

December 9, 1996

Martin J. Chávez, Mayor

Greg Krenik, PE
Mark Goodwin & Assoc.
P.O. Box 90606
Albuquerque, NM 87199

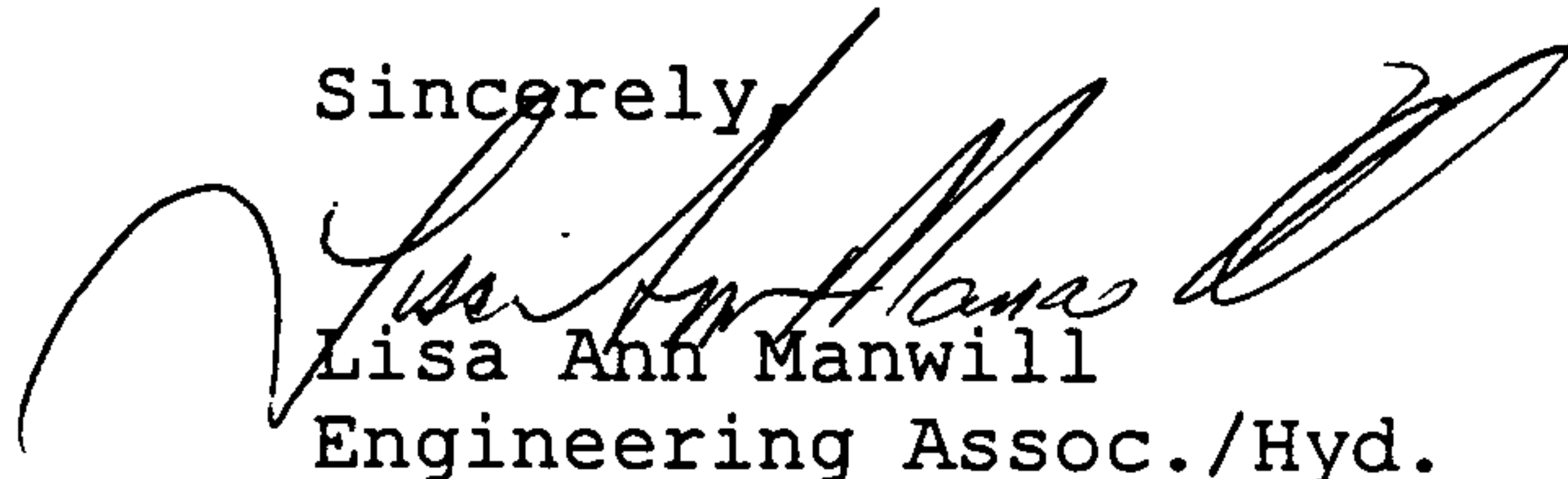
**RE: HEDGES MINI STORAGE (C12-D12). ENGINEER'S CERTIFICATION FOR
TEMPORARY CERTIFICATE OF OCCUPANCY APPROVAL. ENGINEER'S
CERTIFICATION DATED NOVEMBER 5, 1996.**

Dear Mr. Krenik:

Based on the information provided on your November 6, 1996
submittal, the above referenced project is approved for a 30-day
Temporary Certificate of Occupancy.

If I can be of further assistance, please feel free to contact me at
768-3622.

Sincerely,



Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

Good for You, Albuquerque!





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 9, 1995

Greg Krenik
Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

RE: REVISED DRAINAGE PLAN FOR HEDGES MINI STORAGE (C12-D12)
ENGINEER'S STAMP DATED 10/27/95.

Dear Mr. Krenik:

Based on the information provided on your October 30, 1995 resubmittal, the above referenced site is approved for Building Permit and Work Order.

Please be advised that prior to Certificate of Occupancy release, Engineer Certification per the D.P.M. checklist will be required. A copy of letter of acceptance for the W.O. #5207.90 is also required.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 7, 1995

Greg Krenik
Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

RE: REVISED DRAINAGE PLAN FOR HEDGES MINI STORAGE (C12-D12)
ENGINEER'S STAMP DATED 7/18/95.

