

OCOTILLO (L) 3 Fouquieria splendens RED YUCCA (L) 21

5 Gal. 96f

Hesperaloe parviflora

PRICKLY PEAR (L) 24 Opuntia macrocentra

PLANT LEGEND (CONTINUED)

SHRUBS/ORNAMENTAL GRASSES

Rhus trilobata

1 Gal. 365f APACHE PLUME (L) 21 Fallugia paradoxa

1 Gal. 25sf POWIS CASTLE SAGE (L+) 19

Artemisia X Powis Castle 1 Gal. 25sf

THREE-LEAF SUMAC (L) 22

FERN BUSH (L+) 11 Chamaebatiaria millefolium 1 Gal. 25sf

MAIDENGRASS (M) 18 Miscanthus sinensis 1 Gal. 16sf

TURPENTINE BUSH (L+) 33 Ericameria laricifolia

DEER GRASS (M) 24 Muhlenbergia rigens 1 Gal. 16sf

HONEYSUCKLE (M) 60 Lonicera japonica 'Halliana' 1 Gal. 144sf Unstaked-Groundcover

LADY BANK'S ROSE (M) 4 Rosa banksiae 5 Gal. 400sf Unstaked Groundcover

WHIRLING BUTTERFLIES (M)

Gaura lindheimeri

REGAL MIST (M) 14

Muhlenbergia capillaris

BLUE MIST SPIREA (M) 34

Caryopteris clandonensis

AUTUMN SAGE (M) 19

1 Gal. 169f

1 Gal. 95f

Salvia greggii

MILDFLOWER 26

Stipa tennuisima

1 Gal. 4sf

BLUE FESCUE (M) 31 Festuca ovina glauca 1 Gal. 4sf

THREADGRASS (M) 67

1 Gal. 95f

1 *Ga*l.

HARDSCAPES

MITH FILTER FABRIC TO A MINIMUM 3" DEPTH 3/4" GRAY GRAVEL MITH FILTER FABRIC TO A MINIMUM 3" DEPTH

SANTA FE BROWN GRAVEL

COBBLE WITH FILTER FABRIC TO A MINIMUM 3" DEPTH

TRUMPET VINE (M) 2 Campsis radicans

NATURAL EDGE

OVERSIZED GRAVEL

18 BOULDERS

STREET TREE REQUIREMENTS

Street trees required under the City Of Albuquerque Street Tree Ordinance are as follows:

Name of Street: San Pedro NE Required #8 Provided #8

PARKING LOT TREE REQUIREMENTS

Shade trees required under the City Of Albuquerque Parking Lot Tree Ordinance are as follows:

1 Shade tree per 10 spaces Required # 28 Provided # 29

NOTE TO CLIENT:

Should The Hilltop not receive a Grading and Drainage plan during the design process or the on-site grades differ from the Grading and Drainage plan received, The Hilltop reserves the right to apply slope stabilization materials where the specified gravel will not be suitable. Gravel smaller than 2-4" cobblestone will not stay on a slope greater than 3:1. If the grades are greater than what was originally designed, we will request an infield change-order to lay cobblestone or rip-rap, in lieu of the specified gravel, to stabilize the slope. All vegetative material shall remain per plan.

SEE SHEET L-101 FOR DETAILS & NOTES

LANDSCAPE CALCULATIONS

TOTAL LANDSCAPE PROVIDED

169934	square feet
31892	_ square feet
138042	square feet
15%	_
20706	square feet
29161	square feet
75%	square feet
21871	square feet
21,904 (75%)square feet
0	square feet
	31892 138042 15% 20706 29161 75% 21871 21,904 (75%

2916:1 (21%) square feet

LANDSCAPE ARCHITECTS & CONTRACTORS

GRAPHIC SCALE

30 15 0 15 30 SCALE: 1"=30'

Cont. Lic. #26458

7909 Edith N.E. Albuquerque, NM 87184 Ph. (505) 898-9690 Fax (505) 898-7737 cm j@hilltoplandscaping.com All creative ideas contained Herein remains the property of The Hilltop Landscape Architects and Contractors and are protected by copyright laws. This is an original design and must not be released or copied unless applicable fees have been paid or job order

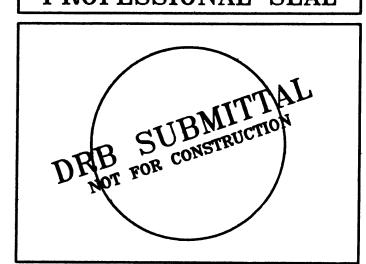
ARCHITECTS

1801 Rio Grande Boulevard, N.W. Albuquerque, New Mexico Phone: (505) 842-1113 Fax: (505) 842-1330

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CONSULTANTS

PROFESSIONAL SEAL



CORLEY'S OF **ALBUQUERQUE** PAN AMERICAN FREEWAY AND SAN PEDRO

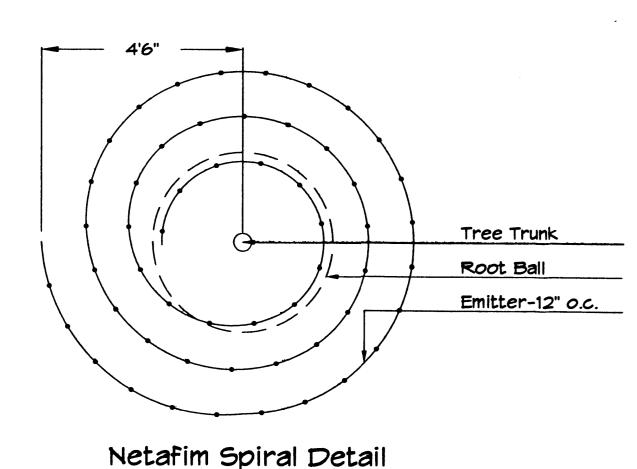
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5-22-07	Comments mm
5-21-07	Revised site plan rmm
DATE	DESCRIPTION

