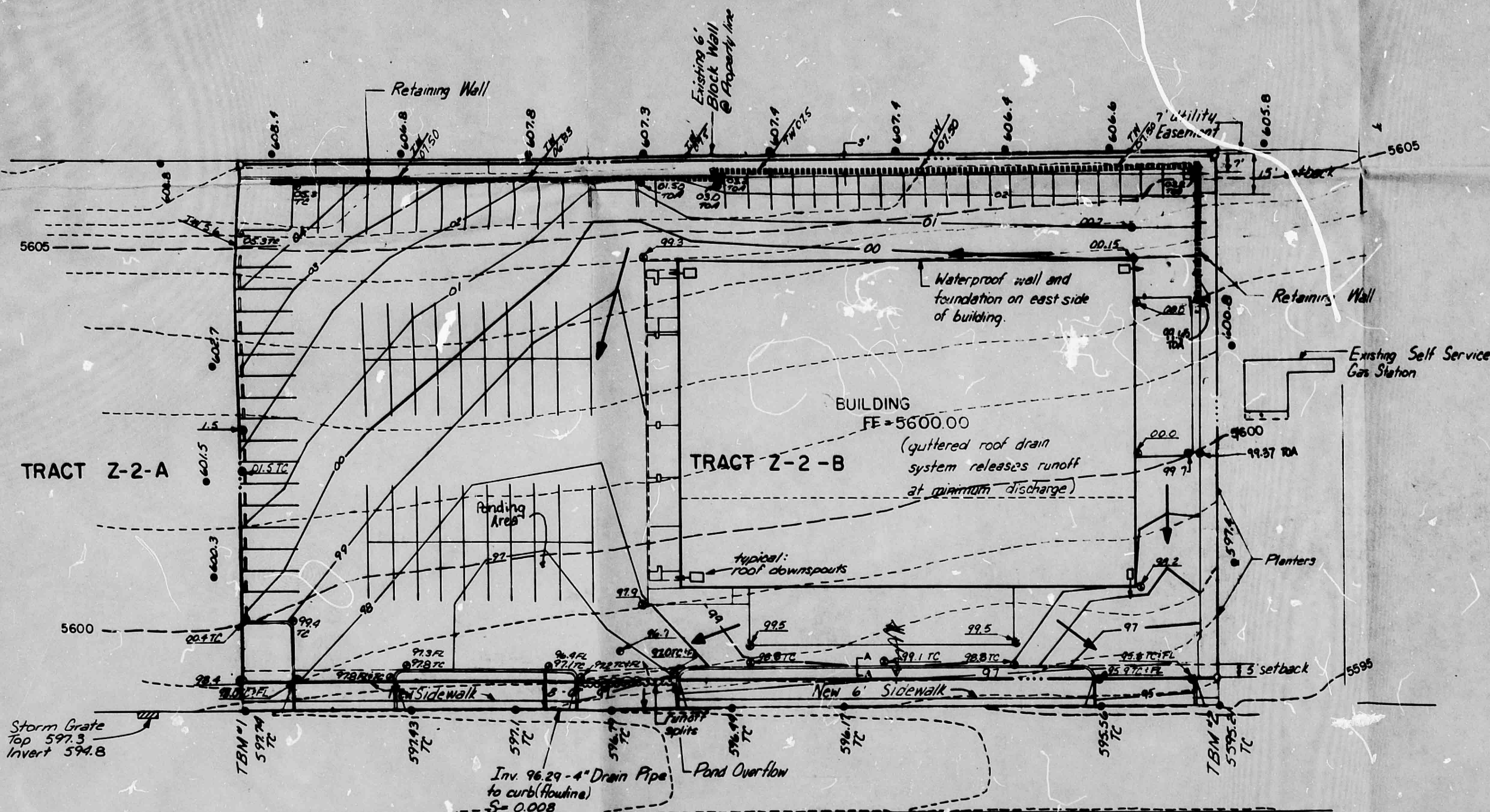
Developed (w/bldg. ponding)
Area = 0.79 ac.
% Impervious = 93%
then C = 0.92
I = 5.28"
then Q = 0.92 (5.28) 0.99 = 4.81 cfs

Developed (no bldg. ponding)
Site Area = 1.43 ac.
% Impervious = 94%
then C = 0.92
I = 5.28"
then Q = 0.92 (5.28) 1.43 = 6.95 cfs

Ponding Volume = 700 cf (approx.)
Original Free Discharge Area = 1.43 ac.
Proposed Free Discharge Area = 0.19 ac.
Bldg. Roof Area = 19,135 SF

- LEGEND**
- PROPERTY LINE
 - EXISTING CONTOURS
 - PROPOSED CONTOURS
 - EXISTING SPOT ELEVATIONS
 - PROPOSED SPOT ELEVATIONS
 - FUTURE SIDEWALK
 - RETAINING WALL
 - DIRECTION OF FLOW