Dear Mr. Krenik:

Based on the information provided on your July 20, 1995 resubmittal, the above referenced site is approved for Building Permit and Work Order.

Please be advised that prior to Certificate of Occupancy release, Engineer Certification per the D.P.M. checklist will be required. A copy of letter of acceptance for the W.O. #5207.90 is also required.

If I can be of further assistance, please feel free to contact me at 768-2667.

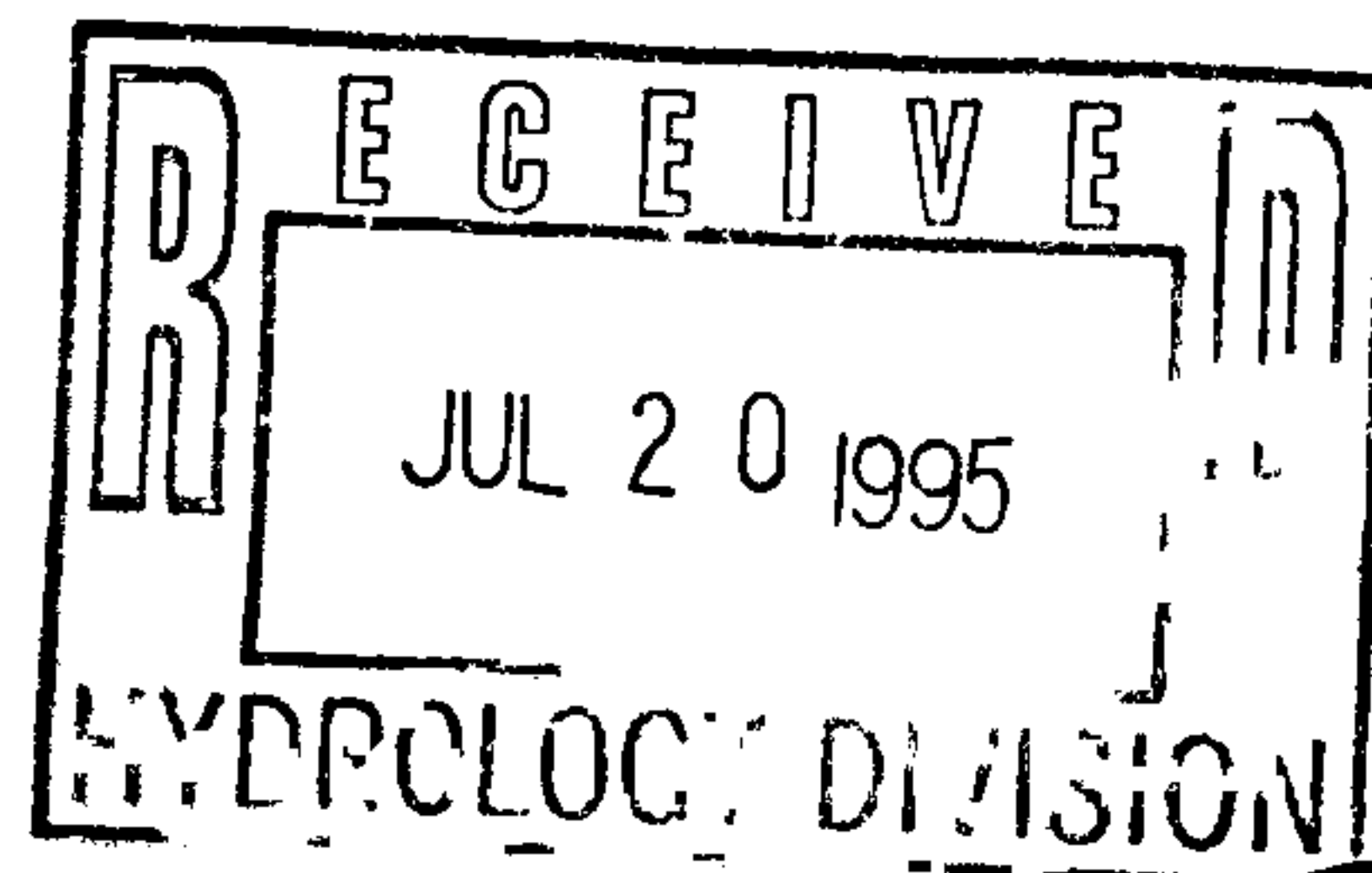
Sincerely,

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File

DRAINAGE REPORT
for
HEDGES MINI STORAGE



Prepared For:

Dr. Don Hedges
6463 Fourth Street NW
Albuquerque, NM 87107

August 1994



3-15-95
7-19-95

PURPOSE

The purpose of this report is to present the drainage management plan for Hedges Mini Storage to obtain final plat and work order approval. All applicable ordinances and the DPM were utilized to prepare this plan.

EXISTING CONDITIONS

The project comprises an area of 3.99895 acres at the west end of Albuquerque West Unit One(Appendix B). This site is bounded by Paradise Boulevard to the north, Nunzio Avenue to the south and Eagle Ranch Road to the east.

The tract is sloping from southwest to northeast at approximately 4 percent. Vegetative cover is typical of west side property, and the soils are sandy. The site drains overland and is released into the southwestern side intersection of Paradise Blvd and Eagle Ranch. The drainage then runs down the south side of Paradise Blvd and enters a New Mexico State Highway storm inlet near the intersection of Coors and Paseo Del Norte.

HYDROLOGIC ANALYSIS

HYMO was utilized for this analysis, adhering to the existing report by Leedshill - Herkenhoff, Inc. on the Coors Road interchange dated September 1985. The report has made provisions for each parcel in this 46 acre basin to discharge 0.95 cfs per acre. All of the pertinent hydrologic parameters and calculation methods are located in Appendix A of this report.

PROPOSED MANAGEMENT PLAN