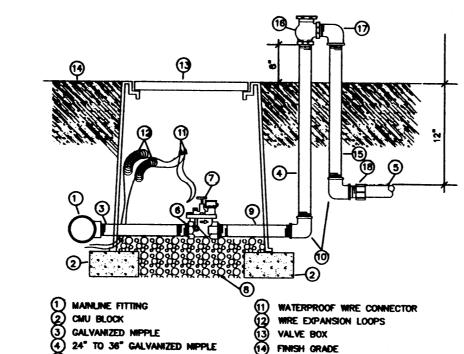
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SHEET TITLE LANDSCAPING PLAN

L-100

LANDSCAPE PLAN





AUTOMATIC VALVE (SEE LEGEND) GALVANIZED STREET ELL GRAVEL
 GALVANIZED NIPPLE
 GALVANIZED ELBOW 18 TOE NIPPLE OR MALE ADAPTER

AUTOMATIC VALVE W/ ATMOSPHERIC

VACUUM BREAKER

Galvanized nipple — 18" to 24" length Atmosphèric vacuum Breaker

N.T.S.

LATERAL PIPE

ŘĚĎUČÉŘ BUSHING

LANDSCAPE NOTES: Landscape maintenance shall be the responsibility of the Property Owner.

It is the intent of this plan to comply with the City Of Albuquerque Water Conservation Landscaping and Water Waste Ordinance planting restriction approach. Approval of this plan does not constitute or imply exemption from water waste provisions of the Mater Conservation Landscaping and Water Waste Ordinance.

Mater management is the sole responsibility of the Property Owner. All landscaping will be in conformance with the City of Albuquerque zoning Code, Street Tree Ordinance, Pollen Ordinance, and Water Conservation Landscaping and Water Waste Ordinance. In general, water conservative, environmentally sound landscape principles will be followed in design and installation.

Plant beds shall achieve 75% live ground cover at maturity.

Santa Fe Brown Gravel over Filter Fabric shall be placed in all landscape areas which are not designated to receive native seed.

IRRIGATION NOTES: Irrigation shall be a complete underground system with Trees to receive 1 Netafim spiral (50' length) with 3 loops at a final radius of 4.5' from tree trunk, pinned in place. Netafim shall have emitters 12" o.c. with a flow of .6 gph. Shrubs to receive (2) 1.0 GPH Drip Emitters. Drip and Bubbler systems to be tied to 1/2" polypipe with flush caps at each end. Trees and shrubs shall be on separate

Run time per each shrub drip valve will be approximately 15 minutes per day. Tree drip valve shall run 1.5 hours, 3 times per week. Run time will be adjusted according to the

Point of connection for irrigation system is unknown at current time and will be coordinated in the field. Irrigation will be operated by automatic controller.

Location of controller to be field determined and power source for controller to be provided by others.

Irrigation maintenance shall be the responsibility of the Property Owner.

Water and Power source shall be the responsibility of the Developer/Builder. ARCHITECTS

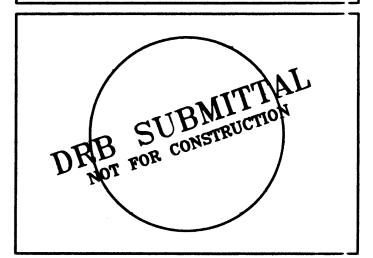
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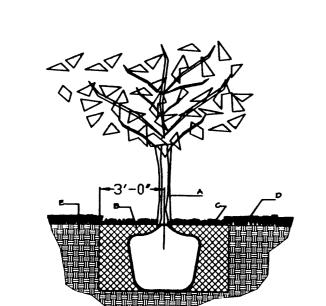
CORLEY'S OF **ALBUQUERQUE** PAN AMERICAN FREEWAY AND SAN PEDRO

-5-22-07 Revised site plan mm DESCRIPTION

PROJECT NUMBER: DRAWING FILE: LMF-L100.dwg DRAWN BY: RMM 5-7-07 CHECK BY: COPYRIGHT: CLAUDIO VIGIL ARCHITECTS - 2006

SHEET TITLE LANDSCAPING PLAN

> SHEET NUMBER L-101



GENERAL NOTES:

- 1. ROOTBALL SHALL BE PLACED ON UNDISTURBED SOIL TO PREVENT TREE FROM SETTLING.
- 2. TOP OF ROOTBALL INDICATED LEVEL AT WHICH TREE WAS GROWN AND DUG: THIS REPRESENTS THE LEVEL AT WHICH THE TREE SHOULD BE INSTALLED; THAT LEVEL MAY BE EXCEEDED BY ONLY A ONE INCH LAYER OF
- 3. PRIOR TO BACKFILLLING TREE, ALL WIRE, ROPE AND SYNTHETIC MATERIALS SHALL BE REMOVED FROM THE TREE AND THE PLANTING PIT.
- 4. PRIOR TO BACKFILLING ALL BURLAP SHALL BE CUT AWAY EXCEPT FROM BOTTOM OF THE ROOTBALL..

