

KEYED NOTES:

- 1 SEE SHEET G1.
- 2 SEE SHEET G1.
- 3 SEE SHEET G1.
- 4 SEE SHEET G1.
- 5 BEAR TRIB ARROYO.
- 6 SEE SHEET G1.
- 7 EXISTING SOCCER FIELD TO REMAIN.
- 8 NEW PAVED PARKING.
- 9 SEE SHEET G1.
- 10 SEE SHEET G1.
- 11 CONSTRUCT NEW TYPE "A" CATCH BASIN.
N 1505774.24
E 408703.66
GRADE= 5389.75
INV(OUT)= 5387.25
- 12 INSTALL 22 LF 18" CLASS IV
RCP @ S=0.0110 ft/ft
N 1505752.81
E 408703.69
INV(OUT)= 5387.01
SEE DETAIL D ON SHEET D6
- 13 OUTLET TO ARROYO
N 1505829.87
E 408092.45
INV(OUT)= 5374.62
SEE DETAIL D ON SHEET D6
- 14 CONSTRUCT TWO (2) NEW
TYPE "A" CATCH BASINS.
N 1505865.33
E 408106.33
GRADE= 5379.80
INV(OUT)= 5375.80
- 15 INSTALL 40 LF 36" CLASS IV
RCP @ S=0.031 ft/ft
N 1505829.87
E 408092.45
INV(OUT)= 5374.62
SEE DETAIL D ON SHEET D6
- 16 OUTLET TO ARROYO
N 1505829.87
E 408092.45
INV(OUT)= 5374.62
SEE DETAIL D ON SHEET D6
- 17 NEW CURB CUT FOR DRAINAGE
- 18 MATCH EXISTING BRIDGE GRADES

HYDROLOGY NOTES:

EXISTING SITE CONDITIONS:

THE SITE IS LOCATED BETWEEN OSUNA ROAD TO THE SOUTH, SPAIN ROAD TO THE NORTH, WYOMING BOULEVARD TO THE EAST AND THE EASTERN EDGE OF THE ARROYO DEL OSO GOLF COURSE TO THE WEST. THE SITE CURRENTLY CONSISTS PRIMARILY OF TWO LARGE OPEN GRASS AREAS WHICH ARE GENERALLY USED FOR SOCCER PLAY, SIX TENNIS COURTS ON THE EAST, GREENHOUSES, A PAVED PARKING AREA, AND COMPACTED SOIL PARKING AREAS. THERE ARE LITTLE OR NO NATURAL LANDSCAPED AREAS LEFT IN THE PARK. THE BEAR TRIB ARROYO AND THE BEAR ARROYO RUN THROUGH THE SITE. THE BEAR TRIB WAS RECENTLY IMPROVED WHICH INCLUDES A PEDESTRIAN AND AUTO BRIDGE. THE BEAR ARROYO WAS ALSO RECENTLY IMPROVED FROM WYOMING BOULEVARD TO APPROXIMATELY 1300 FEET WEST OF WYOMING. THESE IMPROVEMENTS CONSIST OF CONCRETE DROP STRUCTURES AND GABION WALLS ALONG THE REACH.

PROPOSED IMPROVEMENTS:

THE PROPOSED IMPROVEMENTS TO THE PARK ARE MINIMAL IN REGARD TO THE AFFECTED AREAS. THE IMPROVEMENTS CONSIST PRIMARILY OF NEW PAVING OR PARKING AREAS AND SIDEWALK FOR ACCESS TO AN AROUND THE SITE. THERE WILL ALSO BE A PLAY AREA FOR YOUNGER CHILDREN AND A BASKETBALL COURT. FOLLOWING ARE DESCRIPTIONS OF THE BASINS AND THE PROPOSED IMPROVEMENTS:

- BASIN A: THE IMPROVEMENTS FOR THIS BASIN CONSIST OF A SMALL PARKING AREA WHICH WILL BE CONSTRUCTED AT THE NORTH EDGE OF THE BASIN.
- BASIN B: BASIN B CONSISTS OF COMPACTED EARTH AND WILL NOT BE DEVELOPED IN THIS PHASE.
- BASIN C: BASIN C CONSISTS OF GREENHOUSES AND COMPACTED EARTH PARKING AREAS AND WILL NOT BE DEVELOPED IN THIS PHASE.
- BASIN D: BASIN D CONSISTS OF COMPACTED EARTH AND WILL BE DEVELOPED IN THIS PHASE TO BE A TURFED AREA.
- BASIN E: THIS AREA IS CURRENTLY COMPACTED EARTH AND WILL BE DEVELOPED FOR A BASKETBALL COURT AND LANDSCAPED AREA.
- BASIN F: BASIN F CONSISTS OF A PAVED PARKING AREA WITH LANDSCAPE ISLANDS. THIS AREA WILL BE REPAVED AND THE LANDSCAPE ISLANDS WILL BE KEPT.
- BASIN G: BASIN G CONSISTS OF A PAVED PARKING AREA WITH LANDSCAPE ISLANDS. THIS AREA WILL BE REPAVED AND THE LANDSCAPE ISLANDS WILL BE KEPT.
- BASIN H: THIS AREA CURRENTLY CONSISTS OF COMPACTED EARTH AND WILL BE DEVELOPED INTO A PLAY AREA WITH TURFED LANDSCAPE AREAS.
- BASIN I: THIS AREA IS A TURFED SOCCER PLAY AREA AND WILL NOT BE CHANGED IN THIS PHASE.

BASIN ID	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
EXISTING Q100, CFS	9.19	4.00	8.26	1.76	1.10	6.45	5.77	2.11	11.99	1.73	1.17	21.07	2.93	0.41	4.11
PROPOSED Q100, CFS	9.08	4.00	8.26	1.33	1.36	6.45	5.77	2.32	11.99	2.51	1.71	21.07	3.41	0.60	5.97
DIFFERENCE, CFS	-0.08	0.00	0.00	-0.43	0.26	0.00	0.00	0.21	0.00	0.78	0.54	0.00	0.48	0.19	1.86

- BASIN J: BASIN J IS COMPACTED EARTH WHICH WILL BE PAVED.
- BASIN K: BASIN K IS COMPACTED EARTH WHICH WILL BE PAVED.
- BASIN L: THIS AREA IS A TURFED SOCCER PLAY AREA AND WILL NOT BE CHANGED IN THIS PHASE.
- BASIN M: BASIN M CONSISTS OF SOME NATURAL LANDSCAPING AS WELL AS COMPACTED EARTH AND SOME PCC SIDEWALK. THIS AREA WILL BE PAVED FOR PARKING AND ADDITIONAL PCC DRIVEWAY WILL BE CONSTRUCTED.
- BASIN N: THIS AREA CONSISTS OF COMPACTED EARTH AND WILL BE PAVED FOR PARKING.
- BASIN O: THIS AREA CONSISTS OF COMPACTED EARTH AND WILL BE PAVED FOR PARKING.

