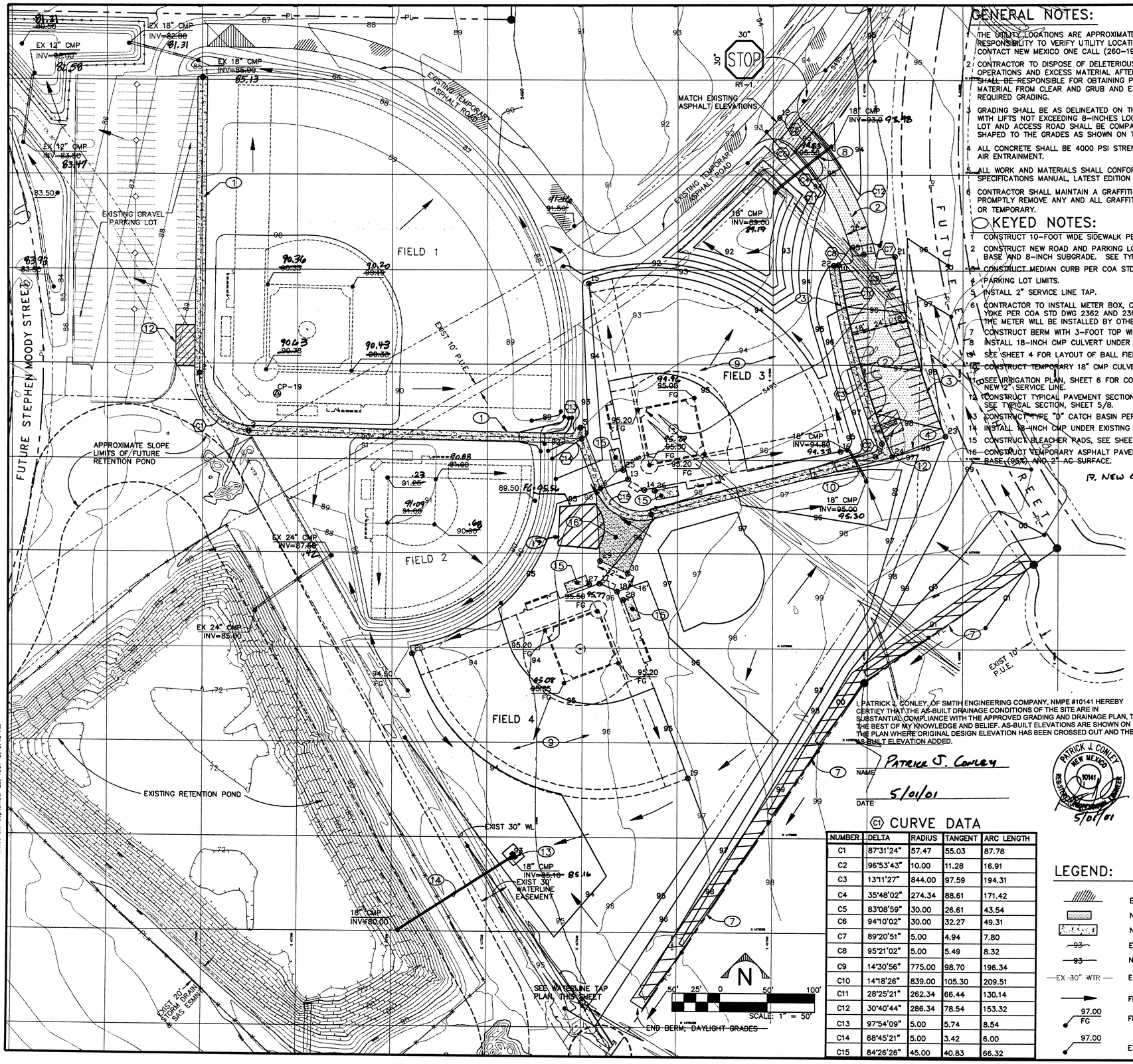


GENERAL NOTES:

1. THE UTILITY LOCATIONS ARE APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION. CONTACT NEW MEXICO ONE CALL (260-1990).
2. CONTRACTOR TO DISPOSE OF DELETERIOUS MATERIALS FROM THE GRUBBING OPERATIONS AND EXCESS MATERIAL AFTER GRADING IS COMPLETE. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMITS REQUIRED FOR DISPOSAL OF MATERIAL FROM CLEAR AND GRUB AND EXCESS MATERIAL FROM THE REQUIRED GRADING.
3. GRADING SHALL BE AS DELINEATED ON THE PLAN. ALL FILL PLACED, SHALL BE PLACED WITH LIFTS NOT EXCEEDING 8-INCHES LOOSE. ALL FILL PLACED, EXCEPT FOR PARKING LOT AND ACCESS ROAD SHALL BE COMPACTED TO 85% ASTM D-1557. FILL SHALL BE SHAPED TO THE GRADES AS SHOWN ON THE PLAN.
4. ALL CONCRETE SHALL BE 4000 PSI STRENGTH AT 28-DAYS WITH 4-6 PERCENT AIR ENTRAINMENT.
5. ALL WORK AND MATERIALS SHALL CONFORM TO THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS MANUAL, LATEST EDITION AND DETAIL AS REFERENCED ON THESE PLANS.
6. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM ALL EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.

