BAN DIEDO AVE NE REPRAILILLO COUNTY. PANEL 129 OF 425 ZONE X Nation to Unit: This tillip Hamilton shows belonded be used whith disching step enters; the Community Hamilton indicates placed in the same places of the same property of the same particulars, for the same particulars, and the same particular particu FIRM BERNALILLO COUNTY. NEW MEXICO AND INCORPORATED ARRAG PANEL 137 OF 826 137 F PRICE NAP THOSE FOR FURNI PARKEL LAYOU PANELS # 129F/137F

CALCULATIONS

DESIGN CRITERIA

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM) REMSED JANUARY 1993 FOR CITY OF ALBUQUERQUE, ADOPTED BY THE COUNTY OF BERNALILLO DISCHARGE RATE: Q=QPEAK x AREA.."Peak Discharge Rates For Small Watersheds"

VOLUMETRIC DISCHARGE: VOLUME = EWeighted x AREA

P100 = 2.60 Inches, Zone 3 Time of Concentration, TC = 10 Minutes

DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [] = 10 YEAR VALUES

EXISTING CONDITIONS - TOTAL OF TWO LOTS

LOT AREA = 1.17 ACRES, WHERE EXCESS PRECIP. 'A' =0.66 In. [0.19],
PEAK DISCHARGE, Q100 = 2.19 CFS [0.68], WHERE UNIT PEAK DISCHARGE 'A' = 1.87 CFS/AC. [0.58]
THEREFORE: VOLUME 100 = 2803 CF [807]

DEVELOPED CONDITIONS

DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA (Excludes AMAFCA Inside New Fence)

	AREA LAND	TREATM'T	Q Peak	E
UNDEVELOPED	Ac.	Α	1.87[0.58]	0.66[0.19]
LANDSCAPING - POND	0.15 Ac.(17%)	В	2.60[1.19]	0.92[0.36]
COMPACTED SOIL & Slopes >	0.30 Ac. (34%)	С	3.45[2.00]	1.29[0.62]
ROOF - PAVEMENT	0.44 Ac. (49%)	D	5.02[3.39]	2.36[1.50]
	0.89 Ac.			

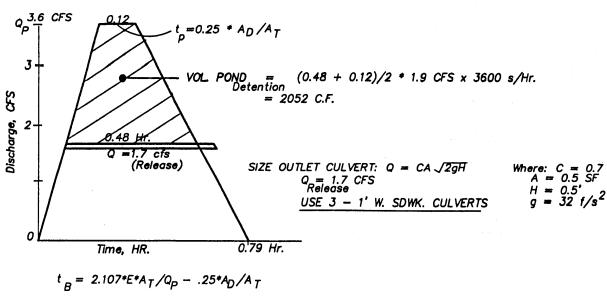
THEREFORE: E_{Weighted} = 1.75 In.[1.0] & Q100 = 3.6 CFS

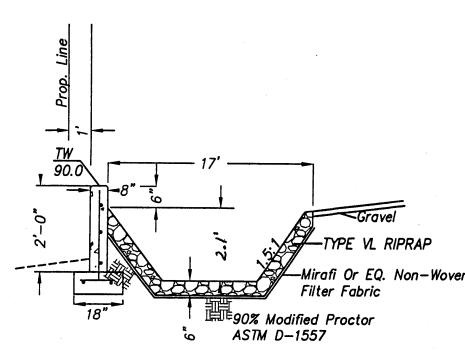
Q10 = 2.3 CFS

VOLUME 10 = 3230 CF THEREFORE: UNIT DISCH. = 4.04 CFS (100-YR.)

VOLUME 100 = 5654 CF

<u>DETERMINE POND SIZE</u> DETENTION POND PER HYDROGRAPH & DPM, Section A.8 STORAGE VOLUME (Required) = VOLUME AREA ABOVE ALLOWABLE RELEASE





CLASSIFICATION AND GRADATION OF RIPRAP

RIPRAP	% SMALLER THAN	INTERMEDIATE ROCK	MEAN
DESIGNATION	GIVEN SIZE BY WEIGHT	DIMENSION (IN.)	PARTICAL SIZE (IN.,
TYPE VL	70-100 50-70 35-50 2-10	12 9 6 2	6

GRADING & DRAINAGE PLAN

THE PROPOSED COMMERCIAL-WAREHOUSE PROJECT IS LOCATED IN THE NORTH ALBUQ. ACRES AREA OF ALBUQUERQUE ON EAGLE ROCK AVENUE IMMEDIATELY WEST OF 1-25. THE GRADING AND DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERNALILLO COUNTY FLOOD HAZARD ORDINANCE, NO.88-46, AND THE CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR SITE DEVELOPMENT PLAN & BUILDING PERMIT. THE PLAN SHOWS:

1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS AND IMPROVEMENTS.

