CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services Section

May 8, 2009

Stephen Dunbar, R.A.
Modulus Architects
2325 San Pedro NE, Suite 2B
Albuquerque, NM 87110

Re: Certification Submittal for Certificate of Occupancy for
Vistas de la Luz Commercial Development PHASE 1; 5400 Sevilla Ave NW
DRB Site Plan, Project # 1004675 (F11-D010A)
Certification dated 05-04-09

Dear Mr. Dunbar,

The Letter of Certification submitted on 05-06-09 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to the Building and Safety Section.

Sincerely,

Kristal D. Metro, P.E.
Traffic Engineer, Planning Dept.
Development and Building Services

C: File
CO Clerk

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

TRAFFIC CERTIFICATION

I, STEPHEN DUNBAR , NMPE OR NMRA 004218 , OF THE FIRM MODULUS ARCHITECTS INC. HEREBY CERTIFY THAT THIS PROJECT IS IN SUBSTANTIAL DESIGN COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 9/1/06. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY STEPHEN DUNBAR OF THE FIRM MODULUS ARCHITECTS INC. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 4/27/09 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR TEMPORARY CERTIFICATE OF OCCPANCY.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE TRAFFIC ASPECTS OF THIS PROJECT. THOSE RELYING ON THE RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

STATE OF NEW MEXICO
STEPHEN A. DUNBAR
No. 4218
REGISTERED ARCHITECT

Stephen A Dunbar

_____ ARCHITECT'S STAMP

Signature of Engineer or Architect

5/4/09

Date

MODULUS ARCHITECTS

2325 San Pedro NE, Suite 2b
Albuquerque, New Mexico 87110
p 505.338.1499 f 505.338.1498
toll free: 1-866-224-2161

CITY OF ALBUQUERQUE

April 8, 2009

Gregory J. Krenik, P.E.
Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199

Re: Vista de La Luz Commercial Amended Grading and Drainage Plan
Engineer's Stamp dated 4-7-09 (F11/D010A)

Dear Mr. Krenik,

Based upon the information provided in your submittal received 4-7-09 the above referenced plan is approved for Building Permit. This amended plan was submitted to reflect the current development plan of not building on Tract K-2.

This is now the plan to Certify for release of Permanent Certificate of Occupancy per the DPM checklist.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

CITY OF ALBUQUERQUE

June 25, 2008

Gregory J. Krenik, P.E.
Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199

Re: Vista de La Luz Commercial Grading and Drainage Plan
Engineer's Stamp dated 6-19-08 (F11/D010A)

Dear Mr. Krenik,

Based upon the information provided in your submittal received 6-19-08 the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file

P.O. Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

DRAINAGE REPORT

for

VISTA DE LA LUZ COMMERCIAL

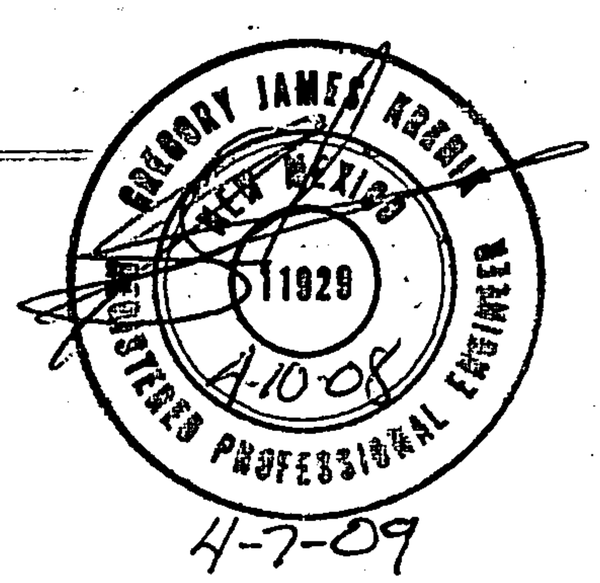
Prepared for

Monterrey Land Group, LLC
5111 San Mateo NE, Suite A-1
Albuquerque, NM 87109

Prepared by

Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199
(505) 828-2200

April 2008



D. Mark Goodwin & Associates, P.A.
Consulting Engineers
P.O. BOX 90606, ALBUQUERQUE,NM 87199
(505) 828-2200 FAX 797-9539

PROJECT Vista de la Luz Commercial
SUBJECT Drainage Calcs
BY GTK DATE 4-10-08
CHECKED _____ DATE _____
SHEET 1 OF ____

REVISED 4-7-09

• THE SITE CONSISTS OF TRACT K OF VISTA de la Luz.
THIS AREA WAS PREVIOUSLY INCLUDED IN THE "VISTA de la LUZ DRAINAGE REPORT" PREPARED BY MARK GOODWIN & ASSOCIATES. (APPENDIX A)

TOTAL AREA OF TRACT K = 2.7555 AC

FROM REPORT 2.4107 AC IS IN BASIN CK
0.1761 AC IS IN BASIN H
0.0529 AC IS IN BASIN G
0.1158 AC IS IN BASIN D

- BASIN CK DRAINS TO ONSITE "DBL D" CATCH BASINS THEN TO THE COORS STORMDRAIN.

- BASIN H DRAINS TO COORS AND SURFACE FLOWS BY SUPERELEVATION ACCROSS COORS.

- BASIN G DRAINS TO SEVILLA THEN TO THE "TYPE B" INLET IN SUMP AT COORS.

- BASIN D DRAINS DIRECTLY TO THE SAN ANTONIO ARROYO.