KEYED NOTES:

1. CONSTRUCT 10-FOOT WIDE SIDEWALK PER COA STD DWG 2430.
2. CONSTRUCT NEW ROAD AND PARKING LOT. CONTRACTOR TO COMPACT 6-INCH AGG. BASE AND 8-INCH SUBGRADE. SEE TYPICAL SECTION, SHEET 5/8.
3. CONSTRUCT MEDIAN CURB PER COA STD DWG 2415.
4. PARKING LOT LIMITS.
5. INSTALL 2" SERVICE LINE TAP.
6. CONTRACTOR TO INSTALL METER BOX, CONCRETE ENCASEMENT, CURB STOP, AND YOKE PER COA STD DWG 2362 AND 2367. PLACE CURB STOP WITHIN METER BOX. THE METER WILL BE INSTALLED BY OTHERS.
7. CONSTRUCT BERM WITH 3-FOOT TOP WIDTH AND 2:1 SIDE SLOPES.
8. INSTALL 18-INCH CMP CULVERT UNDER TEMPORARY ROAD.
9. SEE SHEET 4 FOR LAYOUT OF BALL FIELDS.
10. CONSTRUCT TEMPORARY 18" CMP CULVERT UNDER NEW SIDEWALK.
11. SEE IRRIGATION PLAN, SHEET 6 FOR CONTINUATION OF 3" LINE AND CONNECTIONS TO NEW 2" SERVICE LINE.
12. CONSTRUCT TYPICAL PAVEMENT SECTION WITH 2" AC SURFACE IN HANDICAP AREAS. SEE TYPICAL SECTION, SHEET 5/8.
13. CONSTRUCT TYPE "D" CATCH BASIN PER COA STD DWG 2206. GRATE ELEV = 92.50
14. INSTALL 18-INCH CMP UNDER EXISTING 30-INCH WATERLINE.
15. CONSTRUCT BLEACHER PADS, SEE SHEET 4/8 FOR DETAILS.
16. CONSTRUCT TEMPORARY ASPHALT PAVEMENT. CONTRACTOR TO COMPACT 8-INCH AGG. BASE (95%) AND 2" AC SURFACE.
17. NEW CONCESSION STAND.

⊗CONTROL INFORMATION

POINT	NORTHING	EASTING	ELEVATION
CP-18•	1478450.78	418652.61	5509.56
CP-19	1479067.90	417278.36	5490.45
CP-20•	1478709.76	415779.45	5470.87
1	1479402.29	417200.31	5488.50
2	1479089.70	417196.69	5490.00
3	1479029.31	417248.39	5490.00
4	1479022.95	417598.84	~~5492.80~~ 92.48
5	1479033.88	417599.73	~~5492.00~~ 92.48
6	1478969.41	417618.62	5495.00
7	1478941.65	417672.35	5496.00
8	1479004.29	417907.86	5498.25
9	1479017.65	417914.60	5498.50
10	1479205.55	417869.03	5495.00
11	1479216.64	417895.73	5495.10
12	1479360.27	417807.36	5493.25± 95.10
13	1478979.38	417647.70	~~5495.00~~
14	1478967.92	417664.95	5495.50
15	1479185.58	417606.11	~~5494.00~~ 93.81
16	1479009.51	417871.15	~~5495.00~~ 95.11
17	1478881.75	417612.47	~~5496.00~~ 96.26
18	1478873.27	417631.36	~~5496.00~~ 96.25
19	1478676.64	417706.10	~~5495.00~~ 95.13
20	1478807.01	417415.84	~~5495.00~~ 94.10
21	1479214.40	417928.46	~~5495.50~~ 95.39
22	1479204.84	417864.08	5495.00
23	1479025.89	417981.48	~~5496.25~~ 96.61
24	1479004.35	417925.45	~~5498.00~~ 96.63
25	1478989.16	417642.56	5495.25
26	1478967.06	417675.59	~~5496.56~~ 95.46
27	1478867.41	417606.97	5495.80
28	1478850.96	417643.03	5496.25
29	1478891.87	417618.36	5495.80
30	1478878.76	417647.55	5496.25

I, PATRICK J. CONLEY, OF SMTH ENGINEERING COMPANY, NMPE #10141 HEREBY CERTIEY THAT THE AS-BUILT DRAINAGE CONDITIONS OF THE SITE ARE IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN, TO THE BEST OF MY KNOWLEDGE AND BELIEF. AS-BUILT ELEVATIONS ARE SHOWN ON THE PLAN WHERE ORIGINAL DESIGN ELEVATION HAS BEEN CROSSED OUT AND THE AS-BUILT ELEVATION ADDED.

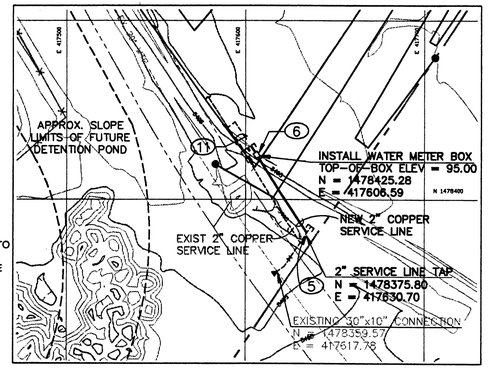
NAME: PATRICK J. CONLEY

DATE: 5/01/01

PATRICK J. CONLEY NEW MEXICO 10141 REGISTERED PROFESSIONAL ENGINEER 5/01/01

WATERLINE TAP PLAN

SCALE: 1" = 40'-0"