ON-SITE

As a developed site, this plan will discharge from one point at a maximum of 3.9 cfs into an 18" storm drain that will be constructed in Eagle Ranch Road and then in turn discharge into the West Park stormdrain (see Appendix C) on the north side of Paradise Blvd. The on site improvements will have two ponds along the east end of the property line with one draining into the other. The ponds will be pervious areas with a landscaped sides connected by a 12" pipe. The first pond will have a 5.5" orifice plate covering the 12" RCP to control its discharge into the second pond. The second pond will control its discharge from the site by an 7.5" orifice plate covering the inlet of an 18" RCP. This configuration will achieve a maximum 3.819 cfs discharge from the site. The off-site flows from west will be intercepted in a 2' concrete swale and directed north to Paradise Blvd. through a sidewalk culvert.

OFF-SITE

As a developed site, from Paseo Del Norte and the western half of Eagle Ranch Road north to Paradise Blvd; to include 30% of Tract C and Lot 10-A Block D of the Albuquerque West Unit One(Appendix B) and Nunzio Avenue the storm runoff will be 5.46 cfs. This runoff will street flow into a newly constructed storm inlet on the southwest corner of Paradise Blvd and Eagle Ranch. This storm inlet will be connected to the 18" RCP in Eagle Ranch Road. In addition, there will be a storm inlet constructed for the purpose of collecting nuisance flows. This storm inlet will be constructed west

of the intersection connected to the 18" RCP in Eagle Ranch. Both inlets will be connected to the onsite discharge system in the intersection of Paradise Blvd. and Eagle Ranch Road.

INTERIM EROSION CONTROL

Due to the sensitive nature of the sandy soils associated with this site, an Erosion Control Plan is part of this report and project.

The plan centers on the fact that storm waters will not be allowed free discharge during the construction process until all street paving is accomplished.