• BASIN CK

0.2725 AC	TYPE "B"	11.30 %	$P_1 = 1.90$ in
0.2726 AC	TYPE "C"	11.31 %	$P_6 = 2.25$ in
1.8656 AC	TYPE "D"	77.39 %	$P_{24} = 2.65$ in
2.4107 AC			

PER THE Vista de la Luz Report THE DESIGN WAS FOR 90% "D" & 10% B OK

FROM AHYMO OUTPUT SHEETS 5-8

Q = 9.67 CFS < 10.12 CFS PER REPORT OK

• USE 2 "DBL D" INLETS IN SUMP ON SITE
ASSUME 50% GOES TO EACH INLET

$Q/P = 3.0H^{1.5}$ Q = 9.67 P = 17 FOR EACH INLET

H = 0.21' OK

ASSUME 50% CLOGGED

H = 0.33' OK

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PROJECT Vista de la Luz Commercial
SUBJECT Drainage Calcs
BY GTK DATE 4-10-08
CHECKED _____ DATE _____
SHEET 2 OF ____

- STORM DRAIN TO BE 18" HDPE AT 2%

FROM NOMO SHEET 3

18" CAN CARRY 18 CFS > 9.67 OK

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PROJECT Vista de la Luz Commercial
SUBJECT Drainage Calcs
BY GJK DATE 4-7-09
CHECKED DATE
SHEET 3 OF

- AMENDED PORTION OF REPORT.
- TRACT K WAS SPLIT INTO TWO TRACTS K1 & K2. ONLY K1 IS BEING DEVELOPED. K2 IS UNDEVELOPED.

BASIN H CHANGES TO	0.2592	AC
BASIN O CHANGES TO	0.1613	AC
BASIN CK CHANGES TO	2.2821	AC
BASIN G REMAINS THE SAME	0.0529	AC

- BASIN CK

TYPE "D" =	1.6447 AC	72.07 %	INCLUDES TEMP PAVING
TYPE "C" =	0.2187 AC	9.58 %	
TYPE "B" =	0.4187 AC	17.95 %	
	2.2821		

- BASIN H

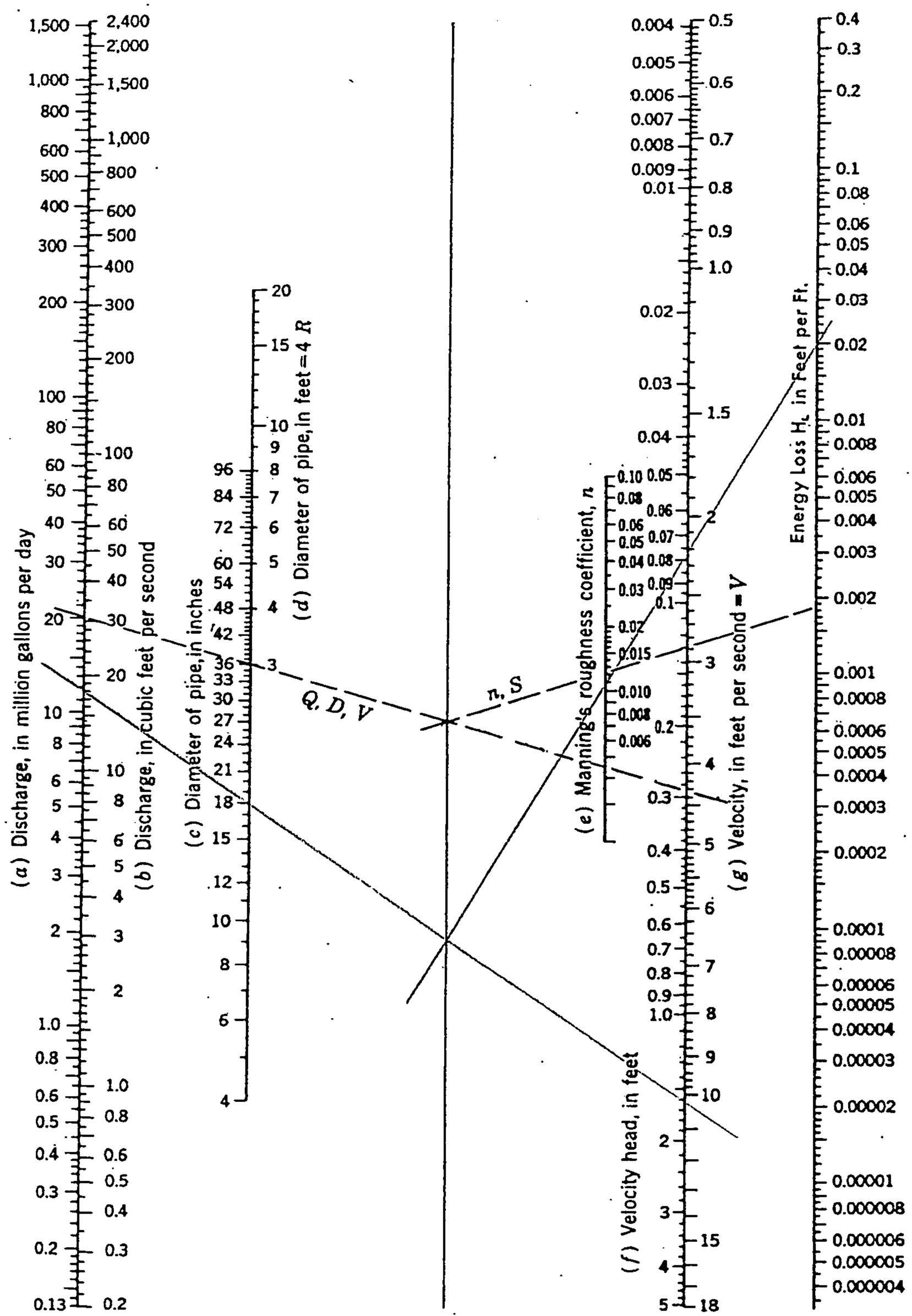
TYPE "D" = 4%
TYPE "C" = 96%

- BASIN D

TYPE "C" = 20.64%
TYPE "B" = 79.36%

FROM AHYMO SHEETS 5-8

Q_{CK} = 8.86 CFS
Q_H = 0.79 CFS
Q_D = 0.37 CFS



Alignment chart for energy loss in pipes, for Manning's formula.
Note: Use chart for flow computations, $H_L = S$