(C1) CURVE DATA

NUMBER	DELTA	RADIUS	TANGENT	ARC LENGTH
C1	87°31'24"	57.47	55.03	87.78
C2	96°53'43"	10.00	11.28	16.91
C3	13°11'27"	844.00	97.59	194.31
C4	35°48'02"	274.34	88.61	171.42
C5	83°08'59"	30.00	26.61	43.54
C6	94°10'02"	30.00	32.27	49.31
C7	89°20'51"	5.00	4.94	7.80
C8	95°21'02"	5.00	5.49	8.32
C9	14°30'56"	775.00	98.70	196.34
C10	14°18'26"	839.00	105.30	209.51
C11	28°25'21"	262.34	66.44	130.14
C12	30°40'44"	286.34	78.54	153.32
C13	97°54'09"	5.00	5.74	8.54
C14	68°45'21"	5.00	3.42	6.00
C15	84°26'26"	45.00	40.83	66.32

LEGEND:

- EXISTING ASPHALT PAVEMENT
- NEW ASPHALT PAVEMENT
- NEW CONCRETE SIDEWALK
- 93 — EXISTING CONTOURS
- 93 — NEW CONTOURS
- —EX 30" WTR— EXISTING WATERLINE
- FLOW LINE
- 97.00 FG — FINISHED GRADE SPOT ELEVATIONS
- 97.00 — EXISTING SPOT ELEVATIONS

AS BUILT INFORMATION

CONTRACTOR | WORK STAKED BY | INSPECTOR'S ACCEPTANCE BY | FIELD VERIFICATION BY | DRAWINGS CORRECTED BY — DATE

MICRO-FILM INFORMATION

RECORDED BY — DATE

NO.

BENCH MARKS

C.O.A BENCHMARK "6-L21" AT THE INTERSECTION OF CENTRAL AND ELIZABETH ON THE MEDIAN.

ELEVATION = 5500.669'

GROUND COORDINATES : NORTHING = 1,481,746.33 EASTING = 418,123.51

GRID COORDINATES : NORTHING = 1,481,220.09 EASTING = 417,975.01

GROUND TO GRID FACTOR: 0.999964485

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE
11599	STEPHEN JAMES	04/96

TOLER, FROM

SURVEYING CONTROL, INC.,

ENGINEERS SEAL

STEPHEN P. KEMNA NEW MEXICO 13983 PROFESSIONAL ENGINEER 10/21/97

NO.	DATE	REMARKS	BY

REVISIONS

DESIGN

DESIGNED BY	XXX	DATE	XX/XX
DRAWN BY	BAC	DATE	XX/XX
CHECKED BY	SPK/PJC	DATE	XX/XX

197626

Smith Engineering Company
A Pell Service Engineering Company
5402 Uptown Boulevard, N.E. Suite 5102 Albuquerque, New Mexico 87110