CONCLUSIONS

The implementation of this plan for the site plus the adjacent areas can be accommodated by the existing off-site conditions. It has been adequately shown in this report and others cited, that the other off-site conveyance systems are adequate and, indeed, were masterplanned with this project in mind. It has also been shown in this report that the internal conveyance of storm water can be accomplished while meeting all current City requirements.

CALCULATIONS



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT HEDGES MINI STORAGE
SUBJECT DRAINAGE CALCULATIONS
BY RM DATE 12 AUG 94
CHECKED _____ DATE _____
SHEET 1 OF _____

• TOTAL Q OFFSITE

$$Q = \text{TRACT C} + \text{LOT 10-A} + \text{NUNZIO AVE} + \text{EAGLE RANCH RD.}$$

$$Q = (1.12 + 2.19 + 0.471 + 3.38) \text{ cfs}$$

$$Q = 7.15 \text{ cfs} \quad \text{TOTAL OFFSITE ALLOWABLE DISCHARGE}$$

ON-SITE

$$\text{TOTAL AREA} = 3.99895 \text{ ACRES}$$

$$\text{BLDG/PAVEMENT} : 3.6488 \text{ ACRES} \quad 91.243\% \text{ TYPE "D"}$$

$$\text{LANDSCAPING} : 0.3502 \text{ ACRES} \quad 8.757\% \text{ TYPE "B"}$$

$$\text{DT} = 0.0333 \text{ HR} \quad P_1 = 1.90 \text{ in.} \quad P_{24} = 2.65 \text{ in.}$$

$$\text{TP} = 0.1333 \text{ HR} \quad P_6 = 2.20 \text{ in.}$$

* FROM HYMO OUTPUT (SHEETS 2-6)

PEAK Q FOR PROPERTY

$$Q_{PK} = 9.52 \text{ cfs} \quad V_{PK} = 0.6177 \text{ ACRE- FEET}$$

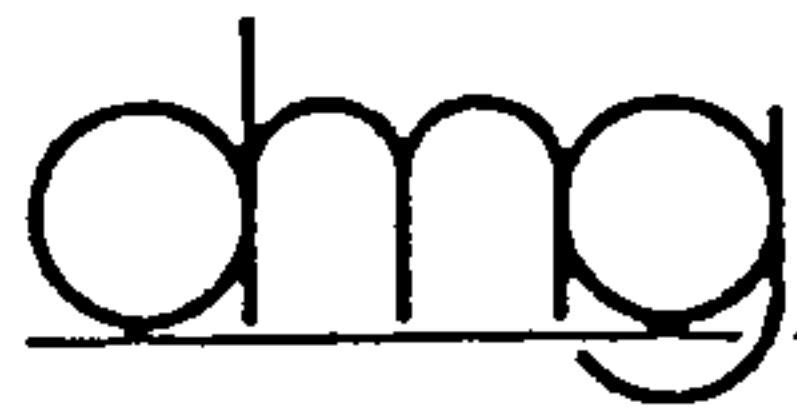
$$\text{ALLOWABLE DISCHARGE } Q_{PK} = 3.934 \text{ cfs}$$

TOTAL Q ENTERING BAR DITCH

$$\text{ON SITE } Q = 3.934 \text{ cfs}$$

$$\text{OFF SITE } Q = 7.150 \text{ cfs (SEE PG 7 \& 8)}$$

$$\text{TOTAL } 11.084 \text{ cfs}$$



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT HEDGES MINI STORAGE
SUBJECT DRAINAGE
BY RM DATE 14 MAR 95
CHECKED _____ DATE _____
SHEET 7 OF _____

DRAINAGE AMENDED FOR OFFSITE FLOWS
NUNZIO AVE.

