

CLAREMONT AVENUE, NE

APPROVALS	NAME	DATE
TRAFFIC		
INSPECTOR		
A.C.E./FIELD		

LEGEND

- EXISTING CONTOURS • 1.0' INTERVALS
- PROPOSED CONTOURS • 1.0' INTERVALS
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- FLOW LINE
- EXISTING CONCRETE PAVEMENT
- PROPOSED NEW ASPHALT PAVEMENT
- PROPOSED NEW CONCRETE SURFACING
- NEW CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE

NOTICE TO CONTRACTOR

- PROPOSED CONTOURS SHOWN ARE TO FINISH SURFACES AND ARE PROVIDED FOR THE PURPOSE OF SHOWING FLOW ROUTING.
- CONTRACTOR IS RESPONSIBLE FOR THE ABATEMENT OF SEDIMENT ONTO ADJOINING PUBLIC RIGHTS-OF-WAY DURING CONSTRUCTION AND FOR THE REMOVAL OF ANY SEDIMENT DEPOSITED IN PUBLIC RIGHT-OF-WAY.
- CONTRACTOR SHALL OBTAIN A "TOPSOIL DISTURBANCE PERMIT" PRIOR TO ANY GRADING OR CONSTRUCTION.
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
 - ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION, AS AMENDED THROUGH UPDATE #5.
 - TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 260-1990 FOR LOCATION OF EXISTING UTILITIES.
 - BACKFILL AND COMPACTION SHALL BE ACCORDING TO STREET USE.
 - MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE PROPERTY SERVED.

BENCH MARK

ACS STA. 12-H16 BRASS CAP SET IN CURB AT SE CORNER OF THE INTERSECTION OF CANDELARIA ROAD AND PRINCETON DRIVE, NE.
ELEV. 5086.32

T.B.M.

TOP OF CURB ADJ. TO NORTHWEST PROPERTY CORNER
ELEV. 5086.22

EXISTING ON-SITE CONDITIONS

A CONCRETE-SURFACED PARKING LOT COVERS THE NORTHERLY ONE-HALF OF THIS SITE. THE REMAINDER IS UNIMPROVED BUT HAS BEEN FILLED WITH SPOIL MATERIAL AND CONSTRUCTION RUBBLE. SLOPE OF THE EXISTING IMPROVED SURFACE IS APPROXIMATELY ONE PER CENT. SLOPE OF THE UNIMPROVED PORTION VARIES; SOUTHERLY THIRTY FEET HAS SLOPES THAT APPROACH FIFTY PER CENT.

THERE ARE NO DISCERNIBLE AREAS THAT CONTRIBUTE OFFSITE FLOWS TO THIS SITE AND THERE ARE NO VISIBLE NATURAL OR GRADED WATERCOURSES WITHIN IT. ALL FLOWS EXIT TO THE SOUTH AND DISCHARGE ONTO TRACTS 21B AND 22 OF THE DASKAY ADDITION. 21B IS DEVELOPED AND WAS DESIGNED TO ACCOMMODATE HISTORIC FLOWS ENTERING IT FROM THE NORTH AND EAST. TRACT 22 IS VACANT.

PROPOSED DEVELOPMENT

THAT AREA WHICH IS CURRENTLY UNDEVELOPED IS TO BE GRADED, COMPACTED, PAVED AND STRIPED FOR PARKING. THE SLOPE ON THE SOUTH WILL BE CLEANED, STABILIZED AND APPROPRIATELY LANDSCAPED (SEPARATE PLAN). ASPHALT MAT DRIVE FOLLOWING THE EAST LINE IS TO BE REMOVED, THE AREA IT COVERS IS TO BE REGRADED AND REPAVED. ALL SURFACE RUNOFF IS TO BE DIRECTED BY GRADE TO A FORMED CONCRETE RUNDOWN, TWO FEET IN BOTTOM WIDTH, THAT WILL DISCHARGE ONTO TRACT 21B. FLOWS ACROSS THAT SITE TO PHOENIX AVENUE ARE COVERED BY A GRANT OF PRIVATE DRAINAGE EASEMENT.