Figure 3-29a Nomograph for solution of Manning's formula.

```
START                   TIME=0.0
***** HYDROGRAPH FOR VISTA DE LA LUZ COMMERCIAL TRACTS K1 & K2
RAINFALL                TYPE=1 RAIN QUARTER=0.0 IN
                        RAIN ONE=1.90 IN RAIN SIX=2.25 IN
                        RAIN DAY=2.65 IN DT=0.03333 HR
***** FULLY DEVELOPED BASIN CK
COMPUTE NM HYD          ID=1 HYD NO=101.1 AREA=0.003767 SQ MI
                        PER A=0 B=11.3 C=11.31 D=77.39
                        TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD               ID=1 CODE=1
***** ONLY K1 DEVELOPED BASIN CK
COMPUTE NM HYD          ID=2 HYD NO=102.1 AREA=0.003566 SQ MI
                        PER A=0 B=17.95 C=9.58 D=72.07
                        TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD               ID=2 CODE=1
***** BASIN H WITH ONLY K1 DEVELOPED
COMPUTE NM HYD          ID=3 HYD NO=103.1 AREA=0.000405 SQ MI
                        PER A=0 B=0 C=96 D=4
                        TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD               ID=3 CODE=1
***** BASIN D WITH ONLY K1 DEVELOPED
COMPUTE NM HYD          ID=4 HYD NO=104.1 AREA=0.000252 SQ MI
                        PER A=0 B=79.36 C=20.64 D=0
                        TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD               ID=4 CODE=1
FINISH
```

```
          AHYMO PROGRAM (AHYMO_97) -                          - Version:  1997.02d
               RUN DATE (MON/DAY/YR) = 04/07/2009
               START TIME (HR:MIN:SEC) = 08:22:04     USER NO.= AHYMO-I-
9702dGoodwinM-AH
               INPUT FILE = vd11comm.dat

     START                  TIME=0.0
     ***** HYDROGRAPH FOR VISTA DE LA LUZ COMMERCIAL TRACTS K1 & K2
     RAINFALL               TYPE=1 RAIN QUARTER=0.0 IN
                            RAIN ONE=1.90 IN RAIN SIX=2.25 IN
                            RAIN DAY=2.65 IN DT=0.03333 HR

                       COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 -
PEAK AT 1.40 HR.
                       DT =     .033330 HOURS        END TIME =     5.999400 HOURS
                          .0000   .0018   .0036   .0055   .0074   .0094   .0114
                          .0134   .0155   .0177   .0199   .0222   .0245   .0269
                          .0293   .0319   .0345   .0372   .0399   .0428   .0458
                          .0489   .0521   .0554   .0589   .0625   .0663   .0703
                          .0745   .0789   .0836   .0888   .0944   .1004   .1133
                          .1421   .1865   .2502   .3372   .4515   .5973   .7788
                         1.0003  1.2059  1.2918  1.3643  1.4288  1.4874  1.5414
                         1.5916  1.6384  1.6823  1.7237  1.7627  1.7995  1.8344
                         1.8674  1.8987  1.9284  1.9566  1.9834  1.9898  1.9958
                         2.0014  2.0068  2.0120  2.0169  2.0216  2.0262  2.0306
                         2.0349  2.0390  2.0430  2.0469  2.0507  2.0543  2.0579
                         2.0614  2.0648  2.0681  2.0713  2.0745  2.0776  2.0806
                         2.0836  2.0865  2.0894  2.0922  2.0949  2.0976  2.1003
                         2.1029  2.1055  2.1080  2.1105  2.1129  2.1153  2.1177
                         2.1201  2.1224  2.1247  2.1269  2.1291  2.1313  2.1335
                         2.1356  2.1377  2.1398  2.1418  2.1439  2.1459  2.1478
                         2.1498  2.1517  2.1537  2.1555  2.1574  2.1593  2.1611
                         2.1629  2.1647  2.1665  2.1683  2.1700  2.1718  2.1735
                         2.1752  2.1769  2.1785  2.1802  2.1818  2.1834  2.1850
                         2.1866  2.1882  2.1898  2.1914  2.1929  2.1944  2.1959
                         2.1975  2.1990  2.2004  2.2019  2.2034  2.2048  2.2063
                         2.2077  2.2091  2.2105  2.2119  2.2133  2.2147  2.2161
                         2.2174  2.2188  2.2201  2.2215  2.2228  2.2241  2.2254
                         2.2267  2.2280  2.2293  2.2306  2.2318  2.2331  2.2343
                         2.2356  2.2368  2.2381  2.2393  2.2405  2.2417  2.2429
                         2.2441  2.2453  2.2465  2.2476  2.2488  2.2500

     ***** FULLY DEVELOPED BASIN CK
     COMPUTE NM HYD         ID=1 HYD NO=101.1 AREA=0.003767 SQ MI
                            PER A=0 B=11.3 C=11.31 D=77.39
                            TP=0.1333 HR MASS RAINFALL=-1

               K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE
CONSTANT, N =  7.106420
               UNIT PEAK =   11.510    CFS   UNIT VOLUME =    .9984        B =   526.28
P60 = 1.9000
               AREA =      .002915 SQ MI    IA =    .10000 INCHES    INF =    .04000
INCHES PER HOUR
               RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033330


               K =   .118477HR    TP =   .133300HR    K/TP RATIO =   .888803     SHAPE
CONSTANT, N =  3.990746
               UNIT PEAK =   2.2654    CFS   UNIT VOLUME =    .9948        B =   354.55
P60 = 1.9000
               AREA =      .000852 SQ MI    IA =    .42497 INCHES    INF =   1.03991
INCHES PER HOUR
               RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033330
```

```
     PRINT HYD            ID=1 CODE=1

                                        PARTIAL HYDROGRAPH   101.10


          RUNOFF VOLUME =      1.75056 INCHES      =          .3517 ACRE-FEET
          PEAK DISCHARGE RATE =        9.67 CFS  AT    1.500 HOURS   BASIN AREA =
.0038 SQ. MI.


     ***** ONLY K1 DEVELOPED BASIN CK
     COMPUTE NM HYD       ID=2 HYD NO=102.1 AREA=0.003566 SQ MI
                          PER A=0 B=17.95 C=9.58 D=72.07
                          TP=0.1333 HR MASS RAINFALL=-1
          *****WARNING*****  SUM OF TREATMENT TYPES DOES NOT EQUAL 100 PERCENT OR
TOTAL AREA


          K =    .072649HR     TP =    .133300HR     K/TP RATIO =    .545000      SHAPE
CONSTANT, N =  7.106420
          UNIT PEAK =    10.187     CFS    UNIT VOLUME =     .9982         B =    526.28
P60 = 1.9000
          AREA =       .002580 SQ MI     IA =     .10000 INCHES     INF =     .04000
INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033330


          K =    .122216HR     TP =    .133300HR     K/TP RATIO =    .916847      SHAPE
CONSTANT, N =  3.861309
          UNIT PEAK =    2.5571     CFS    UNIT VOLUME =     .9950         B =    345.81
P60 = 1.9000
          AREA =       .000986 SQ MI     IA =     .44780 INCHES     INF =    1.10385
INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033330

     PRINT HYD            ID=2 CODE=1

                                        PARTIAL HYDROGRAPH   102.10


          RUNOFF VOLUME =      1.67849 INCHES      =          .3192 ACRE-FEET
          PEAK DISCHARGE RATE =        8.86 CFS  AT    1.500 HOURS   BASIN AREA =
.0036 SQ. MI.


     ***** BASIN H WITH ONLY K1 DEVELOPED
     COMPUTE NM HYD       ID=3 HYD NO=103.1 AREA=0.000405 SQ MI
                          PER A=0 B=0 C=96 D=4
                          TP=0.1333 HR MASS RAINFALL=-1

          K =    .072649HR     TP =    .133300HR     K/TP RATIO =    .545000      SHAPE
CONSTANT, N =  7.106420
          UNIT PEAK =    .63958E-01CFS    UNIT VOLUME =     .8874         B =    526.28
P60 = 1.9000
          AREA =       .000016 SQ MI     IA =     .10000 INCHES     INF =     .04000
INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033330


          K =    .106205HR     TP =    .133300HR     K/TP RATIO =    .796738      SHAPE
```