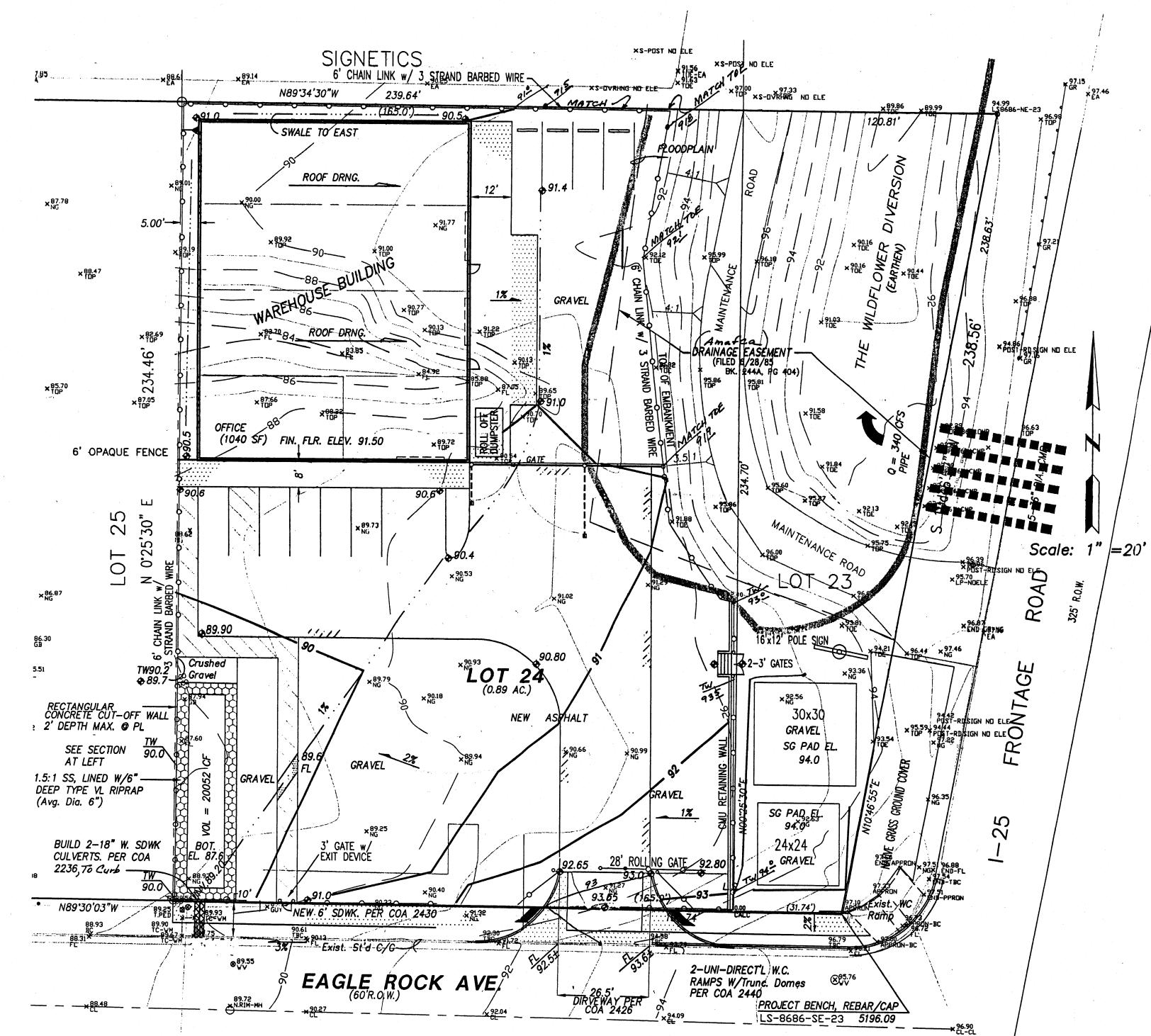
2. PROPOSED IMPROVEMENTS: 8000 SF OF OFFICE-WAREHOUSE BUILDING, ASPHALT DRIVE/PARKING. CONCRETE FLAT WORK, NEW GRADE ELEVATIONS, REFUSE LOCATION, AND LANDSCAPING. 3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.