THE FLOWS GENERATED BY EACH BASIN WILL BE DIRECTED TO THE BEAR ARROYO THROUGH PROPOSED CATCH BASINS AND CONNECTOR PIPES WHICH ARE SHOWN ON THE PLANS. THE NET DIFFERENCE BETWEEN THE EXISTING AND PROPOSED FLOWS IS NOT EXCESSIVE BECAUSE THE EXISTING NON-TURFED AREA ARE COMPACTED EARTH FROM PARKING AND THESE AREAS WILL, IN GENERAL, BE REPLACED BY EITHER LANDSCAPING OR TURF WHICH WILL REDUCE THE RUNOFF AMOUNT IN THOSE AREAS. THE RUNOFF CALCULATIONS FOR EXISTING AND PROPOSED CONDITIONS ARE SHOWN ON THIS SHEET.

EXISTING CONDITIONS:

Basin	Area, ac	Percent Landuse	Q100, cfs
A	2.21	A	9.19
B	1.16	B	4.00
C	2.24	C	8.26
D	0.51	D	1.76
E	0.32	E	1.10
F	1.43	F	6.45
G	1.22	G	5.77
H	0.61	H	2.11
I	4.15	I	11.99
J	0.50	J	1.73
K	0.34	K	1.17
L	8.03	L	21.07
M	0.83	M	2.93
N	0.12	N	0.41
O	1.19	O	4.11
Total	24.86		82.05

DEVELOPED CONDITIONS:

Basin	Area, ac	Percent Landuse	Q100, cfs
A	2.21	A	9.08
B	1.16	B	4.00
C	2.24	C	8.26
D	0.51	D	1.33
E	0.32	E	1.36
F	1.43	F	6.45
G	1.22	G	5.77
H	0.61	H	2.32
I	4.15	I	11.99
J	0.50	J	2.51
K	0.34	K	1.71
L	8.03	L	21.07
M	0.83	M	3.41
N	0.12	N	0.60
O	1.19	O	5.97
Total	24.86		85.83

SPOT DATA

SPOT#	NORTHING	EASTING	ELEV.	DESC.
200	1506406.81	408175.94	5391.00	T.C.
201	1506390.95	408188.13	5391.00	T.C.
202	1506373.50	408132.57	5386.00	T.C.
203	1506357.64	408144.75	5386.00	T.C.
204	1506369.21	408066.73	5385.00	T.A.
205	1506260.16	408117.65	5385.00	T.A.
206	1506291.50	408051.91	5384.00	T.G.
207	1506237.93	408053.27	5380.00	T.G.
208	1506264.19	408083.30	5384.00	T.A.
209	1506222.58	408075.57	5380.00	T.G.
210	1506208.15	408075.31	5380.00	T.G.
211	1506197.51	408057.23	5380.00	T.G.
212	1506176.50	408139.78	5384.00	T.C.
213	1505971.85	408067.62	5380.00	T.A.
214	1505905.69	408110.22	5380.00	T.G.
215	1505909.21	408066.32	5380.00	T.G.
216	1505871.80	408131.50	5380.00	T.G.
217	1505842.32	408168.37	5380.00	T.G.
218	1505865.89	408158.55	5381.00	T.A.
219	1505859.16	408186.32	5381.00	T.C.
220	1505830.82	408212.16	5381.00	T.G.

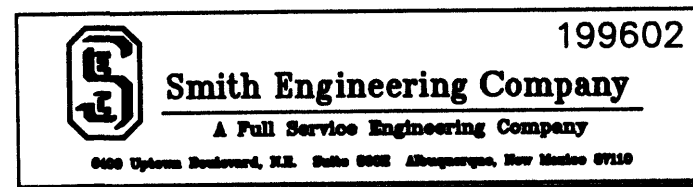
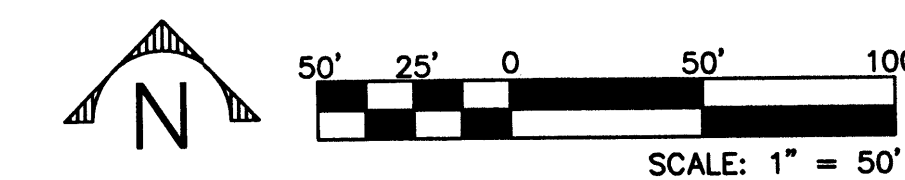
T.A. = TOP OF ASPHALT
T.C. = TOP OF CONCRETE
T.G. = TOP OF GROUND
L.G. = LIP OF GUTTER

SPOT DATA

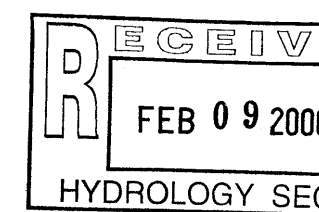
SPOT#	NORTHING	EASTING	ELEV.	DESC.
221	1505834.43	408184.81	5381.00	T.C.
222	1505870.28	408267.71	5383.00	T.C.
223	1505861.84	408320.29	5384.00	T.C.
224	1505836.70	408376.57	5385.00	T.C.
225	1505828.25	408376.57	5385.00	T.C.
226	1505824.69	408404.85	5385.00	T.A.
227	1505835.08	408541.87	5388.00	T.C.
228	1505816.16	408541.88	5388.00	T.C.
229	1505822.43	408562.35	5388.00	T.A.
230	1505842.19	408596.27	5389.00	T.C.
231	1505792.36	408649.63	5389.00	T.G.
232	1505792.22	408594.63	5389.00	T.G.
233	1505831.68	408669.15	5390.00	T.A.
234	1505772.39	408711.11	5390.00	T.C.
235	1505770.40	408730.62	5390.00	T.C.
236	1505842.22	408700.73	5391.00	T.C.
237	1505772.41	408750.14	5391.00	T.G.
238	1505842.30	408857.05	5395.00	T.C.
239	1505792.50	408892.01	5395.00	T.G.
240	1505790.49	408873.96	5395.00	T.C.

