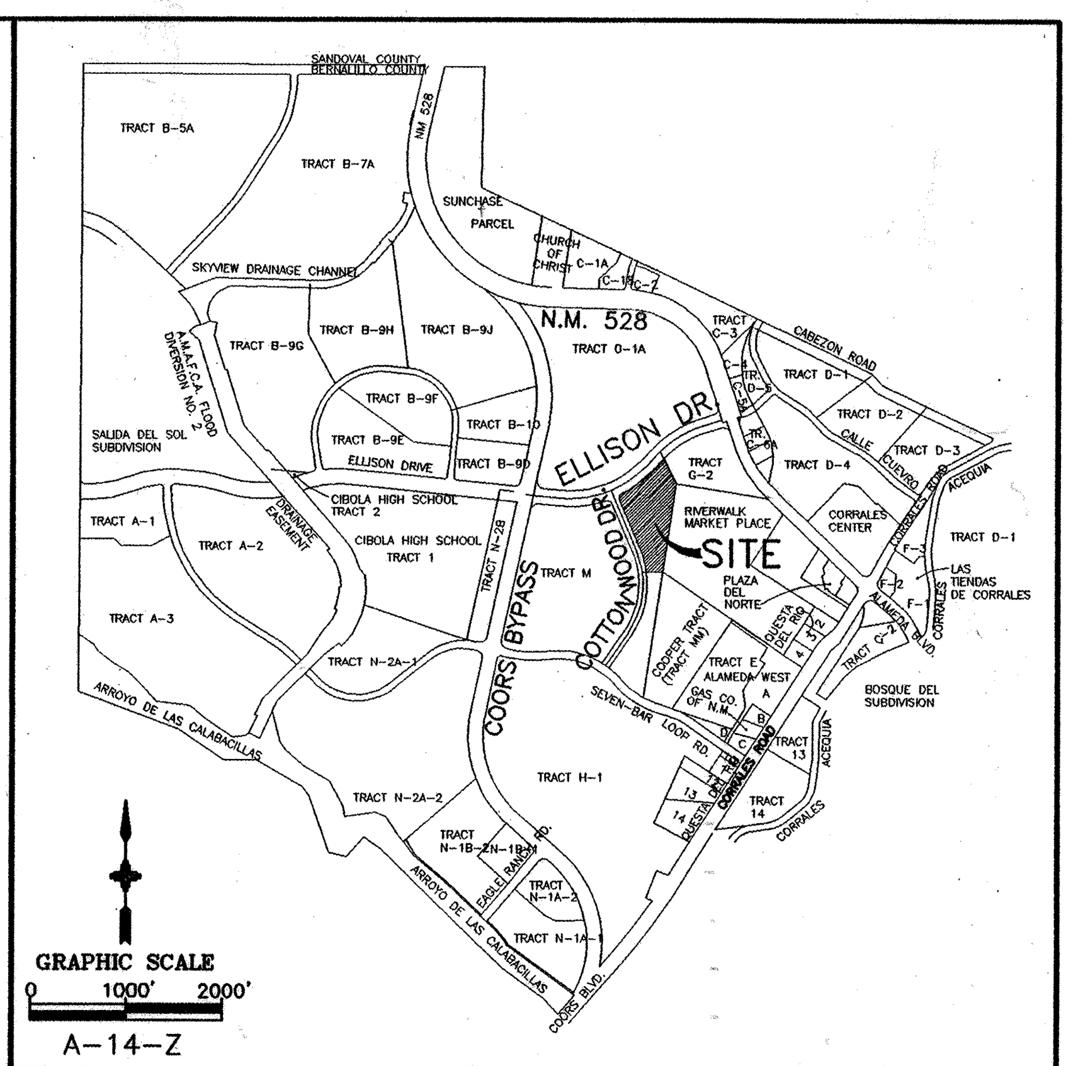
TRACTS G-1A-2A THRU G-1A-2E
7 BAR RANCH
CITY OF ALBUQUERQUE, NEW MEXICO
BERNALILLO COUNTY
GRADING, PAVING AND PUBLIC UTILITIES



VICINITY MAP

RECORD DRAWING

I, R. P. Bohannan, hereby certify that this drawing has been revised in accordance with the survey information furnished by Surv-Tek, Inc. to reflect the construction as actually accomplished.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R P Bohannan 4/15/98
R. P. Bohannan — Date
N.M.P.E. No. 9814

APPROVAL OF AS BUILT DRAWINGS
CHIEF CONSTRUCTION ENGINEER
Peter Chang
DATE 5-27-99

GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREIN, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS AMENDED THRU UPDATE NO. 6. AND NEW MEXICO UTILITIES INC. SPECIFICATIONS FOR WATER & WASTEWATER FACILITIES, LATEST REV. A COPY OF THE NEW MEXICO UTILITIES SPECIFICATIONS MAY BE OBTAINED FROM NEW MEXICO UTILITIES INC., SEE ADDRESS BELOW.
2. CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER, AND SHALL BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEY SECTION. WHEN A CHANGE IS MADE IN ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF GENERAL CONDITIONS OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. THREE (3) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (768-2551) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE SPECIFICATIONS.
4. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, (260-1990) FOR LOCATION OF EXISTING UTILITIES. CONTACT NEW MEXICO UTILITIES INC. (898-2661) FOR WATER AND SEWER LOCATIONS.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS AND EXISTING PAVEMENT. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM AMOUNT OF DELAY.
6. THE CONTRACTOR SHALL CONTACT NEW MEXICO UTILITIES INC. (898-2661) FIVE (5) WORKING DAYS PRIOR TO NEEDING SHUT-OFF OR TURN-ON OF VALVES. ONLY NEW MEXICO UTILITIES INC. PERSONNEL ARE AUTHORIZED TO OPERATE VALVES.
7. THE PUBLIC WATER LINE MUST BE A MINIMUM OF 18" ABOVE THE SEWER LINE AT ALL CROSSINGS.
8. THE CONTRACTOR SHALL FURNISH EMD'S ON ALL WATER AND SEWER SERVICE STUBS, CAPS AND PLUGS.
9. ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
10. BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE.
11. TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE CITY ENGINEER.
12. SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
13. IF CURB IS DEPRESSED FOR A DRIVEPAD OR A HANDICAP RAMP, THE DRIVEPAD OR RAMP SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF THE CURB AND GUTTER.
14. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED BY CONTRACTOR WITH PLASTIC REFLECTORIZED PAVEMENT MARKINGS IN EXISTING STRIPING LOCATIONS UNLESS OTHERWISE INDICATED BY THIS PLAN SET.
15. ANY WORK AFFECTING AN ARTERIAL ROADWAY REQUIRES 24 HOUR CONSTRUCTION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR, OR REMOVAL AND REPLACEMENT OF ANY PAVEMENT, PAVEMENT MARKINGS, CURB AND GUTTER, DRIVEPADS, SIDEWALK, WHEELCHAIR RAMP OR ANY OTHER EXISTING IMPROVEMENTS DAMAGED BY THE CONTRACTORS OPERATIONS.
17. THE CONTRACTOR SHALL PERFORM ALL PROJECT CONSTRUCTION AND CONSTRUCTION TRAFFIC CONTROL IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE ORANGE BARREL POLICY.
18. ELLISON DRIVE IS AN ARTERIAL STREET AND ANY WORK REQUIRING CLOSURE OF THROUGH LANES SHALL BE PERFORMED ON A 24 HOUR PER DAY BASIS UNTIL COMPLETE.
19. TO THE GREATEST EXTENT POSSIBLE WITHOUT COMPROMISING SAFETY, CONTRACTORS SHALL CONSTRUCT ALL WORK BEHIND THE EXISTING CURB WITHOUT BARRICADING.
20. A TOTAL OF FOURTEEN (14) CALENDAR DAYS WILL BE ALLOWED FOR EACH COMBINATION OF MEDIAN OPENING / TURN LANE AND CURB OPENING / TURN LANE FROM THE START OF WORK TO COMPLETION OF WORK WITHIN THE RIGHT-OF-WAY. UTILITY TIE-IN WORK AT EACH LOCATION SHALL BE INCLUDED IN THIS TIMEFRAME.
21. THE ABOVE NOTES REFLECT ANTICIPATED TRAFFIC CONTROL REQUIREMENTS. ACTUAL REQUIREMENTS SHALL BE DETERMINED AT TIME OF ISSUANCE OF THE BARRICADE PERMIT(S).

INDEX TO DRAWINGS

DRB CASE No. 96-353

UTILITY COMPANY CONTACTS

NEW MEXICO UTILITIES
(Water & Sanitary Sewer)
Bob Gay
4700 Irving Blvd. N.W.
Albuquerque, NM 87114
(505) 898-2661

PNM ELECTRIC
Jim Vann
4201 Edith Blvd. NE
Albuquerque, New Mexico 87107
(505) 848-3426

PNM GAS
Debbie O'Callaghan
4625 Edith Blvd., NE
Albuquerque, New Mexico 87107
(505) 761-7705

US WEST COMMUNICATIONS
Norma Carrillo
201 Third Street
P.O. Box 1355, Sta. 952
Albuquerque, New Mexico 87103
(505) 245-8706

AT&T
Ishmael Pantoja
111 Third ST., NW
Albuquerque, New Mexico 87103
(505) 842-2806

JONES INTERCABLE
Karen Shore
4611 Montbel Pl., NE
P.O. Box 27138
Albuquerque, NM 87125-7138
(505) 761-6220

NOTE

THE ENGINEER HAS UNDERTAKEN LIMITED FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY, AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "BLUE STAKES" PROCEDURES, OR OTHERWISE.

NOTE

THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.

NOTE

REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE

APPROVALS	ENGINEER	DATE
DRC CHAIR	Billy G. Goolsby	6-17-97
TRANSPORTATION	[signature]	6-17-97
WATER/WASTEWATER	R.W. Kane	6-17-97
HYDROLOGY	Susan Calongne	6-17-97
CIP		
CONSTR. MNGMT.		
CONST. COORD.		

ENGINEERS STAMP & SIGNATURE: R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER — R P Bohannan 6/17/97

EASTERLING & ASSOCIATES, INC.
CONSULTING ENGINEERS
10131 COORS RD., NW, SUITE H – 7 & 8
ALBUQUERQUE, NEW MEXICO 87114
(505) 898-8021 FAX (505) 898-8501

****
APPROVED FOR CONSTRUCTION

[signature] 6-17-97
N.M. UTILITIES INC. — DATE

Ricardo Roybal 6/17/97
CITY ENGINEER — DATE

CITY PROJECT NO. 566181

SHEET 1 OF 16

DWG: T:\PROJECTS\4350\DWG\FINAL\COVER
TIME: 06-17-97 10:45:59

TRACTS G-1A-2A THRU G-1A-2E

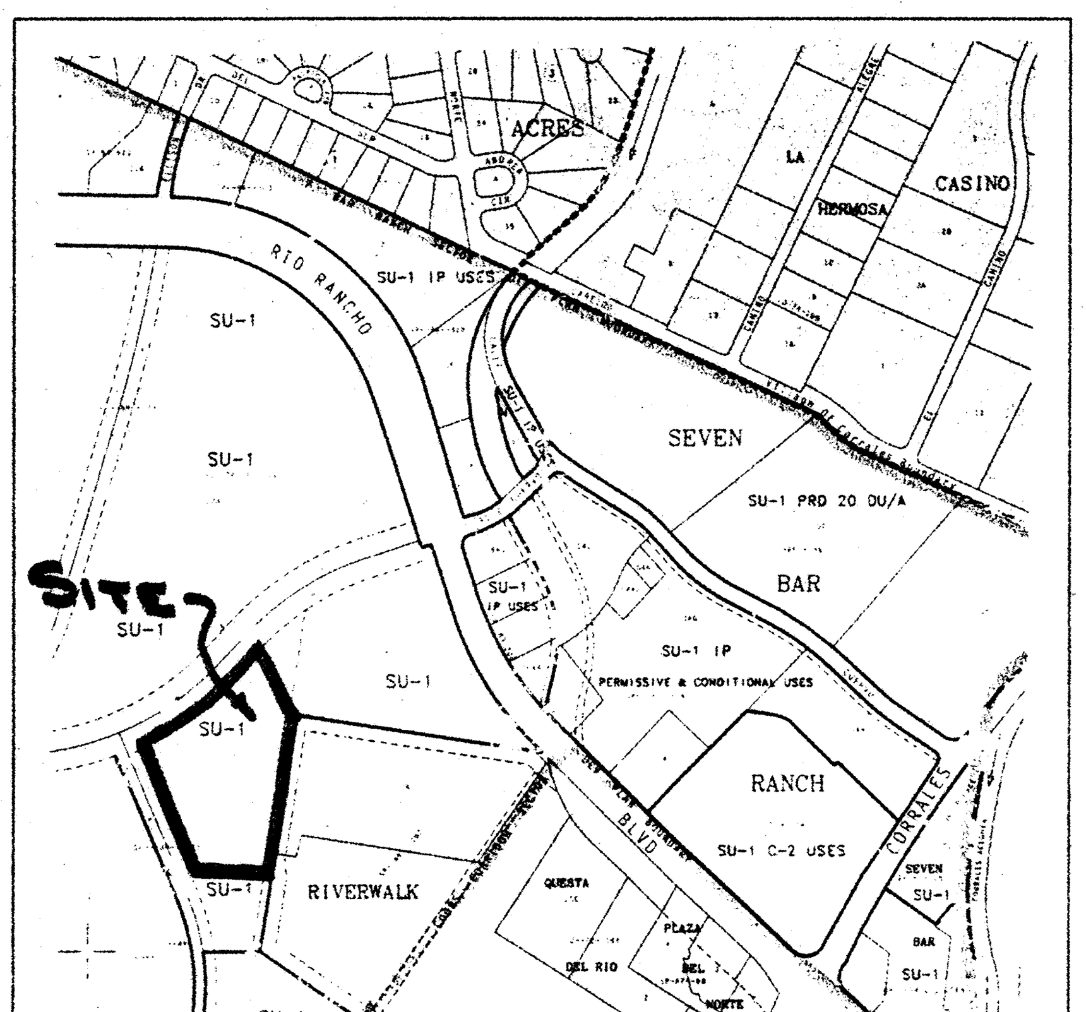
SEVEN - BAR RANCH

(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)

CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

NOVEMBER, 1996

Reserved for County Clerk Seal



Vicinity Map

N.T.S.

GENERAL NOTES

1. Bearings are grid based upon the New Mexico State Plane Coordinate System, Central Zone (NAD27), and rotated to grid at the Albuquerque Control Survey Monument "NM-448-N12".
2. Distances are ground.
3. Distances along curved lines are arc lengths.
4. All corners are a 5/8" rebar and surveycap stamped "HUGG LS 5823", "HUGG LS 9750" or "HUGG LS 11808" unless otherwise indicated.
5. Delta Alpha = -00° 13' 46"
6. Ground to Grid factor = 0.99967595
7. Zone Atlas Page A-14.
8. U.C.L.S. Log Number 96110116250468

DISCLOSURE STATEMENT

The purpose of this replat is to divide Tract G-1A-2 into **five (5)** tracts, grant the easements shown hereon and to dedicate to the City of Albuquerque in fee simple the additional street right of way shown hereon.

NOTE:

These properties are within the New Mexico **Utilities**, Inc. (NMU, Inc.) franchise area. Water and Sanitary Sewer **System** capabilities are based on NMU, Inc. facilities, not on the City of Albuquerque. Water and Sanitary Sewer infrastructure improvements must, however, be approved by both the City of Albuquerque and NMU, Inc.

PUBLIC UTILITY EASEMENTS

PUBLIC UTILITY EASEMENTS shown on this plat are granted for the common and joint use of:

A. PNM Electric Services for installation, maintenance, and service of overhead and underground electrical lines, transformers and other equipment and related facilities reasonably necessary to provide electrical service.

B. PNM Gas Services for installation, maintenance and service of natural gas lines, valves and other equipment and facilities reasonably necessary to provide natural gas.

C. U.S. West Communications for the installation, maintenance, and service of such lines, cable, and other related equipment and facilities reasonably necessary to provide communication services, including but not limited to ground pedestals and closures.

D. Jones Intercable for the installation, maintenance, and service of such lines, cable, and other related equipment and facilities reasonably necessary to provide Cable TV service.

E. New Mexico Utilities, Inc., for the installation, maintenance and service of sewer and water lines, valves and other related equipment reasonably necessary to provide sewer and water services.

Included, is the right to build, rebuild, construct, reconstruct, locate, relocate, change, remove, modify, renew, operate, and maintain facilities for the purposes described above, together with free access to, from, and over said easements, including sufficient working area space for electric transformers, with the right and privilege to trim and remove trees, shrubs or bushes which interfere with the purposes set forth herein. No building, sign, pool (aboveground or subsurface), hot tub, concrete or wood pool decking, or other structure shall be erected or constructed on said easements, nor shall any well be drilled or operated thereon. Property owners shall be solely responsible for correcting any violations of National Electrical Safety Code by construction of pools, decking, or any structures adjacent to or near easements shown on this plat.

In approving this plat, PNM Electric Services and Gas Services (PNM) did not conduct a Title Search [illegible] are not shown on this plat.