BLOCK 12, EASTRIDGE ADDITION, UNIT 4



Storm Grate Top 597.4 Invert 594.9

APPROVED FOR DRAINAGE
DATE 12/20/84
SIGNATURE [Signature]
DIVISION DRAINAGE INSPECTOR
WHEN GRADING EXECUTED

BENCHMARK

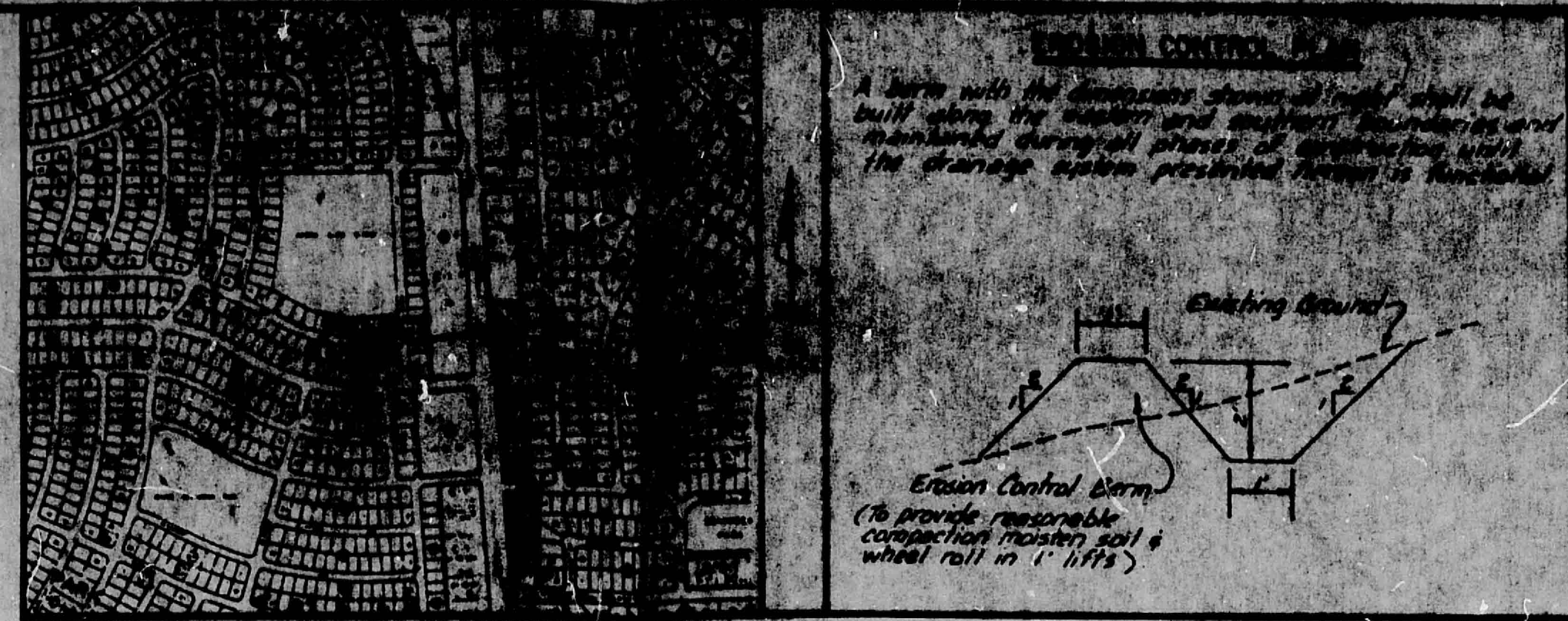
BM 90-22 SBBFH. N.E. QUAD.
JUAN TABO AND PRINCESS
JEANNE. ELEV. 5605.49

RECEIVED
DEC 18 1984
HYDROLOGY SECTION

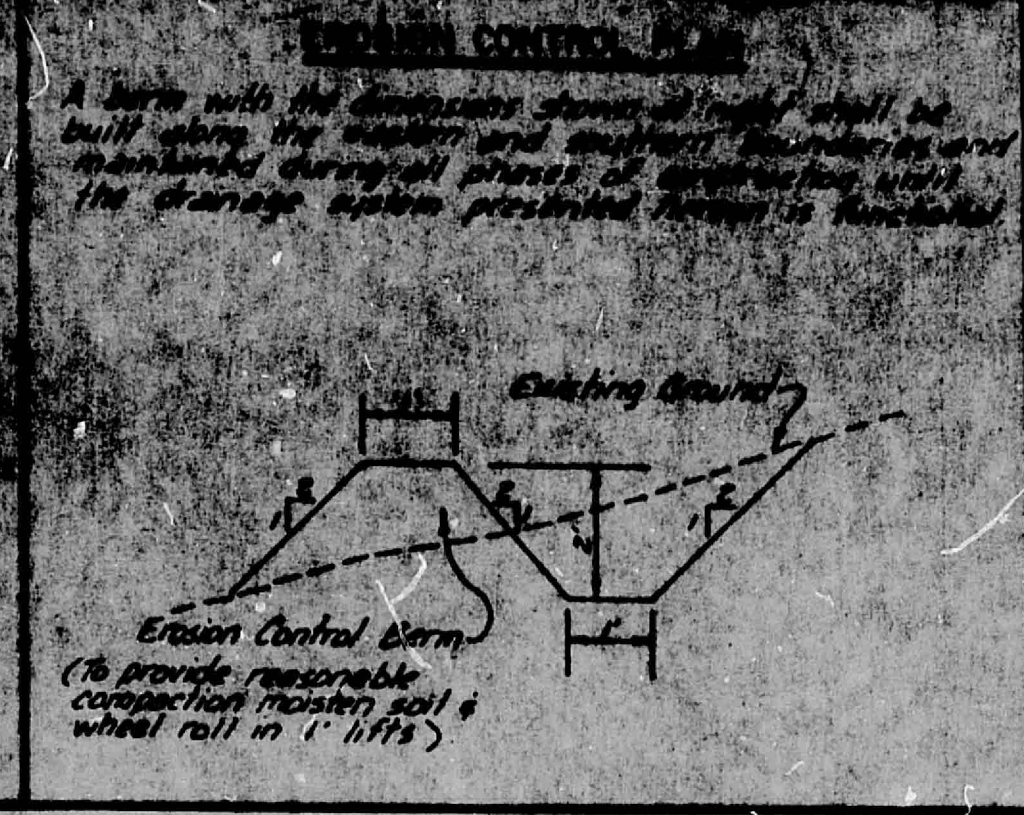
PEP BOYS JUAN TABO SITE	
Project No.	
Sheet	1 of 1
Job No.	42452
Drawn By	TR
Date	10/84
Checked By	JT
Scale	1" = 30'
DRAINAGE PLAN	