LEGEND

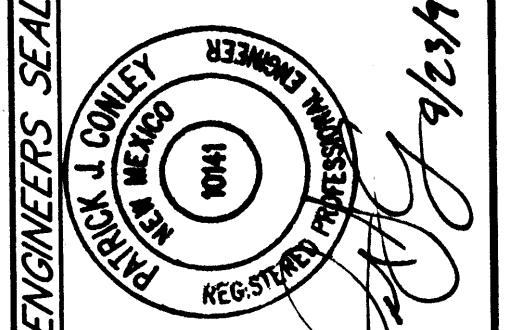
- (A) DRAINAGE BASIN DESIGNATION
- DRAINAGE BASIN BOUNDARY
- EXISTING 1' CONTOUR
- 5400 --- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR
- 5400 --- PROPOSED 5' CONTOUR
- FLOW LINE
- CATCH BASIN
- STORM DRAIN LINE



CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: PHASE 1 IMPROVEMENTS - ARROYO DEL OSO PARK GRADING AND DRAINAGE PLAN	
Design Review Committee	City Engineer Approval
City Project No. 4980.93	Zone Map No. F-19-Z
Sheet G2	Of 41



AS BUILT INFORMATION		BENCH MARKS		FIELD NOTES		ENGINEERS SEAL	
CONTRACTOR	DATE	STATION	DATE	NO.	BY	REMARKS	DESIGN
INSPECTOR'S FIELD VERIFICATION BY	DATE	"4 F-19" SET IN TOP OF A CONCRETE POST FLUSHED WITH TOP OF THE CURB AS SHOWN ON SHEET 2.	JMA	1			
MICRO-FILM INFORMATION		REVISIONS		DATE		DATE	
RECORDED BY	NO.	DESIGNED BY PJC	06/99	DRAWN BY SEC	06/99	CHECKED BY PJC	06/99



199602 Smith Engineering Company A Full Service Engineering Company One System Boulevard, Suite 2000, Albuquerque, New Mexico 87102	
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
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Design Review Committee	City Engineer Approval
City Project No. 4980.93	Zone Map No. F-19-Z
Sheet G2	Of 41

- 1 EXISTING TENNIS COURT TO REMAIN.
- 2 EXISTING GREENHOUSE TO REMAIN.
- 3 EXISTING PAVED AREA TO BE REPAVED.
- 4 EXISTING SOCCER FIELD TO REMAIN.
- 5 BEAR TRIB ARROYO.
- 6 NEW PAVED PARKING.
- 7 SEE SHEET G2.
- 8 SEE SHEET G2.
- 9 NEW PLAY AREA.
- 10 CONSTRUCT NEW TYPE "D" CATCH BASIN.
N 1505902.09
E 409868.19
GRATE= 5416.50
INV (OUT)= 5414.00
- 11 INSTALL 110 LF 18" CLASS IV
RCP @ S=0.0200 ft/ft
N 1505793.04
E 409868.35
GRATE= 5414.75
INV (IN)= 5411.71
INV (OUT)= 5411.61
- 13 INSTALL 84 LF 24" CLASS IV
RCP @ S=0.0210 ft/ft
N 1507707.07
E 409868.47
INV(OUT)= 5409.80
SEE DETAIL A ON SHEET D6
- 15 CONSTRUCT NEW TYPE "D" CATCH BASIN.
N 1505825.66
E 409536.04
GRATE= 5406.80
INV (OUT)= 5404.75

16 INSTALL 30 LF 18" CLASS IV
RCP @ S=0.0060 ft/ft

17 WYE CONNECTION
N 1505794.43
E 409536.08
INV= 5404.57

18 INSTALL 48 LF 18" CLASS IV
RCP @ S=0.0280 ft/ft

19 OUTLET TO ARROYO
N 1505742.97
E 409536.16
INV(OUT)= 5403.08
SEE DETAIL A ON SHEET D6

20 CONSTRUCT NEW TYPE "D" CATCH BASIN.
N 1505796.60
E 409596.43
GRATE= 5407.80
INV(OUT)= 5406.02

21 INSTALL 62 LF 18" CLASS IV
RCP @ S=0.0240 ft/ft

22 CONSTRUCT NEW TYPE "A" CATCH BASIN.
N 1505959.67
E 409325.73
GRATE= 5405.50
INV(OUT)= 5400.75

23 INSTALL 155 LF 18" CLASS IV
RCP @ S=0.0160 ft/ft

24 CONSTRUCT NEW TYPE "A" CATCH BASIN.
N 1505804.80
E 409328.67
GRATE= 5402.35
INV(IN)= 5398.27
INV(OUT)= 5398.17

25 INSTALL 27 LF 24" CLASS IV
RCP @ S=0.0350 ft/ft

26 CONSTRUCT NEW TYPE "D" CATCH BASIN.
N 1505778.00
E 409328.01
GRATE= 5400.75
INV(N)= 5397.23
INV(OUT)= 5397.13

27 INSTALL 44 LF 30" CLASS IV
RCP @ S=0.0060 ft/ft

28 OUTLET TO ARROYO
N 1505730.27
E 409319.93
INV(OUT)= 5396.84
SEE DETAIL B ON SHEET D6

29 CONSTRUCT NEW TYPE "A" CATCH BASIN.
N 1505773.79
E 409053.86
GRATE= 5394.60
INV(OUT)= 5391.60

30 INSTALL 29 LF 18" CLASS IV
RCP @ S=0.0200 ft/ft

31 OUTLET TO ARROYO
N 1505744.96
E 409053.90
INV(OUT)= 5391.02
SEE DETAIL D ON SHEET D6

32 MATCH GRADES AT EXISTING BRIDGE

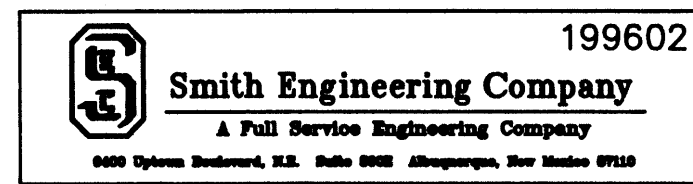
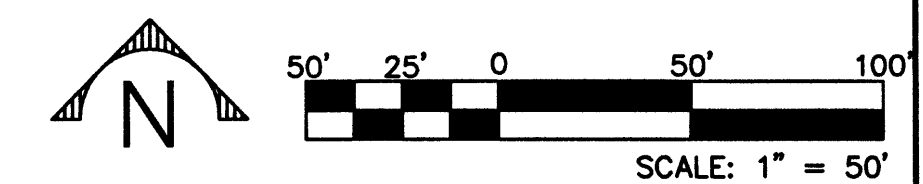
NOTE:
SEE ARCHITECTURAL SHEETS
FOR SITE IMPROVEMENTS &
LAYOUT OF IMPROVEMENTS