CONSTRUCTION NOTES:

- A. TREE
- B. BACKFILL WITH EXISTING SOIL. C. 4" DEPTH OF BARK MULCH.
- D. TURF AT FINISH GRADE.
- E. UNDISTRUBED SOIL.

TREE PLANTING DETAIL

GENERAL NOTES:

1. THE OUTSIDE DIAMETER OF THE WATER RETENTION BASIN SHALL BE TWICE THE DIAMETER OF THE SHRUB PLANTING PIT.

SHRUB PLANTING DETAIL NTS

CONSTRUCTION NOTES:

- A. SHRUB.
- B. BACKFILL WITH EXISTING SOIL. C. EARTH BERM AROUND WATER RETENTION
- D. 4" DEPTH OF BARK MULCH.
- E. FINISH GRADE. F. UNDISTURBED SOIL.



GRAPHIC SCALE

SCALE: 1"=30'

LANDSCAPE PLAN

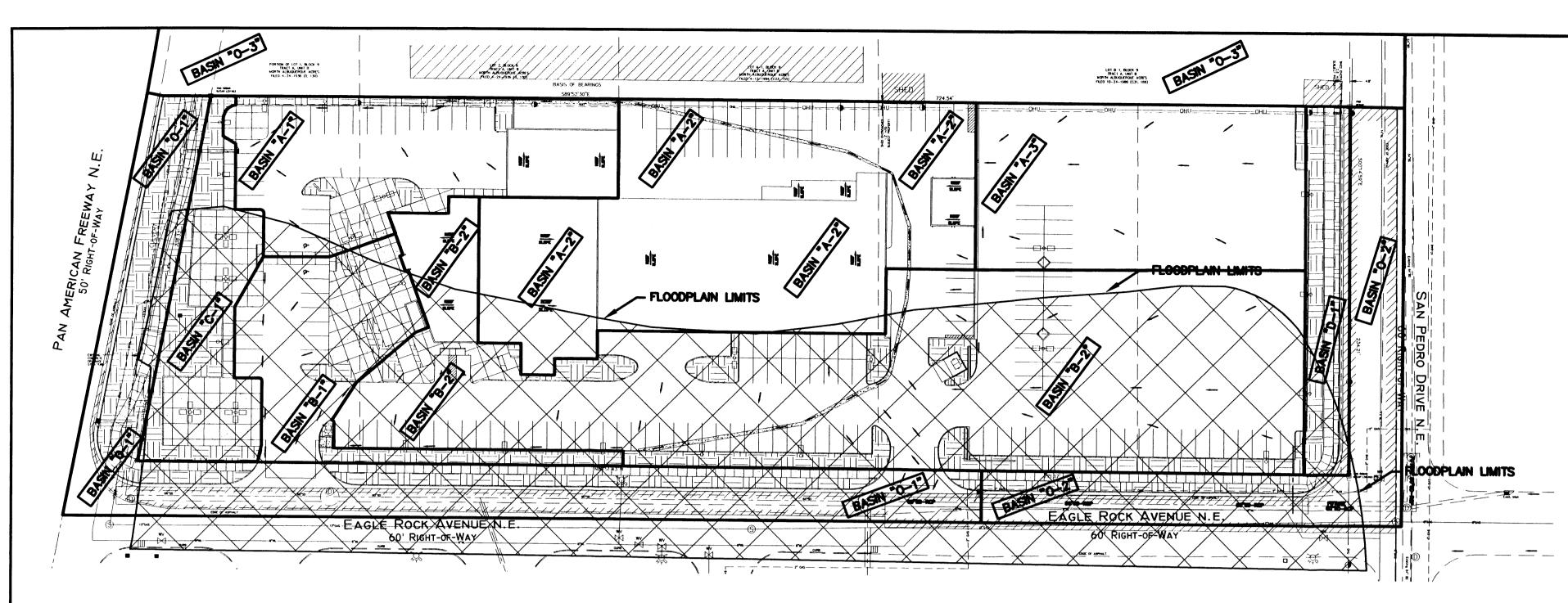
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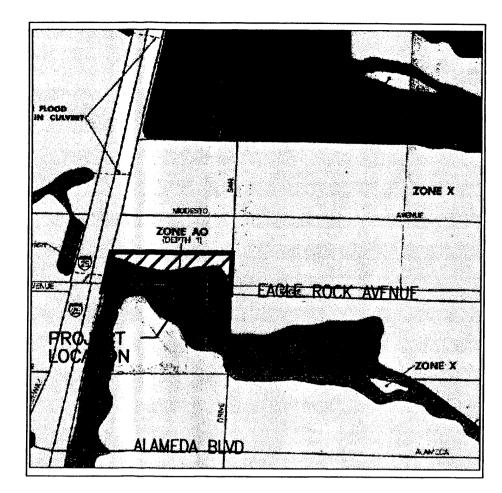
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FIRM MAP 35001C0129D

SCALE: N.T.S.