DISPOSAL ROUTING IS VIA SURFACE OF PHOENIX AVENUE TO DROP INLETS LOCATED AT THE INTERSECTION OF PRINCETON DRIVE. INLETS FEED A 72" RCP STORM DRAIN RUNNING WEST TO DAYLIGHT INTO AN IMPROVED CHANNEL WHICH DRAINS INTO THE MENAUL SCHOOL WATER DETENTION POND. CONTROLLED DISCHARGE FROM THIS POND VIA BURIED STORM DRAIN OUTFALLS INTO THE ALAMEDA DRAIN.

THIS PROPOSED IMPROVEMENTS WITHIN THIS SITE CONSTITUTE AN INFILL OF AN OTHERWISE DEVELOPED URBAN, COMMERCIAL AREA.

AREA OF THIS SITE IS 1.81 ACRES. THIS IS APPROXIMATELY 9 TENTHS OF ONE PER CENT OF THE TOTAL AREA (183 ACRES) FEEDING THE LOCAL STORM DRAIN SYSTEM IN PHOENIX AVENUE AS MEASURED FROM THE OUTFALL POINT ON THE WEST SIDE OF I-25.

LENGTH OF RUN • FURTHEST REACH: 5000 FEET
AVERAGE SLOPE: .021 FT/FT
TIME OF CONCENTRATION (DPM 22.2 Eq. b-5):
$$t_c = \left(\frac{12000 - 5000}{72000 + 3 \cdot .021 \cdot 50} \right) \cdot \left(\frac{5000 - 4000}{555.2 + .021 \cdot 0.065} \right) = .2263 \text{ hr.}$$

THE DEVELOPED INTENSITY:

$$i = 0.726 \cdot (\log (24.6 \cdot .2263)) \cdot \left(\frac{1}{.2263} \right) \cdot 2.01 = 4.81 \text{ in/hr.}$$

TREATMENT AREAS FOR COMMERCIAL USES WEIGHTED AS FOLLOWS: B 5%, C 5%, D 90%
$$Q_{100} = (.9 \cdot 183 \cdot .93) + (.05 \cdot 183 \cdot .61) + (.05 \cdot 183 \cdot .43) \cdot 4.81 = 783 \text{ CFS, peak}$$

THIS SITE IS 3400 FEET FROM OUTFALL POINT.
FLOW IS CONVEYED ENTIRELY ON ASPHALT SURFACES OR WITHIN CONCRETE STORM SEWERS.

AVG. SLOPE, DISCHARGE POINT TO OUTFALL: .017 FT/FT

STREET RUN: 1100 FT $V = 10 \cdot 3 \cdot .017 = 3.91 \text{ FPS}$
STORM DRAIN RUN: 2300 FT.

Given Constant Data:		COMPUTED					
Diameter	Slope	Channel Slope	Manning's n	Discharge	Depth	Velocity	Capacity
6.00	0.0157	ft	ft/ft	cfs	ft	fps	Full cfs
0.012	0.012	0.0157	0.012	574.88	6.00	20.33	574.88
Discharge	574.88	6.00	0.0157	0.012	574.88	6.00	20.33

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$t_c = \frac{1100 \text{ FT}}{3.91 \text{ FPS}} + \frac{2300 \text{ FT}}{20.33 \text{ FPS}} = 394.5 \text{ SEC (1.095 HR)}$

IMPACT FROM THIS SITE OCCURS BEFORE BASIN PEAK FLOW.