CONSTANT, N = 4.498737
UNIT PEAK = 1.1292 CFS UNIT VOLUME = .9896 B = 387.15
P60 = 1.9000
AREA = .000389 SQ MI IA = .35000 INCHES INF = .83000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033330

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 103.10

RUNOFF VOLUME = 1.06819 INCHES = .0231 ACRE-FEET
PEAK DISCHARGE RATE = .79 CFS AT 1.500 HOURS BASIN AREA =
.0004 SQ. MI.

***** BASIN D WITH ONLY K1 DEVELOPED
COMPUTE NM HYD ID=4 HYD NO=104.1 AREA=0.000252 SQ MI
PER A=0 B=79.36 C=20.64 D=0
TP=0.1333 HR MASS RAINFALL=-1

K = .125692HR TP = .133300HR K/TP RATIO = .942929 SHAPE
CONSTANT, N = 3.749558
UNIT PEAK = .63919 CFS UNIT VOLUME = .9794 B = 338.11
P60 = 1.9000
AREA = .000252 SQ MI IA = .46904 INCHES INF = 1.16331
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
.033330

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 104.10

RUNOFF VOLUME = .75550 INCHES = .0102 ACRE-FEET
PEAK DISCHARGE RATE = .37 CFS AT 1.500 HOURS BASIN AREA =
.0003 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 08:22:04

DRAINAGE REPORT

for

VISTA DE LA LUZ

Prepared by

Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199
(505) 828-2200

August 2006

GREGORY JAMES NOFFKE
NEW MEXICO
11929
REGISTERED PROFESSIONAL ENGINEER
8-22-06

3-13-07, 3-27-07, 5-17-07

D. Mark Goodwin & Associates, P.A.
Consulting Engineers
P.O. BOX 90606, ALBUQUERQUE,NM 87199
(505) 828-2200 FAX 797-9539
e-mail: goodwinengrs@comcast.net

PROJECT Vista de la Luz
SUBJECT Drainage Calcs
BY GSK DATE 8-18-06
CHECKED _____ DATE _____
SHEET 1 OF ____
REVISED 3-27-07

- SITE CONSISTS OF 29.3055 AC ON THE WEST SIDE OF COORS BLVD NW AND ON THE NORTH SIDE OF THE SAN ANTONIO DIVERSION CHANNEL.
- SITE IS NOT IN A 100yr FLOOD ZONE - SEE ATTACHED MAP #35001C0114E.
- SITE SLOPES FROM NW TO SE AT 5% FOR 25% OF THE PROPERTY THEN AT 10% FOR 50% THEN 3% FOR THE REMAINING 25%.
- THERE ARE OFFSITE FLOWS THAT ENTER THIS SITE FROM LA MARIPOSA SOUTH THROUGH A 10' CONCRETE CHANNEL (SEE APPENDIX A). THIS REPORT WILL RUN THE MAY 1977 FLOWS USING CURRENT AHYMO TO DETERMINE THE ACTUAL FLOW ENTERING THE SITE.
- RUNOFF WILL BE DESIGNED AS SURFACE FLOW TO INLETS. THE INLETS WILL DRAIN TO STORMDRAIN WHICH WILL OUTFALL AT THE SOUTHEAST CORNER TO THE SAN ANTONIO CHANNEL VIA A STORMWATER QUALITY CONTROL MANHOLE.
- THERE WILL BE SOME SIDESLOPES AND PART OF ROADS THAT WILL DIRECT DISCHARGE TO COORS BLVD ROW. THIS FLOW WILL FLOW ALONG COORS BLVD TO ~~THE~~ ARROYO IN THE CURRENT LOCATION.
- SITE WILL BE DIVIDED INTO 4 DRAINAGE BASINS
  - A) NORTH HALF
  - B) SOUTH HALF
  - C) COMMERCIAL AREA
  - D) DIRECT DISCHARGE AREA

- DETERMINE RUNOFF PER LOT FOR BASIN A

61 LOTS - AREA = 8.3550 AC

PADS = 30x70 = 2100 ☐'
DRIVE PAD = 20x20 = 400 ☐'
TOTAL TYPE "D" = 3.5009 AC

ROW WITHIN BASIN A = 2.4041 AC (SAY 8' OF SONK & 29.33 BACK TO BACK IN 48')
77.78 % "D" = 1.8699 AC
22.22 % "C" = 0.5342 AC