DRAINAGE BASIN BOUNDARY MAP

SCALE: 1" = 50

THE FOLLOWING ITEMS CONCERNING THE CORLEY'S LINCOLN MERCURY VOLVO LOCATED AT THE NORTHEAST CORNER OF 1-25 FREEWAY FRONTAGE ROAD AND EAGLE ROCK AVENUE NE, ALBUQUERQUE, NEW MEXICO. GRADING AND DRAINAGE PLAN ARE CONTAINED HEREON

- DRAINAGE CALCULATIONS
- 2. VICINITY MAP (C-18) FLOOD INSURANCE RATE MAP 35001C0129 AND 35001C0137 D

AS SHOWN BY THE VICINITY MAP, THE SITE IS LOCATED ON THE NORTHEAST CORNER OF 1-25 FREEWAY FRONTAGE ROAD AND EAGLE ROCK AVENUE NE, (SEE ATTACHED VICINITY MAP (C-18). THE PARCEL'S LEGAL DESCRIPTION IS LOT 17, 18, 19, 20 AND A PORTION OF 21, BLOCK 9, TRACT A, UNIT B, NORTH ALBUQUERQUE ACRES. THE PROPERTY IS BOUNDED ON THE NORTH BY A WOOD SHOP, TO THE EAST BY SAN PEDRO BOULEVARD NE, TO THE SOUTH BY EAGLE ROCK AVENUE NE AND TO THE WEST BY 1-25 FREEWAY FRONTAGE ROAD. THIS SITE CONTAINS APPROXIMATELY 4.02 ACRES AND IS CURRENTLY UN-DEVELOPED AND APPEARS TO BE RECENTLY GRADED. REVIEW OF AERIAL PHOTOS FOR THE LAST 10 YEARS INDICATES THAT THE SITE WAS USED AS A LUMBER YARD.

THE SITE CURRENTLY DRAINS FROM EAST TO WEST AT APPROXIMATELY 3% SLOPE. SAN PEDRO BOULEVARD TO THE EAST HAS TEMPORARY ASPHALT PAVING APPROXIMATELY 28 FEET WIDE. EAGLE ROCK AVENUE TO THE SOUTH HAS THE SOUTH HALF OF THE STREET BUILT TO CITY STANDARDS ALONG THE WEST HALF OF THE SITE. EAGLE ROCK AVENUE HAS THE REMAINING EAST HALF OF THE SITE HAS TEMPORARY ASPHALT PAVING THAT VARIES FROM 24 FEET TO 38 FEET OF WIDTH. THE 1-25 FREEWAY FRONTAGE ROAD TO THE WEST IS BUILT TO PERMANENT NEW MEXICO

THE SITE IS LOCATED ON FIRM MAP 35001 C0129 AND 35001 C0137 D AS SHOWN ON THE ATTACHED DRAWING. THE MAP SHOWS THAT THE SITE LIES WITHIN A 100-YEAR FLOOD PLAIN. THIS FLOODPLAIN IS CAPTURED IN A CONCRETE CHANNEL AND CONVEYED TO A STORM DRAIN IN EAGLE ROCK AVENUE NE. THE CHANNEL AND STORM DRAIN IMPROVEMENTS WERE CONSTRUCTED AS PART OF THE PREMIER AUTO DEALERSHIP, THIS FACILITY IS ON THE SOUTH SIDE OF EAGLE ROCK AVENUE NE (SEE DRAINAGE REPORT A11/D24).

THERE IS A SECOND FLOODPLAIN ON THE WEST SIDE OF THE PROPERTY THAT COMES FROM THE SOUTH. THIS FLOODPLAIN IS NO LONGER IN EXISTENCE. IT WAS ORIGINALLY CREATED FROM A DRAINAGE PROBLEM WHERE ALAMEDA CROSSED THE INTERSTATE. ALAMEDA HAS BEEN REDESIGNED AND FLOWS FROM THAT AREA CAN NO LONGER PHYSICALLY ENTER THIS SITE.

PROPOSED CONDITIONS

AS SHOWN BY THE GRADING PLAN PREPARED FOR THIS SITE, THE INTENT IS TO CONSTRUCT A NEW CAR DEALERSHIP FOR NEW AND USED CAR SALES. THE NEW BUILDING WILL HAVE APPROXIMATELY 37,778SF AND CONSIST OF A SHOWROOM, OFFICE AND SERVICE AREA. THE NEW DEALERSHIP WILL ALSO HAVE APPROXIMATELY 327 PAVED PARKING SPACES AND ASSOCIATED LANDSCAPING TO MEET CITY ZONING REQUIREMENTS.

THE PROPOSED DRAINAGE MANAGEMENT PLAN IS TO FREE DISCHARGE BASINS A-1 THRU A-3 INTO A NEW INLET IN THE PARKING LOT AND CONNECTED INTO A NEW STORM DRAIN THAT WILL BE INSTALLED IN THE I-25 FRONTAGE ROAD. A NEW STORM DRAIN WILL ALSO BE EXTENDED FROM THE 1-25 DRAINAGE STRUCTURE TO THE NORTH END OF THE SITE TO CAPTURE 1-25 FRONTAGE ROAD OFFSITE FLOWS FROM THE NORTH.

BASIN B-1 AND B-2WILL FREE DISCHARGE INTO A NEW INLET ON THE EAST CURB OF I-25 FRONTAGE ROAD THAT WILL BE INSTALLED AND CONNECTED INTO THE EXISTING 60" STORM DRAIN ON EAGLE ROCK AVENUE THAT CONVEYS FLOWS INTO THE I-25 DRAINAGE STRUCTURE.

THIS PROJECT WILL ALSO CONSTRUCT THE NORTH HALF OF EAGLE ROCK AVENUE TO CITY STANDARDS FROM THE 1-25 FRONTAGE ROAD TO SAN PEDRO BOULEVARD NE, SEE BASIN O-1. A NEW 60" STORM DRAIN WILL BE EXTENDED BY THIS PROJECT ON EAGLE ROCK AVENUE FROM THE CURRENT STUB OUT NEAR THE CENTER OF THE SITE TO SAN PEDRO BOULEVARD NE.