APPROVALS

PNM Electric Services — 1-9-97	Date
PNM Gas Services — 1-7-97	Date
U.S. West Communications — 1-7-97	Date
Jones Intercable — 1-7-97	Date
New Mexico Utilities, Inc. — 1-8-97	Date

APPROVALS

Traffic Engineer, City of Albuquerque Public Works Department — 2-18-97	Date
FOR City Surveyor, City of Albuquerque Public Works Department — 12-24-96	Date
Utility Development Division, City of Albuquerque Public Works Department — 2-18-97	Date
Albuquerque Metropolitan Arroyo Flood Control Authority	Date
City Engineer, City of Albuquerque Public Works Department	Date
Property Management, City of Albuquerque	Date
Design and Development, CIP City of Albuquerque — 2-18-97	Date

APPROVAL as specified by the Albuquerque Subdivision Ordinance.

Chairman, Albuquerque/Bernalillo County Development Review Board	Date

DRB 96- 353
V-97-17

SURVEYORS CERTIFICATION

I, Gary P. Hugg, New Mexico Professional Surveyor Number 5823, hereby certify that this plat of survey was prepared from field notes of an actual ground survey performed by me or under my supervision; that it meets the Standards for Land Surveys in New Mexico as adopted by the New Mexico State Board of Registration for Professional Engineers and Professional Surveyors; that it meets the minimum requirements for surveys and monumentation of the Albuquerque Subdivision Ordinance; that it shows all easements of record; and that it is true and correct to the best of my knowledge and belief.

Garry P. Hugg
NMPS No. 5823
November 1, 1996

PROFESSIONAL SURVEYOR STATE OF NEW MEXICO No. 5823 GARRY P. HUGG

SHEET 1 OF 3

SURV-TEK, INC.
Consulting Surveyors
5643 Paradise Blvd. N.W. Albuquerque, New Mexico 87114 Phone: 505-897-3366 Fax: 505-897-3377

96027ls1

TRACTS G-1A-2A THRU G-1A-2E

SEVEN - BAR RANCH

(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)

CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

NOVEMBER, 1996

Reserved for County Clerk Seal

LEGAL DESCRIPTION

That certain parcel of land situate within the Town of Alameda Grant in projected Section 5, Township 11 North, Range 3 East, New Mexico Principal Meridian, City of Albuquerque, Bernalillo County, New Mexico, being and comprising Tract G-1A-2, Seven-Bar Ranch, as the same is shown and designated on the plat entitled "TRACTS G-1A-1 AND G-1A-2, SEVEN-BAR RANCH, (BEING A REPLAT OF TRACT G-1A, SEVEN-BAR RANCH), CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO", filed in the office of the County Clerk of Bernalillo County, New Mexico, on December 26, 1996, in Volume 96C, folio 420.

Said parcel contains 7.7978 acres, more or less.

FREE CONSENT AND DEDICATION

SURVEYED and REPLATTED and now comprising TRACTS G-1A-2A THRU G-1A-2E, SEVEN-BAR RANCH (BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH), CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, withe free consent of and in accordance with the wishes and desires of the undersigned owner(s) and proprietor(s) thereof. Said owner(s) and proprietor(s) do hereby grant to the use of the public forever all public utility easements shown hereon and do hereby dedicate the additional street right of way shown hereon to the City of Albuquerque in fee simple and do hereby certify that they are so authorized to act.

WRANGLER PROPERTIES LIMITED LIABILITY COMPANY
an Oklahoma Limited Liability Company

Donald L. Chalmers, Manager

ACKNOWLEDGEMENT

STATE OF NEW MEXICO
COUNTY OF BERNALILLO

This instrument was acknowledged before me on this 13TH day of NOVEMBER, 1996.

Notary Public

My Commission expires: 12-18-2000

PROFESSIONAL SURVEYOR STATE OF NEW MEXICO No. 5823 GARRY P. HUGG

SHEET 2 OF 3

SURV-TEK, INC.
5643 Paradise Blvd. N.W. Albuquerque, New Mexico 87114 Phone: 505-897-3366 Fax: 505-897-3377

96027ls2

TRACTS G-1A-2A THRU G-1A-2E

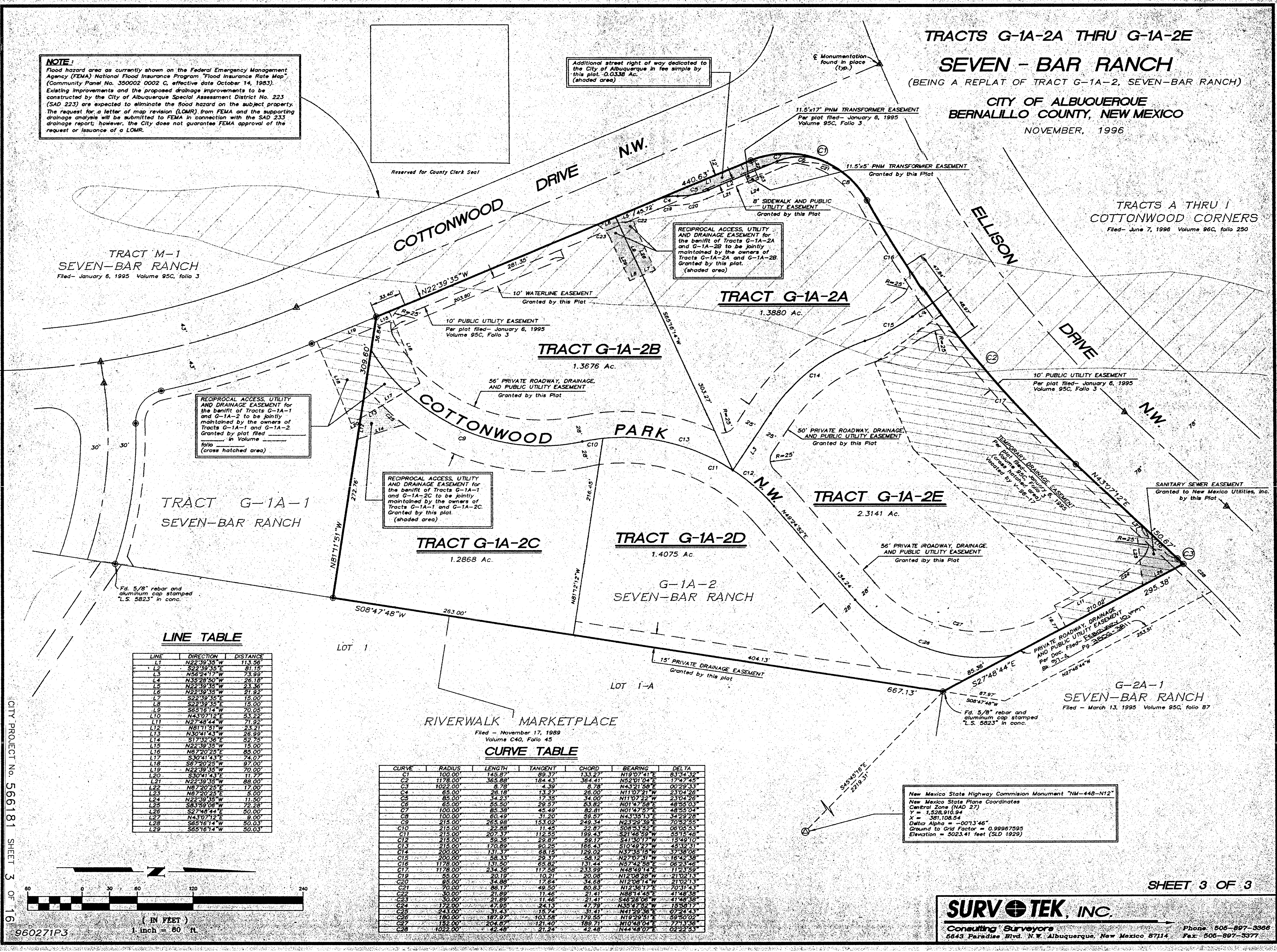
SEVEN - BAR RANCH

(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)

CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

NOVEMBER, 1996

NOTE:
Flood hazard area as currently shown on the Federal Emergency Management Agency (FEMA) National Flood Insurance Program "Flood Insurance Rate Map" (Community Panel No. 350002 0002 C, effective date October 14, 1983). Existing improvements and the proposed drainage improvements to be constructed by the City of Albuquerque Special Assessment District No. 223 (SAD 223) are expected to eliminate the flood hazard on the subject property. The request for a letter of map revision (LOMR) from FEMA and the supporting drainage analysis will be submitted to FEMA in connection with the SAD 233 drainage report; however, the City does not guarantee FEMA approval of the request or issuance of a LOMR.



New Mexico State Highway Commision Monument "NM-448-N12"
New Mexico State Plane Coordinates
Central Zone (NAD 27)
Y = 1,528,910.94
X = 381,108.54
Delta Alpha = -00°13'46"
Ground to Grid Factor = 0.99967595
Elevation = 5023.41 feet (SLD 1929)

LINE TABLE

LINE	DIRECTION	DISTANCE
L1	N22°39'35"W	113.56'
L2	S22°39'35"E	81.15'
L3	N56°24'17"W	73.99'
L4	N35°28'50"W	26.18'
L5	N22°39'35"W	23.36'
L6	N22°39'35"W	21.92'
L7	S22°39'35"E	15.00'
L8	S22°39'35"E	15.00'
L9	S65°16'14"W	70.05'
L10	N43°07'12"E	53.22'
L11	N27°48'44"W	71.92'
L12	N81°11'51"W	23.21'
L13	N30°41'43"W	26.99'
L14	S17°32'36"E	52.75'
L15	N22°39'35"W	15.00'
L16	N67°20'25"E	85.00'
L17	S30°41'43"E	74.07'
L18	S67°20'25"W	97.00'
L19	N22°39'35"W	70.00'
L20	S30°41'43"E	11.77'
L21	N22°39'35"W	88.00'
L22	N67°20'25"E	17.00'
L23	N67°20'25"E	5.00'
L24	N22°39'35"W	11.50'
L25	S83°59'06"W	72.28'
L26	S27°48'44"E	50.00'
L27	N43°07'12"E	9.00'
L28	S65°16'14"W	50.03'
L29	S65°16'14"W	50.03'

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	100.00'	145.87'	89.37'	133.27'	N19°07'41"E	83°34'32"
C2	1178.00'	365.88'	184.43'	364.41'	N52°01'04"E	17°47'45"
C3	1022.00'	8.78'	4.39'	8.78'	N43°21'58"E	00°29'33"
C4	65.00'	26.18'	13.27'	26.00'	N11°07'21"W	23°04'26"
C5	85.00'	34.23'	17.35'	34.00'	N11°07'22"W	23°04'26"
C6	65.00'	55.50'	29.57'	53.82'	N01°47'58"E	48°55'03"
C7	100.00'	85.38'	45.49'	82.81'	N01°47'57"E	48°55'04"
C8	100.00'	60.49'	31.20'	59.57'	N43°35'13"E	34°29'28"
C9	215.00'	265.98'	153.02'	249.34'	N23°29'39"E	70°52'55"
C10	215.00'	22.88'	11.45'	22.87'	S08°53'52"E	06°05'53"
C11	215.00'	207.37'	112.55'	199.43'	S21°46'59"W	55°15'48"
C12	215.00'	59.36'	29.87'	59.17'	S41°30'17"W	15°49'10"
C13	215.00'	170.89'	90.25'	166.43'	S10°49'27"W	45°32'31"
C14	200.00'	131.37'	68.15'	129.02'	N37°35'15"W	37°38'06"
C15	200.00'	58.33'	29.37'	58.12'	N27°07'31"W	16°42'38"
C16	1178.00'	131.50'	65.82'	131.44'	N57°42'58"E	06°23'46"
C17	1178.00'	234.38'	117.58'	233.99'	N48°49'14"E	11°23'59"
C19	55.00'	20.19'	10.21'	20.08'	N12°08'28"W	21°02'13"
C20	85.00'	34.88'	17.64'	34.68'	N12°08'14"W	21°02'13"
C21	70.00'	86.17'	49.50'	80.83'	N12°36'17"E	70°31'43"
C22	30.00'	21.89'	11.46'	21.41'	N88°14'45"E	41°48'38"
C23	30.00'	21.89'	11.46'	21.41'	S46°26'06"W	41°48'38"
C24	172.00'	47.95'	24.13'	47.79'	N35°47'52"W	15°58'17"
C25	243.00'	31.43'	15.74'	31.41'	N41°29'36"E	07°24'43"
C26	180.00'	187.97'	103.58'	179.55'	N19°29'51"E	59°50'02"
C27	152.00'	204.87'	121.40'	189.71'	N10°48'04"E	77°13'36"
C28	1022.00'	42.48'	21.24'	42.48'	N44°48'07"E	02°22'53"

SHEET 3 OF 3

SURV-TEK, INC.
Consulting Surveyors
5643 Paradise Blvd. N.W. Albuquerque, New Mexico 87114
Phone: 505-897-3366
Fax: 505-897-3377

LEGEND

DESCRIPTION	NEW	EXISTING
CONTOURS	5094	
SPOT ELEVATIONS	5088	
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	36"SD
SANITARY SEWER M.H. & LINE	8"SAS	8"SAS
FIRE HYDRANT & WATER LINE	6"W	6"W
REDUCERS		
WATER VALVES	GATE BUTTERFLY	GATE BUTTERFLY
WATER CONNECTIONS		
WATER JOINTS	TEE CROSS BEND CAP	TEE CROSS BEND CAP
CONCRETE		
GAS LINE	G	G
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	CT	CT
POWER/TELEPHONE POLE	P.P.	P.P.
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION	TC 5088.28 FL 5087.78	
HYDROLOGICAL ANALYSIS PT.		

SEVEN BAR RANCH TRACT G-1A-2
GRADING AND DRAINAGE PLAN

GENERAL
TRACT G-1A-2, SEVEN BAR RANCH IS A 7.76 ACRE TRACT LOCATED AT THE SOUTHEAST CORNER OF ELLISON DRIVE AND COTTONWOOD DRIVE NW. THE SITE IS ZONED SU-1 FOR C2 USES (REFER TO EPC Z-96-92). TRACT G-1A-2 WAS CREATED BY SUBDIVISION OF TRACT G-1A INTO TWO PARCELS, G-1A-1 AND G-1A-2 (DRB 96-353). THE 6/27/96 CONCEPTUAL GRADING & DRAINAGE PLAN FOR TRACT G-1A IS STILL APPLICABLE TO TRACT G-1A-1. THIS NEW GRADING & DRAINAGE PLAN ESTABLISHES REVISED DRAINAGE GUIDELINES FOR TRACT G-1A-2.

METHOD
THE HYDROLOGY FOR THIS GRADING AND DRAINAGE PLAN IS BASED ON THE METHODS PRESENTED IN THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL VOLUME 2, DESIGN CRITERIA, SECTION 22.2 HYDROLOGY, JANUARY 1993, PROCEDURE FOR 40 ACRE AND SMALLER BASINS. THE HYDROLOGY FOR EXISTING (UNDEVELOPED) AND FOR PROPOSED (DEVELOPED) CONDITIONS IS INCLUDED IN THE HYDROLOGY SUMMARY TABLE.

EXISTING CONDITIONS
THE SITE IS CURRENTLY UNDEVELOPED. THE EXISTING SITE TERRAIN IS RELATIVELY MILD AND SLOPES GENERALLY FROM SOUTH TO NORTH AT ABOUT 1%. MOST OF THE SITE DRAINS TO THE TEMPORARY DETENTION POND AT THE NORTH END OF THE SITE CONSTRUCTED UNDER SAD 223. A SMALL PORTION OF THE SITE DRAINS EAST TO THE EXISTING WALMART STORE PARKING AREA. THE ONLY OFFSITE FLOWS ENTERING TRACT G-1A-2 ORIGINATE ON TRACT G-1A-1. THE FEMA FLOOD INSURANCE RATE MAP FOR THE CITY OF ALBUQUERQUE, NEW MEXICO AND INCORPORATED AREAS, PANEL 2 OF 50, (COMMUNITY PANEL NO. 350002 0002 C) INDICATES THAT A SMALL PORTION OF TRACT G-1A-2 IS WITHIN THE ZONE AO (DEPTH 1) FLOOD HAZARD AREA. THE FLOOD HAZARD AREA ENCROACHING ON THE SITE IS EXPECTED TO BE ELIMINATED BY A LETTER OF MAP REVISION TO BE PROCESSED IN CONNECTION WITH SAD 223.

PROPOSED CONDITIONS
IT IS PROPOSED THAT TRACT G-1A-2 BE SUBDIVIDED INTO FIVE TRACTS, G-1A-2A THROUGH G-1A-2E. IN ACCORDANCE WITH THE PREVIOUS CONCEPTUAL GRADING & DRAINAGE PLAN FOR TRACT G-1A, THE TOTAL ALLOWABLE RELEASE RATE FROM THE TRACT G-1A-2 AREA IS 5.74 CFS. THE PORTION OF THE PROPOSED PRIVATE ROADWAY THAT ENCROACHES ONTO TRACT G-2A (BASIN G-2A-1) WILL ALSO BE DEVELOPED WITHIN THE 5.74 CFS ALLOWABLE RELEASE RATE. AN ONSITE PRIVATE STORM DRAIN WILL BE CONSTRUCTED TO ACCEPT DRAINAGE FROM THE PRIVATE ROADWAYS AND EACH TRACT. THE STORM DRAIN WILL DISCHARGE TO THE EXISTING 18" DIAMETER STORM DRAIN STUB IN ELLISON DRIVE. AS INDICATED IN THE ALLOWABLE RELEASE RATES TABLE, BASINS 2A2, 2B2 AND G-2A-1 WILL FREE-DISCHARGE TO THE PRIVATE STORM DRAIN. THE REMAINING BASINS WILL CONTROL DISCHARGE TO THE STORM DRAIN AT RATES NOT TO EXCEED THOSE SHOWN IN THE TABLE. A PRIVATE DRAINAGE EASEMENT WILL BE GRANTED OVER THE PRIVATE ROADWAYS AND THE PRIVATE STORM DRAIN CORRIDORS.