J22 / 039

- LEGEND**
- PROPERTY LINE
 - EXISTING CONTOURS
 - PROPOSED CONTOURS
 - EXISTING SPOT ELEVATIONS
 - PROPOSED SPOT ELEVATIONS
 - FUTURE SIDEWALK
 - RETAINING WALL
 - DIRECTION OF FLOW

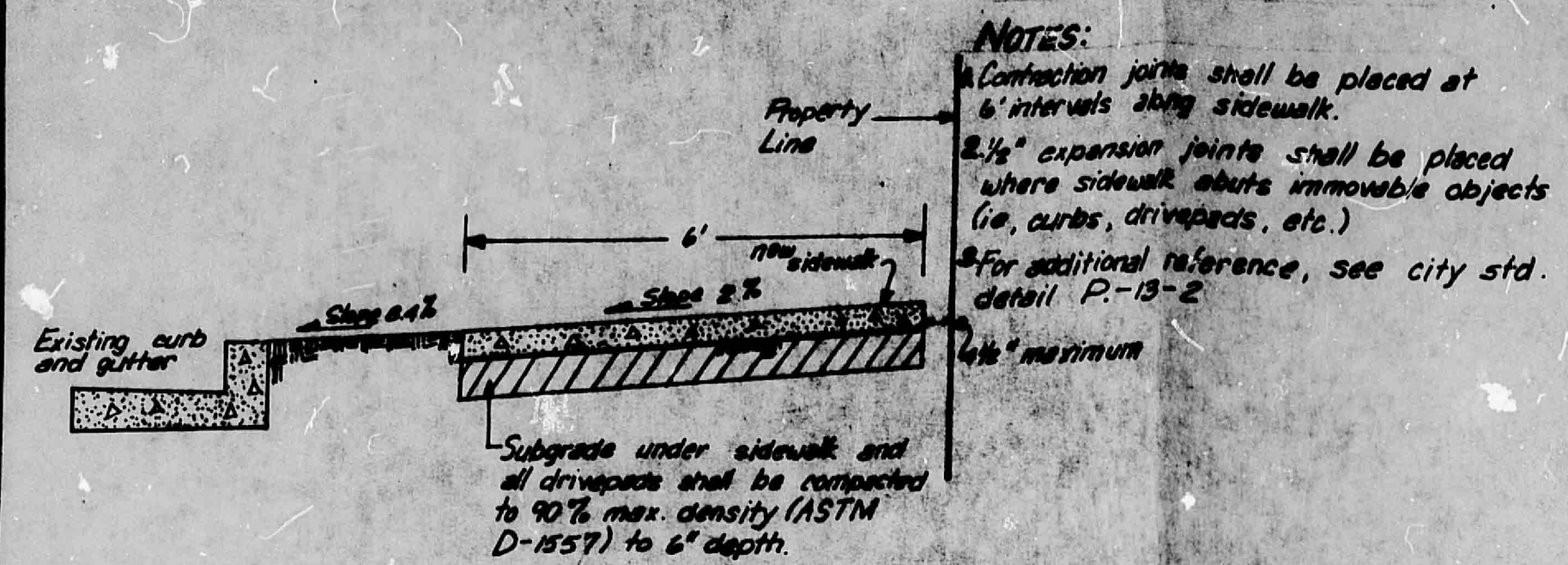


LOCATION MAP
ZONE ATLAS PAGE J-21-2, J-22-2



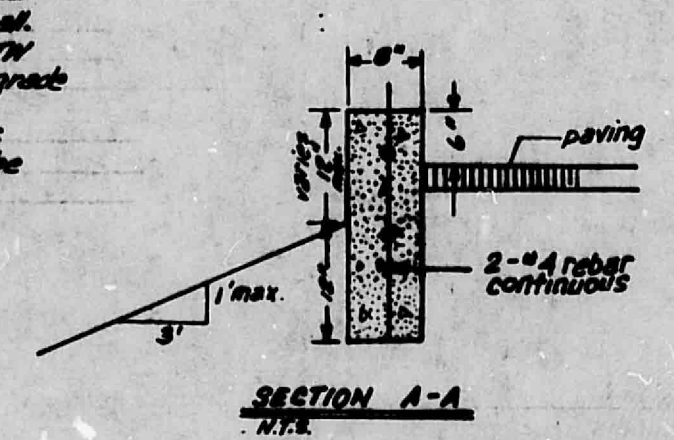
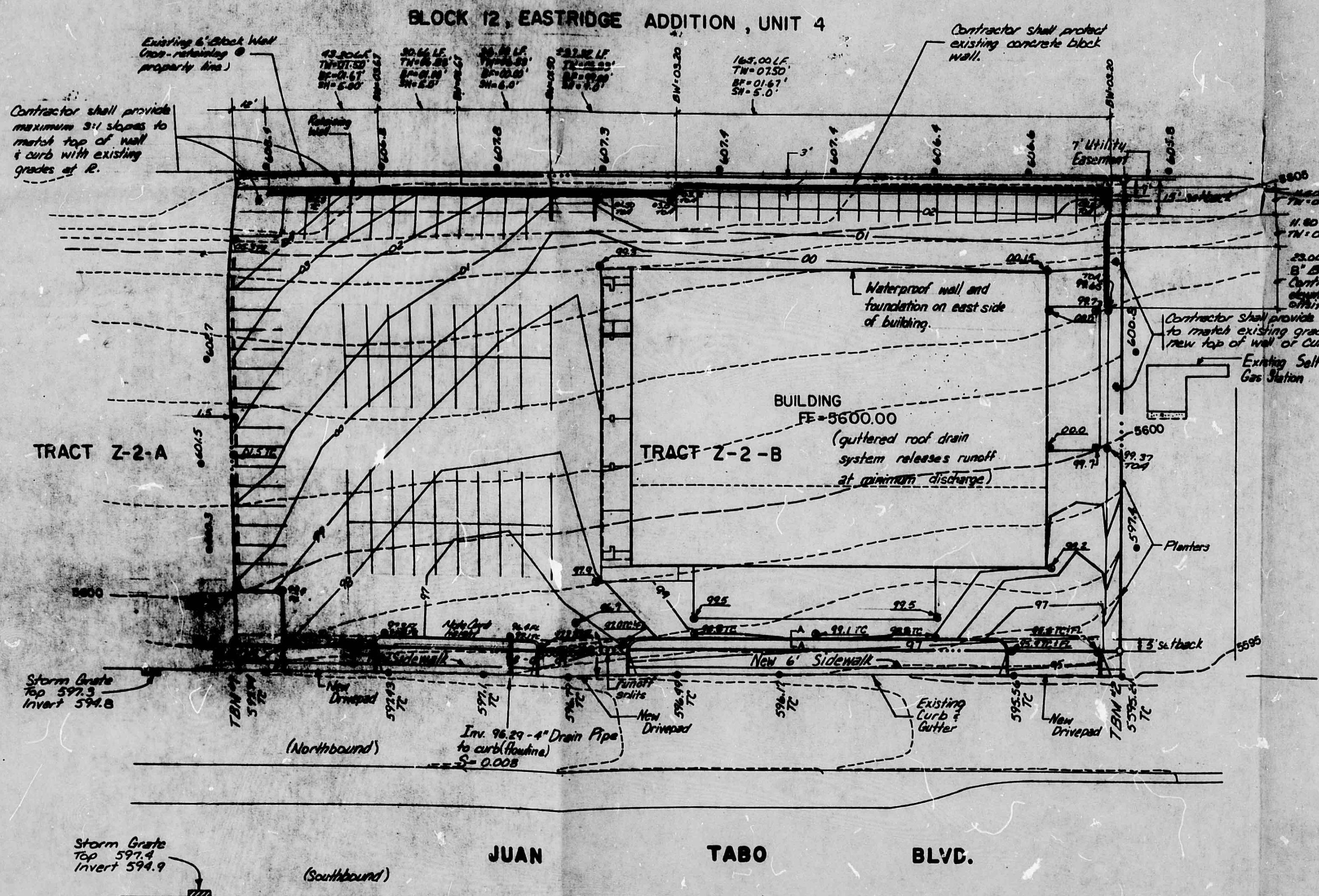
EROSION CONTROL PLAN

- GRADING NOTES**
1. NO FILL MATERIAL SHALL BE PLACED IN FILL.
 2. ALL WORK DETAILLED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE SPECIFIED, BE PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE PUBLIC WORKS DIVISION, 19-2-1 AND THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION-1993 EDITION.
 3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATION SERVICE, 768-1234 FOR LOCATION OF EXISTING UTILITIES.
 4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
 5. PRIOR TO GRADING, ALL VEGETATION, DEBRIS AND HEAVY SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE. TOPSOIL STRIPPINGS SHALL BE DISPOSED OF OFF-SITE OR STOCKPILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.
 6. ALL MATERIAL PLACED IN FILL SHALL HAVE BEEN EXCAVATED ON-SITE OR FROM AN APPROVED BORROW AREA.
 7. FINISHED PAD ELEVATIONS ARE BELOW FINISH FLOOR ELEVATIONS.
 8. DURING ROUGH GRADING OF THE SITE, ALL BUILDING PADS SHALL BE GRADED TO THREE FEET BEYOND SPECIFIED HORIZONTAL DIMENSIONS.
 9. SUBGRADE TOLERANCE ON ALL BUILDING PADS, PARKING AREAS, ROADWAYS, DRAINAGE IMPROVEMENTS ETC. SHALL BE $\pm .05$ FEET.