ON-SITE DRAINAGE DATA

THIS SITE LIES WITHIN PRECIPITATION ZONE 2

CONDITION	STORM RETURN PERIOD YEAR	TREATMENT TYPE	TREATMENT AREA	EXCESS PRECIP. IN.	PEAK RUNOFF CFS/AC	RUNOFF VOLUME CU.FT.	RUNOFF RATE CFS
EXISTING	100	B	27522	0.78	2.28	1789	1.44
		C	10397	1.13	3.14	979	0.75
		D	32126	2.12	4.70	5676	3.47
EXISTING	10	B	27522	0.28	0.95	642	0.60
		C	10397	0.52	1.71	451	0.41
		D	32126	1.34	3.14	3587	2.31
TOTAL	100		70045			8444	5.66
	10		70045			4680	3.32
DEVELOPED	100	B	5751	0.78	2.28	373	0.30
		C	6100	1.13	3.14	574	0.44
		D	58194	2.12	4.70	10281	6.28
DEVELOPED	10	B	5751	0.28	0.95	134	0.13
		C	6100	0.52	1.71	264	0.24
		D	58194	1.34	3.14	6498	4.19
TOTAL	100		70045			11228	7.02
	10		70045			6896	4.56

FLOW RATE INCREASES OF 1.36 CFS AND 1.24 CFS FOR THE 100-YEAR AND 10-YEAR STORMS MAY BE EXPECTED. THE 6-HOUR RUNOFF VOLUMES WILL INCREASE BY 2784 CUBIC FEET FOR THE 100-YEAR STORM AND 2216 CUBIC FEET FOR THE 10-YEAR STORM.