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

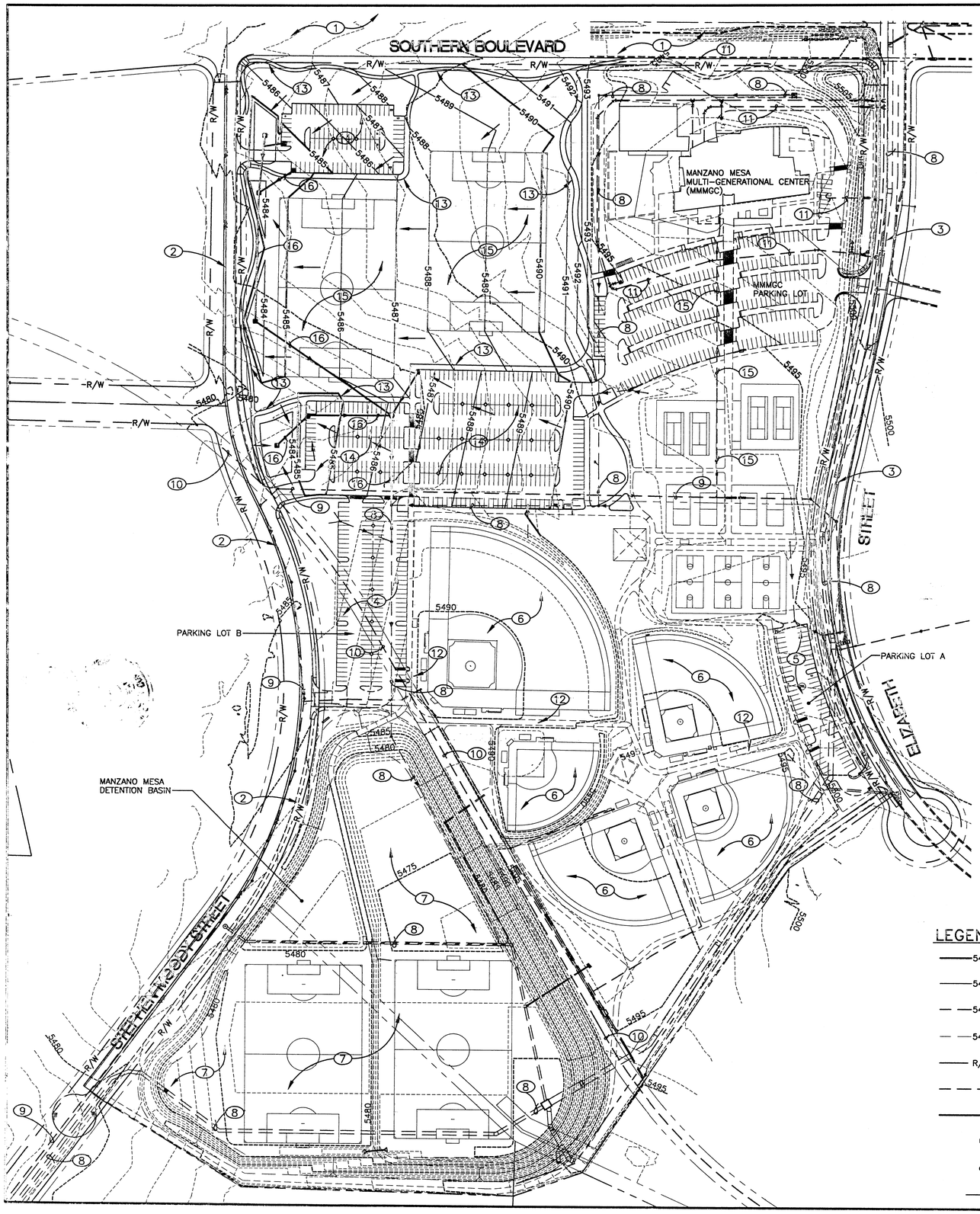
TITLE: MANZANO MESA PARK - PHASE 2A

GRADING AND DRAINAGE PLAN

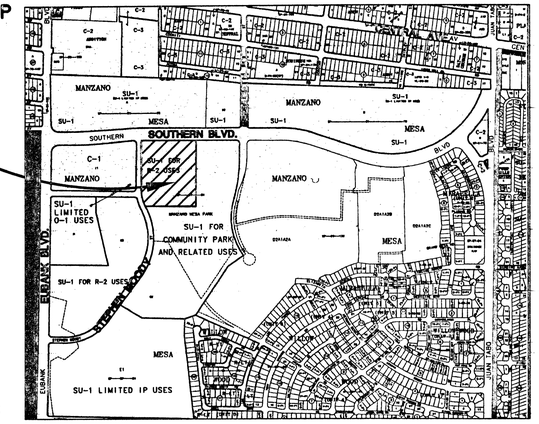
Design Review Committee	City Engineer Approval	Last Design Update	No. / Day / Yr.	No. / Day / Yr.

City Project No. 4980.90 | Zone Map No. L-21 | Sheet 3 Of 8

Drawing name: N:\197626\PHASE2\GRADE.DWG
Saved on: October 17, 1997 at 10:24 AM
This is plot # 18
Plotted on: September 29, 1997 at 9:40 AM



VICINITY MAP



N

MAP NO. L-21-Z

GENERAL NOTES:

1. PROPOSED ELEVATIONS SHOWN MAY CHANGE SLIGHTLY IN ORDER TO BETTER BALANCE THE CUT/FILL FOR THE SITE.
2. ROAD DESIGN AND CONSTRUCTION FOR ELIZABETH STREET, SOUTHERN BOULEVARD AND STEPHEN MOODY WILL BE ACCOMPLISHED UNDER SEPARATE CONTRACT.
3. THE MANZANO MESA MULTI-GENERATIONAL CENTER (MMMGC) IS CURRENTLY UNDER CONSTRUCTION.
4. THE BASEBALL FIELDS, PARKING LOT A AND B AND THE DETENTION BASIN WERE CONSTRUCTED UNDER A SEPERATE CONTRACT.
5. THE EXISTING STORM DRAIN FROM THE MMMGC TO THE EXISTING DETENTION BASIN WILL BE CONSTRUCTED BY OTHERS UNDER THE MMMGC CONTRACT.

KEYED NOTES:

1. SOUTHERN BOULEVARD DESIGNED AND CONSTRUCTED UNDER SEPARATE CONTRACT.
2. STEPHEN MOODY DRIVE DESIGNED AND CONSTRUCTED UNDER SEPARATE CONTRACT.
3. ELIZABETH STREET DESIGNED AND CONSTRUCTED UNDER SEPARATE CONTRACT.
4. EXISTING PARKING LOT B.
5. EXISTING PARKING LOT A.
6. EXISTING BASEBALL FIELD.
7. EXISTING DETENTION BASIN.
8. EXISTING STORM DRAIN SYSTEM.
9. EXISTING 8-INCH SAS.
10. EXISTING 30-INCH CCP WATERLINE IN 30' WATERLINE EASEMENT.
11. EXISTING 8" WATERLINE.
12. EXISTING SIDEWALK.
13. PROPOSED SIDEWALK.
14. PROPOSED PARKING LOT.
15. EXISTING 6" SANITARY SEWER.
16. PROPOSED STORM DRAIN.