 10. FINISHED TOP OF ASPHALT TOLERANCE FOR ALL AREAS WITH SLOPES LESS THAN 1% IS $\pm .02$ FEET FINISHED TOP OF ASPHALT TOLERANCE FOR ALL AREAS WITH SLOPES GREATER THAN 1% IS $\pm .05$ FEET.
 11. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL.
 12. GRADING AND EARTHWORK OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH ALL CURRENT CITY, COUNTY, STATE AND FEDERAL DUST CONTROL REGULATIONS.
 13. PRIOR TO FOOTING PLACEMENT THE PROPOSED BEARING SURFACES SHOULD BE SCARIFIED AND MOISTENED TO OPTIMUM MOISTURE CONTENT ($\pm 2\%$) FOR A MINIMUM DEPTH OF 8 INCHES. BEARING SURFACES SHOULD THEN BE COMPACTED WITH A MINIMUM OF 25 PASSES WITH A HEAVY VIBRATORY ROLLER, TO A MINIMUM OF 90% OF THE MAXIMUM PROCTOR DENSITY AS DETERMINED BY ASTM D-1557.
 14. BACKFILL AND ANY SOIL DISTURBED AROUND THE FOUNDATION WALLS SHOULD BE MOISTENED AND COMPACTED TO 90% OF MAXIMUM DENSITY PRIOR TO PLACING EXTERIOR SLABS OR SIDEWALKS.
 15. ANY FILL REQUIRED BELOW FINISHED AREAS OF THE BUILDING SLAB SHOULD BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557.
 16. DO NOT PUDDLE OR JET BACKFILL.
 17. THE TOP 8" OF SUBGRADE BENEATH THE PAVEMENT AND BUILDINGS SHALL BE SCARIFIED AND COMPACTED, WITH A MINIMUM OF 20 PASSES USING HEAVY VIBRATORY EQUIPMENT, TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557.
 18. PRIOR TO PLACEMENT OF SOIL FILL, AND SUBSEQUENT TO FINAL GRADING IN CUT SECTIONS, THE NATURAL GROUND SHALL BE SCARIFIED, BROUGHT TO OPTIMUM MOISTURE CONTENT ($\pm 2\%$) FOR AS DEEP AS PRACTICABLE AND COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557.