$$A = 0.496 \text{ ACRES} = 0.0008 \text{ SQ MILES}$$

LAND TREATMENTS

$$\text{TYPE "A"} = 0\%$$

$$\text{TYPE "B"} = 0\%$$

$$\text{TYPE "C"} = 13\%$$

$$\text{TYPE "D"} = 87\%$$

FROM AHYMO RESULTS

$$Q = 2.19 \text{ cfs}$$

EAGLE RANCH ROAD (WEST SIDE)

$$A = 1.777 \text{ ACRES} = 0.0028 \text{ SQ MILES}$$

LAND TREATMENTS

$$\text{TYPE "A"} = 0\%$$

$$\text{TYPE "B"} = 0\%$$

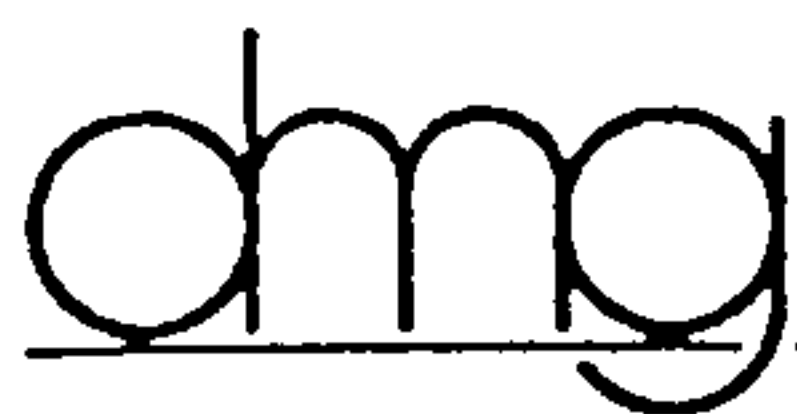
$$\text{TYPE "C"} = 0\%$$

$$\text{TYPE "D"} = 100\%$$

FROM AHYMO RESULTS

$$Q = 7.95 \text{ cfs}$$

CONTINUED ON NEXT PAGE



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT HEDGES MINI STORAGE
SUBJECT DRAINAGE
BY RM DATE 14 MAR 95
CHECKED _____ DATE _____
SHEET 8 OF _____

• AMENDED OFFSITE CALCULATIONS (CONTINUED)