SUMMARY OF EXISTING AND PROPOSED IMPROVEMENTS

SITE: THE MANZANO MESA PARK IS A 48 ACRE PARK FACILITY LOCATED IN THE SOUTHEAST AREA OF ALBUQUERQUE. THE SITE IS BOUNDED BY ELIZABETH STREET TO THE EAST, SOUTHERN BOULEVARD TO THE NORTH, AND STEPHEN MOODY TO THE WEST. THE MAJORITY OF THE PARK HAS BEEN DEVELOPED OR MASTER PLANNED. THE AREA PREVIOUSLY KNOWN AS OPTION TRACT G-1 IS THE PART OF THE SITE THAT IS BEING PLANNED. THE SITE SLOPES FROM THE EAST TO WEST AT APPROXIMATELY 1.5%. SOIL TYPES: THE SOILS TYPES GENERALLY CONSIST OF EMB (GRAVELLY FINE LOAM WITH 0 TO 5 PERCENT SLOPES), MWA (MADUREZ-WINK, GENTLY SLOPING SANDY LOAM) AND TGB (TIJERAS GRAVELLY FINE SANDY LOAM, 1 TO 5 PERCENT SLOPES).

DRAINAGE FACILITIES: THE PARK IS THE SITE OF THE MANZANO MESA DETENTION BASIN AND STORM DRAIN. THIS SYSTEM DRAINS THE PARK AS WELL AS OFFSITE DRAINAGE BASINS. THIS BASIN WILL ALSO DRAIN THE PROPOSED IMPROVEMENTS. THE PROPOSED IMPROVEMENTS FOR THE SITE INCLUDE STORM DRAIN RANGING IN SIZE FROM 12" TO 24". THIS SYSTEM WILL DRAIN TO THE SOUTH AND CONNECT TO A SYSTEM WHICH DRAINS TO THE DETENTION BASIN. THE PROPOSED SYSTEM WILL INCLUDE INLETS AND MANHOLES AS REQUIRED AND SMALL DETENTION BASINS TO COLLECT FLOW. THE ESTIMATED RUNOFF FROM THE PROPOSED IMPROVEMENTS IS 30 CFS. A COMPLETE DRAINAGE REPORT WILL BE PREPARED FOR THE SITE DURING THE DRC PROCESS.

UTILITIES: UTILITIES FOR THE SITE INCLUDE STORM DRAIN, SANITARY SEWER, WATER AND POWER. THESE UTILITIES ARE SHOWN ON THE DRAWING BY THE KEYED NOTES. ALL MAJOR PROPOSED SITE UTILITIES, EXCEPT THE STORM DRAIN FACILITIES AND SMALL DIAMETER WATER LINES FOR THE IRRIGATION FOR THE PROPOSED IMPROVEMENTS, HAVE BEEN CONSTRUCTED UNDER SEPARATE CONTRACTS.

ROADS: THE DESIGN OF ELIZABETH STREET AND THE FRONTAGE OF SOUTHERN BOULEVARD FOR THE MMMGC SITE IS DESIGNED AND IS OUT FOR CONSTRUCTION UNDER SEPARATE CONTRACT. THE DESIGN OF STEPHEN MOODY AND THE FRONTAGE OF SOUTHERN BOULEVARD FOR THE PROPOSED IMPROVEMENTS IS CURRENTLY UNDER DESIGN AND WILL BE CONSTRUCTED UNDER SEPARATE CONTRACT BEFORE THE PROPOSED PARK IMPROVEMENTS ARE MADE.

LEGEND

5480	MAJOR PROPOSED CONTOUR
5486	MINOR PROPOSED CONTOUR
5495	MAJOR EXISTING CONTOUR
5493	MINOR EXISTING CONTOUR
R/W	RIGHT-OF-WAY
	EXISTING UTILITY
	PROPOSED STORM DRAIN
	PROPOSED CATCH BASIN
	PROPOSED MANHOLE
	OVERLAND FLOW ARROWS

N

100' 50' 0 100' 200'

SCALE: 1" = 100'

CONSENSUS PLANNING, INC.
Planning / Landscape Architecture
924 Park Avenue SW
Albuquerque, NM 87102
(505) 764-9801 Fax 842-5495
e-mail: cp@consensusplanning.com

101119
Smith Engineering Company
A Full Service Engineering Company
5555 Sylvan Boulevard, N.E. Suite 5555 Albuquerque, New Mexico 87110

CITY OF ALBUQUERQUE
DEPARTMENT OF PARKS AND RECREATION

TITLE: MANZANO MESA PARK
CONCEPTUAL GRADING AND DRAINAGE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	No. / Day / Yr.	No. / Day / Yr.

City Project No. | Zone Map No. L-21-Z | Sheet 3 Of 4

RECEIVED JUN 04 2001 HYDROLOGY SECTION

AS BUILT INFORMATION

CONTRACTOR	DATE
WORK STAKED BY	DATE
INSPECTOR'S ACCEPTANCE BY	DATE
FIELD VERIFICATION BY	DATE
DRAWINGS CORRECTED BY	DATE

MICRO-FILM INFORMATION

RECORDED BY	DATE
NO.	