4. QUANTIFICATION OF DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS WHICH CONTRIBUTE TO THE EXISTING FLOWS.

PRESENTLY, THE SITE IS A DIRT-VEGETATED SURFACE. THE SITE IS BOUNDED BY DEVELOPED COMMERCIALLY/INDUSTRIAL ZONED FACILITIES. THE SITE FALLS APPROXIMATELY 3% FROM EAST TO WEST.

EAGLE ROCK AVENUE IS A MAJOR LOCAL STREET WITH 2 LANES, WITH CURB, GUTTER AND DETTACHED SIDEWALKS. SITE RUNOFF WILL BE ALLOWED TO DRAIN THROUGH THE SITE, AND PONDED IN DEPRESSED LANDSCAPE AREAS. THE SITE HAS HISTORICALLY DRAINED TO THE WEST AND NORTH VIA A COMBINATION OF OVERLAND SHEET AND GULLIED FLOW.

HISTORICAL DOWNSTREAM OUTFALL LOCATIONS WILL REMAIN UNCHANGED WITH DEVELOPMENT. FREE DISCHARGE OF A PORTION OF SITE RUNOFF IS ACCEPTABLE SINCE PARTIAL DOWNSTREAM CAPACITY EXISTS. A PORTION OF SITE RUNOFF IS ROUTED THROUGH PROPOSED LANDSCAPING.



I, PHILIP W. CLARK, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT I HAVE VISITED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS, AND DO FURTHER CERTIFY THAT NO EARTHWORK OF ANY KIND, NOR ANY DISTURBANCE OF THE EXISTING GROUND HAS OCCURRED ON THIS SITE SINCE THE CONTOURS WERE

PROJECT DATA

LEGAL DESCRIPTION (Existing Platting)

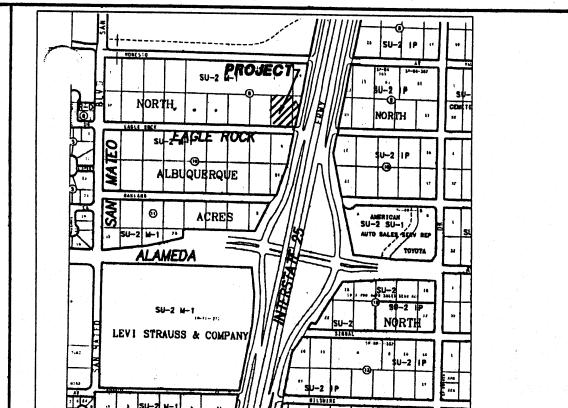
LOTS 23 & 24, BLOCK 9, UNIT B, TRACT A, NORTH ALBUQUERQUE ACRES, Albuquerque, Bernalillo County, New Mexico

PROJECT BENCHMARK

GPS, TO ACS, NAVD 88 DATUM, SEE PLAN, SE CORNER OF LOT 23.

TOPOGRAPHIC DESIGN SURVEY

Compiled by Clark Consulting Engineers From Design Survey Performed BY TERRAMETRICS (PHIL TURNER, PS), 6/08



MAP ZONE C-18 Scale: 1" = 780'

- 1. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 7TH EDITION W/ UPDATES.
- 2. AN EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY R.O.W. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION.
- 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.
- 4. ALL LANDSCAPING AREA SHALL BE SOFT-LINED WITH NATIVE VEGETATION AND/OR GRAVEL. ASPHALT PARKING AREA SHALL DRAIN DIRECTLY TO EXISTING CURB CUT.
- 5. LANDSCAPING IRRIGATION SYSTEM SHALL BE DRIP-TYPE. CONTRACTOR SHALL INSTALL SYSTEM PRIOR TO PLACEMENT OF PAVING.
- 6. CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.
- 7. REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION
- PER CITY OF ALBUQ. SPEC. 1011, NATIVE SEED MIX.
- 8. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3 HORIZONTAL TO 1 VERTICAL, 3:1. ALL DIMENSIONS TO FACE OF CURB, UNLESS NOTED OTHERWISE.
- 9. REMOVE/REPLACE EXISTING CURB WITH ST'D. 8" COA CURB/GUTTER. PER DWG. 2415A, if applicable.