BASIN C-1 IS ADJACENT TO THE EXISTING RIGHT OF WAY OF I-25 FRONTAGE ROAD AND WILL FREE DISCHARGE INTO A NEW INLET ON THE EAST CURB OF 1-25 FRONTAGE ROAD THAT WILL BE INSTALLED AND CONNECTED INTO THE EXISTING 60" STORM DRAIN.

THE CALCULATIONS THAT APPEAR HEREON, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL RUNOFF FOR PEAK FLOWS AND STORM DURATION FOR VOLUME REQUIREMENTS. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS AS SET FORTH IN THE REVISION OF SECTION 22.7 HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993. THIS D.P.M. PROCEDURE IS USED FOR ANALYZING ONSITE FLOWS.

BASED ON A REVIEW OF THE SITE AND SINCE THE STORM DRAIN IN EAGLE ROCK AVENUE WAS DESIGNED PER THE NORTH ALBUQUERQUE ACRES MASTER DRAINAGE PLAN (NAAMDP), DOWNSTREAM CAPACITY IS NOT AN ISSUE AND FREE DISCHARGE IS APPROPRIATE FOR THIS DEVELOPMENT.

THE CONTRACTOR WILL BE REQUIRED TO DEVELOP A STORM WATER POLLUTION PREVENTION PLAN AND COMPLETE AND SUBMIT A NOTICE OF INTENTT (NOI) TO THE EPA PRIOR TO BEGINNING CONSTRUCTION GRADING ACTIVITIES. THE CONTRACTOR WILL BE REQUIRED TO PREPARE A SEDIMENT CONTROL PLAN REQUIRED FOR NEW MEXICO ENVIRONMENTAL DEPARTMENT PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

BASED ON A FIELD VISIT OF THE SITE AND REVIEW OF THE TOPOGRAPHIC SURVEY IT APPEARS THAT OFFSITE FLOWS ENTER THIS PROPERTY AT THE SOUTHWEST CORNER OF THE SITE THROUGH THE EXISTING SWALE ALONG THE NORTH SIDE OF EAGLE ROCK AVENUE. THIS PROJECT WILL CONSTRUCT THE NORTH HALF OF EAGLE ROCK AVENUE TO CITY STANDARDS WITH CURB AND GUTTER AND NEW INLETS INORDER TO CONVEY THESE OFFSITE FLOWS INTO THE EXISTING 60" STORM DRAIN. OFFSITE FLOWS FROM THE NORTH SIDE OF THE FRONTAGE ROAD (BASIN "O-3") WILL ALSO BE ADDRESSED BY THIS PLAN AND BE CONVEYED TO THE EXISTING DRAINAGE STRUCTURE WITH A NEW STORM DRAIN IN THE FRONTAGE ROAD.

ACCORDING TO THE DRAINAGE REPORT A11/D24 ALL FLOWS EAST OF SAN PEDRO BLVD. ARE PICKED UP WITH THE EXISTING 54" STORM DRAIN IN SAN PEDRO BLVD. AND THE IMPROVEMENTS CONSTRUCTED PER THE DRAINAGE REPORT OF A11/D24. THIS PROJECT IS ALSO CONSTRUCTING TWO ADDITIONAL INLETS ON EAGLE ROCK AVENUE AND HAVE ADDITIONAL CAPACITY OF 16.6 CFS FOR ANY FLOWS EAST OF SAN PEDRO IF THIS SHOULD BE ENCOUNTERED PRIOR TO THE PERMANENT STORM DRAIN TO BE INSTALLED BY THE CITY IN SAN PEDRO BLVD.

DRAINAGE CALCULATIONS . PRECIPITATION ZONE = 3

10 DAY = 4.90 INCHES

2. DESIGN STORM = DEPTH (INCHES) AT 100-YEAR STORM 6-HOUR = 2.60 INCHES 24-HOUR = 3.10 INCHES

PEAK DISCHARGE (CFS/ACRE) FOR 100-YEAR, ZONE 2, TABLE A-9: Q = 1.87 CFS/ACRE SOIL UNCOMPACTED "A"

Q = 3.45 CFS/AC COMPACTED SOIL "C" Q = 5.02 CFS/ACRE IMPERVIOUS AREA "D" FOR WATERSHEDS LESS THAN OR EQUAL TO 40 ACRES

4. EXCESS PRECIPITATION, E (INCHES), 6 HOUR STORM, ZONE 2, TABLE A-8: E = 0.66INCHES SOIL UNCOMPACTED "A"

E = 0.92 INCHES LANDSCAPED "B" E = 1.29 INCHES COMPACTED SOIL "C"

E = 2.36INCHES IMPERVIOUS AREA 'D" 5. EXISTING CONDITIONS ONSITE

Q = 2.60 CFS/ACRE LANDSCAPED "B"

TOTAL HUMAN COMPACTED AREA (DISTURBED) = 175,086SF = 4.02ACRES TREATMENT "C" = 100%

Q(EXISTING-6HR) = $(3.45 \times 4.02) = 13.87$ CFS - EXISTING FLOW RATE INTO THE WEST DRAINAGE STRUCTURE ADJACENT TO 1-25 FRONTAGE ROAD. V(EXISTING-6HR) = (1.29 X 4.02) = 5.81AC-FT - EXISTING VOLUME INTO THE WEST DRAINAGE STRUCTURE

ADJACENT TO 1-25 FRONTAGE ROAD.