BENCH MARKS

C.O.A. BENCHMARK "6-L21" FROM THE INTERSECTION OF EUBANK AND THE FUTURE INTERSECTION GO DIRECTLY EAST 292 FEET

ELEVATION = 5500.67'

GROUND COORDINATES: NORTHING = 1,481,746.33 EASTING = 418,123.51

GRID COORDINATES: NORTHING = 1,481,220.09 EASTING = 417,975.01

GROUND TO GRID FACTOR: 0.99984527

SURVEY INFORMATION

NO.	FIELD NOTES BY	DATE
11599	STEPHEN JAMES TOLER, FROM SURVEYING CONTROL, INC.	5/01

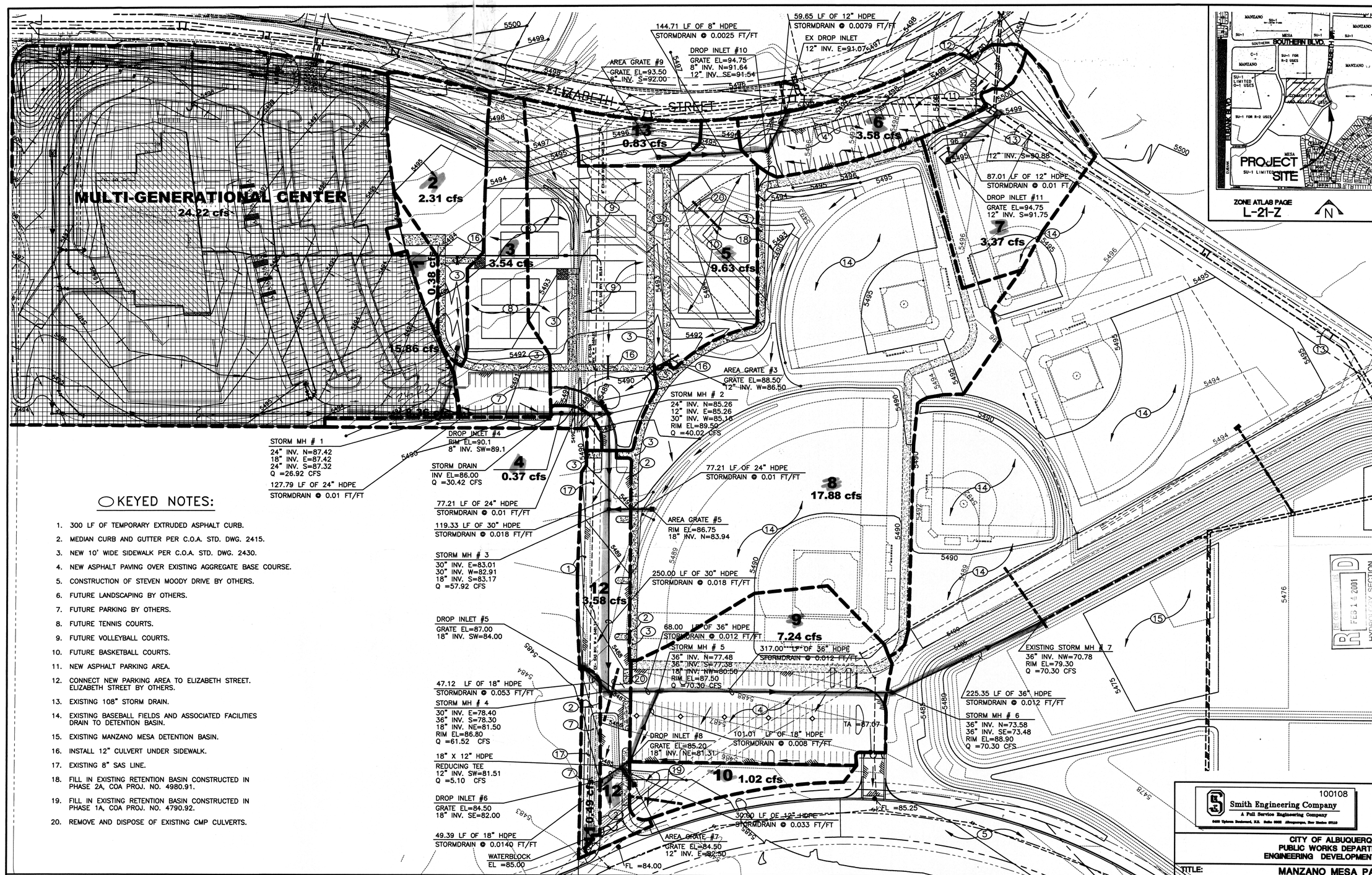
ENGINEERS SEAL: PATRICK J. CONLEY, NEW MEXICO, 14010, REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS	BY

REVISIONS

		DATE
DESIGN		
DESIGNED BY	PJC	5/01
DRAWN BY	SDD	5/01
CHECKED BY	PJC	5/01

RECEIVED JUN 04 2001 HYDROLOGY SECTION



KEYED NOTES:

1. 300 LF OF TEMPORARY EXTRUDED ASPHALT CURB.
2. MEDIAN CURB AND GUTTER PER C.O.A. STD. DWG. 2415.
3. NEW 10' WIDE SIDEWALK PER C.O.A. STD. DWG. 2430.
4. NEW ASPHALT PAVING OVER EXISTING AGGREGATE BASE COURSE.
5. CONSTRUCTION OF STEVEN MOODY DRIVE BY OTHERS.
6. FUTURE LANDSCAPING BY OTHERS.
7. FUTURE PARKING BY OTHERS.
8. FUTURE TENNIS COURTS.
9. FUTURE VOLLEYBALL COURTS.
10. FUTURE BASKETBALL COURTS.
11. NEW ASPHALT PARKING AREA.
12. CONNECT NEW PARKING AREA TO ELIZABETH STREET. ELIZABETH STREET BY OTHERS.
13. EXISTING 108" STORM DRAIN.
14. EXISTING BASEBALL FIELDS AND ASSOCIATED FACILITIES DRAIN TO DETENTION BASIN.
15. EXISTING MANZANO MESA DETENTION BASIN.
16. INSTALL 12" CULVERT UNDER SIDEWALK.
17. EXISTING 8" SAS LINE.
18. FILL IN EXISTING RETENTION BASIN CONSTRUCTED IN PHASE 2A, COA PROJ. NO. 4980.91.
19. FILL IN EXISTING RETENTION BASIN CONSTRUCTED IN PHASE 1A, COA PROJ. NO. 4790.92.
20. REMOVE AND DISPOSE OF EXISTING CMP CULVERTS.