EXIST. SPOT ELEVATION EXIST. CONTOUR	+24.0
NEW SPOT ELEVATION	4 24.0
NEW CONTOUR	12
NEW SWALE	
DRAINAGE DIRECTION, EXISTING	
NEW CONCRETE CURB (0.5' HEIGHT)	
NEW P.C.C., CONCRETE	
TOP OF CURB, EXISTING	TBC
FLOWLINE	FL
FACE OF CURB/FACE OF CURB	F-F
EXISTING TOP OF ASPHALT CURB	TAC
EXIST. TOP OF ASPHALT	TA
EXIST. GROUND	G
EXIST. EDGE OF CONCRETE	EC
DOWNSPOUT	DS
LANDSCAPING NOTICE TO CONTRAC	LS

NOTICE TO CONTRACTORS 1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.

2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE ST'D. SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 7TH EDITION, AND AMENDMENT #1.

TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT THE LIN LOCATING SERVICE, NM ONE CALL 260—1990, FOR LOCATION OF EXISTING UTILITIES. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

D. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE. 6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.

APPROVAL	NAME	•	DATE

Clark Consulting Engineers 19 Ryan Road Edgewood, New Mexico 87015 Tele: (505) 281-2444 LOTS 23 & 24, BLOCK 9, UNIT B, TRACT A NORTH ALBUQUERQUE ACRES DATE REVISION 9/29/08 BILTWELL BUILDINGS
Replot (INC)

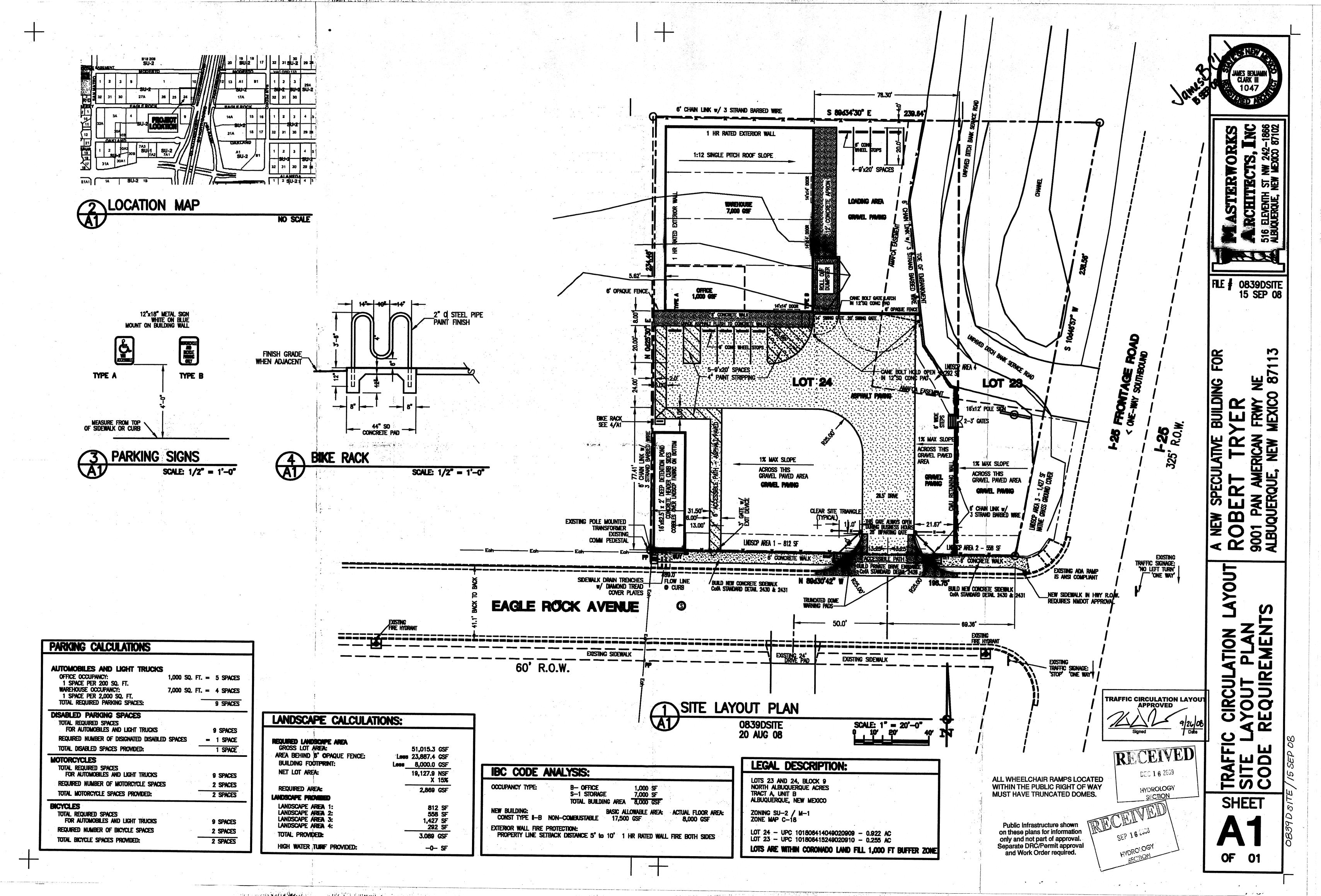
Replot (INC)

