

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



October 11, 2016

David Soule, P.E.
Rio Grande Engineering
P.O. Box 93924
Albuquerque, NM 87199

Richard J. Berry, Mayor

RE: Estates at Glendale Unit 3 (File: B19D027)
Drainage Report, Engineer's Stamp Date 8-12-16
Grading and Drainage Plan, Engineer's Stamp Date 9-22-16

Dear Mr. Soule:

Based upon the information provided in your submittal received 9-22-16, the above referenced submittal is approved for Preliminary Plat and ESC Permit (Grading Permit) with the following conditions:

- 6" mountable curb is shown in front of lots 18 and 23, and per our discussion should be standard curb in front of lot 18. 4" curb may be acceptable on the east side of the road, but provide calculations or rational at DRC to justify the lower curb height.
- It is not clear the limits of the Standard Curb and Gutter, and the 4" mountable curb noted in the general notes. Show limits on the Work Order Construction Set.
- Lot 17 has a double wall on the Northern Boundary. The more northern wall is a retaining wall and has ToW and Grade elevations shown. However, the more southern wall is a retaining on the western half. Show where the retaining wall stops and becomes a garden wall. Show ToW and BoW elevations on the as-built.
- For DRB action, the following easements need to be shown on the plat:
 - Lots 17, 18, and 19 will require a Cross-Lot Drainage Easement on the plat for the benefit of Lots 18,19, and 20. Also, ensure the drainage channel is on the I.L.
 - Lot 20 will need a Cross-Lot Drainage Easement for the Benefit of Lot 25.
 - A Private Drainage Easement is needed over the SW Culvert to the wall, for the Benefit of Lot 24 and 25. Ensure Drainage channel and SW culvert at end of cul-de sac is on the infrastructure list
 - Other items to be on the I.L. are the SW culvert on Glendale and the sump Double C inlet

Prior to Building Permit approval, Engineer Certification per the DPM checklist will be required.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Rita Harmon", with a long, sweeping horizontal line extending to the right.

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf: via Email: Recipient

DRAINAGE REPORT

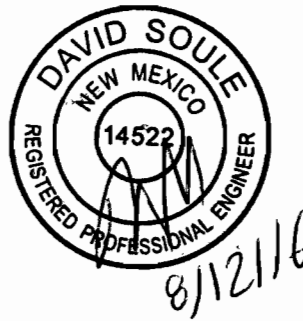
For

THE ESTATES AT GLENDALE UNIT 3
Albuquerque, New Mexico

Prepared by

Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

August 16, 2016



David Soule P.E. No. 14522

TABLE OF CONTENTS

Purpose 3

Introduction..... 3

Existing Conditions..... 3

Exhibit A-Vicinity Map 4

Proposed Conditions 5

Summary 5

Appendix

NAAMDP, Phase 1 asbuilt excerpts A

Site Hydrology B

Hydraulic calculations..... C

Map

Site Grading and Drainage Plan

PURPOSE

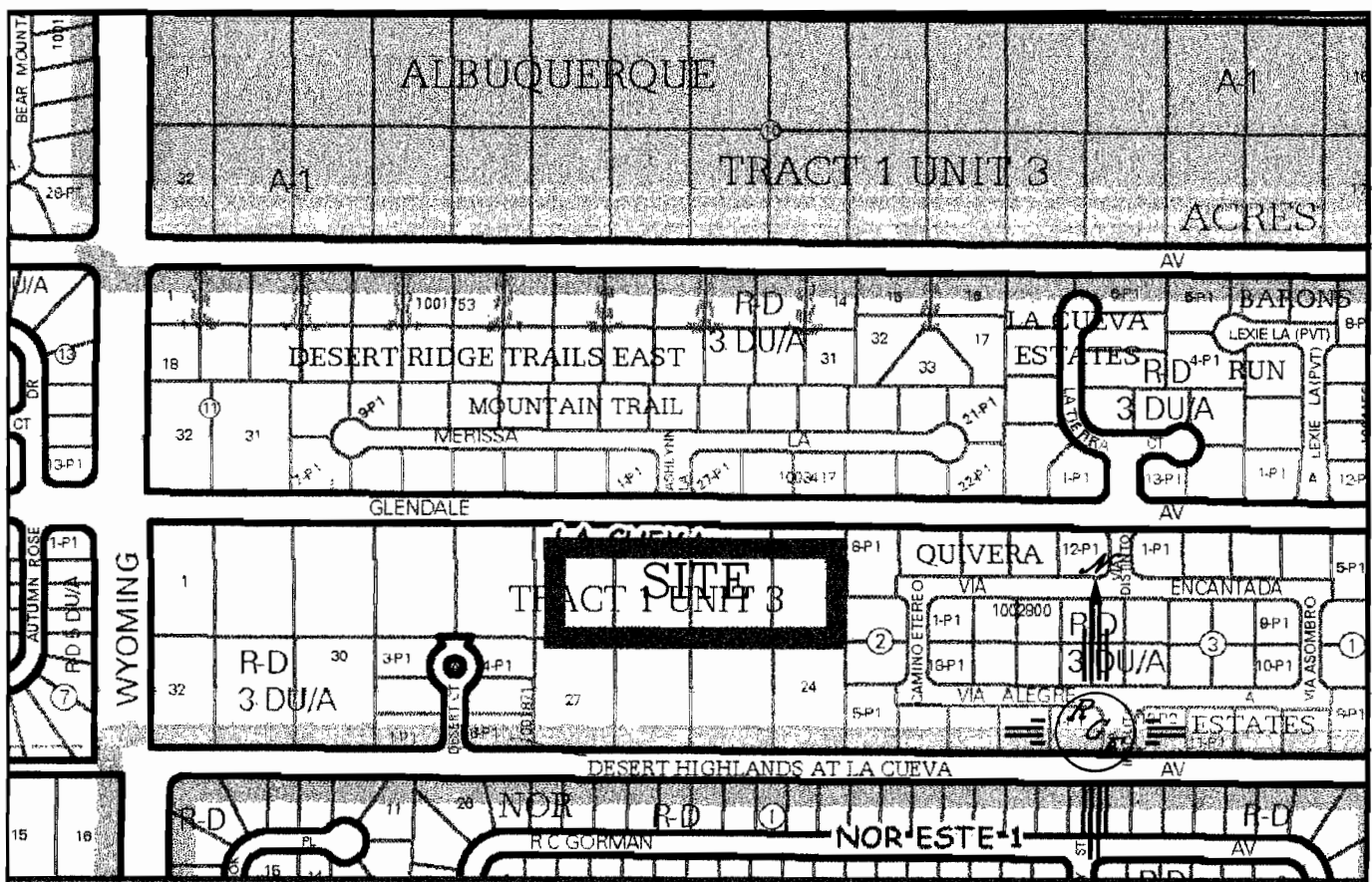
The purpose of this report is to provide the Drainage Management Plan for the development of a 7-lot subdivision located on Glendale Avenue between Wyoming Boulevard and Barstow Street NE. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque’s Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