SIDEWALK DETAIL
N.T.S.

Note:
Retaining wall construction details and notes are shown on sht. 2 of this plan set.



DRIVEPAD DETAILS
N.T.S.

Drivepads should cross the sidewalk on the sidewalk grade line without depression of the sidewalks. However, if a drivepad gradient in excess of 11% would be required to avoid depression of the sidewalk, the sidewalk shall be transitioned to match the drivepad within 6' and the drivepad gradient shall be maintained.

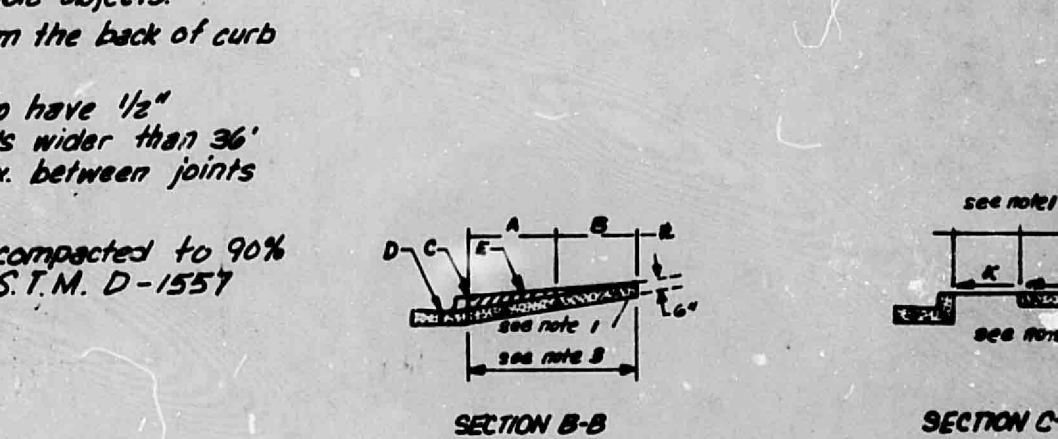
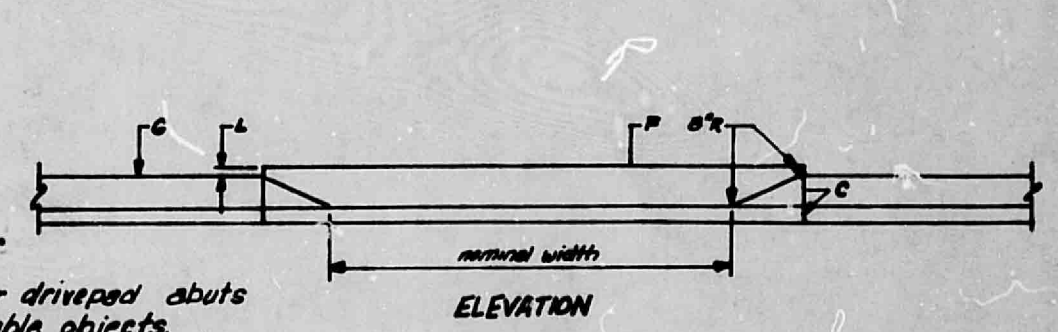
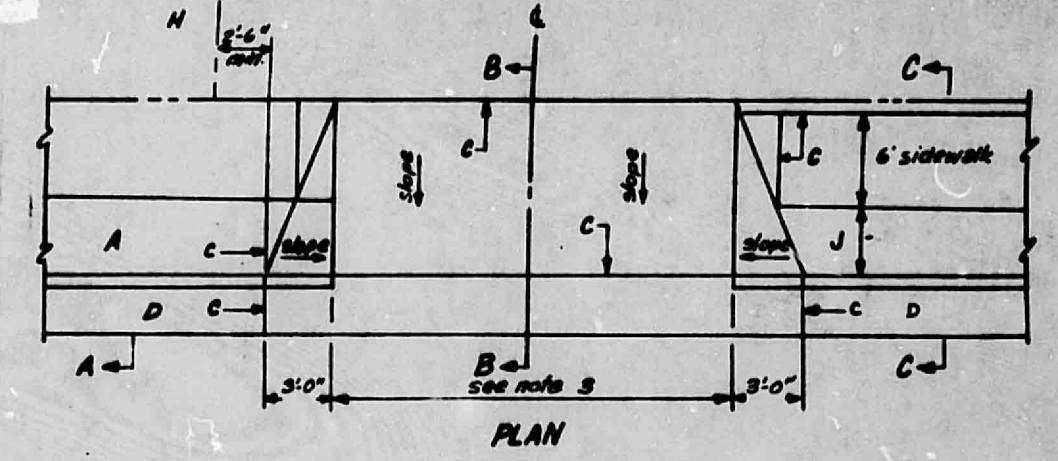
Notes:

1. 1/2" expansion joint where sidewalk or drivepad abuts buildings, fences, walls or other immovable objects.
2. All drivepads shall be constructed from the back of curb to property line.
3. Drivepads wider than 15' (nominal) to have 1/2" expansion joint at midpoint. Drivepads wider than 36' to have 1/2" expansion joints 18' max. between joints equally spaced.
4. Subgrade under drivepads shall be compacted to 90% max. density as determined by A.S.T.M. D-1557 to a depth of 6".

Construction Notes

- A. Det. area.
- B. Offset sidewalk area.
- C. 1/2" expansion joint, adjust to field conditions on replacement work.
- D. Curb and gutter.
- E. Slope to be adjusted to provide uniform transition between sidewalk and drivepad.
- F. Top of drivepad.
- G. Top of curb.
- H. Property line.
- I. variable.
- J. Slope 1/4" per ft. very near drivepads to match drivepad slope.
- K. 0.35' above top of curb at property line typical. Deviations must be approved by city engineer prior to construction.