AS BUILT INFORMATION

CONTRACTOR		
WORK STAKED BY		DATE
INSPECTOR'S ACCEPTANCE BY		DATE
FIELD VERIFICATION BY		DATE
DRAWINGS CORRECTED BY		DATE
MICRO-FILM INFORMATION		
RECORDED BY		DATE
NO.		

BENCH MARKS

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEERS SEAL

PATRICK J. CONLEY
NEW MEXICO
10244
PROFESSIONAL ENGINEER
2/13/01

RECEIVED FEB 14 2001 HYDROLOGY SECTION

NO.	DATE	REMARKS	BY
		REVISIONS	

DESIGN		
DESIGNED BY	PJC	DATE 2/01
DRAWN BY	JAB	DATE 2/01
CHECKED BY	PJC	DATE 2/01

Smith Engineering Company
A Full Service Engineering Company
5600 Uptown Boulevard, N.E. Suite 202B Albuquerque, New Mexico 87110
100108

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE:
MANZANO MESA PARK
GRADING AND DRAINAGE PLAN

Design Review Committee	City Engineer Approval	Last Design Update	No. / Day / Yr.	No. / Day / Yr.

City Project No.	Zone Map No.	Sheet	Of
	L-21-Z	1	2

\Civ_Cadd\100108\Park Drainage\100HYDRO_plan.dwg Tue Feb 13 11:10:35 2001

MULTI-GENERATIONAL CENTER DRAINAGE ANALYSIS

GENERAL

Smith Engineering Company (SEC) has been retained by Consensus Planning Inc. to develop the drainage and grading plan for the Manzano Mesa Park Phase 2D. Phase 2D of the Park is on a 13.82 acre tract of land located on the southeast side of Albuquerque, New Mexico. The site borders a future extension of Elizabeth Street on the east, and Steven Moody on the west. The site is 1200 feet east of Eubank Boulevard and south of Southern Blvd.

SITE LOCATION AND DESCRIPTION

The project area is located in Bernalillo County on the southeast side of the City of Albuquerque, New Mexico. The local climate is considered semi-desert and is hot and dry. Albuquerque receives less than 8 inches of rain per year. The project is located on the east mesa area near Kirtland Air Force Base. The area presently receives runoff from local upstream basins. The majority of the floods that effect the area come from thunderstorms that occur in the months of July, August and September. The summer thunderstorms originate from the Gulf of Mexico. Less intense winter rainfall come from frontal activity that originates in the Pacific Ocean.

HYDROLOGIC ANALYSIS

The City of Albuquerque's Development Process Manual (DPM) Section 22.2 was used to compute the 100-year, 6-hour, and 10-year, 6-hour peak flows for the onsite basins. Precipitation Zone 3 along with Tables A-8, A-10 and A-11 were used for these calculations. The site was divided into thirteen basins based on developed runoff patterns. The Rational Method was used to compute the peak flows for this analysis. The 100-year, 6-hr storm is the design storm for the area.

A. Existing Conditions

The Manzano Mesa Park is zoned SU-1 for Park. The south end of the Park has been developed with five baseball diamonds, parking lots and the 45 acre-foot Manzano Mesa Detention Pond. The existing north end of the Park is the location of the future Multi-Generational Center. The Center will discharge it's runoff via a storm drain system to the the south. See City of Albuquerque Project No. 5751.91. The undeveloped portion of the Park is undeveloped grass land overlying the sandy to gravely loam. The average slope of the original grade was about 2% east to west. The Flood Insurance Rate Map (FIRM Panel # 35002 037C, Oct. 14, 1983) for the area delineates an existing 100-year flood plain (Zone AO) crossing the middle of the Manzano Mesa Park.
In April 1996 SEC completed a Conditional Letter of Map Revision (CLOMR) that proposes the elimination of this flood plain as a result of the proposed Juan Tabo Detention Basin and the existing Juan Tabo Storm Drain System located upstream.