6. PROPOSED FLOW AND VOLUME CONDITIONS ONSITE: BASIN "A-1" AREA = 0.44 ACRES IMPERVIOUS AREA PROPOSED:

PARKING, SIDEWALK AND BUILDING AREA

TREATMENT "D" AREA = 0.40AC LANDSCAPED AREA PROPOSED TREATMENT "B" AREA = 0.04AC $Q(PROPOSED-6HR) = (2.60 \times 0.04) + (5.02 \times 0.40)$ = 2.11CFS PROPOSED ONSITE FLOW $V(PROPOSED-6HR) = ((0.92 \times 0.04) + (2.36 \times 0.40)) / 12 \times 43,560$

= 3,560CF = 0.08AC-FT PROPOSED RUNOFF VOLUME BASIN "A-2" AREA = 0.92 ACRES IMPERVIOUS AREA PROPOSED: PARKING, SIDEWALK AND BUILDING AREA TREATMENT "D" AREA = 0.92AC LANDSCAPED AREA PROPOSED:

TREATMENT "B" AREA = 0.00AC $Q(PROPOSED-6HR) = (5.02 \times 0.92)$ = 4.62CFS PROPOSED ONSITE FLOW $V(PROPOSED-6HR) = \{(2.36 \times 0.92)\} / 12 \times 43,560$ = 7,881CF = 0.18AC-FT PROPOSED RUNOFF VOLUME

BASIN "A-3" AREA = 0.51 ACRES IMPERVIOUS AREA PROPOSED: PARKING, SIDEWALK AND BUILDING AREA TREATMENT "D" AREA = 0.50 AC LANDSCAPED AREA PROPOSED: TREATMENT "B" AREA = 0.01AC $Q(PROPOSED-6HR) = (2.60 \times 0.01) + (5.02 \times 0.50)$ = 2.54CFS PROPOSED ONSITE FLOW $V(PROPOSED-6HR) = ((0.92 \times 0.01) + (2.36 \times 0.50)) / 12 \times 43,560$

= 4,317CF = 0.10AC-FT PROPOSED RUNOFF VOLUME

= 2,361CF = 0.05AC-FT PROPOSED RUNOFF VOLUME

BASIN "B-1" AREA = 0.30 ACRES IMPERVIOUS AREA PROPOSED PARKING, SIDEWALK AND BUILDING AREA TREATMENT "D" AREA = 0.26 AC LANDSCAPED AREA PROPOSED TREATMENT "B" AREA = 0.04AC $Q(PROPOSED-6HR) = (2.60 \times 0.04) + (5.02 \times 0.26)$ = 1.41CFS PROPOSED ONSITE FLOW $V(PROPOSED-6HR) = \{(0.92 \times 0.04) + (2.36 \times 0.26)\} / 12 \times 43,560$

BASIN "B-2" AREA = 1.46 ACRES IMPERVIOUS AREA PROPOSED: PARKING, SIDEWALK AND BUILDING AREA TREATMENT "D" AREA = 1.29 AC LANDSCAPED AREA PROPOSED: TREATMENT "B" AREA = 0.17AC $Q(PROPOSED-6HR) = (2.60 \times 0.17) + (5.02 \times 1.29)$ = 6.92CFS PROPOSED ONSITE FLOW V(PROPOSED-6HR) = ((0.92 X 0.17) + (2.36 X 1.29)) / 12 X 43,560

BASIN "C-1" AREA = 0.24 ACRES

IMPERVIOUS AREA PROPOSED: PARKING, SIDEWALK AND BUILDING AREA TREATMENT "D" AREA = 0.13 AC ANDSCAPED AREA PROPOSED: TREATMENT "B" AREA = 0.11AC $Q(PROPOSED-6HR) = (2.60 \times 0.11) + (5.02 \times 0.13)$ = 0.94CFS PROPOSED ONSITE FLOW $V(PROPOSED-6HR) = ((0.92 \times 0.11) + (2.36 \times 0.13)) / 12 \times 43,560$

= 11,618CF = 0.27AC-FT PROPOSED RUNOFF VOLUME

= 1,481CF = 0.03AC-FT PROPOSED RUNOFF VOLUME

BASIN "D-1" AREA = 0.15 ACRES IMPERVIOUS AREA PROPOSED: PARKING, SIDEWALK AND BUILDING AREA TREATMENT "D" AREA = 0.10 AC LANDSCAPED AREA PROPOSED: TREATMENT "B" AREA = 0.05AC $Q(PROPOSED-6HR) = (2.60 \times 0.05) + (5.02 \times 0.10)$ = 0.63CFS PROPOSED ONSITE FLOW $V(PROPOSED-6HR) = ((0.92 \times 0.05) + (2.36 \times 0.10)) / 12 \times 43,560$ = 1,029CF = 0.02AC-FT PROPOSED RUNOFF VOLUME

BASIN "O-1" AREA = 0.67ACRES IMPERVIOUS AREA PROPOSED: PARKING, SIDEWALK AND BUILDING AREA TREATMENT "D" AREA = 0.50AC LANDSCAPED AREA PROPOSED: TREATMENT "B" AREA = 0.17AC $Q(PROPOSED-6HR) = (2.60 \times 0.17) + (5.02 \times 0.50)$ = 2.95CFS PROPOSED ONSITE FLOW $V(PROPOSED-6HR) = \{(0.92 \times 0.17) + (2.36 \times 0.50)\} / 12 \times 43,560$ = 4,851CF = 0.11AC-FT PROPOSED RUNOFF VOLUME