INITIAL SITE DEVELOPMENT WILL INCLUDE CONSTRUCTION OF REQUIRED OFFSITE IMPROVEMENTS, ONSITE ROADWAYS AND DRAINAGE IMPROVEMENTS AND INTERIM RETENTION PONDS ON EACH TRACT. TRACT DEVELOPMENT WILL BE PHASED BASED ON DEMAND. INDIVIDUAL SITE-SPECIFIC GRADING AND DRAINAGE PLANS WILL BE PREPARED FOR EACH TRACT PRIOR TO TRACT DEVELOPMENT. ADDITIONAL INTERIM GRADING AND DRAINAGE IMPROVEMENTS MAY BE NEEDED DEPENDING ON REQUIREMENTS FOR INDIVIDUAL TRACT DEVELOPMENT.

UPON DEVELOPMENT OF TRACT G-1A-1, THE DRAINAGE FROM TRACT G-1A-1 WILL BE PONDED ONSITE AND CONTROL-DISCHARGED TO THE STORM INLETS IN COTTONWOOD DRIVE. IN THE INTERIM, THE EXISTING DRAINAGE WILL CONTINUE TO DRAIN TO TRACT G-1A-2C AND THE POND ON TRACT G-1A-2C SHALL HAVE SUFFICIENT ADDITIONAL VOLUME TO POND THE RUNOFF FROM BOTH TRACTS.

PROPOSED BUILDING FINISHED FLOOR ELEVATIONS SHALL BE AT LEAST ONE FOOT ABOVE THE FLOOD HAZARD ELEVATION.

EROSION CONTROL
ALL DISTURBED AREAS SHALL BE SURFACED, LANDSCAPED OR REVEGETATED UPON THE COMPLETION OF EACH PHASE OF SITE DEVELOPMENT. TEMPORARY SWALES, PONDS, EARTH BERMS, STRAW BALES AND SILT FENCING SHALL BE IMPLEMENTED AS NECESSARY DURING CONSTRUCTION TO PREVENT SEDIMENT EROSION FROM THE SITE.

GRADING & DRAINAGE PLAN
ALLOWABLE RELEASE RATES

BASIN	AREA (AC)	Q100 / 6HR PEAK FLOW RATE (CFS)	ALLOWABLE RELEASE RATE (CFS)	APPROXIMATE RETENTION POND VOLUME REQUIRED FOR INTERIM CONDITION (CU FT)	APPROXIMATE DETENTION POND VOLUME REQUIRED FOR DEVELOPED CONDITION (CU FT)
2A1	1.1740	4.95	0.44	3,154	7243
2A2	0.2141	0.89	0.89	0	0
2B1	1.0933	4.61	0.41	2,937	6,745
2B2	0.2743	1.15	1.15	0	0
2C	1.2868	5.43	0.49	6,994	7946*
2D	1.4075	5.94	0.53	3,781	8680
2E	2.3141	9.77	0.87	6,216	14275
G-2A-1	0.2279	0.96	0.96	0	0
TOTALS	7.9920	33.70	5.74		

* 11,000 CU.FT. IF TRACT G-1A-1 IS UNDEVELOPED

HYDROLOGY SUMMARY

BASIN	CONDITION	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	2 YEAR Q (cfs)	2 YEAR VOLUME (ac.ft.) 6 HR	24 HR	10 YEAR Q (cfs)	10 YEAR VOLUME (ac.ft.) 6 HR	24 HR	100 YEAR Q (cfs)	100 YEAR VOLUME (ac.ft.) 6 HR	24 HR	10 DAY
2A1	DEVELOPED	PROPOSED TRACT G-1A-2A SITE	1.1740	0.0%	0.0%	10.0%	90.0%	1.84	0.0646	0.0821	3.23	0.1135	0.1405	4.95	0.1831	0.2236	0.3128
2A2	DEVELOPED	PROPOSED TRACT G-1A-2A STREET	0.2141	0.0%	0.0%	14.0%	86.0%	0.33	0.0113	0.0144	0.58	0.0201	0.0248	0.89	0.0327	0.0398	0.0553
2B1	DEVELOPED	PROPOSED TRACT G-1A-2B SITE	1.0933	0.0%	0.0%	10.0%	90.0%	1.71	0.0601	0.0765	3.01	0.1057	0.1308	4.61	0.1706	0.2083	0.2911
2B2	DEVELOPED	PROPOSED TRACT G-1A-2B STREET	0.2743	0.0%	0.0%	12.0%	88.0%	0.42	0.0148	0.0188	0.75	0.0261	0.0323	1.15	0.0423	0.0516	0.0719
2C	DEVELOPED	PROPOSED TRACT G-1A-2C	1.2868	0.0%	0.0%	10.0%	90.0%	2.02	0.0708	0.0900	3.54	0.1244	0.1540	5.43	0.2007	0.2451	0.3428
2D	DEVELOPED	PROPOSED TRACT G-1A-2D	1.4075	0.0%	0.0%	10.0%	90.0%	2.21	0.0774	0.0985	3.87	0.1361	0.1684	5.94	0.2200	0.2681	0.3747
2E	DEVELOPED	PROPOSED TRACT G-1A-2E	2.3141	0.0%	0.0%	10.0%	90.0%	3.63	0.1273	0.1619	6.36	0.2237	0.2769	9.77	0.3610	0.4408	0.6161
G-2A-1	DEVELOPED	PORTION OF TRACT G-2A-1 STREET	0.2279	0.0%	0.0%	10.0%	90.0%	0.36	0.0125	0.0160	0.63	0.0220	0.0273	0.96	0.0356	0.0434	0.0607
TOTAL SITE	UNDEVELOPED	TOTAL BASINS 2A1-2E UNDEVELOPED	7.7641	90.0%	0.0%	0.0%	10.0%	1.31	0.0466	0.0595	3.92	0.1268	0.1467	12.41	0.3837	0.4134	0.4788
G-1A-1	UNDEVELOPED	OFFSITE INTERIM DRAINAGE-TRACT G-1A-1	1.3166	90.0%	0.0%	0.0%	10.0%	0.22	0.0079	0.0101	0.66	0.0215	0.0249	2.10	0.0651	0.0701	0.0812

INPUT DATA:

PRECIP. ZONE	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM 1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.20	2.66	3.12	3.67

RECORD DRAWING

I, R. P. Bohannan, hereby certify that this drawing has been revised in accordance with the survey information furnished by Surv-Tek, Inc. to reflect the construction as actually accomplished.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P. Bohannan 4/15/98
Date
N.M.P.E. No. 9814

LEGAL DISCRIPTION
TRACTS G-1A-2A THRU G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996

BENCHMARK
NMSHC MONUMENT "NM-448-N12"
ELEV. = 5023.41'
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

NO.	REVISIONS	BY	DATE

TRACTS G-1A-2A THRU G-1A-2E SEVEN BAR RANCH

GRADING & DRAINAGE PLAN

RONALD P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
1/31/97

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY: RPB	DRAWN BY: DEC	CHECKED BY: RPB	SHEET 1 OF 2
EAI JOB NO: 4350	DATE: 1-97		

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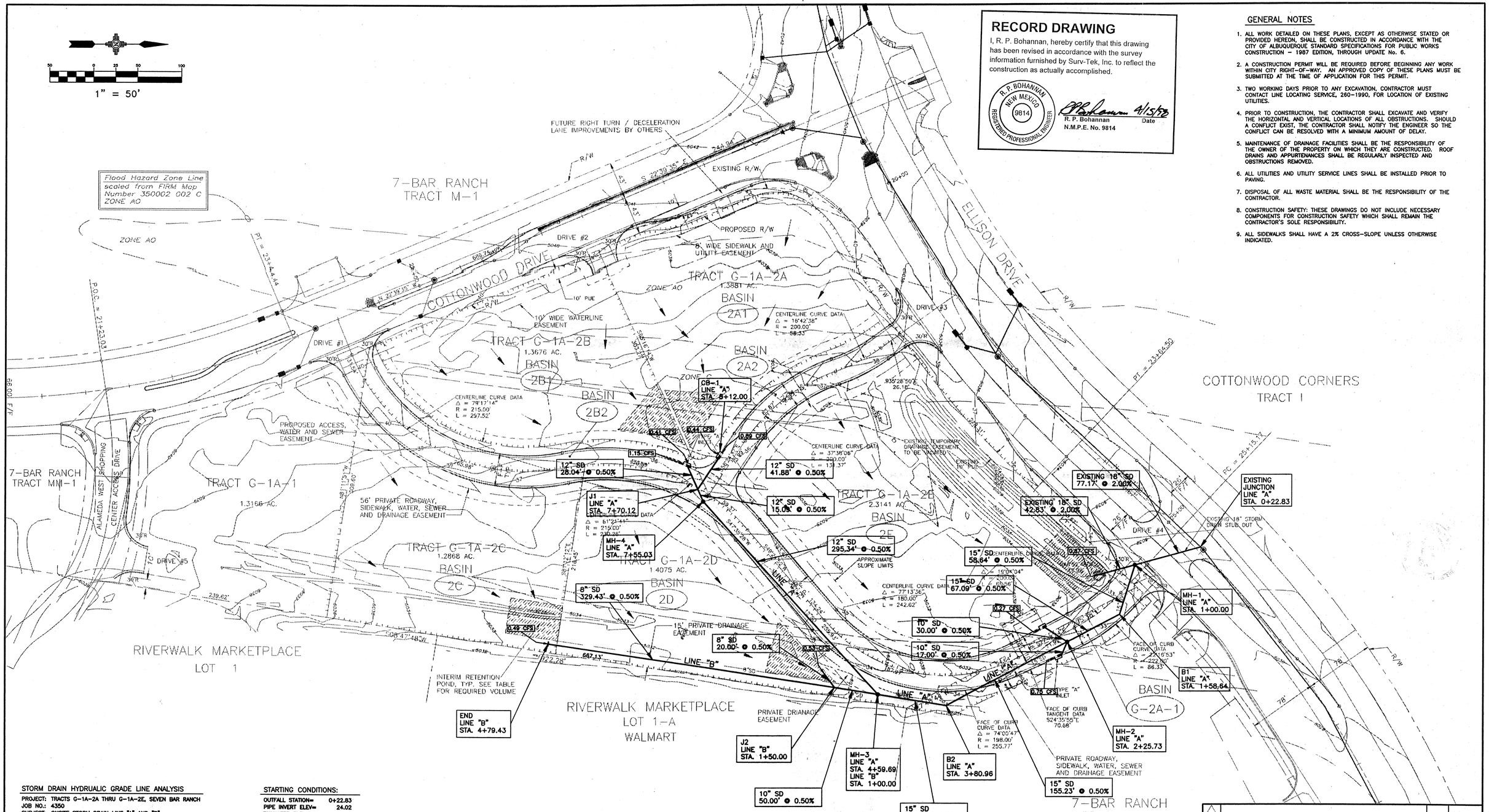

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R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P. Bohannan — Date 4/15/98

N.M.P.E. No. 9814

GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION – 1987 EDITION, THROUGH UPDATE No. 6.
2. A CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 260-1990, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. MAINTENANCE OF DRAINAGE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY ON WHICH THEY ARE CONSTRUCTED. ROOF DRAINS AND APPURTENANCES SHALL BE REGULARLY INSPECTED AND OBSTRUCTIONS REMOVED.
6. ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
7. DISPOSAL OF ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONSTRUCTION SAFETY: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE CONTRACTOR'S SOLE RESPONSIBILITY.
9. ALL SIDEWALKS SHALL HAVE A 2% CROSS-SLOPE UNLESS OTHERWISE INDICATED.

STORM DRAIN HYDRUALIC GRADE LINE ANALYSIS

PROJECT: TRACTS G-1A-2A THRU G-1A-2E, SEVEN BAR RANCH
JOB NO.: 4350
SUBJECT: ONSITE STORM DRAIN LINE "A" AND "B"

STARTING CONDITIONS:

OUTFALL STATION=	0+22.83
PIPE INVERT ELEV=	24.02
TAILWATER ELEVATION =	27.12
STARTING HGL ELEV=	27.12
STARTING GROUND ELEV=	32.19

PIPE DATA								STRUCTURE(S) @ UPSTREAM END PIPE SEGMENT					PIPE ELEVATION DATA				GROUND ELEV		PRESSURE FLOW HYDRAULICS					HEAD LOSS CALCULATIONS							EGL & HGL @ UPSTREAM END OF PIPE SEGMENT							HGL BELOW GROUND?	
PIPE SEGMENT FROM DOWN STREAM	TO UP STREAM	STA. OFFSET	MAIN FLOW (cfs)	PIPE DIA. (inches)	MANNING COEFF. ("n")	LAV LENGTH (feet)	PIPE SLOPE (fpf)	MANHOLE LOSS (1=yes)	BEND ANGLE (degees)	JUNCTION ANGLE (degees)	LATERAL DIAMETER (inches)	TRANSITION LOSS (1=yes)	PIPE INVERT DOWN STREAM (elev.)	PIPE INVERT UP STREAM (elev.)	PIPE SOFFIT DOWN STREAM (elev.)	PIPE SOFFIT UP STREAM (elev.)	DOWN STREAM (elev.)	UP STREAM (elev.)	FLOW AREA (sq.ft.)	FLOW VELOCITY (fps)	FLOW DEPTH (feet)	FRICTION SLOPE (fpf)	VELOCITY HEAD (feet)	FRICTION LOSS Hf	MANHOLE LOSS Hm	BEND LOSS Hb	JUNCTION LOSS Hj	TRANS LOSS EXPANSION Hte	TRANS LOSS CONTRACTION Htc	SUM OF LOSSES	STORM DRAIN STA.	EGL ELEV. BACK	EGL ELEV. AHEAD	HGL ELEV. BACK	HGL ELEV. AHEAD	DEFAULT HGL ELEV AHEAD	PIPE FULL?	FINISHED GROUND ELEV	CHECK
LINE "A"																																								
OUTFALL	MH1	STA 1+00.00	5.74	18	0.013	77.17	0.020	1	55	1	18	1	24.02	25.56	25.52	27.06	32.2	32.4	1.767	3.25	1.50	0.003	0.164	0.230	0.008	0.026	0.023	0.000	0.000	0.287	0+77.17	27.51	27.57	27.35	27.41	27.41	FULL	32.40	OK
MH1	B1	STA 1+58.64	4.87	15	0.013	58.64	0.005		45				25.81	26.11	27.06	27.36	32.4	33.1	1.227	3.97	1.25	0.006	0.245	0.333	0.000	0.035	0.000	0.000	0.000	0.368	1+35.81	27.99	28.02	27.74	27.76	27.76	FULL	33.10	OK
B1	MH2	STA 2+25.73	4.87	15	0.013	67.09	0.005	1		60	10		26.11	26.44	27.36	27.69	33.1	32.6	1.227	3.97	1.25	0.006	0.245	0.381	0.012	0.000	0.152	0.000	0.000	0.546	2+02.9	28.40	28.57	28.16	28.32	28.32	FULL	32.60	OK
MH2	B2	STA 3+80.96	3.91	15	0.013	155.23	0.005		37				26.44	27.22	27.69	28.47	32.6	33.5	1.227	3.19	1.25	0.004	0.158	0.569	0.000	0.020	0.000	0.000	0.000	0.589	3+58.13	29.05	29.07	28.89	28.91	28.91	FULL	33.50	OK
B2	MH3	STA 4+59.69	3.91	15	0.013	78.73	0.005	1	40	1	10	1	27.22	27.61	28.47	28.86	33.5	31.5	1.227	3.19	1.25	0.004	0.158	0.288	0.008	0.021	0.003	0.000	0.000	0.320	4+36.86	29.36	29.39	29.20	29.23	29.23	FULL	31.50	OK
MH3	MH4	STA 7+55.03	2.89	12	0.013	295.34	0.005	1	18				27.86	29.34	28.86	30.34	31.5	35.8	0.785	3.68	1.00	0.007	0.210	1.943	0.011	0.019	0.000	0.000	0.000	1.973	7+32.2	31.38	31.41	31.17	31.20	31.20	FULL	35.80	OK
MH4	J1	STA 7+70.12	2.89	12	0.013	15.09	0.005		60	1	12		29.34	29.41	30.34	30.41	35.8	35.9	0.785	3.68	1.00	0.007	0.210	0.099	0.000	0.034	0.209	0.000	0.000	0.343	7+47.29	31.51	31.76	31.30	31.55	31.55	FULL	35.90	OK
J1	CB1	STA 8+12.00	1.33	12	0.013	41.88	0.005						29.41	29.62	30.41	30.62	35.9	35.9	0.785	1.69	1.00	0.001	0.045	0.058	0.000	0.000	0.000	0.000	0.000	0.058	7+89.17	31.65	31.65	31.60	31.60	31.60	FULL	35.90	OK
CB1	DUMMY																																							
LINE "B"																																							
MH3	J2	STA 1+50.00	1.02	10	0.013	50.00	0.005			45	8	1	28.03	28.28	28.86	29.11	31.5	32.5	0.545	1.87	0.83	0.002	0.054	0.108	0.000	0.000	0.045	0.000	0.000	0.154	0+50.00	29.39	29.44	29.34	29.38	29.38	FULL	32.50	OK
J2	END	STA 4+79.43	0.49	8	0.013	329.43	0.005						28.45	30.09	29.11	30.76	32.5	32.7	0.349	1.40	0.67	0.002	0.031	0.542	0.000	0.000	0.000	0.000	0.000	0.542	3+79.43	29.96	29.98	29.93	29.93	30.76	(PARTIAL)	32.70	OK
END	DUMMY																																							