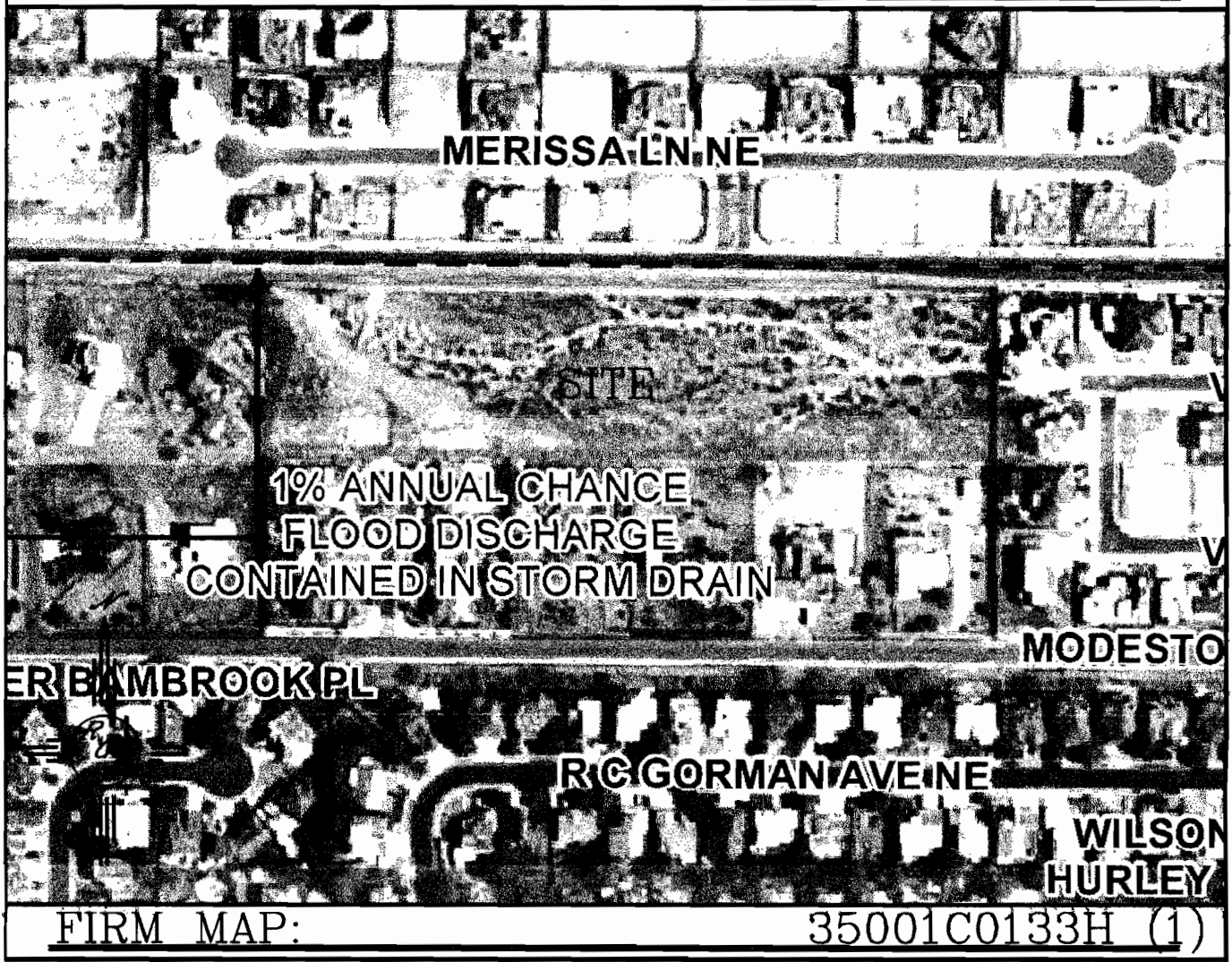
The subject of this report, as shown on the Exhibit A, is a 1.74-acre parcel of land located on the south side of Glendale Avenue between Wyoming Boulevard and Barstow Street NE. The legal description of this site is tract B the Estates at Glendale Subdivision. As shown on FIRM map35013C0133H, the entire site is located within Flood Zone X. The site has had grading activities upon it over the past several years. The site contains a retention pond constructed with phase two. Due to the upstream construction, the site is not affected by any upland flows from the north or east. The site is impacted by the adjacent lots to the south. The site currently free discharges to a large pond located at the northwest corner of the site. Phase 3 will be developed at this time, in addition to changes in the wall heights at the interface between phase 2 and 3. The site was analyzed and the discharge rates approved by the previously approved grading plan and report. Based upon conversation with the City Engineer, due to the site plan for subdivision and building permit being previously approved, the development of the site will be allowed to discharge at a rate equal to or less than the fully developed conditions assumed for this site within the approved grading plan. Due to lower development pattern that developed east of this site (basin 203.3), the overall El Camino basin shall not exceed the developed conditions assumptions of the governing North Albuquerque Acres Master Drainage Plan (NAAMDP), which relevant excerpts can be found in appendix A.

EXISTING CONDITIONS

The site currently does have ponds and stockpiles on it and has been impacted by human development over the years. The site is the third phase and final phase of the Estates at Glendale project. The site was initially designed by John Mackenzie by report found in city of Albuquerque drainage file. A copy of the overall grading plan is located in appendix A. The site is impacted by minor upland flows from the developed lots to the south. The site currently discharges all of its flow to the North West corner to a temporary retention pond. As shown in the approved grading plan and the flow rates for this stub, this site was anticipated to discharge 14.5 cfs. A copy of this as built design showing flow rates programmed to leave the site is located in appendix A. The site is located within basins 204.0 of the NAAMDP. The adjacent infrastructure improvements within Glendale were constructed with phase one of this development. A 24" storm drain pipe was stubbed into the property with the initial phase. All downstream improvements are in place and accepted by the city of Albuquerque.



and more details visit: <http://www.cabq.gov/ais>
VICINITY MAP: B-19-Z



PROPOSED CONDITIONS

The proposed improvements consist of a new 7-lot subdivision serviced by private paved roadways. The lots shall free discharge to the roadway and be conveyed within the roadway to an inlets connected to the stub constructed with phase 1. As shown in appendix B, this site contains 2 onsite basins and one offsite basin. The offsite basin flows were obtained from the previous grading plan. Basin A contains the majority of the site and roadway. This basin generates 6.06 cfs which is collected by a new inlet. Basin B contains the rear yard of lots 17-19, this basin generates 1.54 cfs which is conveyed via a 2' concrete channel, which discharges to Glendale via a single sidewalk culvert. This basin drains to the rear due to the agreements the developer made to the phase two lots regarding new wall heights. Basin C is the rear portion the adjacent lot to the south. In the ultimate conditions this basin will generate 2.86 cfs which will enter the site via three turned blocks, and a 2' sidewalk culvert. This basin combines with basin A, and is captured by the new inlet. As shown in appendix C, the block opening, channels, street and inlets have been sized to accommodate the flow. The first flush will be obtained by shallow yard ponds and the depression of the area between the sidewalk and the curb.

SUMMARY AND RECOMMENDATIONS

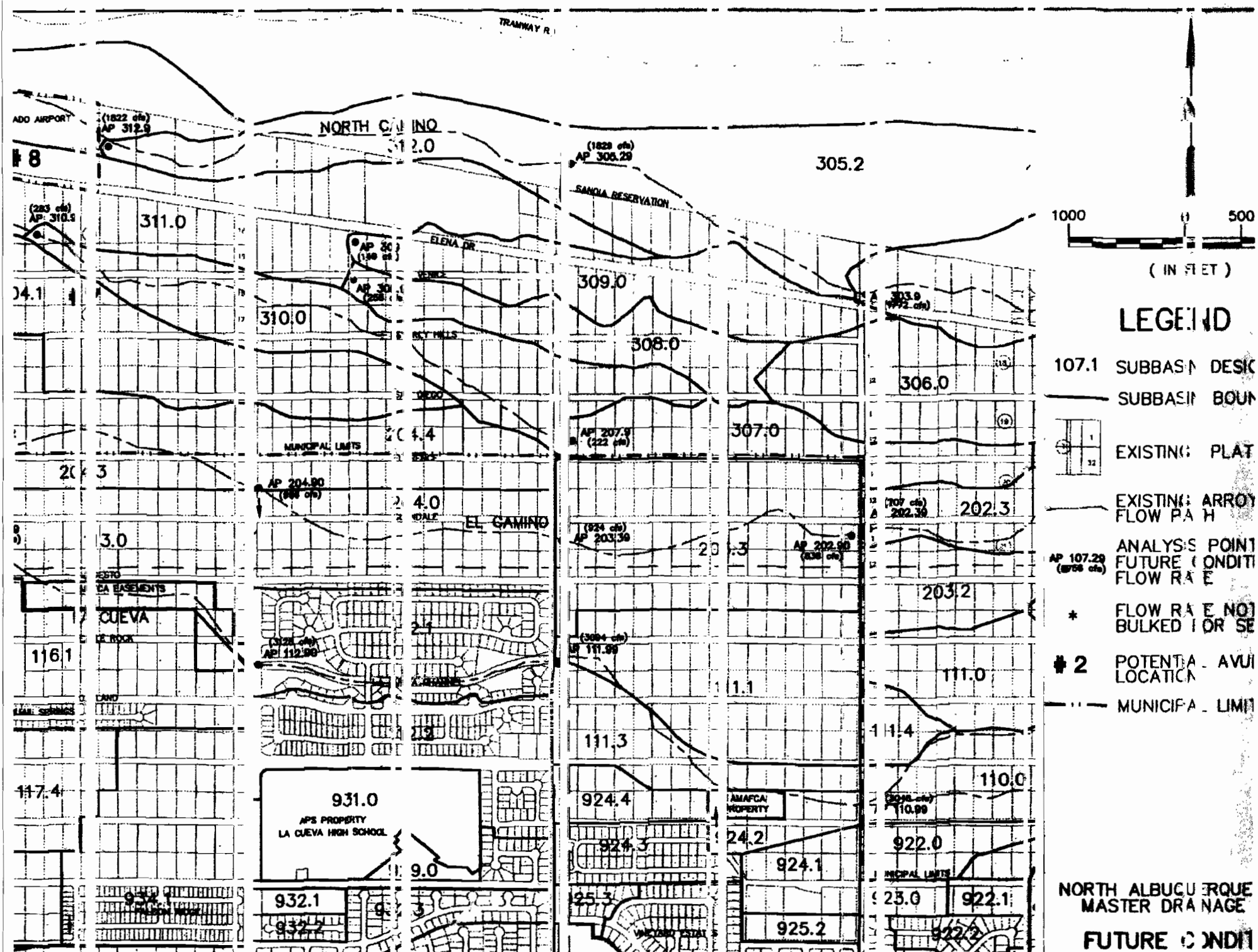
This project is a development of residential subdivision with the North Albuquerque Acres Master Drainage plan. The development is consistent with the land use assumptions and drainage concepts of the initial approved grading plan. The surrounding development diverted the majority of the upland flow. The minor flow from the developed lots to the south is allowed to pass thru the site. The discharge will enter the downstream storm drain where it was anticipated. The inlets, pipes and roadways have been shown to provide the required capacity. The site has been designed in accordance with City of Albuquerque Drainage ordinance. This drainage plan and report conforms to the governing drainage regulations of the City. Since the effected area site encompasses more than 1 acre, a NPDES permit will be required prior to any construction