APPROVED FOR ROUGH GRADING (\$1.0')
HYDROLOGY ENGINEER DATE

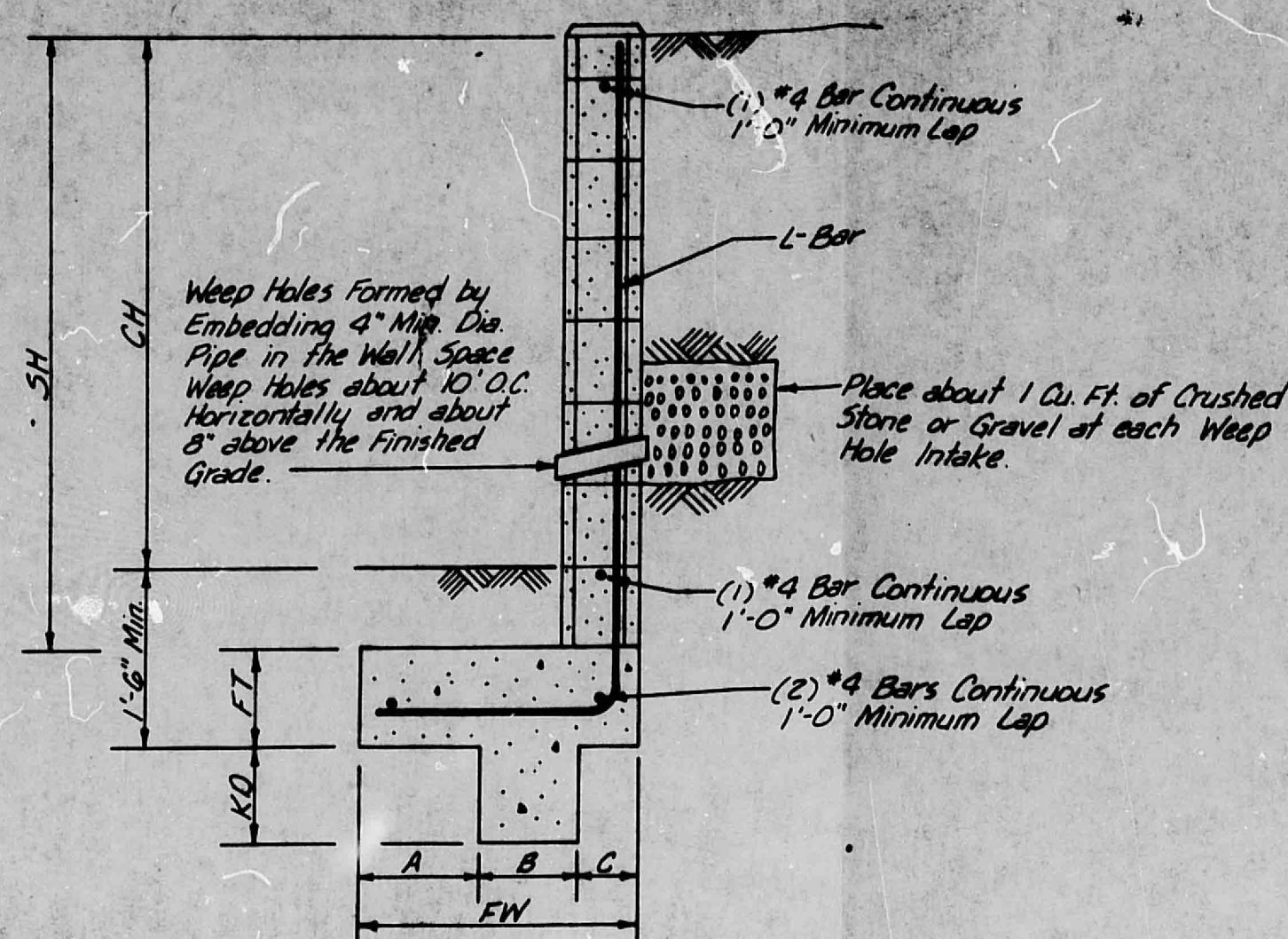


BENCHMARK
BM 9J-22 SBBFH. NE. QUAD.
JUAN TABO AND PRINCESS
JEANNE. ELEV. 5605.49'

APPROVED FOR DRAINAGE
12/24/04
DATE
SIGNATURE
ADVISE DRAINAGE INSPECTOR
WHEN GRADING EXECUTED

PEP BOYS SITE AT JUAN TABO BLVD. GRADING PLAN Project No. _____ Job No. 42452 Sheet 2 of 2 Drawn By: JTR Date: 10/04 Checked By: JT Scale: 1" = 30' Date: 12/24/04 Revised Site Plan	
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DEC 18 1984
HYDROLOGY SECTION

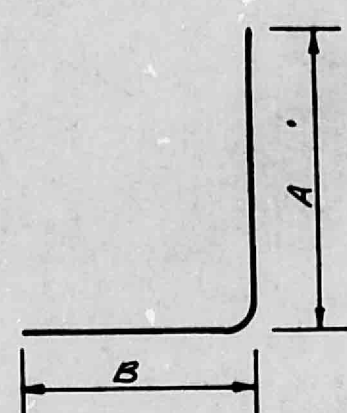


SH	CH	FT	KD	FW	A	B	C
3'-0"	2'-2"	8"	8"	1'-8"	6"	8"	6"
4'-0"	3'-2"	8"	8"	1'-10"	8"	8"	6"
5'-0"	4'-4"	10"	10"	2'-4"	12"	10"	6"