NO.	REVISIONS	BY	DATE

TRACTS G-1A-2A THRU G-1A-2E SEVEN BAR RANCH GRADING & DRAINAGE PLAN STORM DRAIN HYDRUALIC GRADE LINE ANALYSIS

RONALD P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER — 1/31/97

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET 2
RPB	DEC	RPB	OF 2
EA JOB NO: 4350	DATE: 1-97		

CITY PROJECT No. 566181 SHEET 5 OF 16

DWG: T:\PROJECTS\4350\DWG\REVISED\G1ASD
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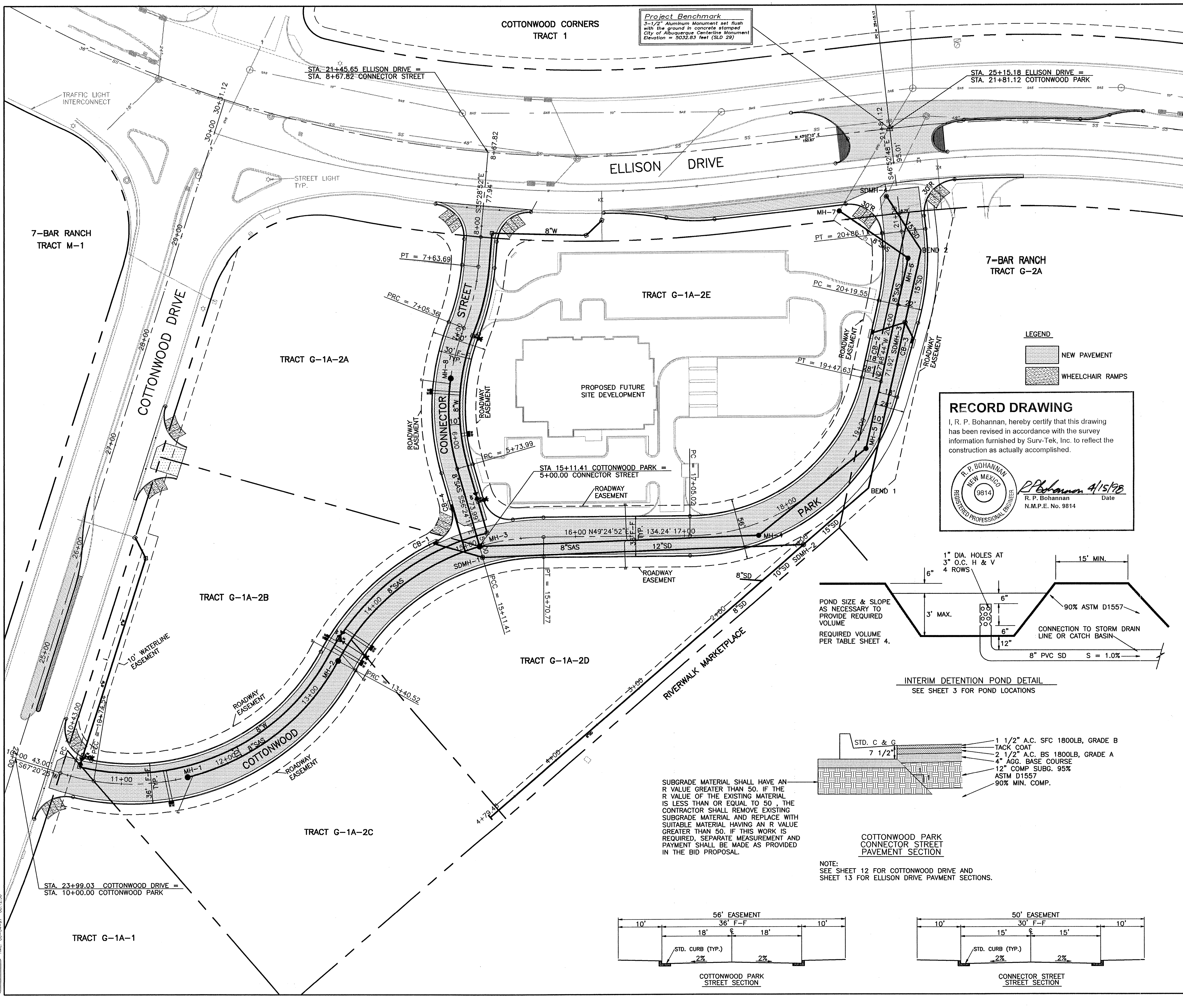

RECORD DRAWING

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R. P. Bohannan 4/15/98
N.M.P.E. No. 9814

SUBGRADE MATERIAL SHALL HAVE AN R VALUE GREATER THAN 50. IF THE R VALUE OF THE EXISTING MATERIAL IS LESS THAN OR EQUAL TO 50 , THE CONTRACTOR SHALL REMOVE EXISTING SUBGRADE MATERIAL AND REPLACE WITH SUITABLE MATERIAL HAVING AN R VALUE GREATER THAN 50. IF THIS WORK IS REQUIRED, SEPARATE MEASUREMENT AND PAYMENT SHALL BE MADE AS PROVIDED IN THE BID PROPOSAL.

NOTE:
SEE SHEET 12 FOR COTTONWOOD DRIVE AND SHEET 13 FOR ELLISON DRIVE PAVMENT SECTIONS.

CITY OF ALBUQUERQUE STANDARD DRAWINGS FOR STORM DRAIN AND PAVING TO BE USED FOR THIS PROJECT (ALL SHEETS).

STORM DRAIN
2102 MANHOLE TYPE "E".
2201 STORM INLET DOUBLE TYPE "A"

PAVING
2405 RESIDENTIAL STREET SECTION
2408 ART./COLL. ST. SECTION WITH MEDIAN
2415 CURB AND GUTTER
2420 CONRETE VALLEY GUTTER.
2430 SIDEWALKS (OFFSET TYPES).
2441 WHEEL CHAIR RAMPS (CASE II).
2465 PAVEMENT CUTS FOR UTILITIES.

NEW MEXICO UTILITIES STANDARD DRAWINGS FOR SANITARY SEWER AND WATER TO BE USED FOR THIS PROJECT (TYP. FOR ALL SHEETS).

WATER
EXHIBIT "A" 1" METER SET
EXHIBIT "C" METER BOX & LID
EXHIBIT "D" METER BOX LOCATION

CITY OF ALBUQUERQUE STANDARD DRAWINGS FOR SANITARY SEWER AND WATER TO BE USED FOR THIS PROJECT (TYP. FOR ALL SHEETS).

SEWER
2102 MANHOLE TYPE "E".
2465 PAVEMENT CUTS FOR UTILITIES.

WATER
2315 PIPE TRENCH TERMINOLOGY.
2320 CONCRETE BLOCK DESIGN.
2340 FIRE HYDRANT INSTALLATION.

WATER SERVICE LOCATIONS

LOT	STA. @ PL	INV. ELEV. @ PL
G-1A-1	11+42 11+44	5038.2 5038.2
G-1A-2C	13+48 13+50	5035.0 5035.0
G-1A-2B	13+52 13+54	5035.1 5035.1
G-1A-2D	13+66 13+68	5035.0 5035.0
G-1A-2E	6+03 6+05	5034.7 5034.7
G-1A-2A	6+41 6+43	5035.0 5035.0

EACH LOT SHALL HAVE A SEPARATE WATER SERVICE FOR IRRIGATION.

6" DIA. SEWER SERVICE LOCATIONS

LOT	STA. @ PL	INV. ELEV. @ PL
G-1A-1	11+47.48	5030.22
G-1A-2B	13+44.94	5028.94
G-1A-2C	13+37.21	5028.92
G-1A-2D	16+45.65	5026.94
G-1A-2E	16+45.65	5027.08
G-1A-2A	6+53.41	5028.76

AS BUILT INFORMATION
CONTRACTOR GERALD A. MARTIN
WORK STAKED BY SURV-TEK
INSPECTOR'S ACCEPTANCE BY EASTERLING & ASSOC.
FIELD VERIFICATION BY SURV-TEK
DRAWINGS CORRECTED BY EASTERLING & ASSOC. DATE 6-98
COA INSPECTOR: JERRY JOHNSON

MICRO-FILM INFORMATION
RECORDED BY
NO.

BENCH MARKS
New Mexico State Highway Commision Monument
"NM-448-N12"
New Mexico State Plane Coordinates, Central Zone (NAD 27) as published:
Y = 1528910.94
X = 381108.54
Elevation = 5023.41 (SLD 1929)
Ground to grid factor = 0.99967595
Delta Alpha = -00°13'46"

SURVEY INFORMATION
FIELD NOTES
NO. | BY | DATE

ENGINEER'S SEAL

REVISIONS
NO. | DATE | REMARKS
DESIGN

DESIGNED BY DEC\RPB DATE 4-97
DRAWN BY DEC DATE 4-97
CHECKED BY RPB DATE 4-97

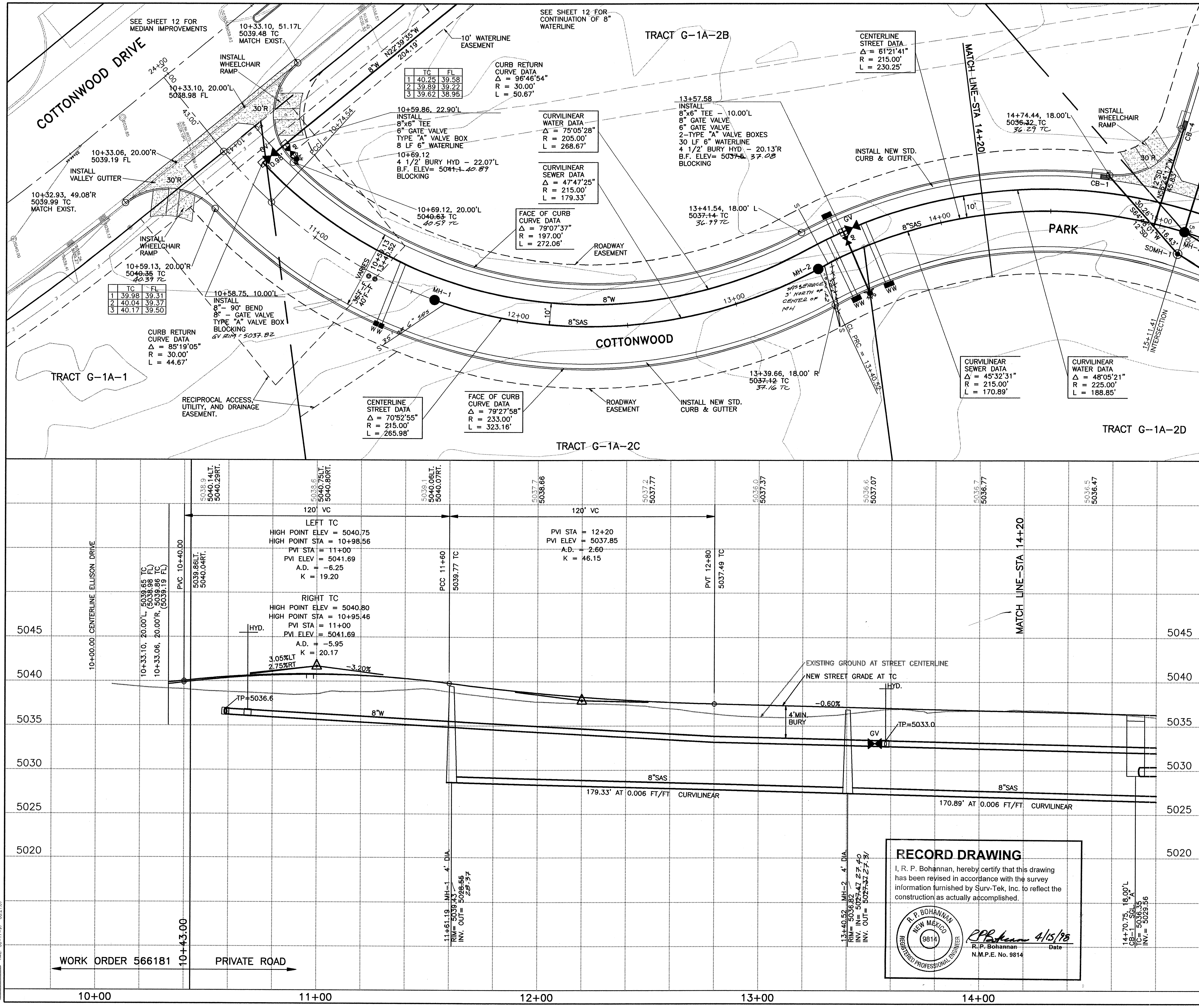
Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TRACTS G-1A-2A THRU G-1A-2E
STREET & UTILITY MASTER PLAN
STREET, WATER, SEWER & STORM DRAIN IMPROVEMENTS

DESIGN REVIEW COMMITTEE: APPROVED
CITY ENGINEER APPROVAL
LAST DESIGN UPDATE Mo./DAY/YR. Mo./DAY/YR.

CITY PROJECT No. 566181 | ZONE MAP NO. A-14 | SHEET 6 OF 16



RECORD DRAWING

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R. P. Bohannan N.M.P.E. No. 9814 — 4/15/98 Date

SURVEY INFORMATION — FIELD NOTES

NO.	BY	DATE

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Elevation = 5023.41 (SLD 1929)
Ground to grid factor = 0.99967595
Delta Alpha = - 00°13'46"

AS BUILT INFORMATION

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

MICRO-FILM INFORMATION

RECORDED BY — DATE
NO.

ENGINEER'S SEAL

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY DEC\RPB DATE 4-97
DRAWN BY DEC DATE 4-97
CHECKED BY RPB DATE 4-97

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

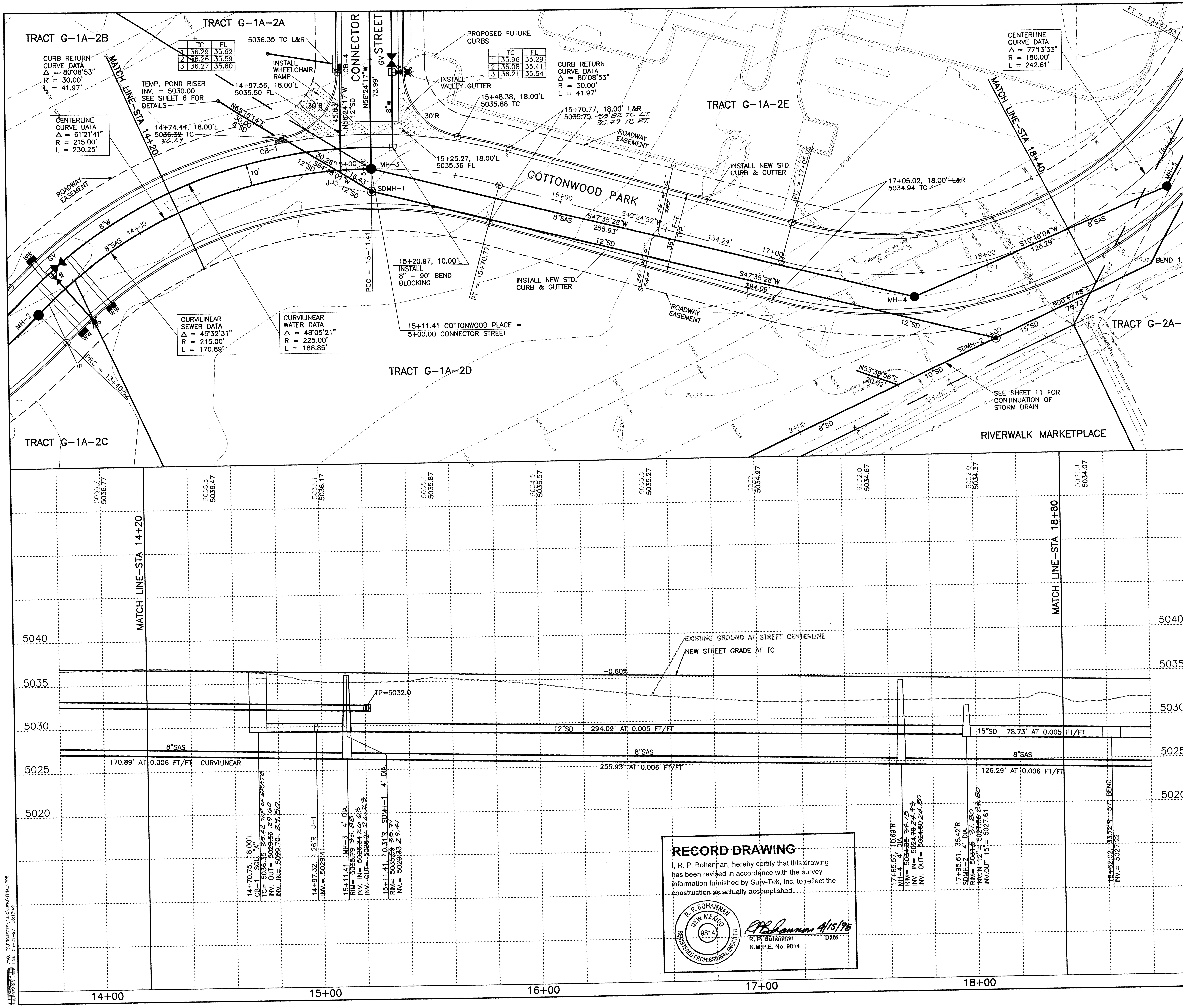
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TRACTS G-1A-2A THRU G-1A-2E
COTTONWOOD PARK
STREET, WATER, SEWER & STORM DRAIN PLAN & PROFILE