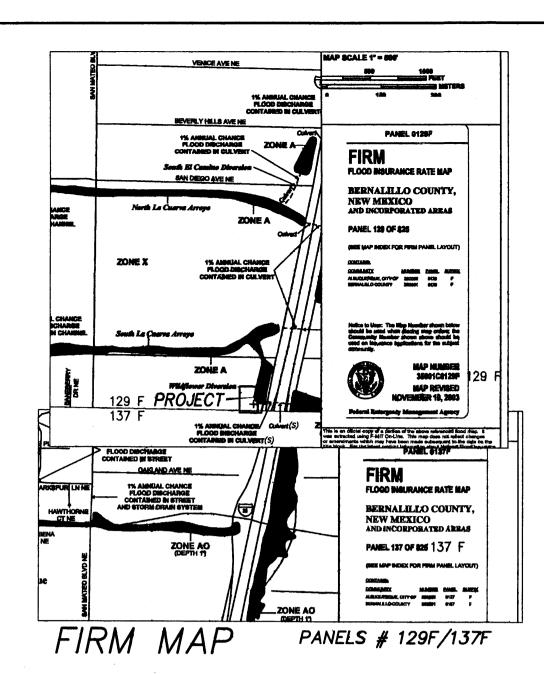
EAGLE ROCK AVENUE NE 10/13/08 505 Rue Grading & Drainage

DESIGNED BY: PWC DRAWN BY: CCE JOB #: BILTWELL

CHECKED BY: PWC DATE: 7/10/08

FILE #: G/D





CALCULATIONS

DESIGN CRITERIA

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM) REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE, ADOPTED BY THE COUNTY OF BERNALILLO DISCHARGE RATE: Q=QPEAK x AREA.."Peak Discharge Rates For Small Watersheds"

VOLUMETRIC DISCHARGE: VOLUME = EWeighted x AREA

P100 = 2.60 Inches, Zone 3 Time of Concentration, TC = 10 Minutes

DESIGN STORM: 100—YEAR/6—HOUR, 10—YEAR/6—HOUR [] = 10 YEAR VALUES

EXISTING CONDITIONS - TOTAL OF TWO LOTS

LOT AREA = 1.17 ACRES, WHERE EXCESS PRECIP. 'A' =0.66 In. [0.19],
PEAK DISCHARGE, Q100 = 2.19 CFS [0.68], WHERE UNIT PEAK DISCHARGE 'A' = 1.87 CFS/AC. [0.58]
THEREFORE: VOLUME 100 = 2803 CF [807]

DEVELOPED CONDITIONS DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA (Excludes AMAFCA Inside New Fence)

AREA LAND TREATM'T Ω P**e**ak 1.87[0.58] 2.60[1.19] 3.45[2.00] 5.02[3.39] --- Ac. 0.66[0.19] LANDSCAPING - POND 0.15 Ac.(17%) B