SPOT#	NORTHING	EASTING	ELEV.	DESC.
1	1505826.05	409049.89	5397.00	MATCH EXISTING
2	1505813.91	409049.42	5396.00	MATCH EXISTING
3	1505782.55	409049.18	5395.00	L.G.
4	1505770.53	409075.78	5395.00	L.G.
5	1505769.94	409093.28	5396.00	T.C.
6	1505757.94	409101.29	5396.00	L.G.
7	1505770.53	409110.78	5396.00	L.C.
8	1505834.52	409056.96	5396.00	MATCH EXISTING
9	150584.08	409043.35	5397.00	MATCH EXISTING
10	1505834.19	409190.87	5400.00	MATCH EXISTING
11	1505834.26	409242.50	5401.00	MATCH EXISTING
12	1505866.46	409326.34	5404.00	L.G.
13	1505864.44	409353.15	5404.00	L.G.
14	1505791.87	409331.88	5402.00	T.C.
15	1505774.12	409331.88	5400.00	L.G.
16	1505770.56	409302.95	5402.00	T.C.
17	1505758.07	409311.29	5402.00	T.C.
18	1505904.98	409323.11	5405.00	MATCH EXISTING
19	1505947.28	409371.40	5405.00	L.G.
20	1505919.46	409391.50	5405.00	L.G.
21	1505876.44	409409.02	5405.00	T.C.
22	1505887.84	409435.31	5405.00	L.C.
23	1505856.65	409425.53	5405.00	T.C.
24	1505855.53	409432.11	5405.00	T.C.
25	1505874.41	409439.92	5405.00	T.C.
26	1505805.24	409419.20	5405.00	T.C.
27	1506010.39	409523.04	5406.00	MATCH EXISTING
28	1506017.46	409518.18	5406.00	MATCH EXISTING
29	1506038.35	409570.01	5406.00	MATCH EXISTING
30	1505970.10	409420.59	5406.00	MATCH EXISTING
31	1505947.85	409408.14	5406.00	T.C.
32	1505947.30	409429.35	5406.00	L.G.
33	1505923.36	409441.61	5406.00	L.G.
34	1505918.01	409438.96	5406.00	L.G.
35	1505908.87	409461.67	5407.00	T.C.
36	1505906.50	409430.94	5406.00	L.C.
37	1505842.68	409470.63	5406.00	T.C.
38	1505813.49	409451.58	5406.00	T.C.

SPOT#	NORTHING	EASTING	ELEV.	DESC
39	1506082.74	409322.96	5407.00	MATCH EXISTING
40	1506082.72	409349.70	5407.00	MATCH EXISTING
41	1506109.92	409369.81	5407.00	MATCH EXISTING
42	1505902.40	409509.83	5408.00	T.C.
43	1505838.90	409509.98	5407.00	T.C.
44	1505813.19	409515.78	5407.00	T.C.
45	1505823.23	409490.93	5407.00	T.G.
46	1505804.14	409561.25	5408.00	T.C.
47	1505806.06	409531.38	5408.00	T.G.
48	1506146.41	409346.56	5408.00	MATCH EXISTING
49	1506146.41	409346.56	5408.00	MATCH EXISTING
50	1506169.86	409370.20	5408.00	MATCH EXISTING
51	1506200.98	409323.63	5409.00	MATCH EXISTING
52	1506203.03	409351.83	5409.00	MATCH EXISTING
53	1506202.59	409364.43	5409.00	MATCH EXISTING
54	1506161.96	409349.70	5409.00	T.A.
55	1506250.50	409562.52	5409.00	MATCH EXISTING
56	1505957.32	409583.60	5409.00	MATCH EXISTING
57	1505927.24	409603.36	5409.00	L.G.
58	1505922.94	409575.96	5409.00	T.C.
59	1505909.88	409565.71	5409.00	T.C.
60	1505828.43	409613.93	5409.00	T.C.
61	1505810.94	409609.72	5409.00	T.G.
62	1505780.96	409605.68	5409.00	T.G.
63	1506222.56	409464.57	5410.00	MATCH EXISTING
64	1506051.78	409575.10	5410.00	MATCH EXISTING
65	1506019.01	409584.30	5410.00	MATCH EXISTING
66	1505984.68	409514.33	5410.00	MATCH EXISTING
67	1505842.53	409639.09	5410.00	T.C.
68	1505840.45	409628.25	5410.00	T.G.
69	1505723.26	409522.33	5411.00	MATCH EXISTING
70	1506172.44	409562.12	5411.00	MATCH EXISTING
71	1506205.59	409582.58	5412.00	MATCH EXISTING
72	1506173.46	409613.70	5412.00	MATCH EXISTING
73	1505852.13	409795.46	5416.00	T.C.
74	1505841.21	409797.09	5416.00	T.C.
75	1505781.01	409829.29	5416.00	T.G.
76	1505788.83	409828.26	5416.00	T.G.
77	1505841.11	409830.76	5415.00	T.G.
78	1505833.63	409824.17	5415.00	T.G.
79	1505788.76	409852.47	5415.00	T.G.
80	1505802.32	409870.53	5415.00	T.G.
81	1505741.22	409837.44	5418.00	T.C.
82	1505728.61	409841.94	5418.00	T.C.
83	1505787.62	410106.01	5428.00	T.C.
84	1505788.89	410100.14	5428.00	T.C.
85	1506252.74	409857.23	5418.00	T.A.
86	1506214.96	409857.03	5418.00	L.G.
87	1506252.76	409876.73	5419.00	T.A.
88	1506194.98	409894.66	5419.00	L.G.
89	1506218.82	409894.83	5419.00	MATCH EXISTING
90	1506269.03	409859.61	5423.00	MATCH EXISTING
91	1506269.03	409967.61	5423.00	T.C.
92	1506205.02	409968.15	5421.00	T.C.
93	1506259.54	409994.73	5423.00	T.C.
94	1506259.05	410014.05	5423.00	T.A.
95	1506197.87	410048.15	5422.00	T.A.
96	1506222.02	410084.92	5423.00	T.A.
97	1506270.74	409987.17	5424.00	T.C.
98	1506270.80	410096.59	5428.00	T.C.
99	1506141.60	409582.08	5411.00	MATCH EXISTING
100	1506092.29	40981.39	5411.00	MATCH EXISTING
101	1505742.63	409871.11	5417.00	T.C.
102	1505728.78	409878.82	5417.00	T.C.
103	1506258.07	410049.12	5424.50	T.A.
104	1506239.09	410083.01	5424.50	T.A.