WALL DIMENSION TABLE

SH	L - BARS				
	SIZE	SPACING	LENGTH	A	B
3'-0"	#4	16"	4'-7"	3'-3"	1'-4"
4'-0"	#4	16"	5'-9"	4'-3"	1'-6"
5'-0"	#5	16"	7'-5"	5'-5"	2'-0"

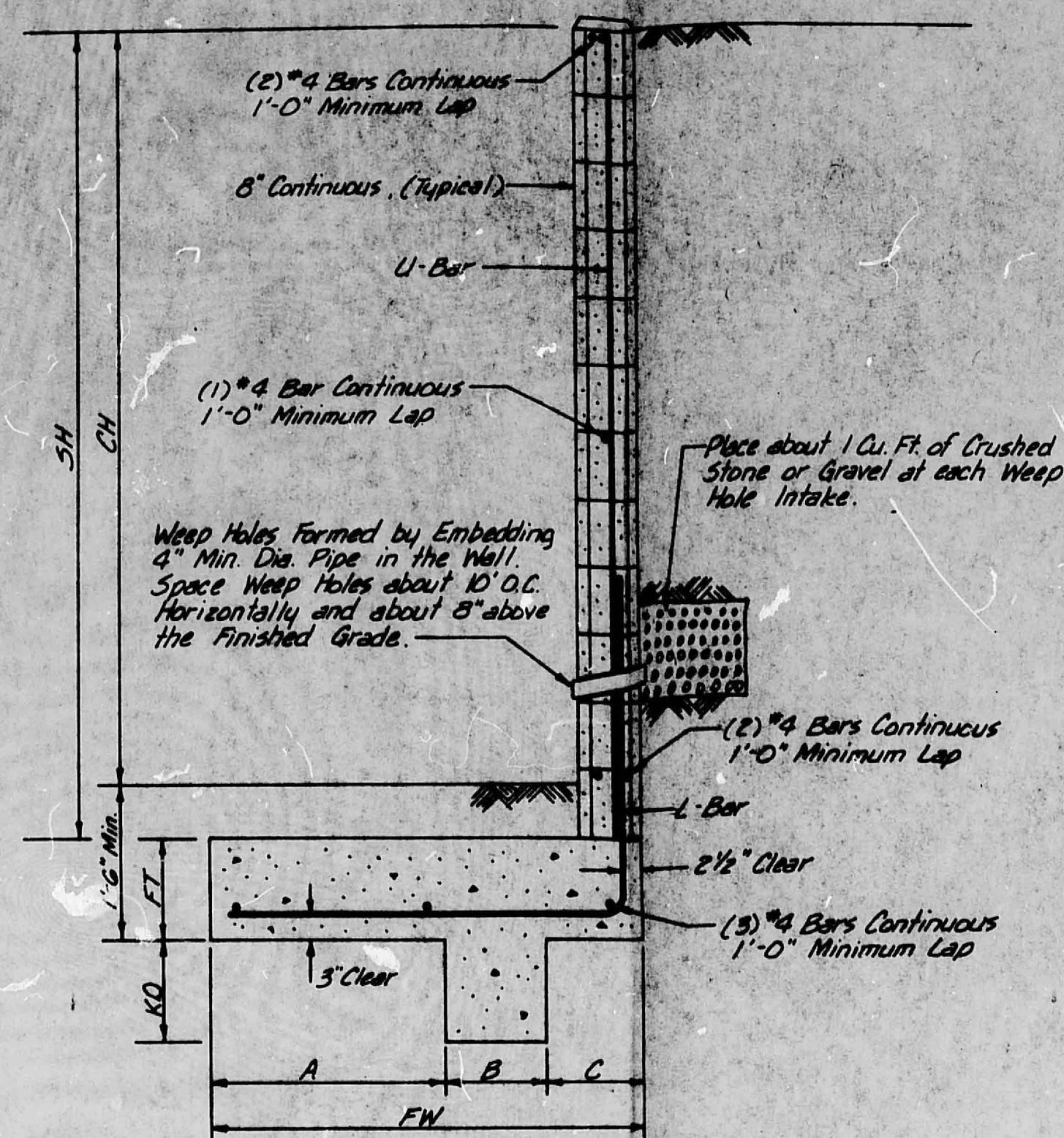
REBAR TABLE



3'-0" to 5'-0" REINFORCED CONCRETE MASONRY WALL

GENERAL NOTES

- Walls designed for level backfill only.
- Back filling against reinforced concrete masonry retaining walls should not be permitted until at least 7 days after placing the core fill concrete or grout. Where heavy equipment is used in back filling walls designed to resist earth pressure only, such equipment should not approach closer to the top of the wall than a distance equal to the height of the wall. Care should also be taken to avoid exerting large impact forces on the wall as could be caused by a large mass of moving earth.
- Design Criteria**
 Weight of Block 12" = 140 PSF
 Weight of Block 8" = 92 PSF
 Weight of Soil = 120 PCF
 Weight of Concrete = 150 PCF
 E.F.P. = 30 PCF
 Maximum Soil Pressure = 1500 PSF
 Minimum Soil Pressure = 0 PSF
 Minimum F.S. O.T. = 1.0
 Coefficient of Friction = 0.4
 Passive Soil Pressure = 300 PCF
 Concrete F'c = 3000 PSI
 Grout F'c = 2000 PSI
 Grade N CMU F'm = 1500 PSI
 Mortar (Type S) = 1800 PSI
 Rebar Grade 60



SH	CH	FT	KD	FW	A	B	C
6'-0"	5'-4"	10"	10"	3'-0"	1'-6"	10"	8"
7'-0"	6'-4"	10"	10"	3'-8"	2'-0"	10"	10"
8'-0"	7'-6"	12"	12"	4'-4"	2'-4"	12"	12"