DESIGN REVIEW COMMITTEE — APPROVED — DESIGN REVIEW COMMITTEE | CITY ENGINEER APPROVAL | Mo./DAY/YR. | Mo./DAY/YR. | LAST DESIGN UPDATE

CITY PROJECT No. 566181 | ZONE MAP NO. A-14 | SHEET 7 OF 16

DWG: T:\PROJECTS\4350\DWG\FINAL\PP7 TIME: 06-17-97 08:21:07



RECORD DRAWING

I, R. P. Bohannan, hereby certify that this drawing has been revised in accordance with the survey information furnished by Surv-Tek, Inc. to reflect the construction as actually accomplished.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P. Bohannan 4/15/98
N.M.P.E. No. 9814 Date

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

New Mexico State Highway Commision Monument
"NM-448-N12"
New Mexico State Plane Coordinates, Central
Zone (NAD 27) as published:
Y = 1528910.94
X = 381108.54
Elevation = 5023.41 (SLD 1929)
Ground to grid factor = 0.99967595
Delta Alpha = - 00°13'46"

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

REVISIONS

NO.	DATE	REMARKS	BY

DESIGN

DESIGNED BY	DEC\RPB	DATE	4-97
DRAWN BY	DEC	DATE	4-97
CHECKED BY	RPB	DATE	4-97

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TRACTS G-1A-2A THRU G-1A-2E
COTTONWOOD PARK
STREET, WATER, SEWER & STORM DRAIN PLAN & PROFILE

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	Mo./DAY/YR.	Mo./DAY/YR.
APPROVED JUN 1 7 1997 DESIGN REVIEW COMMITTEE				

CITY PROJECT No.	ZONE MAP NO.	SHEET	OF
566181	A-14	8	16

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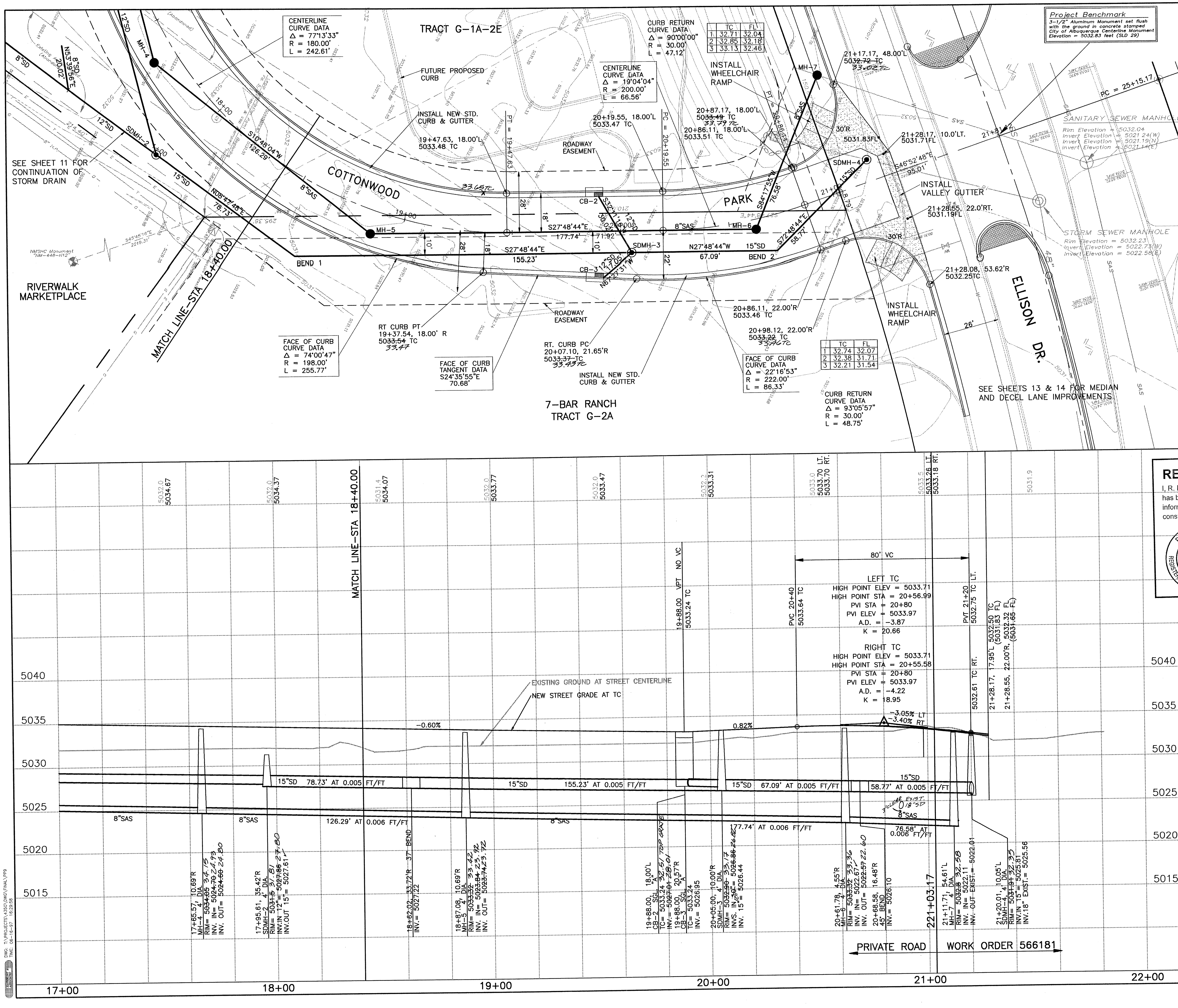

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R. P. Bohannan 4/15/98
N.M.P.E. No. 9814 Date

AS BUILT INFORMATION

MICRO-FILM INFORMATION

SURVEY INFORMATION — FIELD NOTES

BENCH MARKS: New Mexico State Highway Commision Monument "NM-448-N12" New Mexico State Plane Coordinates, Central Zone (NAD 27) as published: Y = 1528910.94 X = 381108.54 Elevation = 5023.41 (SLD 1929) Ground to grid factor = 0.99967595 Delta Alpha = -00°13'46"

ENGINEER'S SEAL

1" = 5' VERT.
1" = 20' HORZ.

REVISIONS — DESIGN
DESIGNED BY DEC/RPB DATE 4-97
DRAWN BY DEC DATE 4-97
CHECKED BY RPB DATE 4-97

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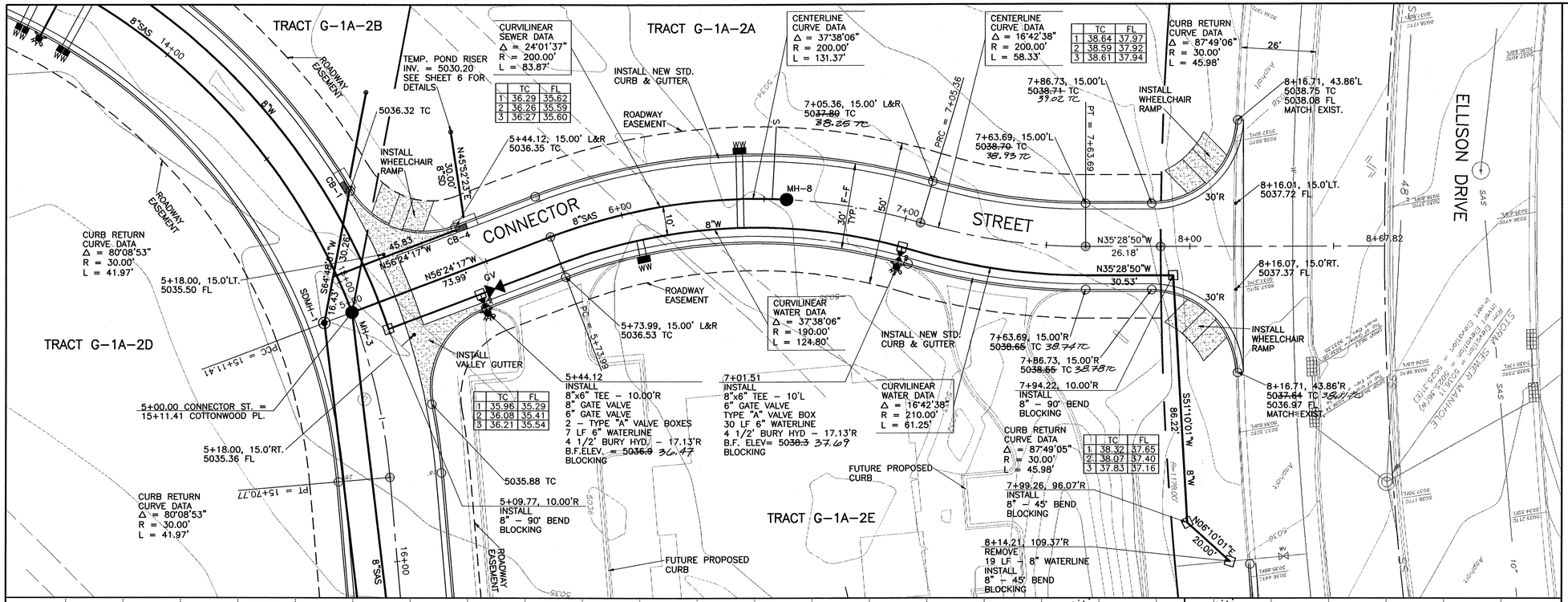
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TRACTS G-1A-2A THRU G-1A-2E
COTTONWOOD PARK
STREET, SEWER & STORM DRAIN PLAN & PROFILE

CITY PROJECT No.	ZONE MAP NO.	SHEET	OF
566181	A-14	9	16



RECORD DRAWING

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R.P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P. Bohannan — Date 4/15/98

N.M.P.E. No. 9814

1" = 5' VERT.

1" = 20' HORZ.

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TRACTS G-1A-2A THRU G-1A-2E
CONNECTOR STREET
STREET, WATER, SEWER & STORM DRAIN PLAN & PROFILE

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	Mo./DAY/YR.	Mo./DAY/YR.
APPROVED DESIGN REVIEW COMMITTEE				

CITY PROJECT No.	ZONE MAP NO.	SHEET	OF
566181	A-14	10	16

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS
New Mexico State Highway Commision Monument
"NM-448-N12"
New Mexico State Plane Coordinates, Central Zone (NAD 27) as published:
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AS BUILT INFORMATION

CONTRACTOR	
WORK PERFORMED BY	DATE
INSPECTOR'S DIARY MADE BY	DATE
FIELD VERIFICATION BY	DATE
MAP COMPILED BY	DATE
CORRECTED BY	DATE

MICRO-FILM INFORMATION

RECORDED BY	DATE
NO.	

ENGINEER'S SEAL
R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

REVISIONS

NO.	DATE	REMARKS	BY
		DESIGN	
DESIGNED BY	DEC\RPB	DATE	4-97
DRAWN BY	DEC	DATE	4-97
CHECKED BY	RPB	DATE	4-97

DWG: I:\PROJECTS\4350\DWG\FINAL\PP10
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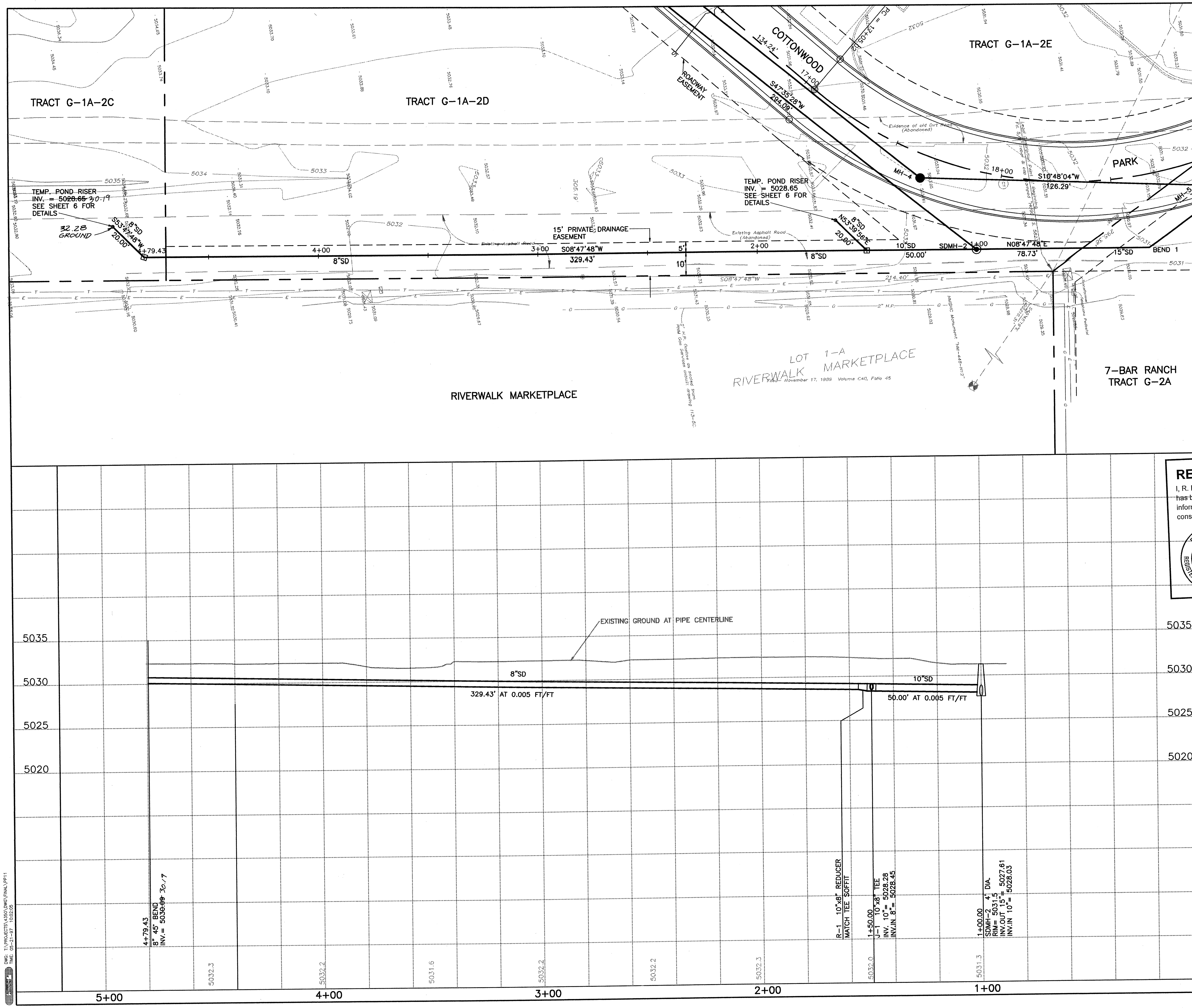

RECORD DRAWING

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R. P. BOHANNAN — NEW MEXICO — 9814 — REGISTERED PROFESSIONAL ENGINEER

R. P. Bohannan 4/15/98
N.M.P.E. No. 9814 Date

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

New Mexico State Highway Commision Monument "NM-448-N12"
New Mexico State Plane Coordinates, Central Zone (NAD 27) as published:
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SURVEY INFORMATION

FIELD NOTES		
NO.	BY	DATE

ENGINEER'S SEAL

R. P. BOHANNAN — NEW MEXICO — 9814 — REGISTERED PROFESSIONAL ENGINEER — 6/17/97

NO.	DATE	REVISIONS REMARKS	BY

DESIGNED BY DEC\RPB	DESIGN DATE	4-97
DRAWN BY DEC	DATE	4-97
CHECKED BY RPB	DATE	4-97

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TRACTS G-1A-2A THRU G-1A-2E
EAST PROPERTY LINE STORM DRAIN
STORM DRAIN PLAN & PROFILE

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	Mo./DAY/YR.	Mo./DAY/YR.
APPROVED — DESIGN REVIEW COMMITTEE		LAST DESIGN UPDATE	