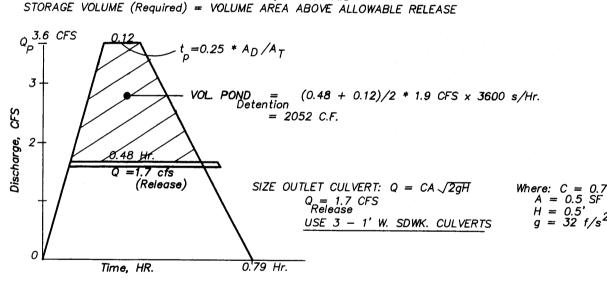
COMPACTED SOIL & Slopes > 0.30 Ac.(34%) 0.44 Ac.(49%) 0.89 Ac. ROOF - PAVEMENT

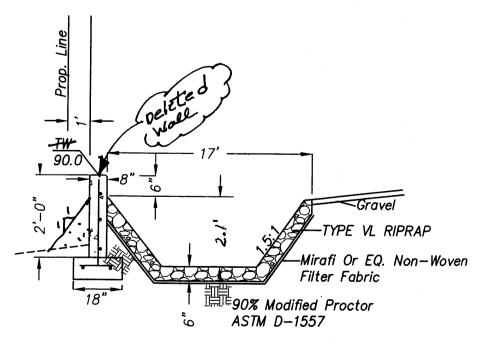
 $t_{p} = 2.107*E*A_{T}/Q_{p} - .25*A_{D}/A_{T}$

THEREFORE: E_{Weighted} = 1.75 In.[1.0] & Q100 = 3.6 CFSVOLUME 100 = 5654 CFQ10 = 2.3 CFS**VOLUME 10 = 3230 CF** THEREFORE: UNIT DISCH. = 4.04 CFS (100-YR.)

DETERMINE POND SIZE

DETENTION POND PER HYDROGRAPH & DPM, Section A.8





POND SECTION

CLASSIFICATION AND GRADATION OF RIPRAP

RIPRAP	% SMALLER THAN	INTERMEDIATE ROCK	MEAN
DESIGNATION	GIVEN SIZE BY WEIGHT	DIMENSION (IN.)	PARTICAL SIZE (IN.
TYPE VL	70–100 50–70 35–50	12 9 6	6

GRADING & DRAINAGE PLAN

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1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS AND IMPROVEMENTS.

6' OPAQUE FENCE

2' DEPTH MAX. @ PL

SEE SECTION

CULVERTS. PER COA

2236, To Curb -

N89'30'03"W

AT LEFT

8เมะ**า** 1.5:1 SS, LINED W/6"

2. PROPOSED IMPROVEMENTS: 8000 SF OF OFFICE-WAREHOUSE BUILDING, ASPHALT DRIVE/PARKING, CONCRETE FLAT WORK, NEW GRADE ELEVATIONS, REFUSE LOCATION, AND LANDSCAPING.

3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS. 4. QUANTIFICATION OF DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS WHICH CONTRIBUTE TO THE PRESENTLY. THE SITE IS A DIRT-VEGETATED SURFACE. THE SITE IS BOUNDED BY DEVELOPED COMMERCIALLY/INDUSTRIAL ZONED FACILITIES. THE SITE FALLS APPROXIMATELY 3% FROM EAST TO WEST.

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XS-POST NO ELE

FLOODPLAIN

with

RIPRAP 4 2-3' GATES

30x30

GRAVEL

SG PAD E

SG PAD EL.

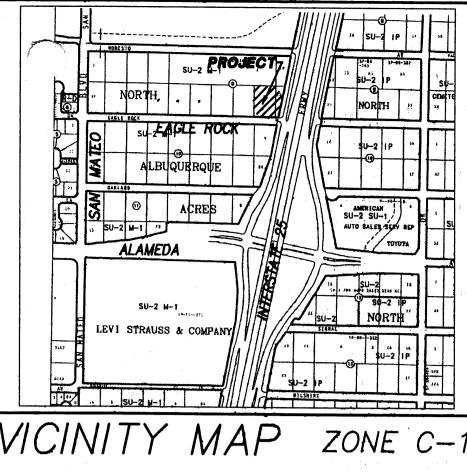
BUILT SOUK N

RAMPS W/Trunc. Domes

PER COA 2440

ORAINAGE EASEMENT -

BK. 244A, PG 404)