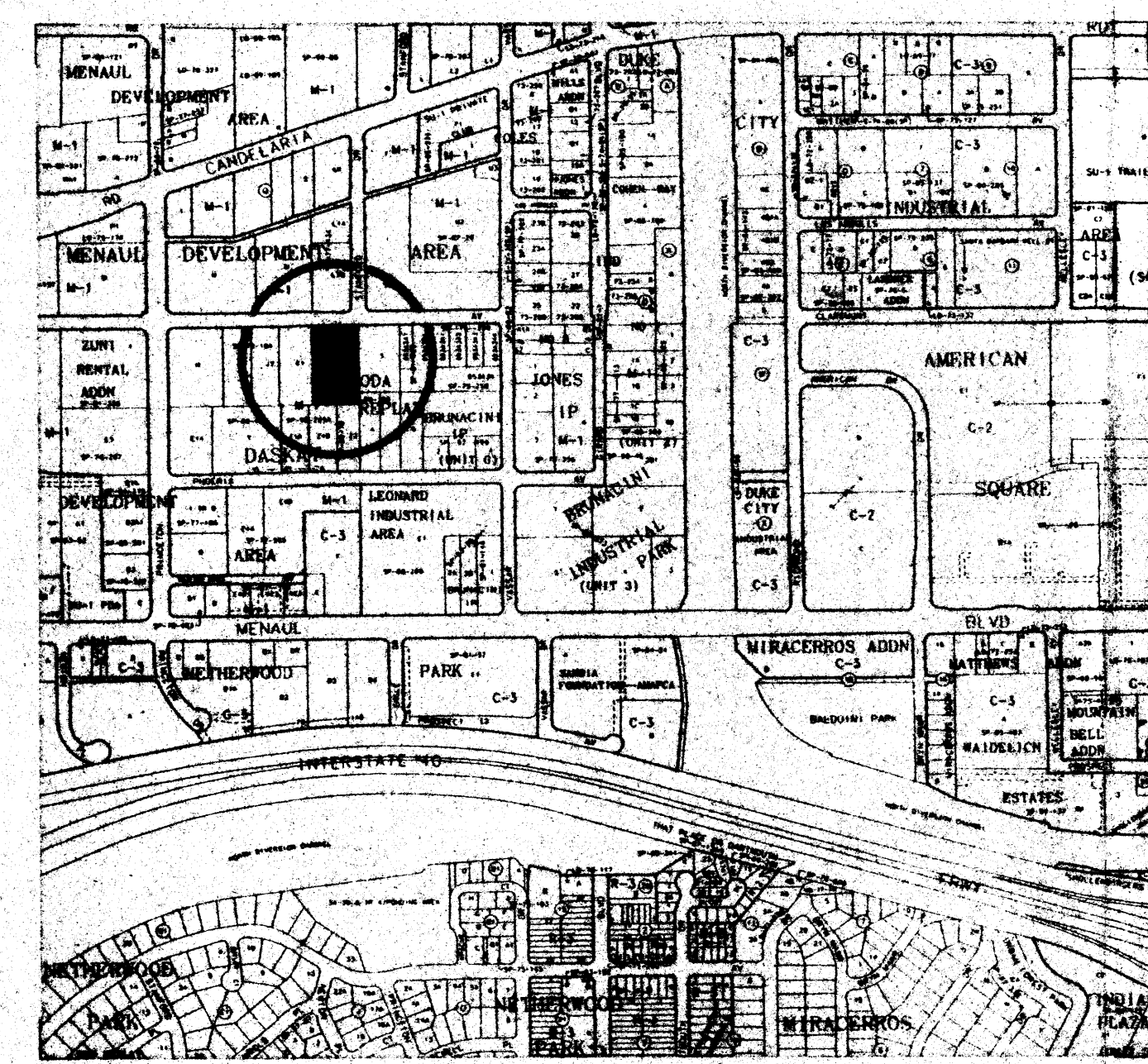
RECEIVED
APR 28 1999
HYDROLOGY SECTION

Richard V. Hall
4/20/99

GRADING AND DRAINAGE PLAN
LOT 2, SANDODA REPLAT
PEPSI COLA METRO BOTTLING
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

D1

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VICINITY MAP

H-16-Z

Rectangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: pepsi7
Description: UPPER 6' RUN

Solve For Depth
Given Constant Data:

Bottom Width..... 2.00
Mannings 'n'..... 0.015
Channel Slope..... 0.0916
Channel Discharge.. 7.02

Worksheet Name: PEPSIS
Description: CONCRETE RUNDOWN

Solve For Depth
Given Constant Data:

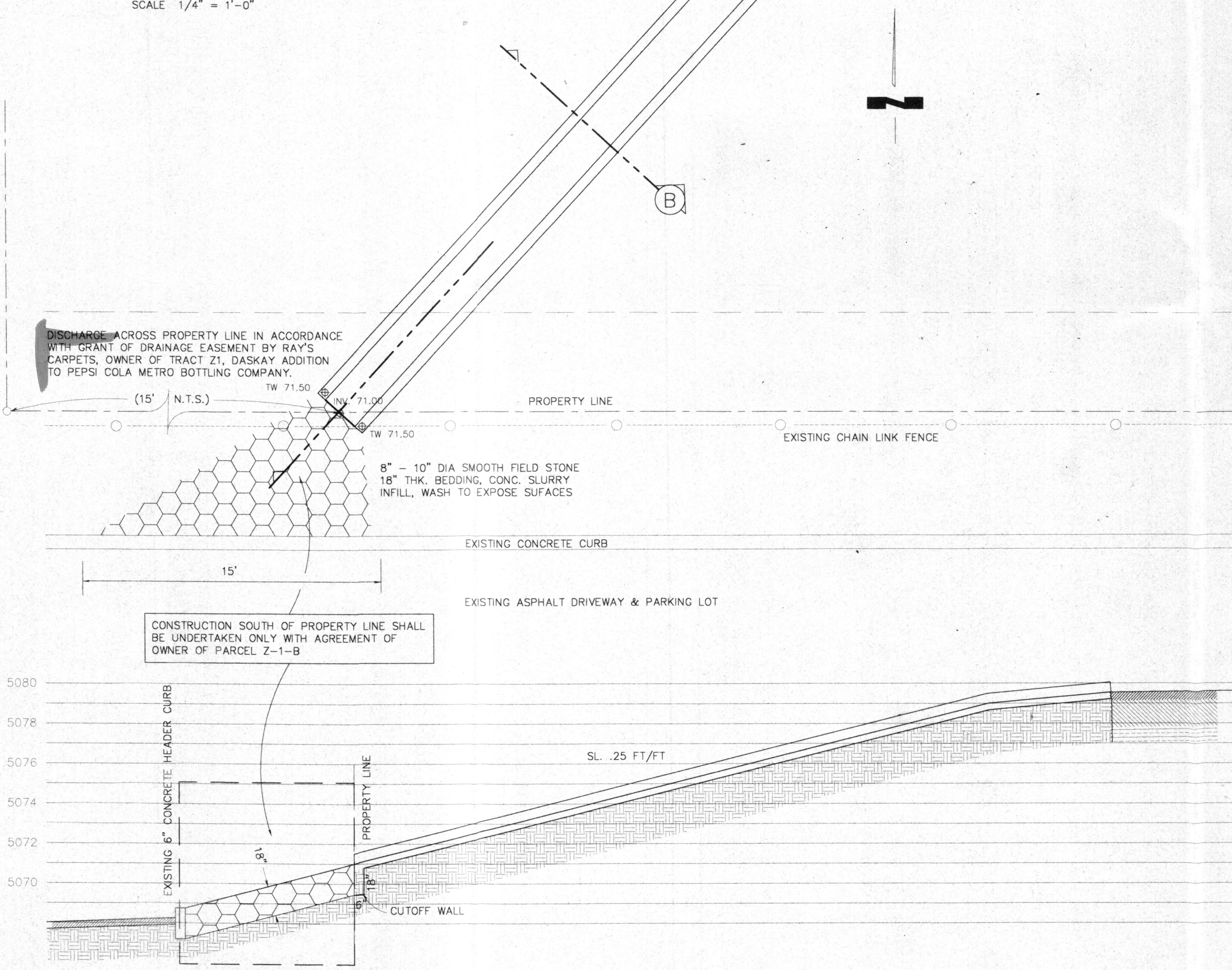
Bottom Width..... 2.00
Mannings 'n'..... 0.015
Channel Slope..... 0.2500
Channel Discharge.. 7.02