APPENDIX A

North Albuquerque Acres Master Drainage Plan

And

Excerpts of phase one as-builts



Basin ID	Hydrologic Condition	Basin Area (mi ²)	Land Treatment %				TP (hrs)
			A	B	C	D	
201	Existing	.1339	95	0	0	5	.133
	Future	.1339	95	0	0	5	.133
200	Existing	.3030	65	20	15	0	.167
	Future	.3030	65	20	15	0	.167
202.1	Existing	.1031	84	0	8	8	.133
	Future	.1031	22	22	22	17	.133
202.2	Existing	.1099	70	5	15	10	.14
	Future	.1099	22	23	38	17	.14
202.3	Existing	.0584	60	10	15	15	.133
	Future	.0518	11	26	33	30	.133
203.1	Existing	.1258	80	0	10	10	.14
	Future	.1258	22	25	36	17	.14
203.2	Existing	.0485	80	0	10	10	.133
	Future	.0394	11	26	33	30	.133
203.3	Existing	.0558	80	0	10	10	.133
	Future	.1259	20	20	34	26	.133
★ 204	Existing	.2119	80	0	10	10	.21
	Future	.0415	20	20	34	20	.155
204.2	Existing	.1333	80	0	10	10	.14
	Future	.0687	8	22	25	45	.14
204.1	Existing	.1484	80	0	10	10	.18
	Future	.1288	17	22	31	30	.18
204.3	Future	.0870	10	15	30	45	.133
204.4	Future	.0546	21	21	36	22	.133
205	Existing	.0459	10	0	20	70	.133
	Future	.0543	0	10	20	70	.133
206.1	Existing	.1221	75	5	10	10	.150
	Future	.1221	0	20	30	50	.150
206.2	Existing	.0461	75	5	10	10	.133
	Future	.0561	0	20	30	50	.133
206.3	Existing	.0480	0	7	7	86	.133
	Future	.0480	0	7	7	86	.133
206.4	Existing	.0327	40	25	5	30	.133
	Future	.0327	0	20	30	50	.133

FUTURE UNIT 3

PLAN VIEW

CROSS SECTION

STATIONING: STA. 10+00 TO 12+00

VERT. 1" = 10'

SCALE: 1" = 50'

DESIGNED BY: J. H. H. H.

DATE: 1964

REVISIONS:

- 1. 10-10-64
- 2. 11-10-64
- 3. 12-10-64
- 4. 1-10-65
- 5. 2-10-65
- 6. 3-10-65
- 7. 4-10-65
- 8. 5-10-65
- 9. 6-10-65
- 10. 7-10-65
- 11. 8-10-65
- 12. 9-10-65
- 13. 10-10-65
- 14. 11-10-65
- 15. 12-10-65
- 16. 1-10-66
- 17. 2-10-66
- 18. 3-10-66
- 19. 4-10-66
- 20. 5-10-66
- 21. 6-10-66
- 22. 7-10-66
- 23. 8-10-66
- 24. 9-10-66
- 25. 10-10-66
- 26. 11-10-66
- 27. 12-10-66
- 28. 1-10-67
- 29. 2-10-67
- 30. 3-10-67
- 31. 4-10-67
- 32. 5-10-67
- 33. 6-10-67
- 34. 7-10-67
- 35. 8-10-67
- 36. 9-10-67
- 37. 10-10-67
- 38. 11-10-67
- 39. 12-10-67
- 40. 1-10-68
- 41. 2-10-68
- 42. 3-10-68
- 43. 4-10-68
- 44. 5-10-68
- 45. 6-10-68
- 46. 7-10-68
- 47. 8-10-68
- 48. 9-10-68
- 49. 10-10-68
- 50. 11-10-68
- 51. 12-10-68
- 52. 1-10-69
- 53. 2-10-69
- 54. 3-10-69
- 55. 4-10-69
- 56. 5-10-69
- 57. 6-10-69
- 58. 7-10-69
- 59. 8-10-69
- 60. 9-10-69
- 61. 10-10-69
- 62. 11-10-69
- 63. 12-10-69
- 64. 1-10-70
- 65. 2-10-70
- 66. 3-10-70
- 67. 4-10-70
- 68. 5-10-70
- 69. 6-10-70
- 70. 7-10-70
- 71. 8-10-70
- 72. 9-10-70
- 73. 10-10-70
- 74. 11-10-70
- 75. 12-10-70
- 76. 1-10-71
- 77. 2-10-71
- 78. 3-10-71
- 79. 4-10-71
- 80. 5-10-71
- 81. 6-10-71
- 82. 7-10-71
- 83. 8-10-71
- 84. 9-10-71
- 85. 10-10-71
- 86. 11-10-71
- 87. 12-10-71
- 88. 1-10-72
- 89. 2-10-72
- 90. 3-10-72
- 91. 4-10-72
- 92. 5-10-72
- 93. 6-10-72
- 94. 7-10-72
- 95. 8-10-72
- 96. 9-10-72
- 97. 10-10-72
- 98. 11-10-72
- 99. 12-10-72
- 100. 1-10-73
- 101. 2-10-73
- 102. 3-10-73
- 103. 4-10-73
- 104. 5-10-73
- 105. 6-10-73
- 106. 7-10-73
- 107. 8-10-73
- 108. 9-10-73
- 109. 10-10-73
- 110. 11-10-73
- 111. 12-10-73
- 112. 1-10-74
- 113. 2-10-74
- 114. 3-10-74
- 115. 4-10-74
- 116. 5-10-74
- 117. 6-10-74
- 118. 7-10-74
- 119. 8-10-74
- 120. 9-10-74
- 121. 10-10-74
- 122. 11-10-74
- 123. 12-10-74
- 124. 1-10-75
- 125. 2-10-75
- 126. 3-10-75
- 127. 4-10-75
- 128. 5-10-75
- 129. 6-10-75
- 130. 7-10-75
- 131. 8-10-75
- 132. 9-10-75
- 133. 10-10-75
- 134. 11-10-75
- 135. 12-10-75
- 136. 1-10-76
- 137. 2-10-76
- 138. 3-10-76
- 139. 4-10-76
- 140. 5-10-76
- 141. 6-10-76
- 142. 7-10-76
- 143. 8-10-76
- 144. 9-10-76
- 145. 10-10-76
- 146. 11-10-76
- 147. 12-10-76
- 148. 1-10-77
- 149. 2-10-77
- 150. 3-10-77
- 151. 4-10-77
- 152. 5-10-77
- 153. 6-10-77
- 154. 7-10-77
- 155. 8-10-77
- 156. 9-10-77
- 157. 10-10-77
- 158. 11-10-77
- 159. 12-10-77
- 160. 1-10-78
- 161. 2-10-78
- 162. 3-10-78
- 163. 4-10-78
- 164. 5-10-78
- 165. 6-10-78
- 166. 7-10-78
- 167. 8-10-78
- 168. 9-10-78
- 169. 10-10-78
- 170. 11-10-78
- 171. 12-10-78
- 172. 1-10-79
- 173. 2-10-79
- 174. 3-10-79
- 175. 4-10-79
- 176. 5-10-79
- 177. 6-10-79
- 178. 7-10-79
- 179. 8-10-79
- 180. 9-10-79
- 181. 10-10-79
- 182. 11-10-79
- 183. 12-10-79
- 184. 1-10-80
- 185. 2-10-80
- 186. 3-10-80
- 187. 4-10-80
- 188. 5-10-80
- 189. 6-10-80
- 190. 7-10-80
- 191. 8-10-80
- 192. 9-10-80
- 193. 10-10-80
- 194. 11-10-80
- 195. 12-10-80
- 196. 1-10-81
- 197. 2-10-81
- 198. 3-10-81
- 199. 4-10-81
- 200. 5-10-81
- 201. 6-10-81
- 202. 7-10-81
- 203. 8-10-81
- 204. 9-10-81
- 205. 10-10-81
- 206. 11-10-81
- 207. 12-10-81
- 208. 1-10-82
- 209. 2-10-82
- 210. 3-10-82
- 211. 4-10-82
- 212. 5-10-82
- 213. 6-10-82
- 214. 7-10-82
- 215. 8-10-82
- 216. 9-10-82</

FUTURE UNITS 2 & 3

Scale: 1" = 10'

North Arrow

UNIT 2

UNIT 3

Various structural annotations and dimensions are present throughout the drawing.