T.A. = TOP OF ASPHALT T.C. = TOP OF CONCRETE T.G. = TOP OF GROUND
L.G. = LIP OF GUTTER

	DRAINAGE BASIN DESIGNATION
	DRAINAGE BASIN BOUNDARY
	EXISTING 1' CONTOUR
	EXISTING 5' CONTOUR
	PROPOSED 1' CONTOUR
	PROPOSED 5' CONTOUR
	FLOW LINE
	CATCH BASIN
	STORM DRAIN LINE



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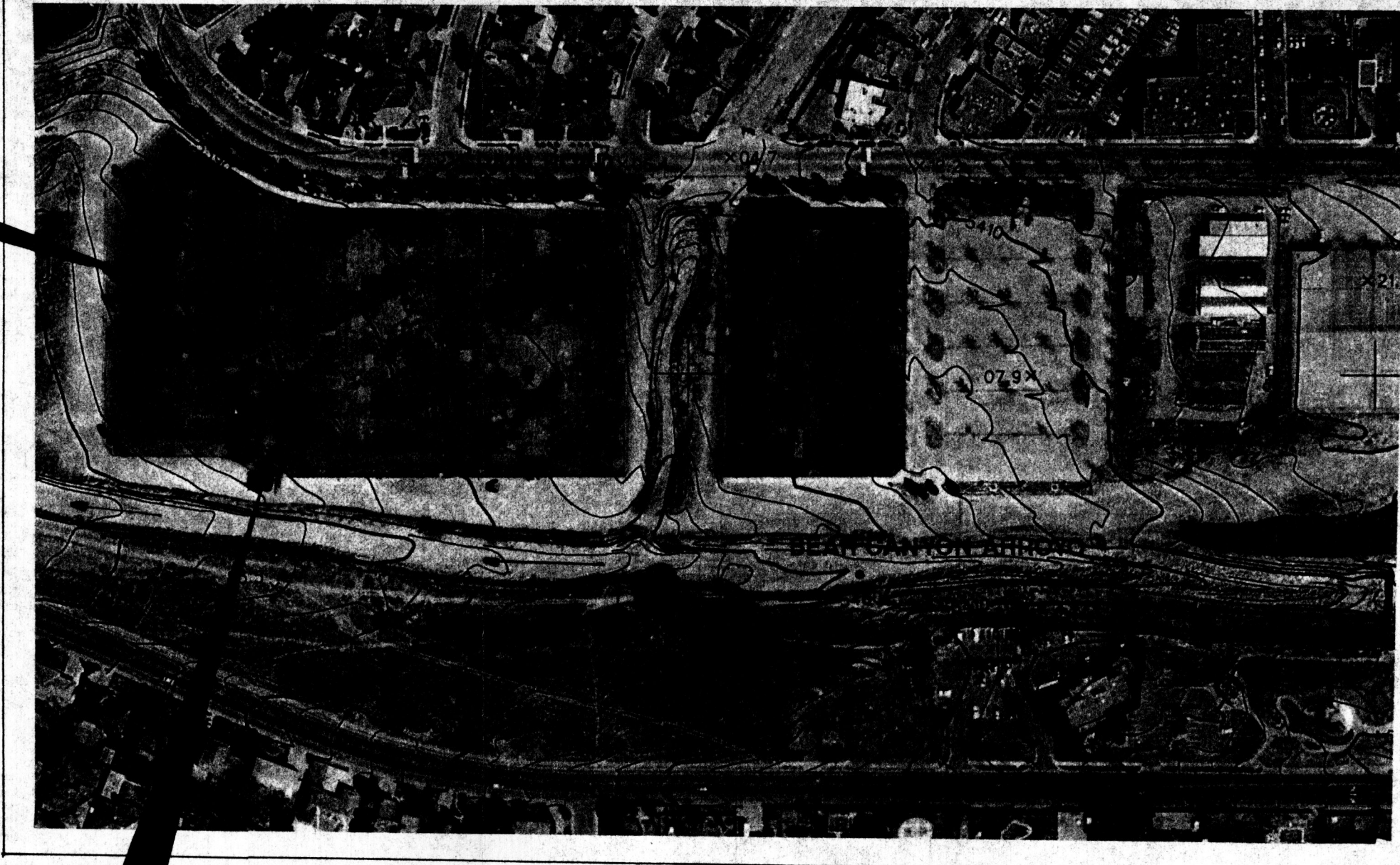
**TITLE: PHASE 1 IMPROVEMENTS - ARROYO DEL OSO PARK
GRADING AND DRAINAGE PLAN**

Design Review Committee	City Engineer Approval	Last Design Update	No. / Day / Yr.	No. / Day / Yr.
City Project No. 4980 93		Zone Map No. E-19-7	Sheet G	Of 41

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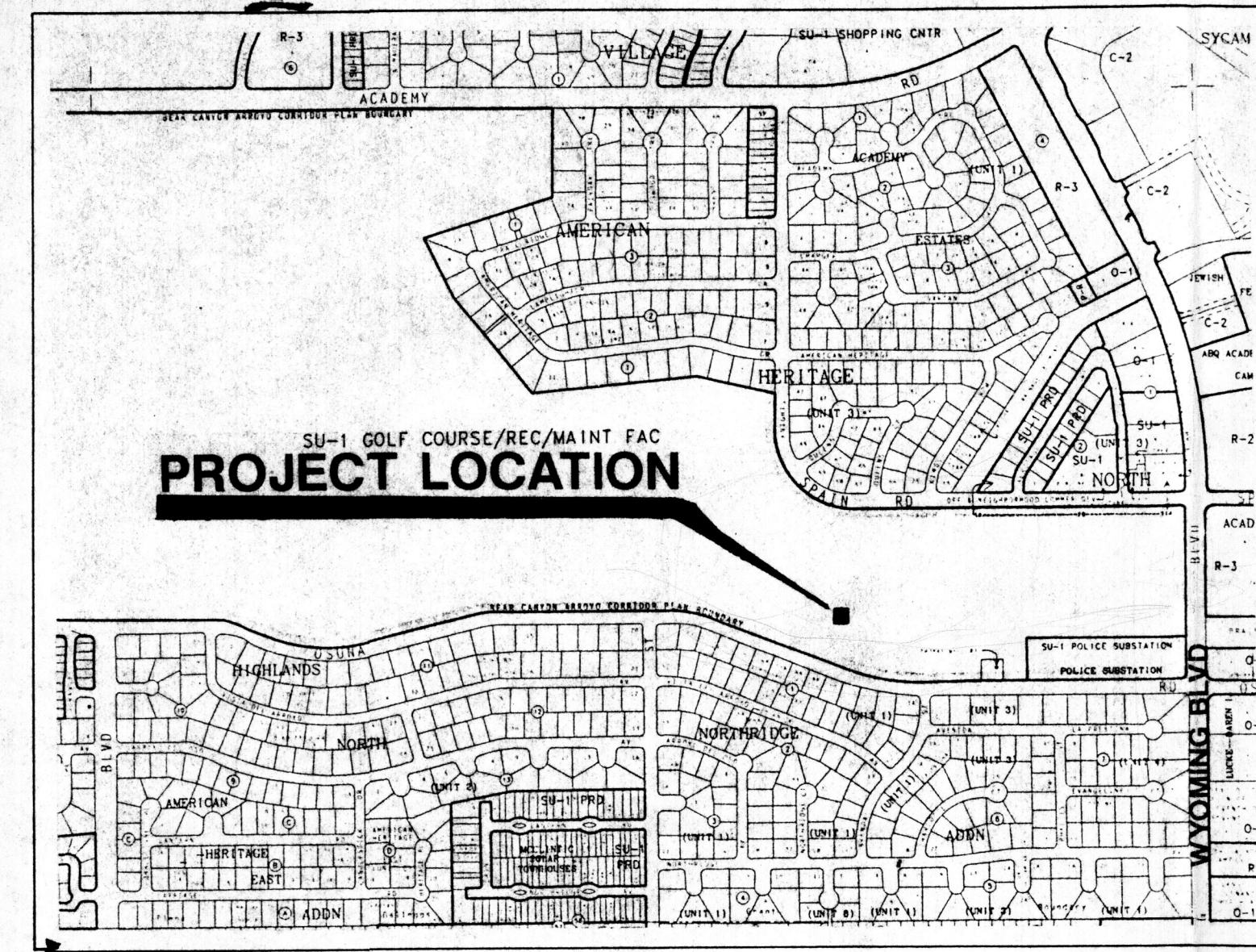
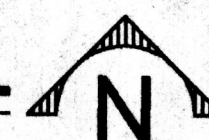
ARROYO DEL OSO
SOCCER FIELDS