Bottom Width	Mannings 'n'	Channel Slope	Channel Depth	Channel Discharge	Channel Velocity
ft		ft/ft	ft	cfs	fps
2.00	0.015	0.0916	0.31	7.02	11.42

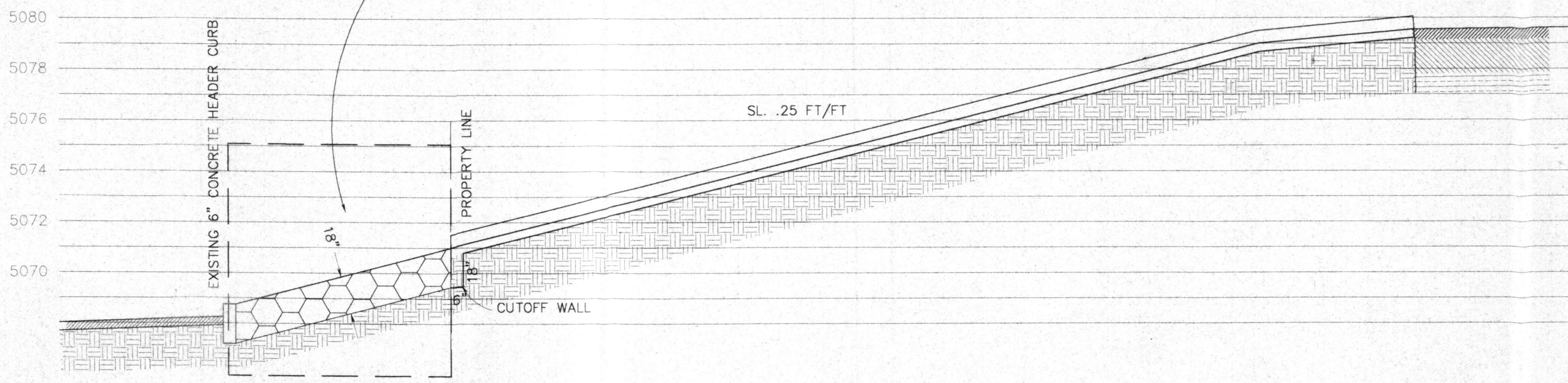
Bottom Width	Mannings 'n'	Channel Slope	Channel Depth	Channel Discharge	Channel Velocity
ft		ft/ft	ft	cfs	fps
2.00	0.015	0.2500	0.22	7.02	15.86