TOTAL "D" IN BASIN A = 3.5009 + 1.8699 = 5.3708 AC = 64.28 %
TOTAL "B" IN BASIN A = 2.0706 AC = 24.79 %
TOTAL "C" IN BASIN A = 0.3794 + 0.5342 = 0.9136 AC = 10.93 %
↑ LANDSCAPE TRACTS

P_1 = 1.90 in
P_6 = 2.25 in
P_{24} = 2.65 in

FROM SHEET 3 - Q = 30.90 CFS
Q PER LOT = 0.5066 CFS

D. Mark Goodwin & Associates, P.A.
Consulting Engineers
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(505) 828-2200 FAX 797-9539
e-mail: goodwinengrs@comcast.net

PROJECT Vista de la Luz
SUBJECT Drainage Calcs
BY GJK DATE 3-9-07
CHECKED ____ DATE ____
SHEET 2 OF ____

REVISED 3-27-07
REVISED 4-23-07

• DETERMINE RUNOFF PER LOT FOR BASIN B

65 LOTS - AREA = 10.2009

PADS = 35x65 = 2275 ☐

DRIVE PADS = 20x20 = 400 ☐

TOTAL "D" = 3,9916 AC

ROW WITHIN BASIN B = 2.3621 AC

77.78% "D" = 1.8372 AC

22.22% "C" = 0.5249 AC

TOTAL "D" = 3.9916 + 1.8372 = 5.8288 AC = 57.14%
TOTAL "B" = 3.8009 AC = 37.26 %
TOTAL "C" = 0.0463 (ENDSCAPE) + 0.5249 = 0.5712 AC = 5.60%

FROM SHEET 3, Q = 35.54 CFS
Q PER LOT = 0.5468 CFS

• DETERMINE RUNOFF FOR COMMERCIAL AREA - BASINS C, CJ & CK
  • TRACT J WILL DRAIN ON SITE TO AN INLET WHICH WILL DRAIN TO THE NEW STORM DRAIN IN COORS BLVD. - BASIN CJ
  • TRACT K WILL DO THE SAME - BASIN CK
  • OJOS AZUL LOTS AND COSTA ALMERIA WILL MAKE UP BASIN C

BASIN C	BASIN CJ	BASIN CK
AREA = 3.2538 AC	AREA = 1.6390 AC	AREA = 2.4138 AC
11 LOTS AT 2500 ☐	90% "D"	90% "D"
= 0.6313 AC "D"	10% "B"	10% "B"
ROW = 1.5631 AC		
78% "D" = 1.2192 AC		
22% "C" = 0.3439 AC		

TOTAL "D" = 0.6313 + 1.2192
= 1.8505 AC = 56.87%
TOTAL "B" = 0.3829 AC = 11.77%
TOTAL "C" = 0.3439 + 0.6765
(ENDSCAPE TRACTS)
= 1.0204 AC = 31.36%

• DETERMINE RUNOFF FOR DIRECT DISCHARGE TO SAN ANTONIO ARROYO - BASIN D

AREA = 2.3078 AC
100% "C"

D. Mark Goodwin & Associates, P.A.
Consulting Engineers
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(505) 828-2200 FAX 797-9539
e-mail: goodwinengrs@comcast.net

PROJECT Vista de la Luz
SUBJECT Drainage Calcs
BY GK DATE 3-9-07
CHECKED _____ DATE _____
SHEET 3 OF ____
REVISED 3-27-07
REVISED 4-23-07

- DETERMINE OFFSITE RUNOFF AT EXISTING CHANNEL
  PER LA MARIPOSA REPORT
  AREA = 5.41 AC
  "D" = 39.6%
  "B" = 60.4%

FROM AHYMO OUTPUT SHEETS 10-18

BASIN	Q (CFS)
A	30.90
B	35.52
C	12.03
D	6.81
CJ	6.92
CK	10.12
OFFSITE	19.02 > 12.7 PER LA MARIPOSA REPORT

- FIND d AT SOUTH HAMMERHEAD OF COSTA MARESME

SLOPE = 1.0% 27'F-F n = 0.017 STD CHG
Q = 61 x 0.5066
= 30.9026 CFS

d = 0.51
WP = 28.02
A = 8.0
V = 3.79 F/S
Q = 30.32 CFS ≈ 30.9026 CFS OK
$d + V^2/2g = 0.73 < 0.85$ OK

INSTALL 2 DBL "A" INLETS IN SUMP
$Q/P = 3.0 H^{1.5}$ P = 17
H = 0.45' < 0.67' OK
ASSUME 50% CLOGGED
H = 0.72' < 0.94' OK

- FOR THE OFFSITE FLOWS THE CHANNEL WILL BE TERMINATED AND A DBL "A" IN SUMP WILL BE INSTALLED.

$Q/P = 3.0 H^{1.5}$
H = 0.52' OK
50% CLOGGED
H = 0.82' OK
THE WILL BE A 16" CURB TO MATCH THE EXISTING AT THE END OF ~~THE~~ CHANNEL.

D. Mark Goodwin & Associates, P.A.
Consulting Engineers
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e-mail: goodwinengrs@comcast.net

PROJECT Vista de la Luz
SUBJECT Drainage Calcs
BY GSK DATE 8-18-06
CHECKED DATE
SHEET 4 OF