CITY PROJECT No.	ZONE MAP NO.	SHEET	OF
566181	A-14	11	16

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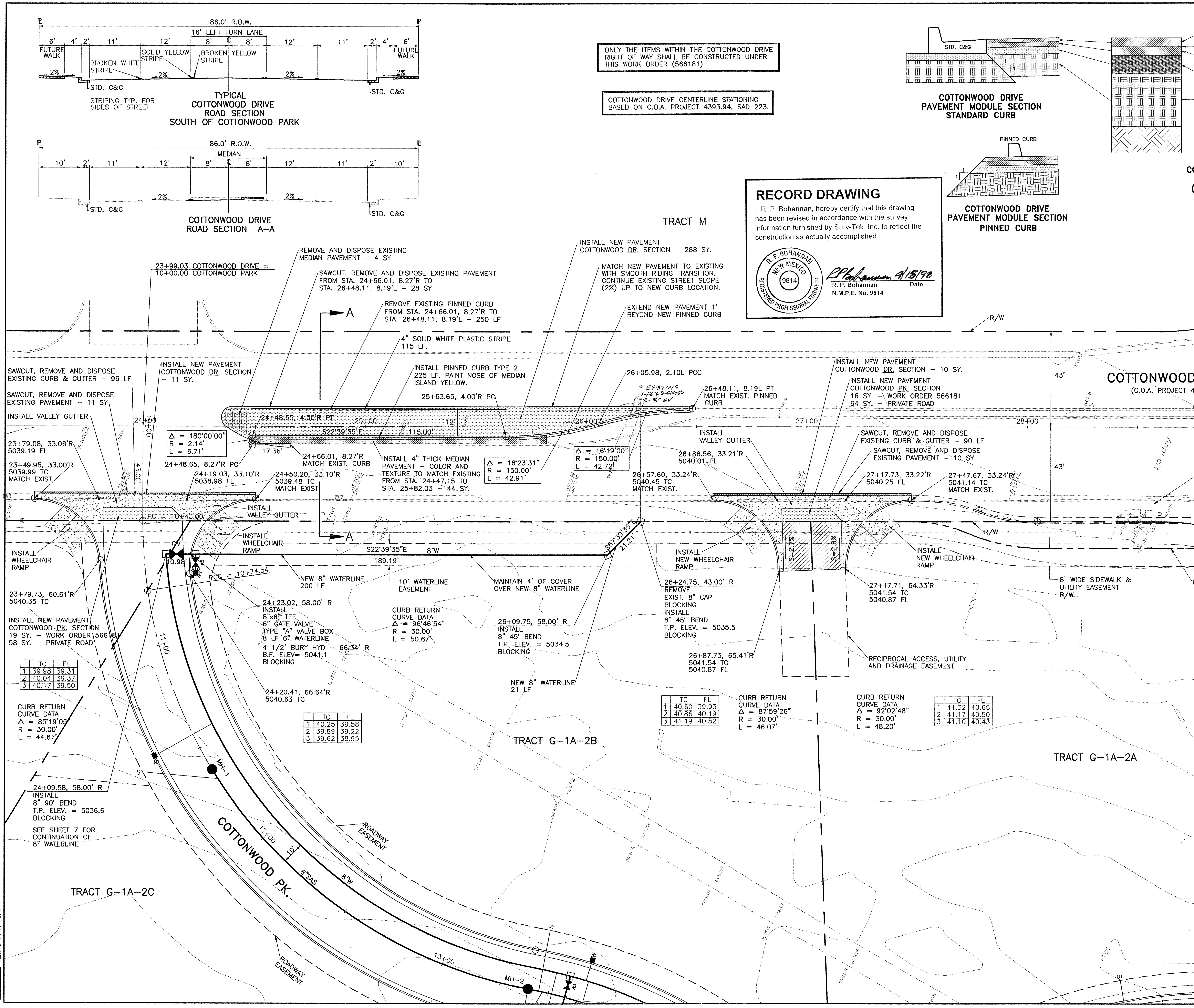

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1	39.98	39.31
2	40.04	39.37
3	40.17	39.50

	TC	FL
1	40.25	39.58
2	39.89	39.22
3	39.62	38.95

	TC	FL
1	40.60	39.93
2	40.86	40.19
3	41.19	40.52

	TC	FL
1	41.32	40.65
2	41.17	40.50
3	41.10	40.43

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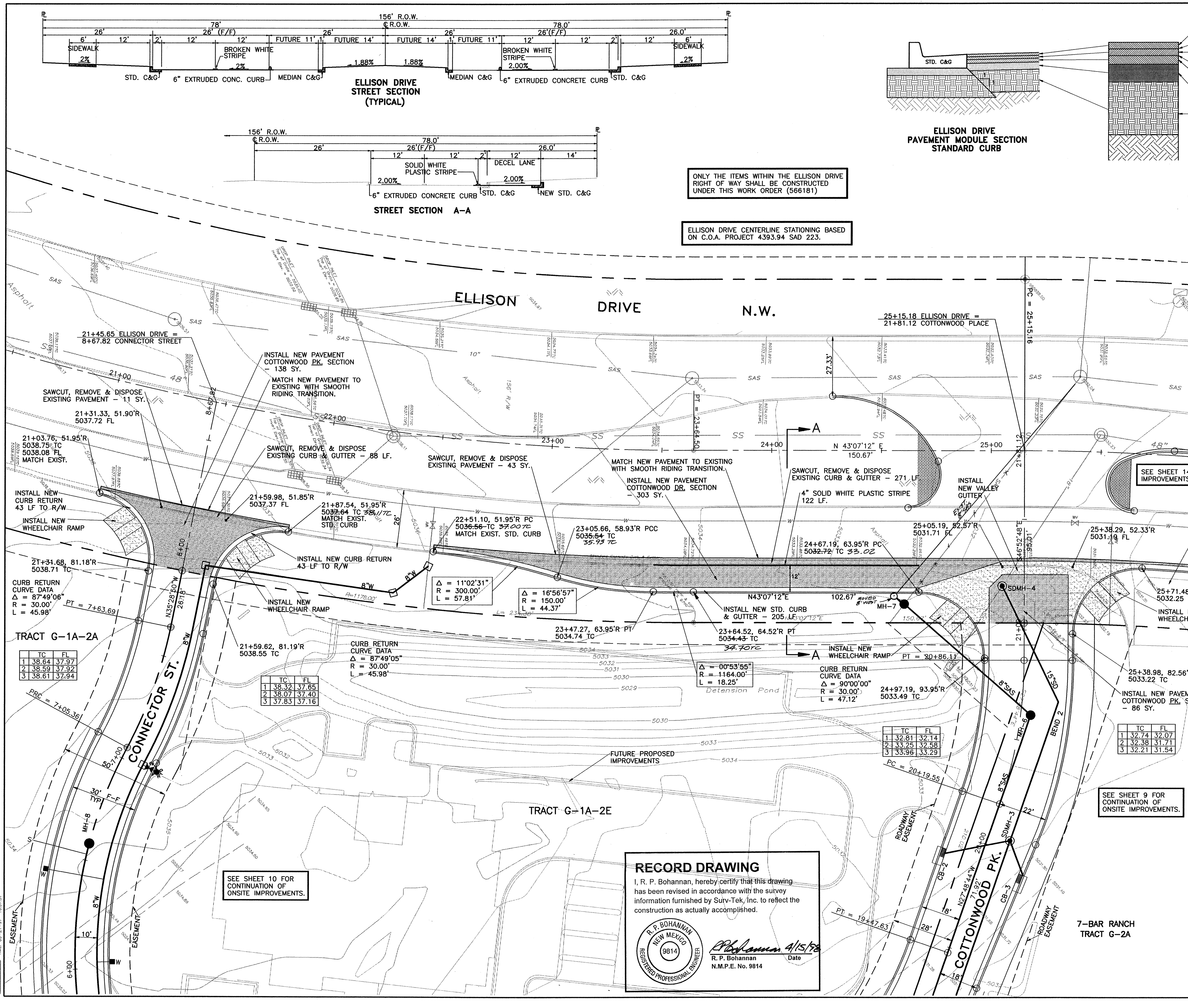
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TRACTS G–1A–2A THRU G–1A–2E
COTTONWOOD DRIVE MEDIAN, DRIVEWAYS & WATERLINE PLAN

CITY PROJECT No. 566181 | ZONE MAP NO. A–14 | SHEET 12 OF 16

DESIGNED BY DEC/RPB DATE 4–97
DRAWN BY DEC DATE 4–97
CHECKED BY RPB DATE 4–97

BENCH MARKS: New Mexico State Highway Commission Monument "NM–448–N12". New Mexico State Plane Coordinates, Central Zone (NAD 27) as published: Y = 1526910.94, X = 381108.54, Elevation = 5023.41 (SLD 1929), Ground to grid factor = 0.99967595, Delta Alpha = – 00°13'46"


156' R.O.W.
ELLISON DRIVE
STREET SECTION
(TYPICAL)
STD. C&G
6" EXTRUDED CONC. CURB
MEDIAN C&G
6" EXTRUDED CONCRETE CURB
SIDEWALK
BROKEN WHITE STRIPE
FUTURE 11'
FUTURE 14'
STREET SECTION A-A
SOLID WHITE PLASTIC STRIPE
DECEL LANE
NEW STD. C&G
ONLY THE ITEMS WITHIN THE ELLISON DRIVE RIGHT OF WAY SHALL BE CONSTRUCTED UNDER THIS WORK ORDER (566181)
ELLISON DRIVE CENTERLINE STATIONING BASED ON C.O.A. PROJECT 4393.94 SAD 223.
ELLISON DRIVE
PAVEMENT MODULE SECTION
STANDARD CURB
1 1/2" ASPHALT PAVEMENT SURFACE COURSE 1800 LB, GRADE B
TACK COAT
1 1/2" ASPHALT PAVEMENT BASE COURSE 1800 LB, GRADE A.
TACK COAT
2" ASPHALT PAVEMENT BASE COURSE 1800 LB, GRADE A.
4" AGGREGATE BASE COURSE
12" COMPACTED SUBGRADE 95% ASTM D1557
ELLISON DRIVE
PAVING SECTION
(MATCH EXISTING)
ELLISON DRIVE N.W.
21+45.65 ELLISON DRIVE = 8+67.82 CONNECTOR STREET
INSTALL NEW PAVEMENT COTTONWOOD PK. SECTION - 138 SY.
MATCH NEW PAVEMENT TO EXISTING WITH SMOOTH RIDING TRANSITION.
SAWCUT, REMOVE & DISPOSE EXISTING PAVEMENT - 11 SY.
SAWCUT, REMOVE & DISPOSE EXISTING CURB & GUTTER - 88 LF.
SAWCUT, REMOVE & DISPOSE EXISTING PAVEMENT - 43 SY.
MATCH NEW PAVEMENT TO EXISTING WITH SMOOTH RIDING TRANSITION.
INSTALL NEW PAVEMENT COTTONWOOD DR. SECTION - 303 SY.
SAWCUT, REMOVE & DISPOSE EXISTING CURB & GUTTER - 271 LF
4" SOLID WHITE PLASTIC STRIPE 122 LF.
INSTALL NEW VALLEY GUTTER
25+15.18 ELLISON DRIVE = 21+81.12 COTTONWOOD PLACE
SEE SHEET 14 FOR MEDIAN IMPROVEMENTS
REMOVE & DISPOSE EXISTING ASPHALT PAVEMENT - 99 SY.
INSTALL NEW STD. CURB & GUTTER - 63 LF
REMOVE & DISPOSE EXISTING VALLEY GUTTER AND RAMPS 166 SY.
INSTALL NEW CURB RETURN 43 LF TO R/W
INSTALL NEW WHEELCHAIR RAMP
INSTALL NEW CURB RETURN 43 LF TO R/W
INSTALL NEW STD. CURB & GUTTER - 205 LF
INSTALL NEW WHEELCHAIR RAMP
INSTALL NEW PAVEMENT COTTONWOOD PK. SECTION - 86 SY.
FUTURE PROPOSED IMPROVEMENTS
Detension Pond
TRACT G-1A-2A
TRACT G-1A-2E
CONNECTOR ST.
COTTONWOOD PK.
7-BAR RANCH TRACT G-2A
SEE SHEET 10 FOR CONTINUATION OF ONSITE IMPROVEMENTS.
SEE SHEET 9 FOR CONTINUATION OF ONSITE IMPROVEMENTS.
CURB RETURN CURVE DATA Δ = 87°49'06" R = 30.00' L = 45.98'
CURB RETURN CURVE DATA Δ = 87°49'05" R = 30.00' L = 45.98'
CURB RETURN CURVE DATA Δ = 90°00'00" R = 30.00' L = 47.12'
CURB RETURN CURVE DATA Δ = 93°05'57" R = 30.00' L = 48.75'
Δ = 11°02'31" R = 300.00' L = 57.81'
Δ = 16°56'57" R = 150.00' L = 44.37'
Δ = 00°53'55" R = 1164.00' L = 18.25'
TC FL
1 38.64 37.97
2 38.59 37.92
3 38.61 37.94
TC FL
1 38.32 37.65
2 38.07 37.40
3 37.83 37.16
TC FL
1 32.81 32.14
2 33.25 32.58
3 33.96 33.29
TC FL
1 32.74 32.07
2 32.38 31.71
3 32.21 31.54
1" = 20' HORZ.

Easterling & Associates, Inc.
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RECORD DRAWING

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R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
R. P. Bohannan 4/15/98
N.M.P.E. No. 9814 Date

AS BUILT INFORMATION: CONTRACTOR, WORK STAKED BY, INSPECTOR'S ACCEPTANCE BY, FIELD VERIFICATION BY, DRAWINGS CORRECTED BY — DATE

MICRO-FILM INFORMATION: RECORDED BY, NO. — DATE

BENCH MARKS
New Mexico State Highway Commission Monument "NM-448-N12"
New Mexico State Plane Coordinates, Central Zone (NAD 27) as published:
Y = 1528910.94
X = 381108.54
Elevation = 5023.41 (SLD 1929)
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Delta Alpha = - 00°13'46"

SURVEY INFORMATION: FIELD NOTES, NO., BY, DATE

ENGINEER'S SEAL: R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER — 6/7/97

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

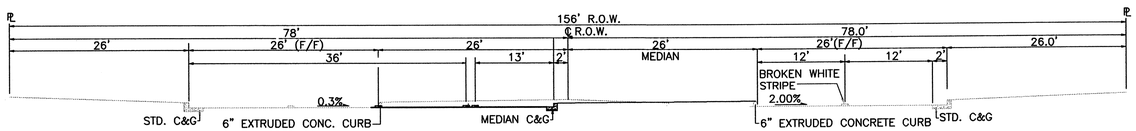
DESIGNED BY	DEC\RPB	DATE 4-97
DRAWN BY	DEC	DATE 4-97
CHECKED BY	RPB	DATE 4-97

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

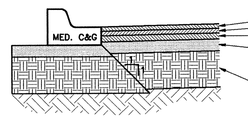
TRACTS G-1A-2A THRU G-1A-2E
ELLISON DRIVE
DRIVEWAYS & DECEL LANE PLAN

DESIGN REVIEW COMMITTEE | CITY ENGINEER APPROVAL | Mo./DAY/YR. | Mo./DAY/YR.
APPROVED — DESIGN REVIEW COMMITTEE
LAST DESIGN UPDATE

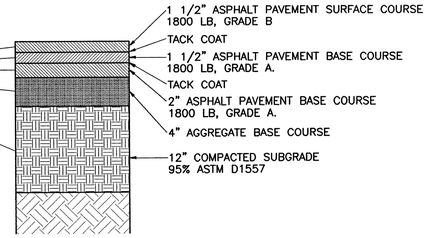
CITY PROJECT No.	ZONE MAP NO.	SHEET	OF
566181	A-14	13	16



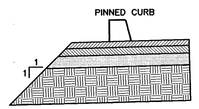
STREET SECTION A–A



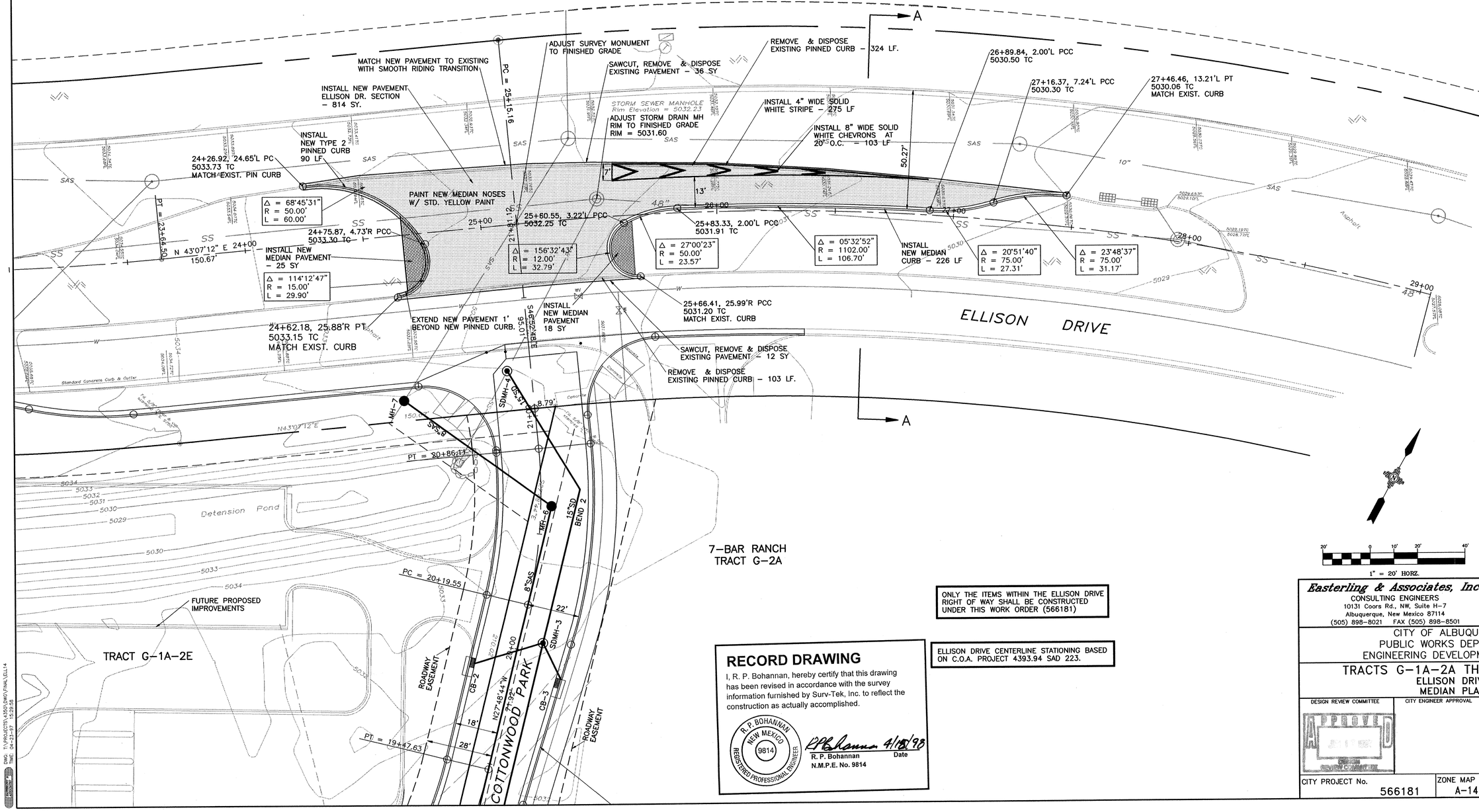
ELLISON DRIVE
PAVEMENT MODULE SECTION
MEDIAN CURB



ELLISON DRIVE
PAVING SECTION



COTTONWOOD DRIVE
PAVEMENT MODULE SECTION
PINNED CURB



ONLY THE ITEMS WITHIN THE ELLISON DRIVE RIGHT OF WAY SHALL BE CONSTRUCTED UNDER THIS WORK ORDER (566181)

ELLISON DRIVE CENTERLINE STATIONING BASED ON C.O.A. PROJECT 4393.94 SAD 223.