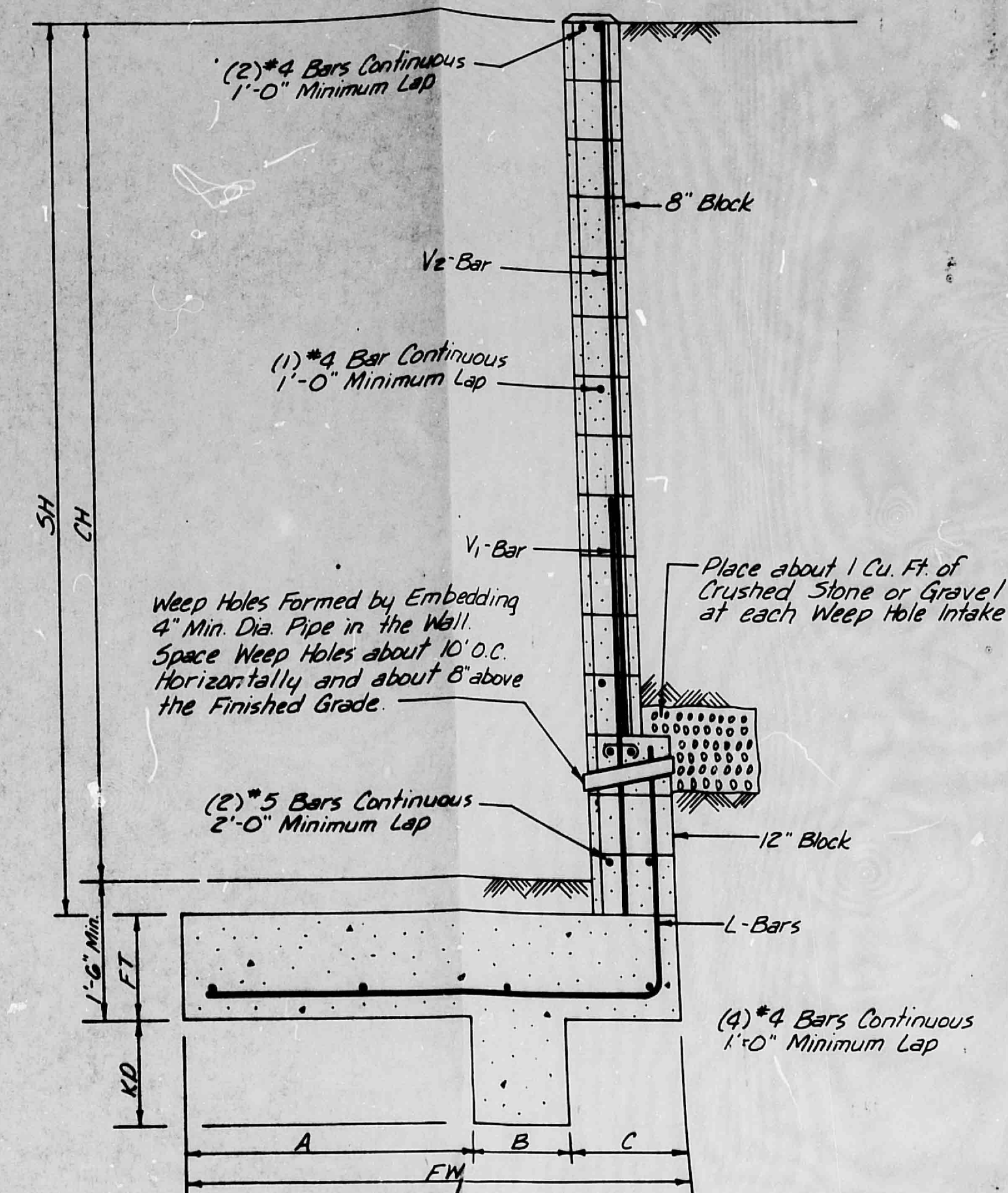
WALL DIMENSION TABLE

SH	L - BARS							
	SIZE	SPACING	LENGTH	A	B	SIZE	SPACING	LENGTH
6'-0"	#5	16"	5'-1"	2'-5"	2'-8"	#4	16"	5'-10"
7'-0"	#4	8"	5'-9"	2'-5"	3'-4"	#4	16"	6'-10"
8'-0"	#5	8"	7'-3"	3'-3"	4'-0"	#4	16"	7'-10"

REBAR TABLE



6'-0" to 8'-0" REINFORCED CONCRETE MASONRY WALL

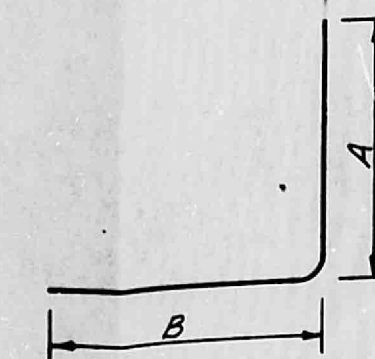


SH	CH	FT	KD	FW	A	B	C
9'-0"	8'-6"	12"	12"	5'-0"	2'-10"	1'-0"	1'-2"
10'-0"	9'-8"	14"	14"	5'-8"	3'-2"	1'-2"	1'-4"

WALL DIMENSION TABLE

SH	L - BARS					V ₁ - BARS			V ₂ - BARS		
	SIZE	SPACING	LENGTH	A	B	SIZE	SPACING	LENGTH	SIZE	SPACING	LENGTH
9'-0"	#5	8"	7'-5"	2'-9"	4'-8"	#4	8"	4'-6"	#4	16"	6'-10"
10'-0"	#5	8"	8'-3"	2'-11"	5'-4"	#5	8"	4'-6"	#4	16"	7'-10"

REBAR TABLE



9'-0" to 10'-0" REINFORCED CONCRETE MASONRY WALL

RETAINING WALL CONSTRUCTION DETAILS

PEP BOYS SITE AT JUAN TABO