REVISED 3-9-07
3-27-07

• DETERMINE SUMP FOR COMMERCIAL ON COSTA ALMERIA

Q = 12.03 CFS

$Q/p = 3.0H^{1.5}$

USE 2 SGL "A" INLETS P=11 FOR EACH INLET

H = 0.32' < 0.67' OK

ASSUME 50% CLOGGED

H = 0.51' < 0.85' OK

• FIND Q AT COSTA MARESME & COSTA GARRAF

Q AT NORTH SIDE
= 27 x 0.5465 = 14.7555 CFS

Q AT WEST SIDE
= 33 x 0.5465 = 18.0345

ADD 2 SGL "A" INLETS AT EACH LOCATION

COSTA MARESME S = 1.64%

d = 0.38
WP = 27.76
A = 4.49
V = 3.32 F/S
Q = 14.92 CFS ≈ 14.7555 OK
$d + V^2/2g = 0.55 < 0.85$ OK

FROM NOMO SHEET 8
$Q_{GRATE} = 4.1$ CFS

Q PAST INLETS
14.7555 - 2(4.1) = 6.5555 CFS

COSTA GARRAF S = 4.0%

d = 0.355
WP = 27.71
A = 3.815
V = 4.66 F/S
Q = 17.78 CFS ≈ 18.0345 OK
$d + V^2/2g = 0.69 < 0.85$ OK

FROM NOMO SHEET 8
$Q_{GRATE} = 5.7$ CFS

Q PAST INLETS
18.0345 - 2(5.7) = 6.6345 CFS

• FIND Q AT SOUTH STUB OF COSTA MARESME

Q = 6.5555 + 6.6345 + 5(0.5465)
= 15.9225 CFS

INSTALL 1 - SGL "A" AND 1 DBL "A" INLET IN SUMP

$Q/p = 3.0H^{1.5}$ P = 11 + 17 - 5 = 23

H = 0.38' < 0.67' OK
ASSUME 50% CLOGGED
H = 0.60' < 0.94' OK

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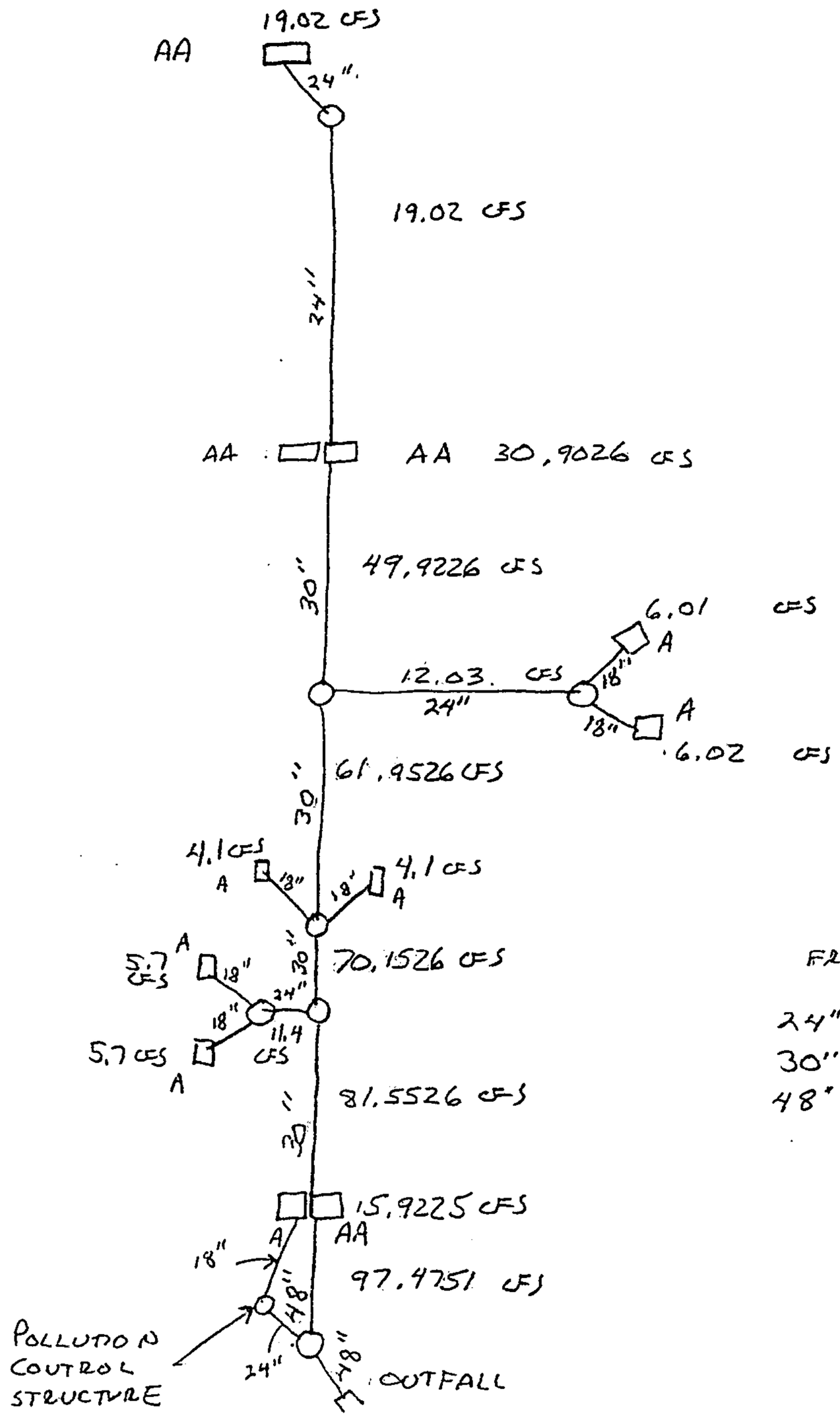
PROJECT Vista de la Luz
SUBJECT DRAINAGE CALCS
BY GSK DATE 8-18-06
CHECKED _____ DATE _____
SHEET 5 OF ____

REVISED 3-9-07
3-27-07

DESIGN STORMDRAIN



FROM NOMO SHEET 9

24" @ 3% CARRIES 37 CFS
30" @ 3% CARRIES 68 CFS
48" @ 0.5% CARRIES 100 CFS

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PROJECT Vista de la Luz
SUBJECT Drainage Calcs
BY GJK DATE 3-9-07
CHECKED ____ DATE ____
SHEET 6 OF ____

REVISED 3-27-07
REVISED 4-23-07

- DETERMINE STORMDRAIN IN COORS BLVD.