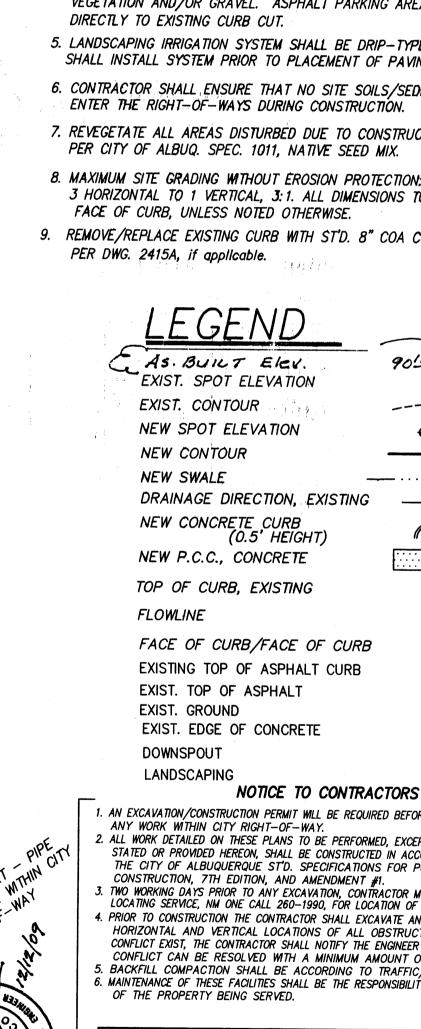


VICINITY MAP ZONE C-18 scale: 1" = 780'

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- 7. REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION
- 8. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3 HORIZONTAL TO 1 VERTICAL, 3:1. ALL DIMENSIONS TO
- 9. REMOVE/REPLACE EXISTING CURB WITH ST'D. 8" COA CURB/GUTTER.

____ 10 -___

4 24.0



1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING 2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE ST'D. SPECIFICATIONS FOR PUBLIC WORKS TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT THE

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APPROVAL NAME DATE Sur Contacted D. Schmitz

Consulting Engineers

Edgewood, New Mexico 87015 Tele: (505) 281-2444

DATE 9/29/08 Bid'r. COA Replot Bull

LOTS 23 & 24, BLOCK 9, UNIT B, TRACT A NORTH ALBUQUERQUE ACRES BILTWELL BUILDINGS EAGLE ROCK AVENUE NE Grading & Drainage

DESIGNED BY: PWC | DRAWN BY: CCE | JOB #: BILTWELL C1 OF

I, PHILIP W. CLARK, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT I HAVE VISITED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS, AND DO FURTHER CERTIFY THAT NO EARTHWORK OF ANY KIND, NOR ANY DISTURBANCE OF THE EXISTING GROUND HAS OCCURRED ON THIS SITE SINCE THE CONTOURS WERE

LEGAL DESCRIPTION (Existing Platting) LOTS 23 & 24, BLOCK 9, UNIT B, TRACT A, NORTH ALBUQUERQUE ACRES, Albuquerque, Bernalillo County, New Mexico

TOPOGRAPHIC DESIGN SURVEY

Compiled by Clark Consulting Engineers From Design Survey Performed BY TERRAMETRICS (PHIL TURNER, PS), 6/08

Crushed

9016 91.35 TA

DEEP TYPE VL RIPRAP (Avg. Dia. 6")

Exist. St'd C/G

SIGNETICS

SWALE TO EAST

ROOF DRNG.

(1040 SF) FIN. FLR. ELEV. 91:50 9160)

239.64

6' CHAIN LINK W/ 3 STRAND BARBED WIRE -

12'

19081 FL

PROJECT DATA

.S#8686-SE-23 5196.09

PROJECT BENCHMARK

GPS, TO ACS, NAVD 88 DATUM, SEE PLAN, SE CORNER OF

×94.86 RD.SEGN NO ELE

Scale: 1" =20'

A CUEX

A COR III

A CHE CHE

×95.70 LP-NUELE

12/12/09 AS.BLT. PLUC CHECKED BY: PWC | DATE: 7/10/08