• PARADISE BLVD

$$A = 21,080 \text{ ft}^2 = 0.4839 \text{ Acres} = 0.0008 \text{ sq miles}$$

LAND TREATMENTS

$$\text{TYPE "A"} = 0\%$$

$$\text{TYPE "B"} = 0\%$$

$$\text{TYPE "C"} = 0\%$$

$$\text{TYPE "D"} = 100.0\%$$

FROM AHYMO RESULTS

$$Q = 2.19 \text{ cfs}$$

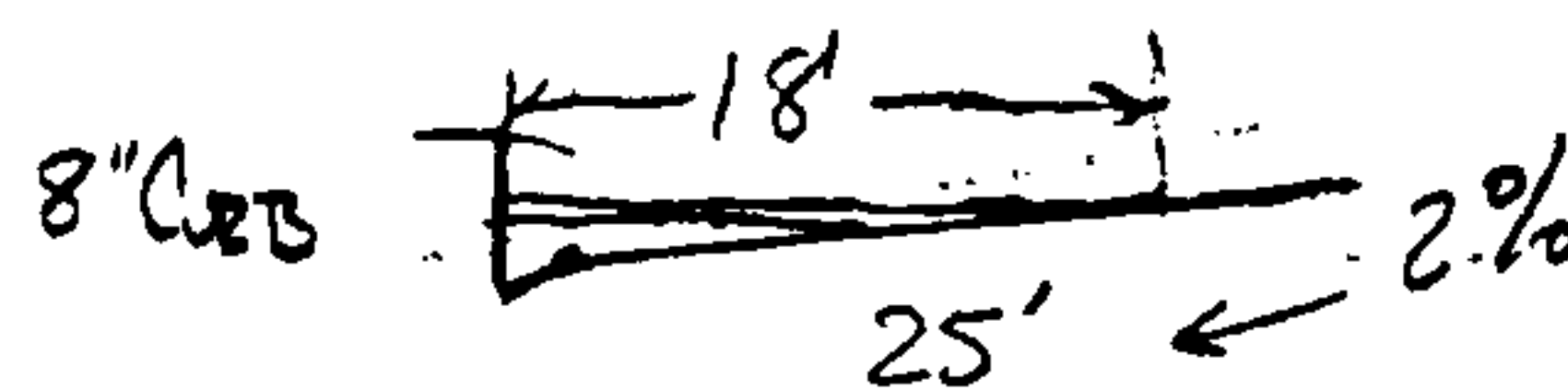
TOTAL FLOW IN EAGLE PANCH

FROM AHYMO

$$Q = 10.14 \text{ cfs}$$

DEPTH OF FLOW

$$D = 0.445'$$



FROM PLATE 22.3 D-5

CAPACITY OF INLET

$$Q = 6.0 \text{ cfs}$$

$$Q = \frac{1.49}{0.017} A \left(\frac{A}{WP} \right) (0.0128)^{\frac{1}{2}}$$

$$Q = \frac{1.49}{0.017} (3.325) \left(\frac{3.325}{18.445} \right) (0.0128)^{\frac{1}{2}}$$

$$Q = 10.52 \text{ cfs}$$

FLOW FROM RIGHT OF WAY IN STORM DRAIN SYSTEM

$$Q = 6 + 2.19 = 8.19 \text{ cfs}$$

FLOW FROM PARADISE BLVD WILL BE COLLECTED BY STORM INLET
SEE PLATE 22.3 D-5

CONTINUED ON NEXT PAGE



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT HEDGES MINI STORAGE
SUBJECT DRAINAGE
BY RM DATE 14 MAR 95
CHECKED _____ DATE _____
SHEET 9 OF _____

• AMENDED OFFSITE CALCULATIONS (CONTINUED)

• PER COORS ROAD INTERCHANGE REPORT

ALL PROPERTIES $Q = 0.95/\text{ACRE}$ ALLOWABLE DISCHARGE

- TRACT C OF ALBUQUERQUE WEST UNIT ONE

PER ALBUQUERQUE WEST UNIT ONE DRAINAGE REPORT
30% OF THIS TRACT PORTIONED TO DRAIN ONTO
EAGLE RANCH ROAD.

$$A = 3.9203 \text{ ACRES} * 0.30 = 1.176 \text{ ACRES}$$

$$Q = (0.95)(1.176 \text{ ACRES})$$

$$Q = 1.12 \text{ cfs ALLOWABLE DISCHARGE}$$

• LOT 10-A BLOCK D ALBUQUERQUE WEST UNIT ONE

$$A = \left(\frac{195' + 300'}{2} \right) * 405' = 100,238 \text{ ft}^2$$

$$A = 2.301 \text{ ACRES}$$

$$Q = (0.95)(2.301 \text{ ACRES})$$

$$Q = 2.19 \text{ cfs ALLOWABLE DISCHARGE}$$

∴ THESE PROPERTIES WILL DISCHARGE TO PUBLIC
RIGHT OF WAY. AMOUNT OF FLOW IN STORM
DRAIN WILL BE CONTROLLED BY STORM INLETS AT
INTERSECTION OF EAGLE RANCH & PARADISE. REMAINDER
OF FLOW WILL CROSS INTERSECTION AND ENTER
BAR DITCH IN PARADISE BLVD.



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT HEDGES Mini Storage
SUBJECT DRAINAGE CALCS
BY GSK DATE 7-19-95
CHECKED _____ DATE _____
SHEET 10 OF _____

• Q IN STORM DRAIN

OFFSITE = 2.19 CFS
7.95 CFS
2.19 CFS

12.33 CFS

NUNZIO
W 1/2 EAGLE RANCH
S 1/2 PARADISE BLVD

ONSITE = 3.82 CFS

TOTAL = 16.15 CFS

• SEE WESTPARK REPORT FOR STORM DRAIN DESIGN.
(APPENDIX C)