APPENDIX B
SITE HYDROLOGY

Weighted E Method
GLENDALE ESTATES

Existing Developed Basins

Basin	Area (sf)	Area (acres)	Treatment A %	Treatment B		Treatment C		Treatment D		100-Year, 6-hr.		10-day		
				(acres)	%	(acres)	%	(acres)	%	Weighted E (ac-ft)	Volum (ac-ft)	Flow cfs	Volum (ac-ft)	
ONSITE A	5966	1.370	0%	0	18.0%	0.247	0%	0.13696	72%	986	1.994	0.8	6.06	0.3
ONSITE B	1591	0.365	0%	0	27.0%	0.099	0%	0.03654	63%	230	1.864	0.7	1.54	0.0
OFFSITE C	2731	0.627	0%	0	17.0%	0.107	0%	0.0627	73%	458	2.008	0.5	2.79	0.1
TOTAL														

Equation:

Weighted E = $E_a \cdot A_a + E_b \cdot A_b + E_c \cdot A_c + E_d \cdot A_d$ / (Total Area)
%

Volume = Weighted D * Total Area

UPLAND FLOW BASED UPON NAAAP

Flow = $Q_a \cdot A_a + Q_b \cdot A_b + Q_c \cdot A_c + Q_d \cdot A_d$

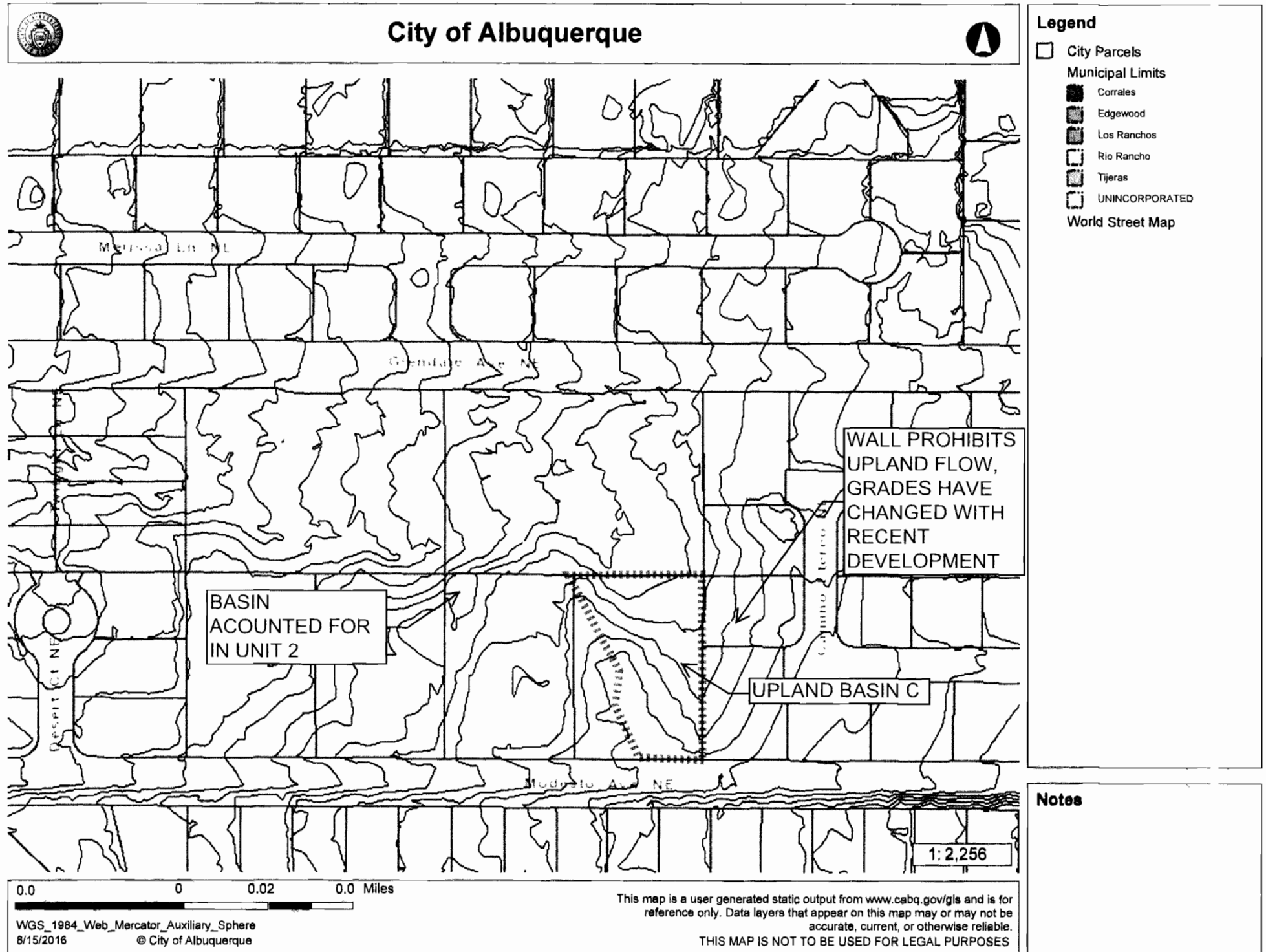
FIRST FLUSH REQUIRED
1st 182 CUBIC FEET

Where: r 100-year, 6-hour storm (zqr 3)

E_a = 0.66 Q_a = 1.87
 E_b = 0.92 Q_b = 2.6
 E_c = 1.29 Q_c = 3.45
 E_d = 2.36 Q_d = 5.02

FLOW SUMMARY

UPLAND TO SW CULVERT : 79 CFS UPLAND
ONSITE TO INLET : 86 CFS UPLAND AND ONSITE A
ONSITE TO 2' CHANNEL : 54 CFS REAR LOTS #7-19



4H

.39
ERIFY INV
ON)

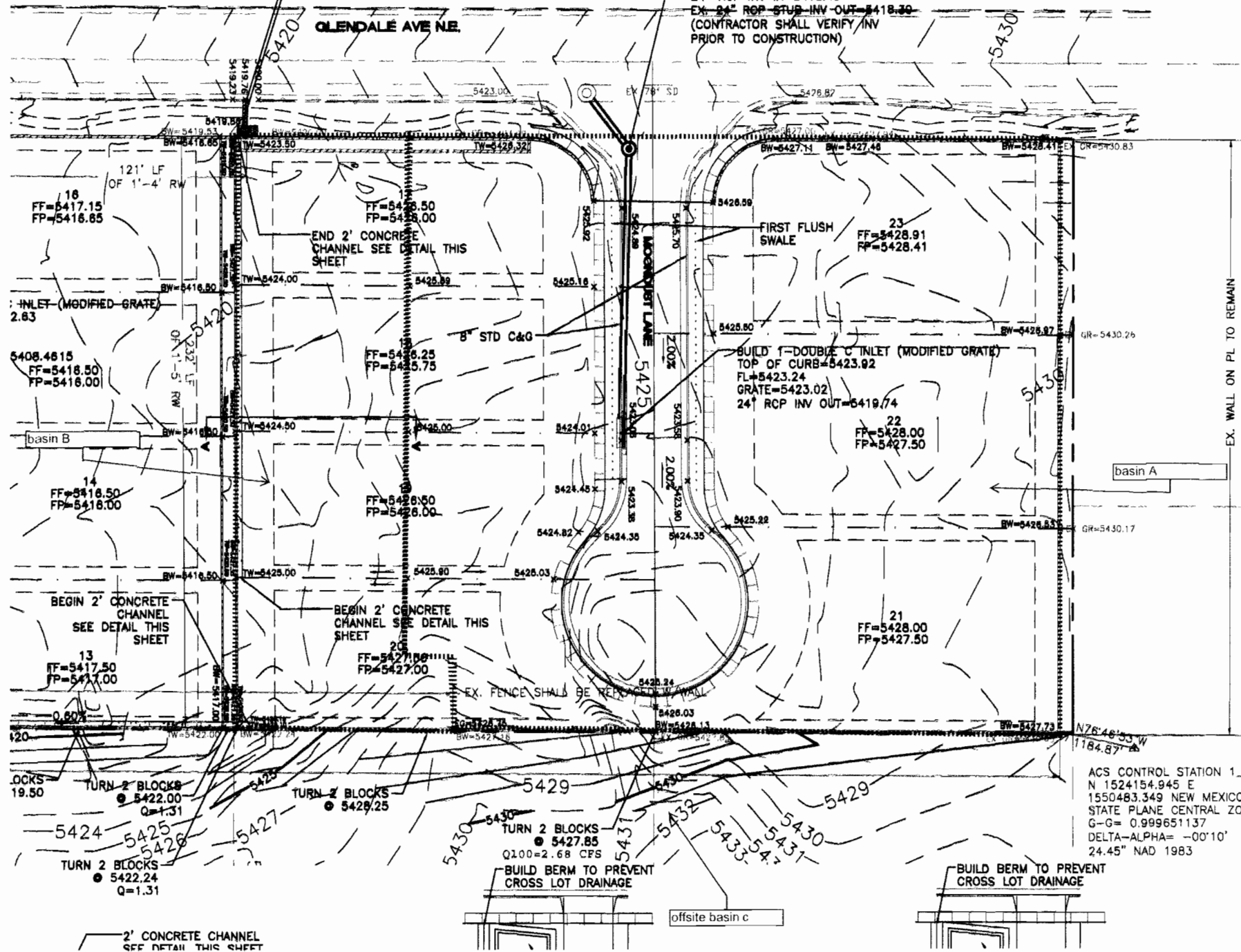
TURN 2 BLOCKS
● 5420.00
BUILD 4'X10'X6" RIP RAP CHANNEL
TO SW CULVERT
TO BE 6" FRACTURED ROCK-HAND PLACED