THE FRONTAGE ON COORS BLVD PRESENTS A SITUATION THAT WILL REQUIRE A STORMDRAIN TO BE CONSTRUCTED. THE AREA ADJACENT TO THE SITE IS FLAT, NO LONGITUDINAL SLOPE, ALSO THE LOW POINT ON COORS IS APPROXIMATELY 270' NORTH OF THE SAN ANTONIO ARROYO. THESE ISSUES REQUIRE A STORMDRAIN TO BE CONSTRUCTED ALONG COORS FROM SEVILLA TO THE ARROYO. THIS STORMDRAIN WILL BE CONSTRUCTED BEHIND THE CURB & GUTTER OF COORS BLVD TO BE ABLE TO GET IT TO DISCHARGE INTO THE ARROYO. THE COMBINATION OF SUPERELEVATION AND RECENT REPAVING HAS LEFT COORS FLAT IN THIS AREA.

WE PROPOSE TO VARY THE CROSS SLOPE ON OUR NEW PAVEMENT TO CREATE POSITIVE SLOPE SOUTH TO SEVILLA WHERE WE WILL CONSTRUCT A SUMP INLET. FARTHER TO THE SOUTH ANOTHER INLET WILL BE CONSTRUCTED AT THE EXISTING LOW SPOT. THE TWO COMMERCIAL TRACTS WILL ALSO DRAIN TO THIS NEW STORMDRAIN.

- AREA NORTH OF SEVILLA DRAINING TO COORS - BASIN E
  THIS WILL DRAIN TO A SGL "A" INLET IN SUMP.
  AREA = 0.2036 AC
  56.63 % "C"
  43.37 % "D"
  FROM AHYMO OUTPUT SHEETS 10-18
  Q = 0.75 CFS

- INTERSECTION OF COORS & SEVILLA, NORTH HALF DRAINS TO A SGL "A" INLET IN SUMP - BASIN F
  AREA = 0.5562 AC
  47.73 % "C"
  52.27 % "D"
  FROM AHYMO OUTPUT SHEETS 10-18
  Q = 2.09 CFS

- INTERSECTION OF COORS & SEVILLA, SOUTH HALF DRAINS TO A "TYPE B" INLET IN SUMP - BASIN G
  AREA = 0.4208 AC
  40.68 % "C"
  59.32 % "D"
  FROM AHYMO OUTPUT SHEETS 10-18
  Q = 1.63 CFS

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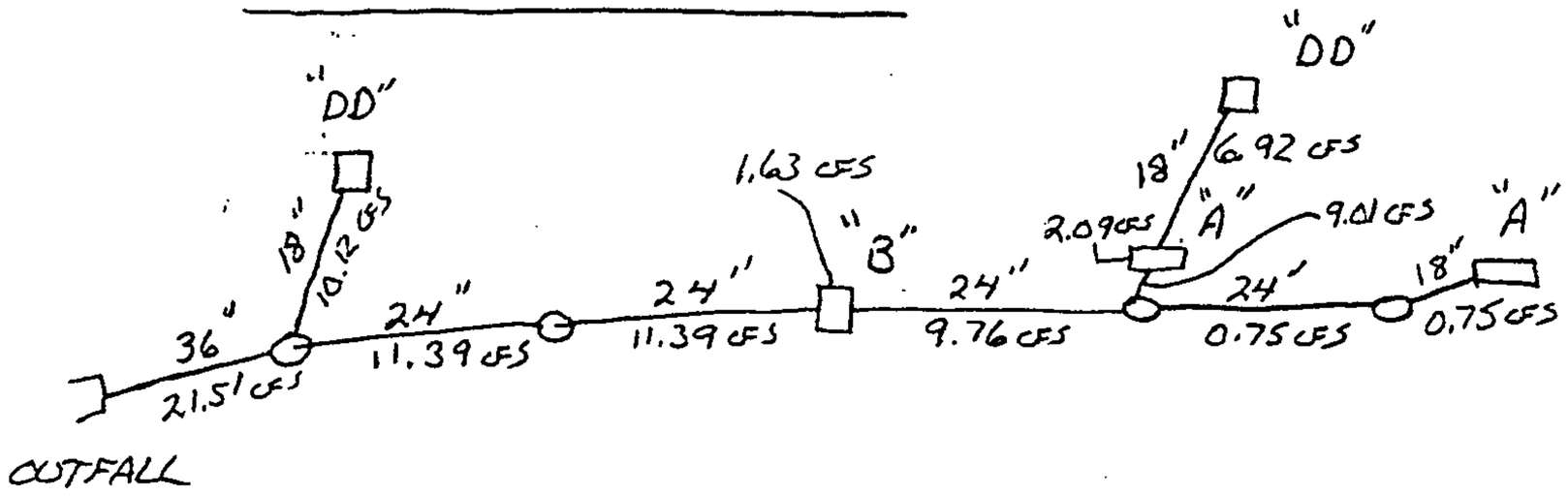
PROJECT Vista de la Luz
SUBJECT Drainage Calcs
BY GJK DATE 3-9-07
CHECKED ____ DATE ____
SHEET 7 OF ____

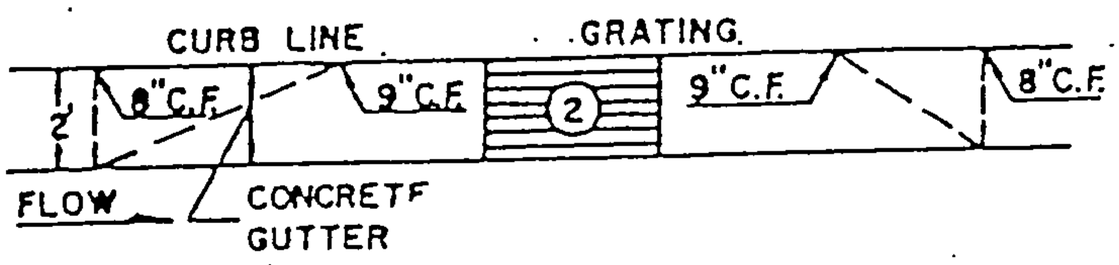
REVISED 3-27-07 REVISED 5-17-07
REVISED 4-23-07

- AREA SOUTH OF SEVILLA DRAINING TO COORS - BASIN H
  THIS WILL DRAIN TO COORS SUPERELEVATION
  AREA = 0.1776 AC
  100% "C"
  FROM AHYMO OUTPUT SHEETS 10-18
  Q = 0.53 CFS