Open Channel Flow Module, Version 3.16 (c)
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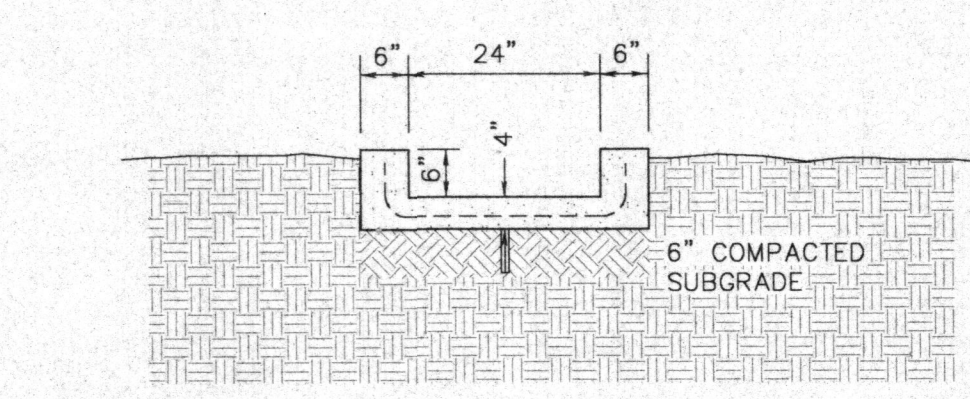
RUNDOWN LAYOUT
SCALE 1/4" = 1'-0"



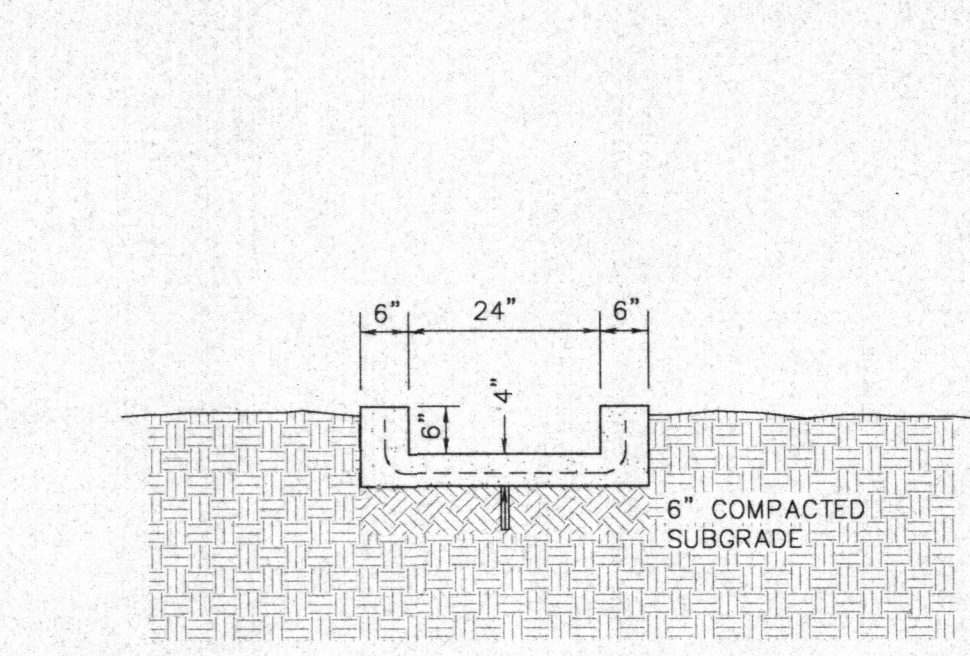
RUNDOWN PROFILE
SCALE 1/4" = 1'-0" V & H



DRAINAGE BASIN
SCALE 1/2" = 1'-0" V & H



RUNDOWN PROFILE
SCALE 1/2" = 1'-0" V & H



DRAINAGE STRUCTURE DETAILS
LOT 2, SANDODA REPLAT
PEPSI COLA METRO BOTTLING
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

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