RECORD DRAWING

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R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P. Bohannan 4/15/98
R. P. Bohannan — Date
N.M.P.E. No. 9814

1" = 20' HORZ.

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TRACTS G–1A–2A THRU G–1A–2E
ELLISON DRIVE
MEDIAN PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	Mo./DAY/YR.	Mo./DAY/YR.
APPROVED				

CITY PROJECT No.	ZONE MAP NO.	SHEET	OF
566181	A–14	14	16

AS BUILT INFORMATION

BENCH MARKS
New Mexico State Highway Commision Monument
"NM–448–N12"
New Mexico State Plane Coordinates, Central Zone (NAD 27) as published:
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Delta Alpha = – 00°13'46"

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

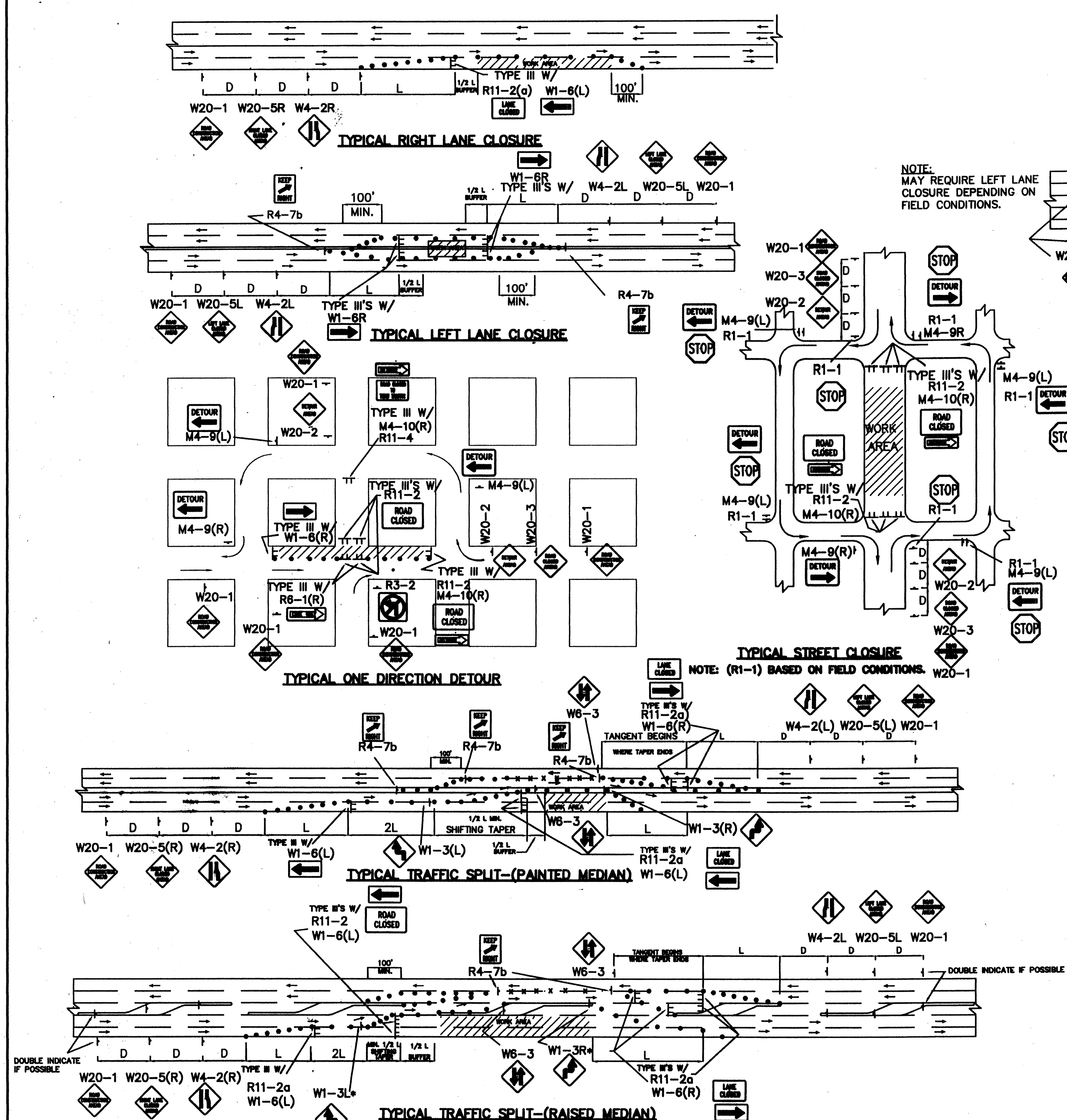
CONTRACTOR — DATE
WORK STAKED BY'S — DATE
ACCEPTANCE BY — DATE
VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE

MICRO–FILM INFORMATION
RECORDED BY — DATE
NO.

ENGINEER'S SEAL
R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
6/17/97

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	DATE 3–97
		DESIGNED BY DEC\RPB	
		DRAWN BY DEC	DATE 3–97
		CHECKED BY RPB	DATE 3–97

DWG. T:\PROJECTS\1450\DWG\FINAL\ELL14
TIME: 04–21–97 15:29:58



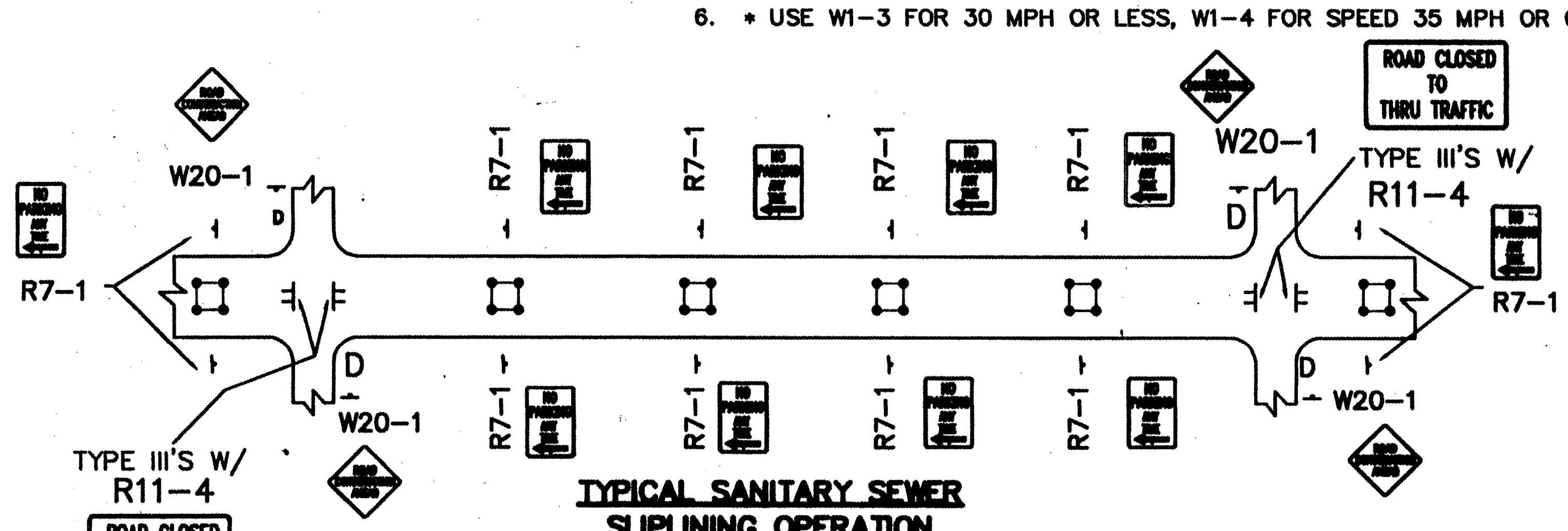
TRAFFIC SPLIT NOTES:

1. THE OFFSET DISTANCE MUST BE CALCULATED IN ALL SHIFTING TAPERS. THE OFFSET DISTANCES SHALL INCLUDE LANE WIDTHS PLUS MEDIAN WIDTHS.
2. 1/2 L IS MINIMUM DISTANCE FOR SHIFTING TAPERS.
3. REVERSE CURVES MAY BE IMPLEMENTED. ALL CURVE DATA SHALL BE CALCULATED.
4. MEDIAN REMOVAL SHALL BE REQUIRED IF 1/2 L OR REVERSE CURVE IS NOT SUFFICIENT. MEDIAN REMOVAL SHALL TAKE PLACE BEFORE SPLITS.
5. REDUCED SPEED MAY BE CONSIDERED.
6. • USE W1-3 FOR 30 MPH OR LESS, W1-4 FOR SPEED 35 MPH OR GREATER.

GENERAL NOTE:

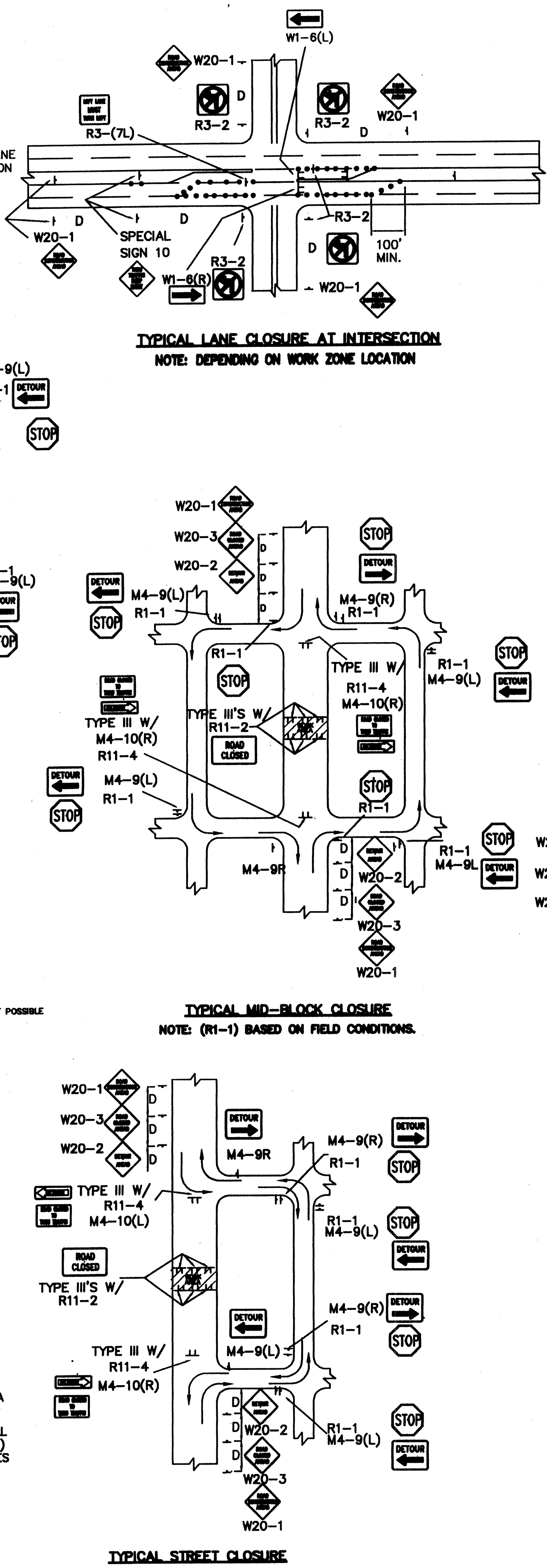
ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A ORANGE BACKGROUND.

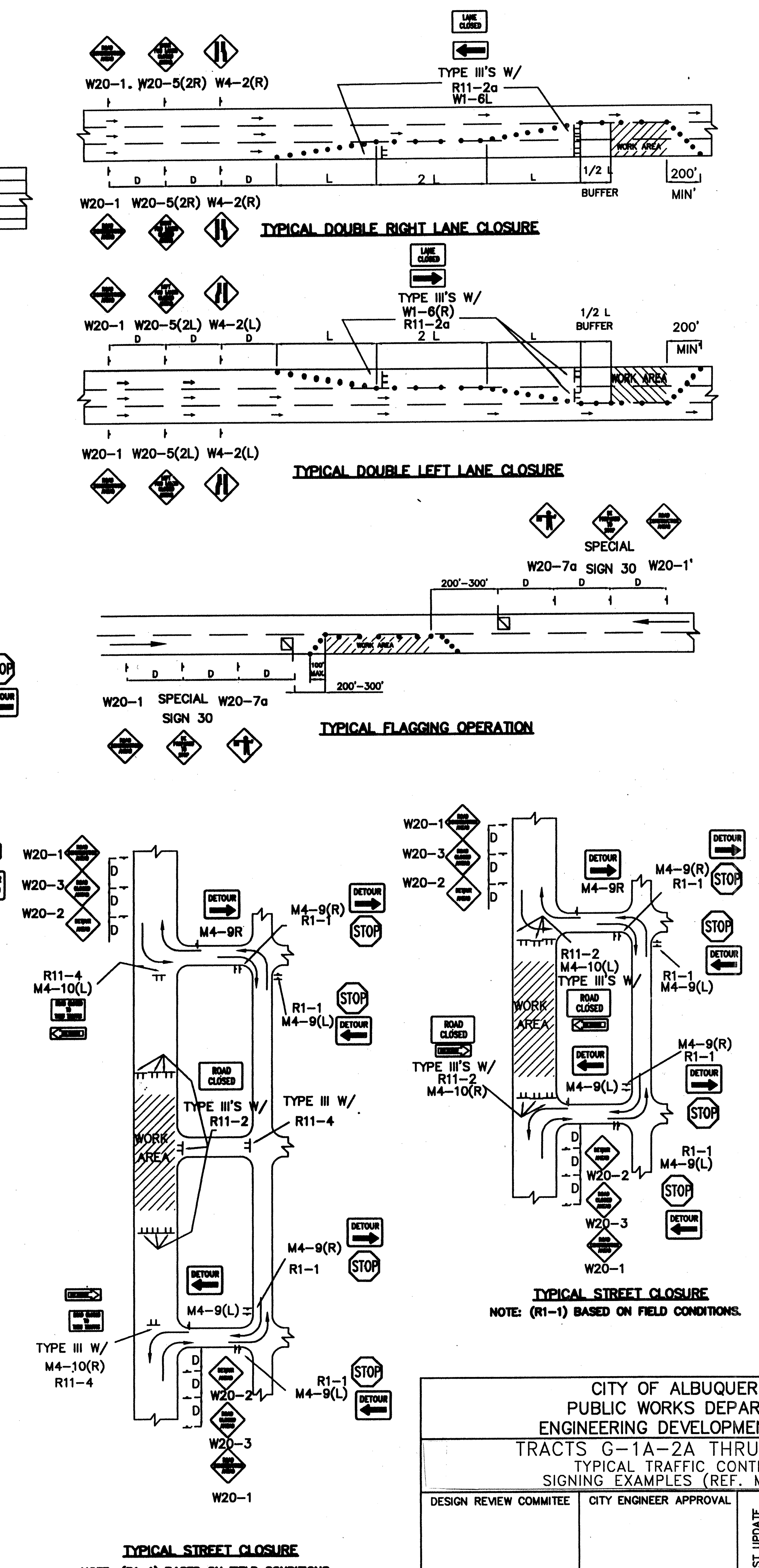
ALL ADVANCE WARNING SIGNS SHALL BE A MINIMUM OF FORTY EIGHT (48) INCHES BY FORTY EIGHT (48) INCHES IN SIZE AND SHALL HAVE ONE WARNING LIGHT.



TYPICAL SANITARY SEWER SLIPLINING OPERATION

- ALL PITS TO HAVE TYPE-A FLASHING LIGHTS.
- ALL PITS TO HAVE FLAGLINE.





AS BUILT INFORMATION — CONTRACTOR; WORK STARTED BY; INSPECTION ACCEPTANCE BY; FIELD VERIFICATION BY; DRAWINGS CORRECTED BY — DATE

MICRO-FILM INFORMATION — RECORDED BY; NO.; DATE

BENCH MARKS

SURVEY INFORMATION — FIELD NOTES — NO. | BY | DATE

ENGINEER'S SEAL

REMARKS — NO. | DATE | BY

REVISIONS — DESIGN — C.O.A. STANDARDS; DESIGNED BY; DRAWN BY; CHECKED BY — DATE

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TRACTS G-1A-2A THRU G-1A-2E
TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES (REF. M.U.T.C.D.)