BASIN "O-2" AREA = 0.38ACRES IMPERVIOUS AREA PROPOSED: PARKING, SIDEWALK AND BUILDING AREA TREATMENT "D" AREA = 0.29AC LANDSCAPED AREA PROPOSED TREATMENT "B" AREA = 0.09AC $Q(PROPOSED-6HR) = (2.60 \times 0.09) + (5.02 \times 0.29)$ = 1.69CFS PROPOSED ONSITE FLOW $V(PROPOSED-6HR) = ((0.92 \times 0.09) + (2.36 \times 0.29)) / 12 \times 43,560$ = 2,784CF = 0.06AC-FT PROPOSED RUNOFF VOLUME

CHECK INLET AND STORM DRAIN CAPACITY AT NORTHWEST CORNER OF BASIN A-1: Q(PROPOSED-6HR) = BASIN "A-1" + BASIN "A-2" + BASIN "A-3" Q(PROPOSED-6HR) = 2.11 + 4.62 + 2.54CFS = 9.27CFSCHECK CAPACITY OF INLET IN SUMP CONDITION CALCULATE BASED ON WEIR CONDITION DEPTH = 0.90FEET (BASED ON 10.75" DIFFERENCE FROM TOP OF CURB TO TOP OF GRATE) TRY SINGLE TYPE "A" INLET LENGTH OF WEIR = (25" + 40")/12"/FT = 5.4FEET Q(CAPACITY) = C X L X H**3/2 = 3.0 X 5.4FEET X (0.90)**3/2 = 13.8CFS Q(CAPACITY) =13.8CFS > 9.27CFS REQUIRED OK

CHECK ORIFICE CAPACITY:
ASSUME INLET SUBMERGED WITH 18" STORM DRAIN $Q = C \times A \times 2gh$ H = 4.0'(INLET DEPTH) - 1.5'/2(HALF DIAMETER) = 3.25' G = 32.2 FT/SEC2C = 0.65 COEFFICIENT $A = 3.14 \times (1.5 \times 1.5)/4 = 1.76SF$ $Q(CAPACITY) = 0.65 \times 1.76 \times 2 \times 32.2 \times 3.25$ Q(CAPACITY) = 16.55 CFS > 9.27CFS REQUIRED OK

SIZE STORM DRAIN PIPE FOR BASIN "A-1": USE MANNING'S ANALYSIS PROGRAM Q = 9.27 CFS, SLOPE = 2% = 0.02FT/FT, n = 0.013USE 18" ROUND PIPE CULVERT Q(CAPACITY) = 14.9CFS > 9.27CFS REQUIRED OK

SIZE RUNDOWN CAPACITY AT NORTHWEST CORNER BASIN A-2: Q(PROPOSED-6HR) = BASIN "A-2" + BASIN "A-3" Q(PROPOSED-6HR) = 4.62 + 2.54CFS = 7.16CFSCHECK WEIR CAPACITY: Q(CAPACITY) = C X L X H**3/2 $L = Q / C X H^{**} 3/2$ USE 1FOOT DEEP CHANNEL, H = 1.0FEET Q = 7.16CFSWEIR COEFFICIENT C = 3 $L = 7.16/(3 \times 1.0 **3/2) = 2.38 \text{FEET}$ USE 2.5FEET WIDTH > 2.38 FEET - OK

SIZE WALL OPENING AT NORTHWEST CORNER BASIN A-3: Q(PROPOSED-6HR) = BASIN "A-3" Q(PROPOSED-6HR) = 2.54CFSCHECK WEIR CAPACITY: Q(CAPACITY) = C X L X H**3/2L = Q / C X H**3/2USE 0.67FOOT DEEP OPENING, BLOCK OPENING, H = 0.67FEET Q = 2.54CFSWEIR COEFFICIENT C = 3

USE 1.67FEET WIDTH > 1.54 FEET - OK CHECK RUNDOWN CAPACITY AT SOUTHWEST CORNER OF BASIN B-2: Q(PROPOSED-6HR) = BASIN "B-2" Q(PROPOSED-6HR) = 6.92CFSCHECK WEIR CAPACITY: Q(CAPACITY) = C X L X H**3/2 $L = Q / C X H^{**} 3/2$ USE 0.50FOOT DEEP OPENING, BLOCK OPENING, H = 0.50FEET

Q = 6.92CFSWEIR COEFFICIENT C = 3 $L = 6.92/(3 \times 0.50 **3/2) = 6.5FEET$ USE 6.5FEET WIDTH > 6.5FEET - OK

L = 2.54/(3 X 0.67 **3/2) = 1.54FEET

11. CHECK NEW INLETS AND STORM DRAIN CAPACITY AT I-25 FRONTAGE ROAD AND EAGLE ROCK AVENUE WITH BASIN O-2, O-1, B-1 AND B-2:

Q(PROPOSED-6HR) = BASIN "O-2" Q(PROPOSED-6HR) = 1.69CFS TYPE "A" INLET PROPOSED AT DOWNSTREAM END OF BASIN O-2 IN EAGLE ROCK SREET DEPTH = 0.23' WITH Q=1.69CFS PER PLATE 22.3 D-2 Q(INLET CAPACITY) = 2.3CFS WITH STREET DEPTH = 0.23' PER PLATE 22.3 D-6 Q(PASS INLET) = 0 SINCE CAPACITY GREATER THAN BASIN FLOW "O-2" Q(INLET CAPACITY AT STREET DEPTH = 0.67') = 15CFS THIS INLET HAS ADDITIONAL CAPACITY OF 15-1.69CFS = 13.3CFS IF ADDITIONAL FLOWS ENCOUNTERED FROM EAST OF SAN PEDRO BLVD.