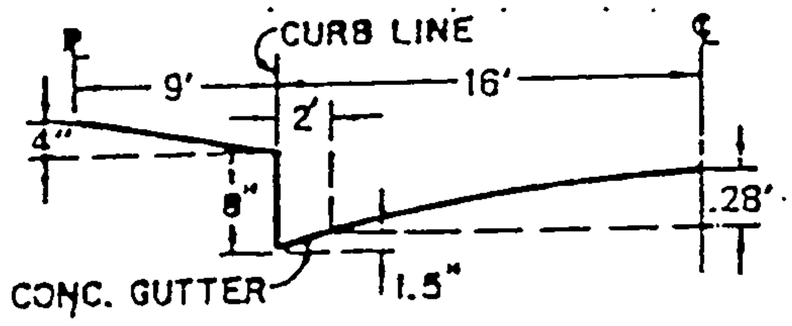
COORS STORM DRAIN



GRATING CAPACITIES FOR TYPE "A" , "C" and "D".

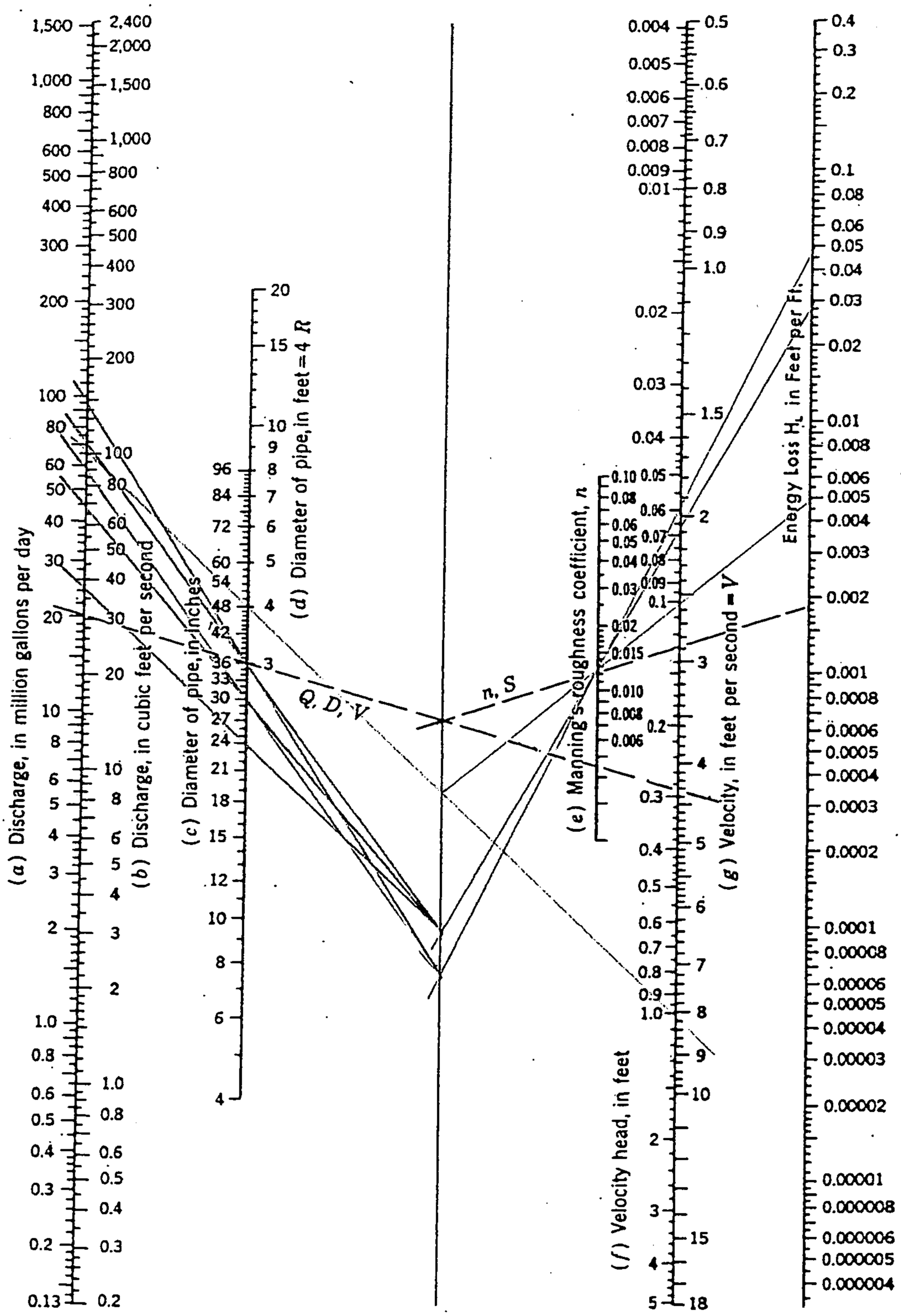


GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)

D = DEPTH OF FLOW (FT.) ABOVE NORMAL GUTTER GRADE



Alignment chart for energy loss in pipes, for Manning's formula.
Note: Use chart for flow computations, $H_L = S$

Figure 3-29a Nomograph for solution of Manning's formula.

CITY OF ALBUQUERQUE

May 27, 2008

Gregory J. Krenik, P.E.
Mark Goodwin & Associates, PA
P.O. Box 90606
Albuquerque, NM 87199

Re: Vista de La Luz Commercial Grading and Drainage Plan
Engineer's Stamp dated 4-10-08 (F11/D010A)

Dear Mr. Krenik,

Based upon the information provided in your submittal received 4-11-08 the above referenced plan is approved for Grading Permit conditional on compliance with the SWPPP.

However, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

- Dumpster pads for restaurants are required to drain to the sanitary sewer after passing through the grease trap.
- Specify the means/provide a detail for stabilizing the 1:1 slope along Coors Blvd.
- What is the status of the storm drain in Coors Blvd?

Please submit a revised Grading and Drainage Plan only, a report is not required. If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file

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