B. Developed Conditions

The proposed project site to be constructed is Phase 2D of the Manzano Mesa Park. The improvements consist of four tennis courts, four volleyball courts and three basketball courts. There will be expansion of the existing east parking lot along Elizabeth with 18 additional parking spaces and the parking lot will be paved (it is currently base course). A existing paved parking lot on the west side of the site will be paved (it is currently base course). This parking lot will be accessible from Steven Moody. Site improvements include new pavement, curb and gutter and sidewalks. The site athletic fields runoff will be via sheet flow to either existing or proposed drainage swales. The drainage swales will discharge to area drop inlets. The parking lots will drain via sheet flow and be collected in the curb and gutters. The curb and gutters will discharge to drop inlets in the parking lots. The drainage Basins 13, 7 and 6 (the parking lot adjacent to Elizabeth Street) will discharge runoff collected by drop inlets to the storm drain system now being constructed in Elizabeth Street. (See C.O.A. Project No. 6366.91, South Eubank Storm Drain Outfall Phase 2). The remaining portion of the site will discharge to a proposed storm drain system on the north and west side of the park. The storm drain system for the park begins at the Multi-Generational Center at the north boundary of the site. The Center discharges 24.22 cfs and is picked up by a 24" HDPE corrugated smooth interior storm drain. The storm drain proceeds south for 128 LF and the system intercepts an additional 16.23 cfs from drainage Basins 1, 2, 3, 4, and 5 via drop inlets. The storm drain then proceeds west for 476 LF and increases to a 30" HDPE corrugated smooth interior pipe. The storm drain collects an additional 21.95 cfs from drainage Basin 8, 11, and 12. The storm drain system then proceeds south, increases to a 36" pipe and discharges to the Manzano Mesa Detention Basin. The 36" storm drain picks up an additional 8.26 cfs from drainage Basins 9 and 10. This drainage plan is consistent with the concept provided in the analysis master report for the Manzano Mesa Park and South Eubank Storm Drain and Detention Basin prepared November, 1995.

MANZANO MESA PARK, PHASE 2D

HYDROLOGIC CALCULATIONS
FOR SMALL WATERSHEDS < 40 ACRES (PER DPM SECTION 22)
PRECIPITATION ZONE = 3

TABLE A-9 (DPM) PEAK DISCHARGE (cfs/acre)

FORMULA: TOTAL Qp (cfs) = QpA*Aa+QpB*Ba+QpC*Ca+QpD*Da --- NOTE - "a" = AREA IN ACRES

BASIN NUMBER	RETURN PERIOD 6-hr.	Qp per LAND TREATMENT TYPE (cfs/acre)				AND			LAND TREATMENT TYPE (acres)						
		QpA	A (ac)	A (%)	QpB	B (ac)	B (%)	QpC	C (ac)	C (%)	QpD	D (ac)	D (%)	TOTAL AREA (ac)	TOTAL Qp (cfs)
1	100	1.87	0.00000	0.0	2.60	0.04818	42.0	3.45	0.04818	42.0	5.02	0.01835	16.0	0.1147	0.38
2	100	1.87	0.00000	0.0	2.60	0.62146	79.0	3.45	0.08653	11.0	5.02	0.07867	10.0	0.7867	2.31
3	100	1.87	0.00000	0.0	2.60	0.15560	19.0	3.45	0.12284	15.0	5.02	0.54051	66.0	0.8189	3.54
4	100	1.87	0.00000	0.0	2.60	0.06194	50.0	3.45	0.06194	50.0	5.02	0.00000	0.0	0.1239	0.37
5	100	1.87	0.00000	0.0	2.60	0.28053	12.0	3.45	0.91173	39.0	5.02	1.14551	49.0	2.3378	9.63
6	100	1.87	0.00000	0.0	2.60	0.00000	0.0	3.45	0.03618	5.0	5.02	0.68744	95.0	0.7236	3.58
7	100	1.87	0.00000	0.0	2.60	0.00000	0.0	3.45	0.90714	95.0	5.02	0.04774	5.0	0.9549	3.37
8	100	1.87	0.00000	0.0	2.60	0.00000	0.0	3.45	4.46254	90.0	5.02	0.49584	10.0	4.9584	17.88
9	100	1.87	0.00000	0.0	2.60	0.00000	0.0	3.45	0.54900	34.0	5.02	1.06570	66.0	1.6147	7.24
10	100	1.87	0.00000	0.0	2.60	0.00000	0.0	3.45	0.29436	100.0	5.02	0.00000	0.0	0.2944	1.02
11	100	1.87	0.00000	0.0	2.60	0.00000	0.0	3.45	0.14326	100.0	5.02	0.00000	0.0	0.1433	0.49
12	100	1.87	0.00000	0.0	2.60	0.00000	0.0	3.45	0.00000	0.0	5.02	0.71227	100.0	0.7123	3.58
13	100	1.87	0.00000	0.0	2.60	0.00000	0.0	3.45	0.23950	100.0	5.02	0.00000	0.0	0.2395	0.83
TOTAL ESTIMATED RUNOFF FOR 100-YEAR STORM, cfs															54.22

RECEIVED
FEB 14 2001
HYDROLOGY SECTION

AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY — DATE
WORK INSPECTED BY — DATE
FIELD VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE
MICRO-FILM INFORMATION
RECORDED BY — DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEERS SEAL
PATRICK J. CONLEY
NEW MEXICO
10141
REGISTERED PROFESSIONAL ENGINEER
2/13/01

NO.	DATE	REMARKS	BY

REVISIONS

DESIGNED BY	PJC	DATE 2/01
DRAWN BY	JAB	DATE 2/01
CHECKED BY	PJC	DATE 2/01

100108
Smith Engineering Company
A Full Service Engineering Company
6400 Uptown Boulevard, N.E. Suite 500E Albuquerque, New Mexico 87110

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: MANZANO MESA PARK
HYDROLOGIC CALCULATIONS

Design Review Committee | City Engineer Approval | Last Design Update | No. / Bsy / Yr. | No. / Bsy / Yr.

City Project No. | Zone Map No. L-21-Z | Sheet 2 Of 2

C:\v_Cadd\100108\Park Drainage\002HYDRO_calc.dwg Tue Feb 13 11:11:50 2001