SHADE STRUCTURE



TOPOGRAPHIC MAPPING

SCALE 1"=200'



LOCATION MAP ZONE ATLAS F-19

N.T.S.



RUNOFF CALCULATIONS

A. GENERAL INFORMATION

THE ARROYO DEL OSO SOCCER PARKS ARE LOCATED BETWEEN SPAIN ROAD AND OSUNA, WEST OF WYOMING BLVD. THE PARK INCLUDES GRASS SOCCER FIELDS WITH DIRT PARKING AREAS AT THE PERIMETER. THE APPROXIMATE TOTAL AREA OF THE SOCCER FIELDS IS 9.7 ACRES. THE PROPOSED CONSTRUCTION IS A SHADE STRUCTURE FOR PUBLIC USED DURING SOCCER GAMES. THE SHADE STRUCTURE WILL INCLUDE PICNIC TABLES AND CHAIRS. THE SHADE STRUCTURE SITE CONSISTS OF COMPACTED EARTH (LAND TREATMENT "C"). THE PROPOSED CONSTRUCTION CONSISTS OF A CONCRETE SLAB THAT IS APPROXIMATELY 1084 SQUARE FEET. TWO CANOPIES WILL COVER APPROXIMATELY ONE HALF OF THE SLAB AREA. THE NEW DEVELOPMENT WILL PRODUCE 0.13 CFS OF RUNOFF. THE INCREASE IN RUNOFF IS NEGLIGIBLE COMPARED TO THE AMOUNT OF RUNOFF PRODUCED BY THE SOCCER FIELDS.

B. CONTRIBUTING AREA

1. TOTAL AREA (SHADE STRUCTURE) = 1083.75 SQUARE FEET (0.025 ACRES)

C. PRECIPITATION (P360) AND EXCESS RUNOFF (E)

(6-HOUR, 100-YEAR STORM)

EXISTING CONDITIONS, LAND TREATMENT "C"

P360 = 2.60 INCHES (TABLE A-2, DPM 22.2)

E = 1.29 INCHES (TABLE A-8, DPM 22.2)

VOLUME = (1.29 INCHES * 0.025 AC)/12 IN/FT = 0.0027 AC-FT

Qp/AC = 3.45 CFS/AC (TABLE A-9, DPM 22.2)

Qp = (3.45 CFS/AC)(0.025 AC) = 0.086

PROPOSED CONDITIONS, LAND TREATMENT "D"

P360 = 2.60 INCHES (TABLE A-2, DPM 22.2)

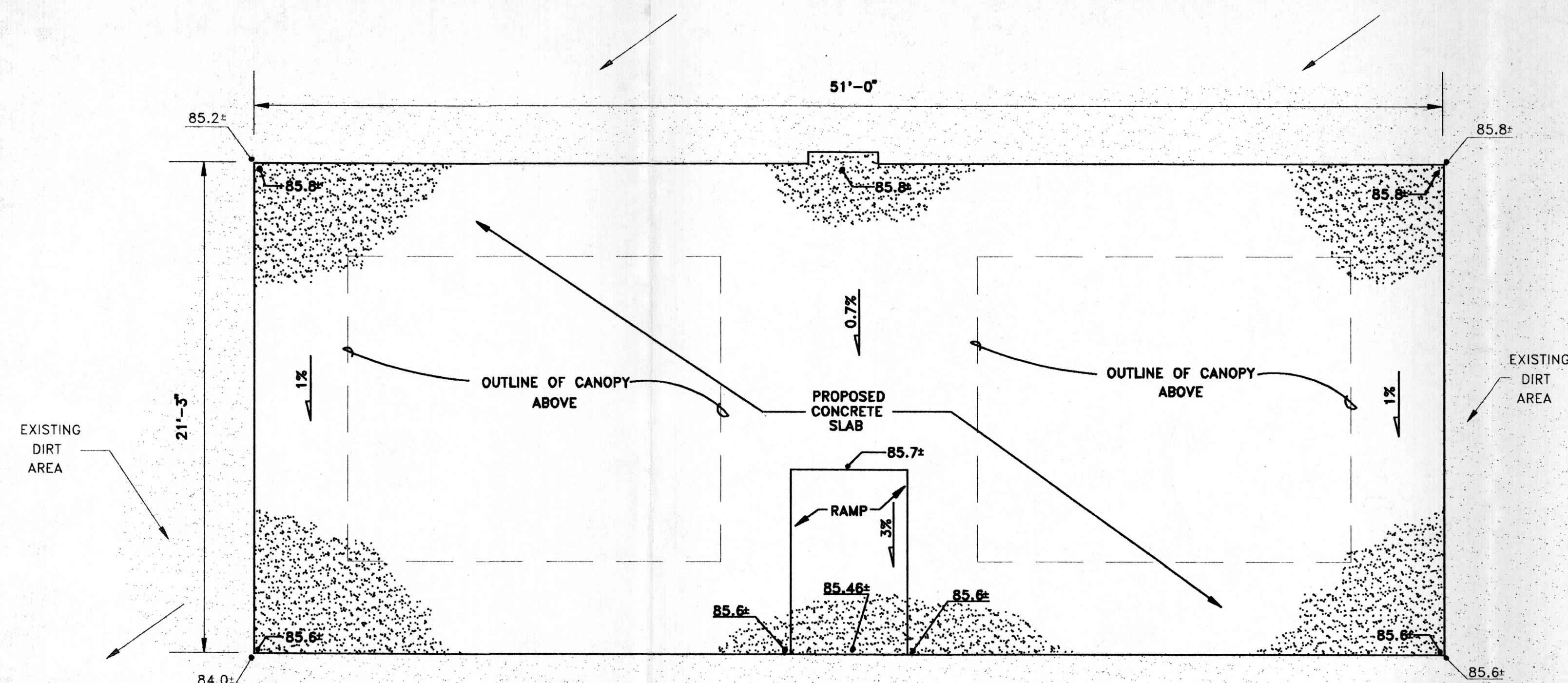
E = 2.36 INCHES (TABLE A-8, DPM 22.2)