SCALE: 1"=30'

BUILD 1-TYPE E SD MH
RIM=5424.70
24" RCP INV IN=5418.49
EX- 24" RCP STUB INV OUT=5418.30
(CONTRACTOR SHALL VERIFY INV
PRIOR TO CONSTRUCTION)

OLENDALE AVE N.E.



ACS CONTROL STATION 1_B
N 1524154.945 E
1550483.349 NEW MEXICO
STATE PLANE CENTRAL ZONE
G-G= 0.999651137
DELTA-ALPHA= -00'10"
24.45" NAD 1983

EX. WALL ON PL TO REMAIN

BUILD BERM TO PREVENT
CROSS LOT DRAINAGE

BUILD BERM TO PREVENT
CROSS LOT DRAINAGE

offsite basin c

2' CONCRETE CHANNEL
SEE DETAIL THIS SHEET

APPENDIX C
HYDRAULIC CALCULATIONS

Street Capacity Calculations

28' F-F Street Section with 8" curb with Superelevated Cross-section
Slope= 0.02

For water depths less than 0.125 feet
Y= Water depth
Area = 8*Y^2
P= SQRT(257*Y^2) + Y
n= 0.017

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.01	0.0008	0.17	0.00	0.000	0.35	0.00	0.61	0.004983
0.025	0.005	0.43	0.01	0.003	0.64	0.02	0.71	0.0156
0.04	0.0128	0.68	0.02	0.011	0.87	0.03	0.77	0.027921
0.055	0.0242	0.94	0.03	0.026	1.08	0.06	0.81	0.041371
0.07	0.0392	1.19	0.03	0.050	1.27	0.09	0.85	0.055686
0.085	0.0578	1.45	0.04	0.083	1.44	0.12	0.87	0.070708
0.1	0.08	1.70	0.05	0.129	1.61	0.16	0.90	0.086333
0.125	0.125	2.13	0.06	0.233	1.87	0.23	0.93	0.113519

For water depths greater than 0.125 ft but less than 0.605 ft
Y1= Y-0.125
A2= A1 + 2*Y1 + 25*Y1^2
P2= P1 + SQRT(2501*Y1^2)+Y1

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.126	0.127	2.18	0.06	0.24	1.86	0.23	0.92	0.11303
0.2	0.416	5.95	0.07	0.87	2.10	0.42	0.83	0.154077
0.27	0.941	9.53	0.10	2.48	2.64	0.71	0.90	0.232694
0.34	1.711	13.10	0.13	5.44	3.18	1.08	0.96	0.32273
0.41	2.726	16.67	0.16	10.08	3.70	1.52	1.02	0.419542
0.4605	3.610	19.24	0.19	14.62	4.05	1.87	1.05	0.492546
0.5198	4.811	22.27	0.22	21.42	4.45	2.31	1.09	0.581067
0.605	6.845	26.61	0.26	34.22	5.00	3.02	1.13	0.712771

For water depths greater than 0.605 ft but less than 0.667 ft
Y3= Y - 0.605
A4= A3 + 26.0 * Y3 + 8 * Y3^2
P4= P3 + Y3 + SQRT(257 * Y3^2)

Depth (ft)	Area (ft^2)	P (ft)	R (A/P)	Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.606	6.871	26.63	0.26	34.42	5.01	3.04	1.13	0.715133
0.62	7.237	26.87	0.27	37.31	5.16	3.20	1.15	0.748153
0.635	7.632	27.12	0.28	40.51	5.31	3.37	1.17	0.783458
0.65	8.031	27.38	0.29	43.83	5.46	3.55	1.19	0.818692
0.667	8.488	27.67	0.31	47.72	5.62	3.75	1.21	0.858546

SIDEWALK CULVERTS

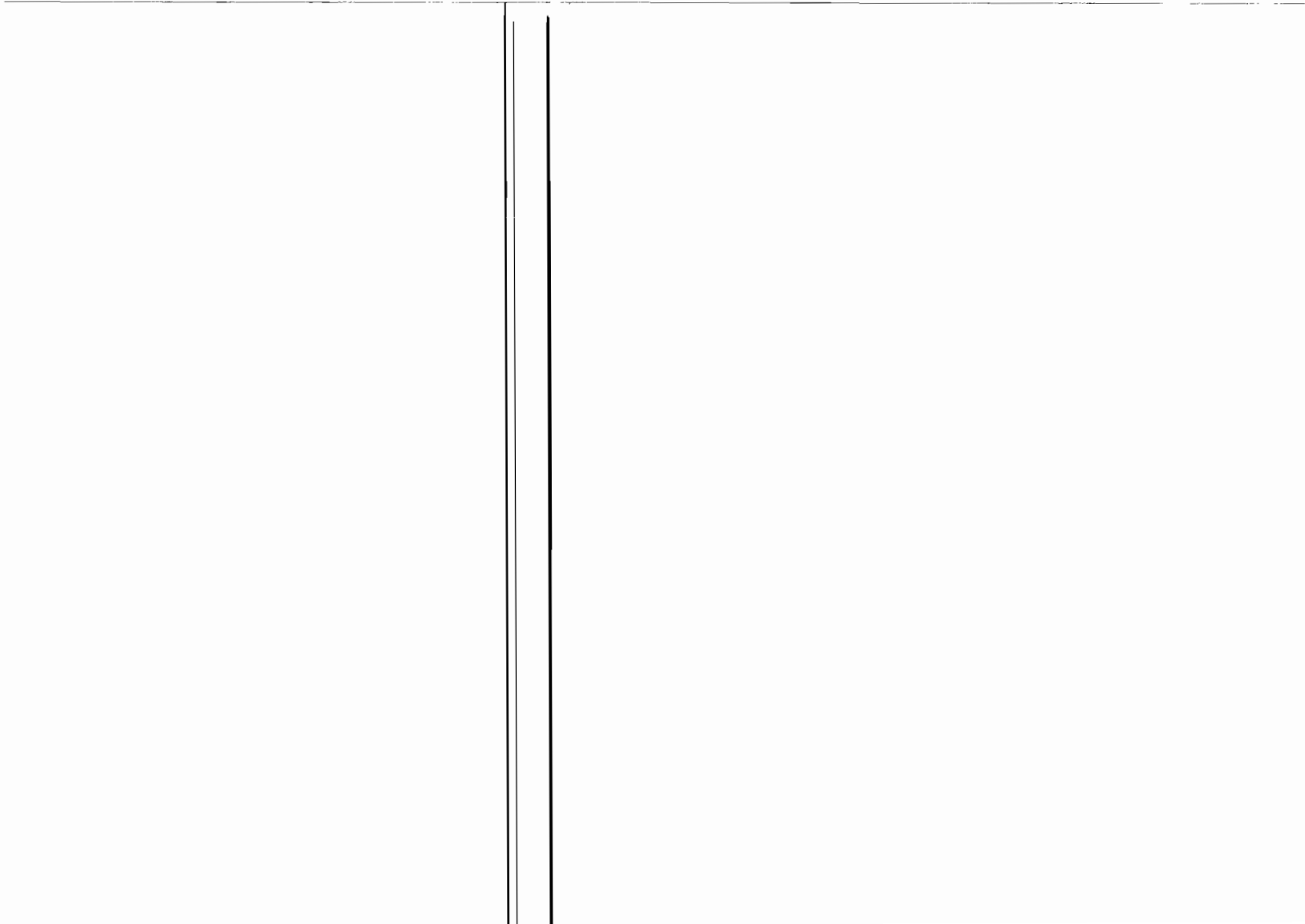
Weir Equation:

$Q=CLH^{3/2}$

Q= 2.92 cfs
C = 2.95
H = 0.67 ft
L = Length of weir

$Q = 2.95 * 2 * ((0.67)^{(3/2)})$

Each culvert has capacity of 3.23 cfs
therefore use 1 culverts



Pipe Capacity

Pipe	D	Slope	Area	R	Q Provided	Q Required	Velocity
	(in)	(%)	(ft^2)		(cfs)	(cfs)	(ft/s)
18rcp	24	1	3.14	0.5	19.66	8.86	2.82

Manning's Equation:

$Q = 1.49/n \cdot A \cdot R^{(2/3)} \cdot S^{(1/2)}$

A = Area
R = D/4
S = Slope
n = 0.015

DROP INLET CALCULATIONS

Inlet	TYPE OF INLET	AREA (SF)	Q (CFS)	H (FT)	H ALLOW (FT)
culdesac	DOUBLE	8.86	17.72	0.1725	0.67

ORIFICE EQUATION
 $Q = CA \sqrt{2gH}$ $H = (Q/CA)^2 / 2G$
C = 0.6
g = 32.2

INLET GRATE=40"X25"
CALCULATE FOR BARS
40-(11*.5) 34.5"
25-(13*.5) 18.5"
OPENING IS 4.43 SF PER GRATE
USING DOUBLE FLOW DUE TO SUMP
100-YEAR, 6-HOUR STORM DISCHARGE IS 8.86 CFS



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: _____ **Building Permit #:** _____ **City Drainage #:** _____

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: _____

City Address: _____

Engineering Firm: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Owner: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Architect: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Other Contact: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Check all that Apply:

DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ ARCHITECT CERTIFICATION
- ☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
- ☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR
- ☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☐ Yes ☐ No

DATE SUBMITTED: _____ **By:** _____

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____

- Double Retaining Wall Between Unit 2 and Unit 3 Shown in Section A-A: The finished grade of the lower retaining wall was raised to limit the wall heights. However, the raised FG Elev. is now at FF Elev for lots 14 and 15. I realize the intention is to slope the grade from the wall to the rear of the house to an elevation lower than FF, but it is highly unlikely that homeowners will leave a low point there at the rear. They will likely level out the back yard for landscaping or slope back towards the wall. Therefore, the FG Elev at the bottom of the lower should not be changed from the approved plan for Unit 2. **We have revised the grades so the bottom of wall is a the same elevation as the pad.**
- Retaining Wall along Eastern Edge: Provide a cross section through this edge. EX. GR Elevation is shown, but needs to be defined on a section. Show the existing wall, with existing TOW and BOW elevations. Is the wall that is shown on the plan a new wall? What is the TOW elevations? **We have added cross section here and added tow and bow grades to the plan. The wall is very tall with screen wall on top . the lots are within a gated subdivision and access is not available.**
- Shouldn't the SW Culverts along Glendale be aligned with the concrete channel? **We have shifted the culverts**
- Section A-A cut in wrong direction. Put Channel on Infrastructure List **we have corrected and the channel will be on the list**
- Double Retaining wall on north side of Lot 17: Won't a single wall suffice? **we want the rear yard planter to be consistently 4' therefore we request the double wall remain**
- Add to concrete channel note between Lots 19 and 20 - state to provide clear opening in wall (typical). Begin concrete channel in Lot 20 (need only be extended a foot or two into lot 20) **we have added note and extended wall**
- 6" Mountable curb called out , but General Notes call out 8" Standard Curb Unless Noted Otherwise. Is all the curb to be 6" Mountable? If so the Gen. Note should be removed. **we have revised lableing, we want mountable but standard near the inlets**
- Revise elevations shown on Section C-C **we have revised**

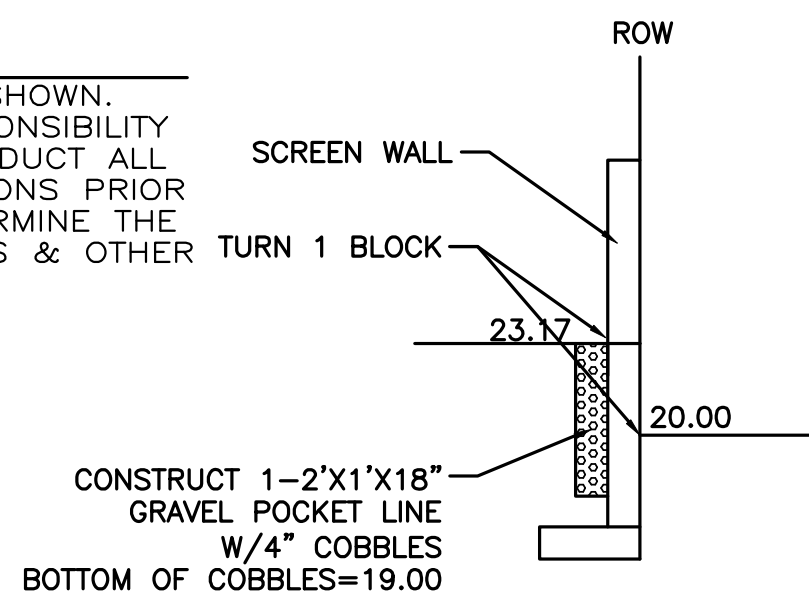
Offsite flows from Lot 24:

- Label Lots 24 and 25 on South side. Add verbiage to the "Turn 2 Blks @ 5427.85" note stating that the opening is to be on the west side of the boundary between Lots 24 and 25. This is to ensure that they do not put the opening on the wrong side. **we have added so flow is allowed to pass thru each lot**
- Slide the SW Culvert and concrete Channel to the east to align with the above mentioned turned blocks. **we have shifted and widened to accept from both lots**
- SW Culvert note says 2 -2' culverts but channel is only 2' wide. Since only 2.68 cfs, won't a narrower channel and SW culvert suffice. **we have revised to have only 1 -2' culvert**

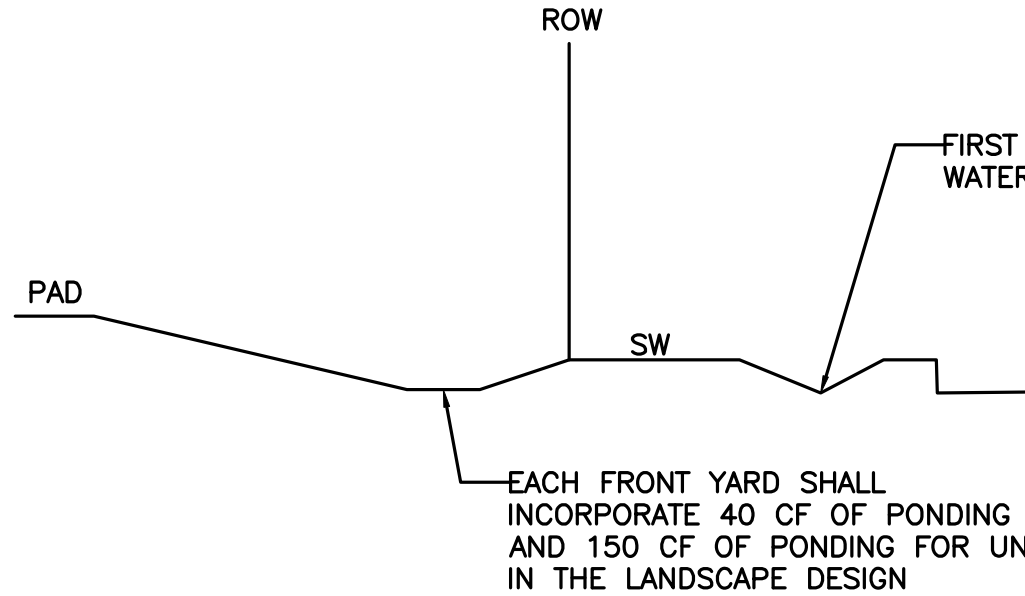
Easements:

- Lots 17, 18, and 19 will require a Cross-Lot Drainage Easement on the plat. Provide the Plat showing all easements. **This is coming to drb in the coming weeks, we will have on plat. we have added into the notes section**
- Lot 20 will need a Cross-Lot Drainage Easement for the Benefit of Lot 25. **This is comming to drb in the comming weeks, we will have on plat. we have labeled**
- A Private Drainage Easement is needed over the SW Culvert to the wall, for the Benefit of Lot 24. **This is comming to drb in the comming weeks, we will have on plat. we have labeled**

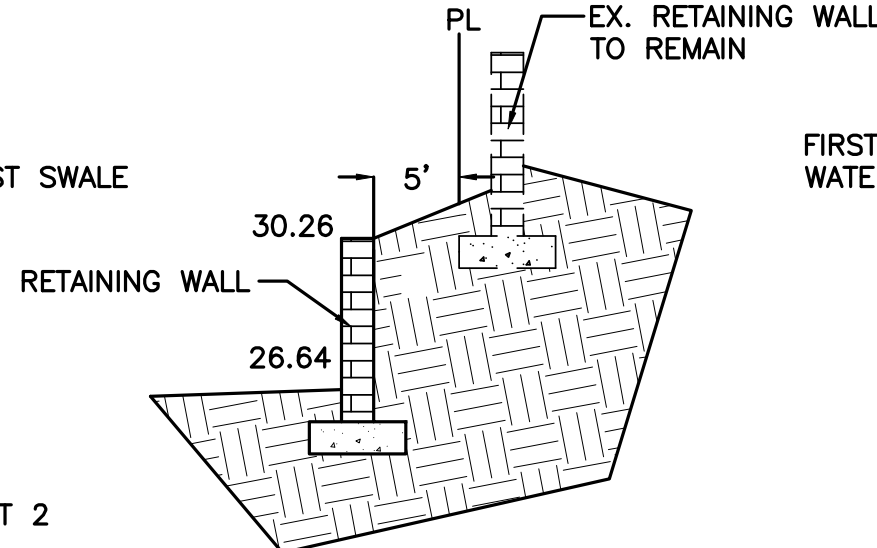
CAUTION:
EXISTING UTILITIES ARE NOT SHOWN.
IT SHALL BE THE SOLE RESPONSIBILITY
OF THE CONTRACTOR TO CONDUCT ALL
NECESSARY FIELD INVESTIGATIONS PRIOR
TO ANY EXCAVATION TO DETERMINE THE
ACTUAL LOCATION OF UTILITIES & OTHER
IMPROVEMENTS.



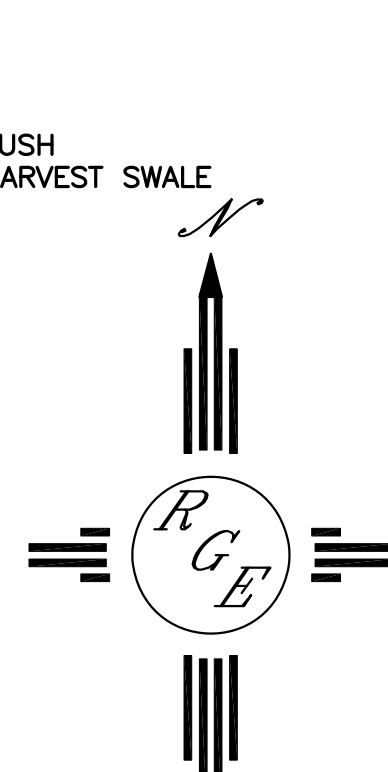
SECTION C-C
NTS



SECTION B-B
NTS



SECTION D-D
NTS

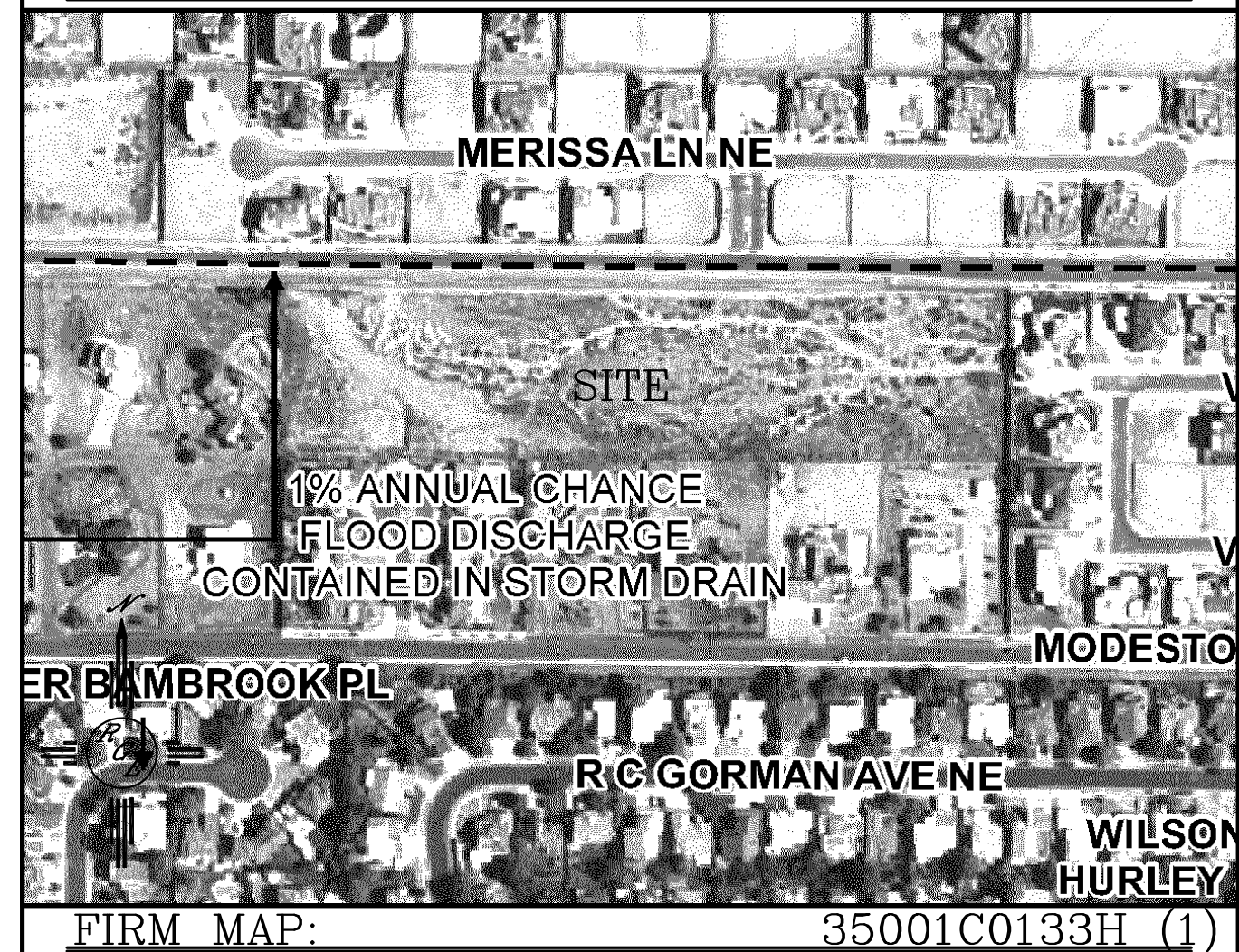
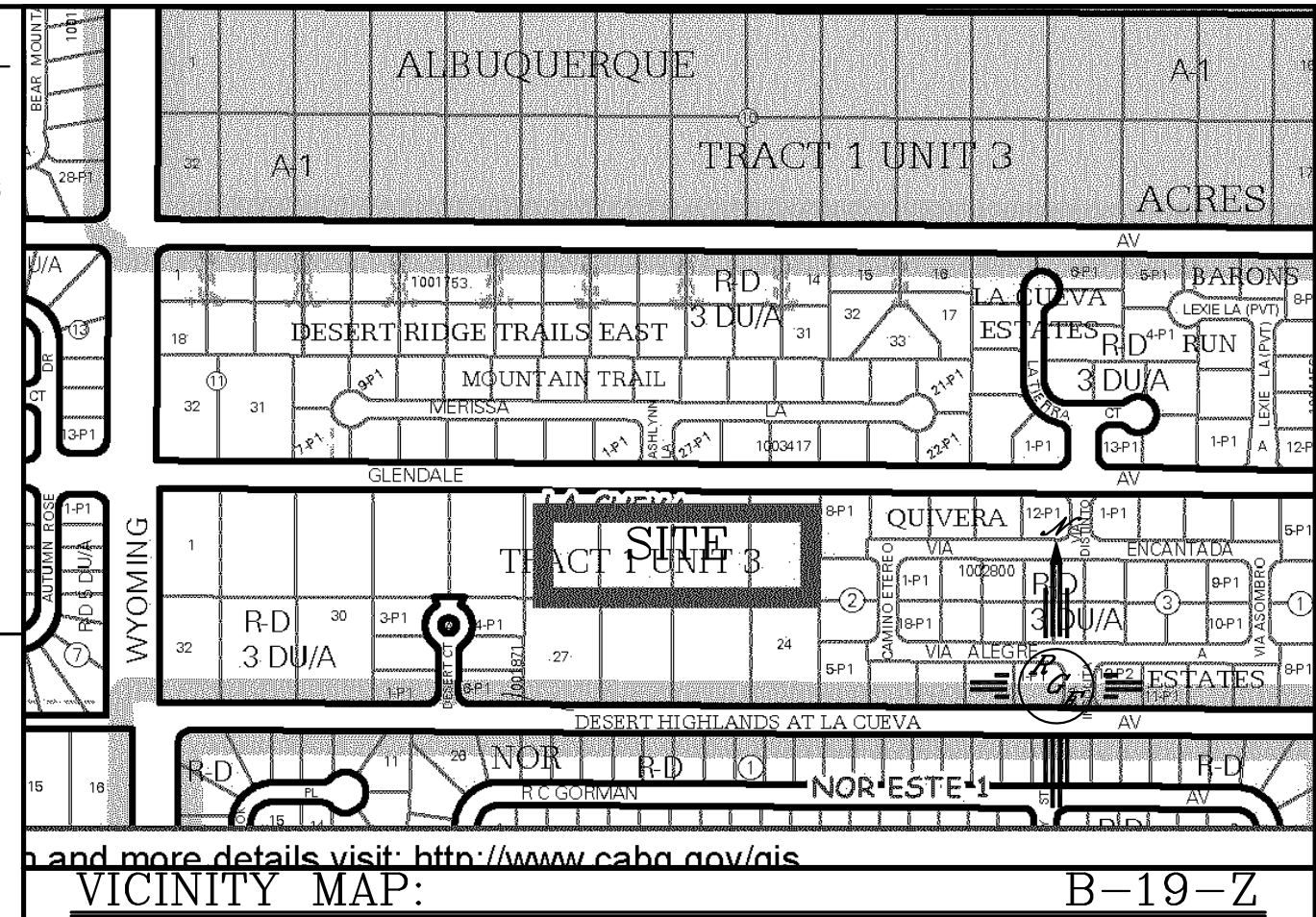


EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.

LEGAL DESCRIPTION:

TR. A AND B, THE ESTATES AT GLENDALE

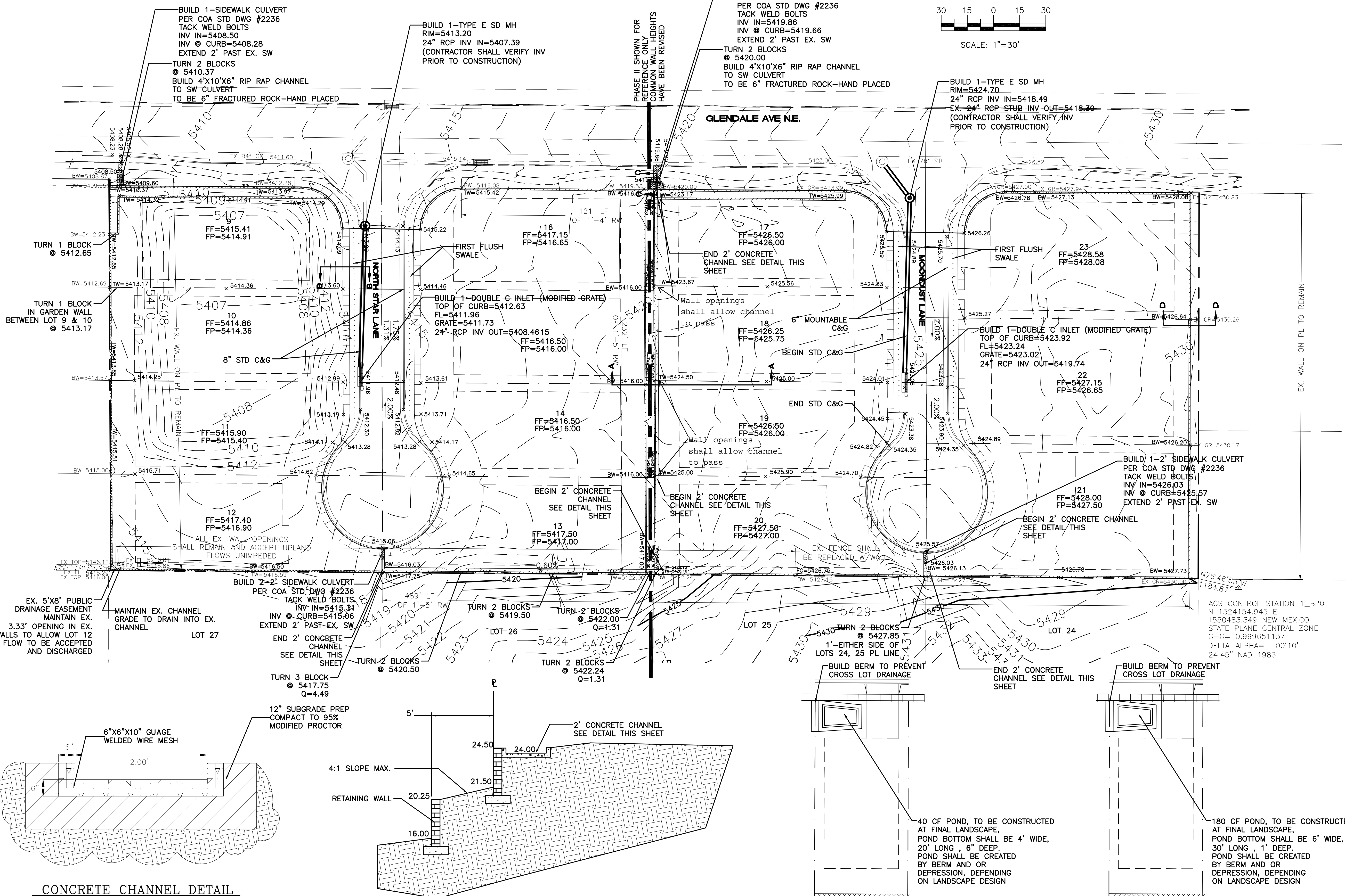


NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.
3. ALL CURB AND GUTTER SHALL BE 4" MOUNTABLE UNLESS OTHERWISE NOTED.
4. THE REAR HALF OF LOT 20, SHALL DRAIN TO CHANNEL IN SW CORNER OF SAID LOT.
5. THE CONTRACTOR SHALL COORDINATE WITH THE LOT OWNERS TO THE SOUTH PRIOR TO OFFSITE GRADING ACTIVITY.
6. LOT 17,18,19 WILL REQUIRED CROSS LOT DRAINAGE EASEMENTS AT TIME OF PLATTING.
7. LOT 20 WILL NEED CROSS LOT DRAINAGE EASEMENT FOR BENFIT OF LOT 25 AT TIME OF PLATTING.
8. LOT 21 WILL NEED CROSS LOT DRAINAGE EASEMENT FOR BENFIT OF LOT 24 AT TIME OF PLATTING.

LEGEND

---	EXISTING CONTOUR
- - -	EXISTING INDEX CONTOUR
---	PROPOSED CONTOUR
- - -	PROPOSED INDEX CONTOUR
---	SLOPE TIE
X	EXISTING SPOT ELEVATION
X	PROPOSED SPOT ELEVATION
---	BOUNDARY
---	CENTERLINE
---	RIGHT-OF-WAY
---	PROPOSED DRAINAGE EASEMENT
---	PROPOSED STANDARD CURB AND GUTTER
---	EXISTING CURB AND GUTTER
---	PROPOSED SCREEN WALL (18" MAX RETAINAGE)
---	PROPOSED RETAINING WALL (HEIGHT VARIES-DESIGN BY OTHERS)
---	EXISTING SCREEN WALL



CONCRETE CHANNEL DETAIL

NTS

SECTION A-A

NTS

TYPICAL WATER HARVETING AREAS-UNIT 2

NTS

TYPICAL WATER HARVETING AREAS-UNIT 3

NTS

	ESTATES AT GLENDALE UNIT 2 AND UNIT 3		DRAWN BY WCVJ
	GRADING AND DRAINAGE PLAN		DATE 8-16-16
			21425-LAYOUT-12-18-14
	1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999		SHEET # 4 JOB # 21425