BASIN O-1: Q(PROPOSED-6HR) = BASIN "O-1" + BASIN "B-1" + BASIN "B-2 Q(PROPOSED-6HR) = 2.93CFS + 1.41CFS + 6.92CFS = 11.3CFS CHECK CAPACITY OF INLET IN SUMP CONDITION CALCULATE BASED ON WEIR CONDITION DEPTH = 0.90FEET (BASED ON 10.75" DIFFERENCE FROM TOP OF CURB TO TOP OF GRATE) TRY SINGLE TYPE "A" INLET LENGTH OF WEIR = (25" + 40" + 25")/12"/FT = 7.5FEET

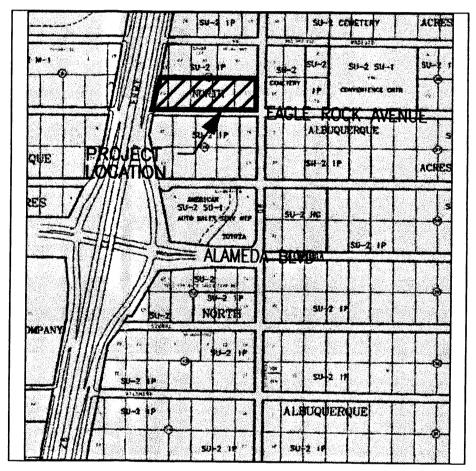
Q(CAPACITY) = C X L X H**3/2 = 3.0 X 7.5FEET X (0.90)**3/2 = 19.2CFS

ASSUME INLET SUBMERGED WITH 18" STORM DRAIN $Q = C \times A \times 2qh$ H = 4.0'(INLET DEPTH) - 1.5'/2(HALF DIAMETER) = 3.25'G = 32.2 FT/SEC2C = 0.65 COEFFICIENT $A = 3.14 \times (1.5 \times 1.5)/4 = 1.76SF$ $Q(CAPACITY) = 0.65 \times 1.76 \times 2 \times 32.2 \times 3.25$ Q(CAPACITY) = 16.55 CFS > 11.3CFS REQUIRED OK

Q(CAPACITY) =19.2CFS > 11.3CFS REQUIRED OK

SIZE STORM DRAIN PIPE CAPACITY JSE MANNING'S ANALYSIS PROGRAM Q = 9.27 CFS, SLOPE = 2% = 0.02FT/FT, n = 0.013USE 18" ROUND PIPE CULVERT Q(CAPACITY) = 14.9CFS > 11.3CFS REQUIRED OK

THIS INLET HAS ADDITIONAL CAPACITY OF 14.9 - 11.3CFS = 3.6CFS IF ADDITIONAL FLOWS ENCOUNTERED FROM EAST OF SAN PEDRO BLVD.



VICINITY MAP C-18

SCALE: N.T.S.



12. BASIN "O-3" TOTAL AREA = 4.75 ACRES, BASIN LIMITS ARE CENTERLINE OF MODESTO AVENUE, CENTERLINE OF SAN PEDRO BLVD AND CENTERLINE OF I-25 FRONTAGE ROAD. WOODWORKERS TRACT TO THE NORTH AREA = 3.76AC

TREATMENT "D" AREA = 61% X 3.76AC = 2.29AC TREATMENT "C" AREA = 39% X 3.76AC = 1.47AC FRONTAGE ROAD AREA = 0.38AC TREATMENT "D" AREA = 50% X 0.38AC = 0.19AC TREATMENT "C" AREA = 50% X 0.38AC = 0.19AC MODESTO AVENUE AREA = 0.45AC TREATMENT "D" AREA = 50% X 0.45 = 0.23AC TREATMENT "C" AREA = 50% X 0.45AC = 0.22AC FINE SAN PEDRO BLVD AREA = 0.16AC TREATMENT "D" AREA = 50% X 0.16AC = 0.08AC TREATMENT "C" AREA = 50% X 0.16AC = 0.08AC TOTAL TREATMENT "D" AREA = 2.79AC TOTAL TREATMENT "C" AREA = 1.96AC $Q(EXISTING-6HR) = (3.45 \times 1.96) + (5.02 \times 2.79)$ = 20.7CFS EXISTING ONSITE FLOW FROM NORTH

FRONTAGE ROAD

SIZE STORM DRAIN PIPE FOR BASIN "O-3, A-1, A-2 & A-3": Q(PROPOSED-6HR) = 20.7 + 9.3CFS = 30.0CFS USE CULVERT ANALYSIS PROGRAM TO DETERMINE HEADWATER INLET CONTROL Q = 30.0 CFS, SLOPE = 1% = 0.01FT/FT, n = 0.013, CULVERT LENGTH = 154' ENTRANCE COEFFICIENT = 0.5 USE 30" ROUND PIPE CULVERT

TAIL WATER DEPTH = 2.00', HEADWATER INLET CONTROL = 3.21', VELOCITY = 9.11FPS

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