VOLUME = (2.36 INCHES * 0.025 AC)/12 IN/FT = 0.0049 AC-FT

Qp/AC = 5.02 CFS/AC (TABLE A-9, DPM 22.2)

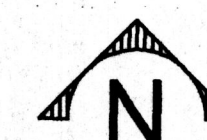
Qp = (5.02 CFS/AC)(0.025 AC) = 0.126 CFS

PROPOSED INCREASE IN RUNOFF AS A RESULT OF CONSTRUCTED SHADE STRUCTURE 0.126 - 0.086 = 0.04 CFS



SHADE STRUCTURE PLAN VIEW

SCALE 1/4" = 1'-0"



LEGEND

- FLOW ARROW
- EXISTING GRADE LINE
- EXISTING ELEVATION
- PROPOSED ELEVATION
- NEW CONCRETE PAD
- EXISTING DIRT AREA

Smith Engineering Company
A Full Service Engineering Company
4600 Uptown Boulevard, N.E. Suite 5000 Albuquerque, New Mexico 87110

CITY OF ALBUQUERQUE
PARKS AND GENERAL SERVICES

TITLE: ARROYO DEL OSO PARK SHADE STRUCTURE GRADING PLAN

Design Review Committee	City Engineer Approval	100% / 100% / 100%	100% / 100% / 100%
City Project No.	Zone Map No.	Sheet	1 of 1

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KEYED NOTES:

- EXISTING TENNIS COURT TO REMAIN.
- EXISTING GREENHOUSE TO REMAIN.
- EXISTING PAVED AREA TO BE REPAVED.
- EXISTING SOCCER FIELD TO REMAIN.
- BEAR TRIB ARROYO.
- NEW PAVED PARKING.
- SEE SHEET G2.
- SEE SHEET G2.
- NEW PLAY AREA.
- CONSTRUCT NEW TYPE "D" CATCH BASIN.
N 1505902.09
E 409868.19
GRATE= 5416.50
INV (OUT)= 5414.00
- INSTALL 110 LF 18" CLASS IV RCP @ S=0.0200 ft/ft
- CONSTRUCT NEW TYPE "D" CATCH BASIN.
N 1505793.04
E 409868.35
GRATE= 5414.75
INV (IN)= 5411.71
INV (OUT)= 5411.61
- INSTALL 86 LF 24" CLASS IV RCP @ S=0.0210 ft/ft
- OUTLET TO ARROYO
N 1505707.07
E 409868.47
INV(OUT)= 5409.80
SEE DETAIL A ON SHEET D6
- CONSTRUCT NEW TYPE "D" CATCH BASIN.
N 1505825.66
E 409536.04
GRATE= 5406.80
INV (OUT)= 5404.75

- INSTALL 30 LF 18" CLASS IV RCP @ S=0.0060 ft/ft
- WYE CONNECTION
N 1505794.43
E 409536.08
INV= 5404.57
- INSTALL 54 LF 18" CLASS IV RCP @ S=0.0280 ft/ft
- OUTLET TO ARROYO
N 1505742.97
E 409536.16
INV(OUT)= 5403.08
SEE DETAIL A ON SHEET D6
- CONSTRUCT NEW TYPE "D" CATCH BASIN.
N 1505796.60
E 409596.43
GRATE= 5407.80
INV(OUT)= 5406.02
- INSTALL 61 LF 18" CLASS IV RCP @ S=0.0240 ft/ft
- CONSTRUCT NEW TYPE "A" CATCH BASIN.
N 1505959.67
E 409325.73
GRATE= 5405.50
INV(OUT)= 5400.75
- INSTALL 155 LF 18" CLASS IV RCP @ S=0.0160 ft/ft
- CONSTRUCT NEW TYPE "A" CATCH BASIN.
N 1505804.80
E 409326.67
GRATE= 5402.35
INV(IN)= 5398.27
INV(OUT)= 5398.17
- INSTALL 27 LF 24" CLASS IV RCP @ S=0.0350 ft/ft

- CONSTRUCT NEW TYPE "D" CATCH BASIN.
N 1505778.00
E 409328.01
GRATE= 5400.75
INV(IN)= 5397.23
INV(OUT)= 5397.13
- INSTALL 49 LF 30" CLASS IV RCP @ S=0.0060 ft/ft
- OUTLET TO ARROYO
N 1505730.27
E 409319.93
INV(OUT)= 5396.84
SEE DETAIL B ON SHEET D6
- CONSTRUCT NEW TYPE "A" CATCH BASIN.
N 1505773.79
E 409053.88
GRATE= 5394.60
INV(OUT)= 5391.60
- INSTALL 29 LF 18" CLASS IV RCP @ S=0.0200 ft/ft
- OUTLET TO ARROYO
N 1505744.96
E 409053.90
INV(OUT)= 5391.02
SEE DETAIL D ON SHEET D6
- MATCH GRADES AT EXISTING BRIDGE

NOTE:
SEE ARCHITECTURAL SHEETS
FOR SITE IMPROVEMENTS &
LAYOUT OF IMPROVEMENTS

SPOT DATA

SPOT#	NORTHING	EASTING	ELEV.	DESC.
1	1505826.05	409049.89	5397.00	MATCH EXISTING
2	1505813.91	409034.42	5396.00	MATCH EXISTING
3	1505782.55	409049.16	5395.00	L.G.
4	1505770.53	409075.78	5395.00	L.G.
5	1505769.94	409093.28	5396.00	T.C.
6	1505757.94	409101.29	5396.00	T.C.
7	1505770.53	409110.78	5396.00	L.G.
8	1505834.52	409056.96	5396.00	MATCH EXISTING
9	1505834.08	409123.35	5399.00	MATCH EXISTING
10	1505834.19	409190.87	5400.00	MATCH EXISTING
11	1505834.26	409242.50	5401.00	MATCH EXISTING
12	1505866.46	409326.34	5404.00	L.G.
13	1505864.44	409353.15	5404.00	L.G.
14	1505781.87	409331.88	5402.00	T.C.
15	1505774.12	409331.88	5402.00	T.C.
16	1505770.56	409302.95	5402.00	T.C.
17	1505758.07	409311.29	5402.00	T.C.
18	1505904.98	409323.11	5405.00	MATCH EXISTING
19	1505947.28	409371.40	5405.00	L.G.
20	1505919.46	409391.50	5405.00	L.G.
21	1505878.44	409398.02	5405.00	T.C.
22	1505865.65	409425.53	5405.00	T.C.
23	1505855.53	409432.11	5405.00	T.C.
24	1505874.41	409439.92	5405.00	T.C.
25	1505805.24	409419.20	5405.00	T.C.
26	1506010.39	409323.04	5406.00	MATCH EXISTING
27	1506017.46	409347.18	5406.00	MATCH EXISTING
28	1506038.35	409370.01	5406.00	MATCH EXISTING
29	1505870.10	409420.59	5406.00	MATCH EXISTING
30	1505947.85	409408.14	5406.00	T.C.
31	1505947.30	409429.35	5406.00	L.G.
32	1505923.36	409441.61	5406.00	L.G.
33	1505918.01	409438.96	5406.00	L.G.
34	1505908.07	409461.67	5407.00	T.C.
35	1505906.50	409430.94	5406.00	T.C.
36	1505842.68	409470.63	5406.00	T.C.
37	1505813.49	409451.58	5406.00	T.C.

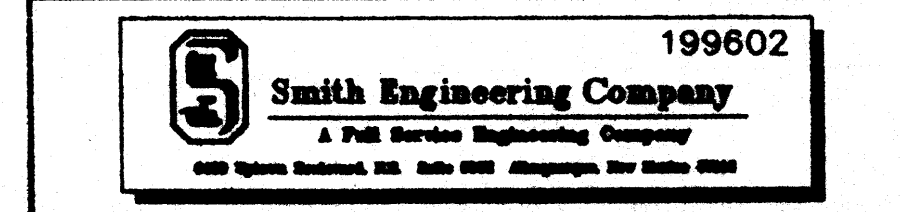
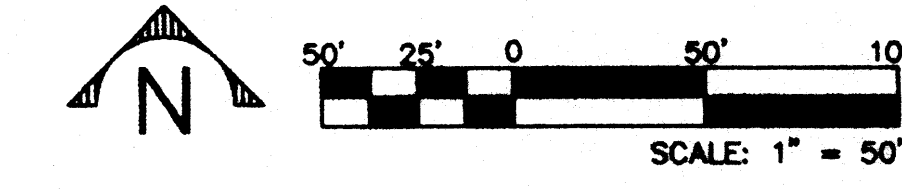
SPOT DATA

SPOT#	NORTHING	EASTING	ELEV.	DESC.
39	1506082.74	409322.96	5407.00	MATCH EXISTING
40	1506082.72	409346.70	5407.00	MATCH EXISTING
41	1506109.92	409369.81	5407.00	MATCH EXISTING
42	1505902.40	409508.83	5408.00	T.C.
43	1505838.90	409508.98	5407.00	T.C.
44	1505813.19	409515.78	5407.00	T.C.
45	1505823.23	409490.93	5407.00	T.G.
46	1505904.14	409591.25	5408.00	T.C.
47	1505806.06	409531.38	5408.00	T.G.
48	1506146.41	409322.99	5408.00	MATCH EXISTING
49	1506146.41	409346.56	5408.00	MATCH EXISTING
50	1506169.86	409370.20	5408.00	MATCH EXISTING
51	1506200.98	409323.63	5408.00	MATCH EXISTING
52	1506203.03	409351.83	5408.00	MATCH EXISTING
53	1506202.59	409384.43	5408.00	MATCH EXISTING
54	1506161.96	409443.84	5409.00	T.A.
55	1505985.50	409562.52	5409.00	MATCH EXISTING
56	1505957.32	409583.60	5409.00	MATCH EXISTING
57	1505927.24	409603.36	5409.00	L.G.
58	1505922.94	409575.96	5409.00	T.C.
59	1505909.88	409645.71	5409.00	T.C.
60	1505828.43	409613.93	5409.00	T.C.
61	1505810.94	409608.72	5409.00	T.G.
62	1505780.96	409605.68	5409.00	T.G.
63	1506222.56	409484.57	5410.00	MATCH EXISTING
64	1506051.78	409575.10	5410.00	MATCH EXISTING
65	1506019.01	409584.30	5410.00	MATCH EXISTING
66	1505994.88	409614.33	5410.00	MATCH EXISTING
67	1505942.53	409638.09	5410.00	T.C.
68	1505840.45	409640.25	5410.00	T.C.
69	1506223.26	409529.23	5411.00	MATCH EXISTING
70	1506172.44	409562.12	5411.00	MATCH EXISTING
71	1506205.59	409562.58	5412.00	MATCH EXISTING
72	1506173.46	409613.70	5412.00	MATCH EXISTING
73	1506252.13	409795.46	5416.00	T.C.
74	1505941.21	409797.09	5416.00	T.C.
75	1505778.01	409853.29	5416.00	T.G.
76	1505798.83	409878.26	5416.00	T.G.
77	1505841.11	409830.76	5415.00	T.G.
78	1505833.63	409824.17	5415.00	T.G.
79	1505788.76	409852.47	5415.00	T.G.
80	1505802.32	409870.53	5415.00	T.G.
81	1505741.22	409937.44	5418.00	T.C.
82	1505728.61	409941.94	5418.00	T.C.
83	1505787.62	410106.01	5428.00	T.C.
84	1505788.89	410100.14	5428.00	T.C.
85	1506252.74	409857.23	5418.00	T.A.
86	1506214.96	409877.03	5418.00	L.G.
87	1506252.76	409876.73	5419.00	T.A.
88	1506194.98	409894.66	5419.00	L.G.
89	1506252.89	409943.63	5422.00	MATCH EXISTING
90	1506269.03	409959.61	5423.00	MATCH EXISTING
91	1506269.03	409967.61	5423.00	T.C.
92	1506205.02	409988.15	5421.00	T.C.
93	1506259.54	409994.73	5423.00	T.C.
94	1506259.05	410014.05	5423.00	T.A.
95	1506197.87	410049.15	5422.00	T.A.
96	1506222.00	410083.02	5423.00	T.A.
97	1506270.74	409987.17	5424.00	T.C.
98	1506270.80	410086.59	5428.00	T.C.
99	1506141.60	409582.08	5411.00	MATCH EXISTING
100	1506092.29	409613.99	5411.00	MATCH EXISTING
101	1505742.63	409871.11	5417.00	T.C.
102	1505729.78	409879.62	5417.00	T.C.
103	1506258.07	410049.12	5424.50	T.A.
104	1506239.09	410063.01	5424.50	T.A.

T.A. = TOP OF ASPHALT T.C. = TOP OF CONCRETE T.G. = TOP OF GROUND
L.G. = UP OF GUTTER

LEGEND

- (A) DRAINAGE BASIN DESIGNATION
- DRAINAGE BASIN BOUNDARY
- EXISTING 1' CONTOUR
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- FLOW LINE
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CITY OF ALBUQUERQUE
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TITLE: PHASE 1 IMPROVEMENTS - ARROYO DEL OBO PARK
GRADING AND DRAINAGE PLAN

Design Review Committee	City Engineer Approval	City Project No.	Zone Map No.	Sheet	of
		4080.93	F-10-Z	16	41

ATTACHMENT C