DESIGN REVIEW COMMITEE	CITY ENGINEER APPROVAL	LAST UPDATE	MO./DAY/YR.	MO./DAY/YR.

PROJECT NO.	MAP NO.	SHEET OF
566181	A-14	15 16

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CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES

1. CONTRACTOR MUST OBTAIN FROM CONSTRUCTION COORDINATION AN EXCAVATION/BARRICADING PERMIT BEFORE ENGAGING IN ANY CONSTRUCTION, MAINTENANCE OR REPAIR WORK IN ANY OF THE CITY OF ALBUQUERQUE'S RIGHTS-OF-WAY. EMERGENCY WORK THAT WOULD PRESERVE LIFE OR PROPERTY IS EXCLUDED WITH THE UNDERSTANDING, THAT A PERMIT SHALL BE OBTAINED WITHIN 24 TO 48 HOURS.

2. CONTRACTOR SHALL AT THE TIME OF PERMIT REQUEST, SUBMIT FOR APPROVAL BY CONSTRUCTION COORDINATION, A TRAFFIC CONTROL PLAN DETAILING ALL EXISTING TOPOGRAPHY SUCH AS LANE WIDTHS, DRIVEWAYS, AND BUSINESS/RESIDENTIAL ACCESSES. THE TRAFFIC CONTROL PLAN SHALL INCLUDE ALL PHASES OF WORK AND SCHEDULES INVOLVED IN THE CONSTRUCTION PROJECT. ANY SEPARATE PHASES OF A CONSTRUCTION PROJECT SHALL BE GIVEN AN INDIVIDUAL PERMIT EACH. BLANKET PERMITS WILL NOT BE ISSUED.

3. THESE TYPICAL TRAFFIC CONTROL PLANS DO NOT REFLECT THE EXISTING TOPOGRAPHY SUCH AS DRIVEWAYS, LANE WIDTHS, AND BUSINESS/RESIDENTIAL ACCESSES. EVERY LOCATION THAT REQUIRES CONSTRUCTION TRAFFIC CONTROL SHALL HAVE A DETAILED TRAFFIC CONTROL PLAN SHOWING ALL EXISTING TOPOGRAPHY.

4. CONSTRUCTION SHALL NOT BEGIN UNLESS A TRAFFIC CONTROL PLAN HAS BEEN APPROVED AND VERIFIED BY CONSTRUCTION COORDINATION.

5. CONSTRUCTION COORDINATION SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY TRAFFIC CONTROL CHANGES NEEDED BY CONTRACTOR, THAT WERE NOT PREVIOUSLY APPROVED. THESE TRAFFIC CONTROL CHANGES SHALL BE REQUESTED IN WRITING ACCOMPANIED WITH A TRAFFIC CONTROL PLAN REFLECTING SUCH CHANGES.

6. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL COMPLY TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL, SERVICE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL DEVICES SHALL NOT BE REMOVED OR ALTERED IN ANY WAY WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION, PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

7. THE CONSTRUCTION TRAFFIC CONTROL INITIAL SET-UP SHALL BE BY AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED WORKSITE TRAFFIC SUPERVISOR. THE MAINTENANCE AND SERVICING SHALL ALSO BE DONE BY AN ATSSA CERTIFIED WORKSITE TRAFFIC SUPERVISOR OR EQUIVALENT.

8. CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND SERVICE ALL TRAFFIC CONTROL DEVICES 24 HOURS A DAY, 7 DAYS A WEEK THROUGHOUT LENGTH OF PROJECT. CONTRACTOR IS RESPONSIBLE THAT ALL TRAFFIC CONTROL DEVICES COMPLY WITH THE MUTCD, LATEST EDITION.

9. ALL ADVANCE WARNING SIGNS SHALL BE DOUBLE INDICATED WHENEVER THERE ARE MULTI-LANE TRAFFIC IN ANY ONE GIVEN DIRECTION AND THERE IS SUFFICIENT MEDIAN SPACE.

10. ALL BARRICADES IN ALL TAPERS AND TANGENTS SHALL BE PLACED APART, A DISTANCE MEASURED IN FEET, EQUAL TO THAT OF THE POSTED SPEED LIMIT. NO EXCEPTIONS UNLESS APPROVED BY CONSTRUCTION COORDINATION PER MUTCD SECTION 6A-4.

11. CONTRACTOR SHALL NOT BEGIN WORK BEFORE 7:00 A.M. OR END WORK AFTER 7:00 P.M. WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.

12. CONTRACTOR IS RESPONSIBLE TO PROVIDE CONSTRUCTION COORDINATION, A WEEKLY LOG OF DAILY INSPECTIONS OF BARRICADE AND MAINTENANCE SCHEDULES ON PROJECTS THAT ARE OVER ONE WEEK DURATION.

13. EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELLED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.

14. CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELIZING PEDESTRIAN TRAFFIC AROUND AND THROUGH THE CONSTRUCTION AREA.

15. CONTRACTOR IS RESPONSIBLE FOR OBLITERATION OF ANY CONFLICTING STRIPING AND RESPONSIBLE FOR ALL TEMPORARY STRIPING.

16. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES, BUSINESSES AND/OR RESIDENTS AT ALL TIMES.

17. CONTRACTOR SHALL PROVIDE ACCESS SIGNS FOR BUSINESSES LOCATED WITHIN THE CONSTRUCTION AREA UNDER THE SUPERVISION OF CONSTRUCTION COORDINATION. EACH ACCESS SIGN SHALL HAVE 5 INCH, WHITE OPAQUE LETTERING ON BLUE REFLECTORIZED BACKGROUND. ACCESS SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE BID AND NOT PART OF THE CONTRACT UNLESS OTHERWISE STATED. NO MORE THAN 3 BUSINESSES SHALL BE LISTED ON A ACCESS SIGN. SHOPPING CENTERS AND MALLS SHALL BE LISTED AS SUCH.

18. ALL ADVANCE WARNING SIGNS SHALL MEET THE MINIMUM REFLECTIVE INTENSITY REQUIREMENTS SET FORTH BY THE CITY OF ALBUQUERQUE. CONSTRUCTION COORDINATION SHALL DETERMINE ALL REQUIREMENTS AND APPROVE OR DISAPPROVE ANY ADVANCE WARNING SIGN PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

19. 24 HOURS PRIOR TO OCCUPYING OR CLOSING OF A RIGHT-OF-WAY, CONTRACTOR SHALL NOTIFY: POLICE, FIRE DEPARTMENT, SCHOOLS, HOSPITALS, TRANSIT AUTHORITY, BUSINESSES AND/OR RESIDENTS THAT WILL BE AFFECTED BY THE CONSTRUCTION.

20. ANY FIELD ADJUSTMENTS SHALL BE APPROVED BY CONSTRUCTION COORDINATION.

21. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS.

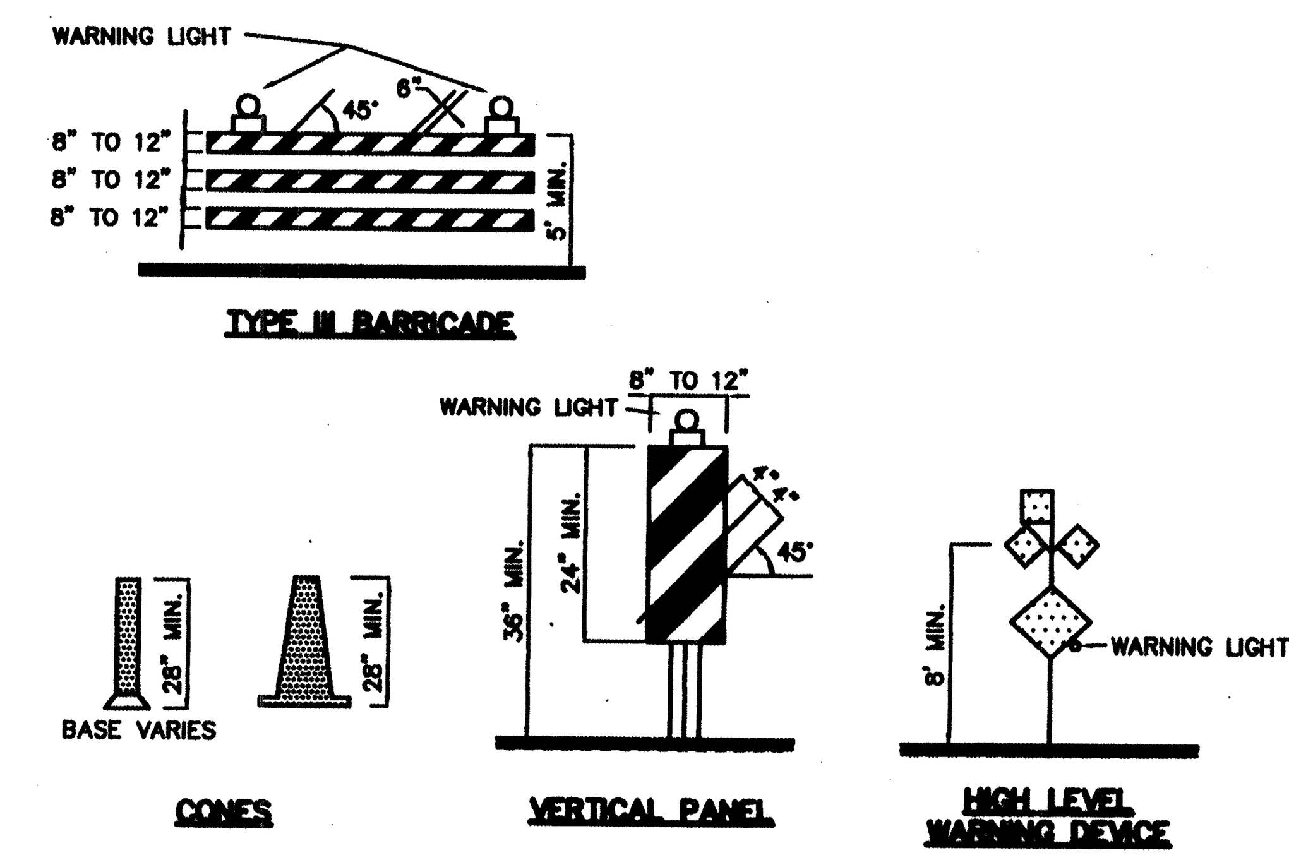
22. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE FOLLOWING:
1. STANDARDS AND REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
2. THE CITY OF ALBUQUERQUE TRAFFIC CODE, LATEST EDITION.
3. SECTION 19 OF THE CITY OF ALBUQUERQUE'S STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION, AS WELL AS OTHER SECTIONS.

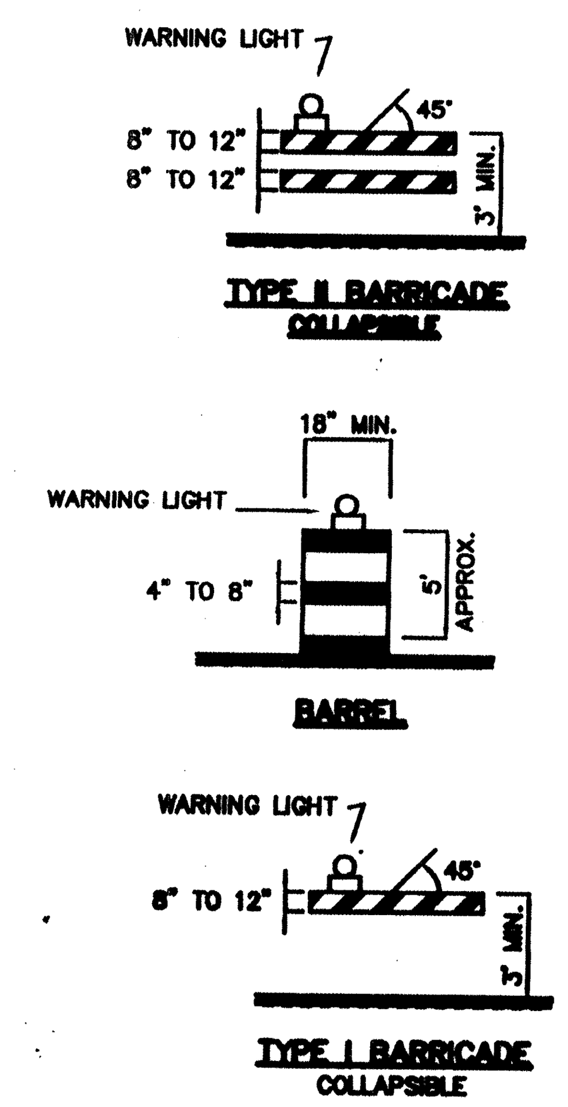
23. FAILURE TO COMPLY WITH ANY OF THE ABOVE MENTIONED, WILL BE ADEQUATE CAUSE TO CEASE ALL WORK ON ANY CONSTRUCTION PROJECT. WORK WILL NOT RESUME UNTIL ALL REQUIREMENTS ARE ADDRESSED AND APPROVED BY CONSTRUCTION COORDINATION.

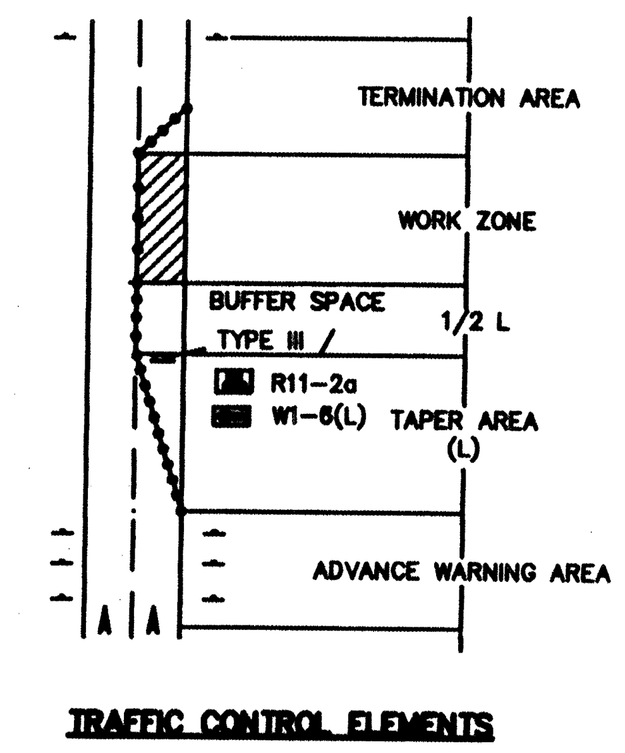
24. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN NEW-CLEAN CONDITION. WASHING OF EQUIPMENT IS INCIDENTAL TO IT'S PLACEMENT AND MAINTENANCE.

25. TRAFFIC CONTROL STANDARDS APPLY ONLY WHERE THE CONSTRUCTION TRAFFIC CONTROL PLANS ARE NOT SPECIFIC.

26. ADVANCE WARNING SIGNS SHALL BE 36"x36" WITH SUPER ENGINEERING GRADE SHEETING OR BETTER.







LEGEND

- WORK AREA
- BARRICADE – TYPE I, TYPE II, OR BARREL
- BARRICADE – TYPE III
- X — VERTICAL PANEL
- WARNING SIGN
- D — DISTANCE BETWEEN SIGNS – A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF TEN TIMES THE SPEED LIMIT OF THE STREET
- FLAGMAN POSITION
- S — SPACING BETWEEN BARRICADES– A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF THE SPEED LIMIT OF THE STREET
- L — TAPER LENGTH – SEE CHART BELOW

THE TANGENT LENGTH IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET.

TAPER REQUIREMENTS

SPEED LIMIT (MPH)	TAPER LENGTH (L) (FEET)			MINIMUM NUMBER OF DEVICES FOR TAPER	MAXIMUM DEVICE SPACING IN FEET	
	10' LANE	11' LANE	12' LANE		ALONG TAPER	AFTER TAPER
20	70	75	80	5	20	20
25	105	115	125	6	25	25
30	150	165	180	7	30	30
35	205	225	245	8	35	35
40	270	295	320	9	40	40
45	450	495	540	13	45	45
50	500	550	600	13	50	50
55	550	605	660	13	55	55

RECOMMENDED SIGN SPACING(D) FOR ADVANCE WARNING SIGN SERIES

SPEED MILES PER HOUR	MINIMUM DISTANCE IN FEET BETWEEN SIGNS	MINIMUM DISTANCE IN FEET FROM LAST SIGN TO TAPER
0–20	10 X SPEED LIMIT	10 X SPEED LIMIT
25–30	10 X SPEED LIMIT	10 X SPEED LIMIT
30–35	10 X SPEED LIMIT	10 X SPEED LIMIT
40–45	10 X SPEED LIMIT	10 X SPEED LIMIT
50–60	10 X SPEED LIMIT	10 X SPEED LIMIT

TAPER CRITERIA

TYPE OF TAPER	TAPER LENGTH
UPSTREAM TAPER:	
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/2 L MINIMUM
TWO-WAY TRAFFIC TAPER	100 FEET MAXIMUM
DOWNSTREAM TAPERS	100 FEET PER LANE

TAPER LENGTH COMPUTATION

SPEED LIMIT

40 MPH OR LESS $L = \frac{WS^2}{60}$

45 MPH OR GREATER $L = W \times S$

L = TAPER LENGTH
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED OR OFF-PEAK 85-PERCENTILE SPEED IN MPH

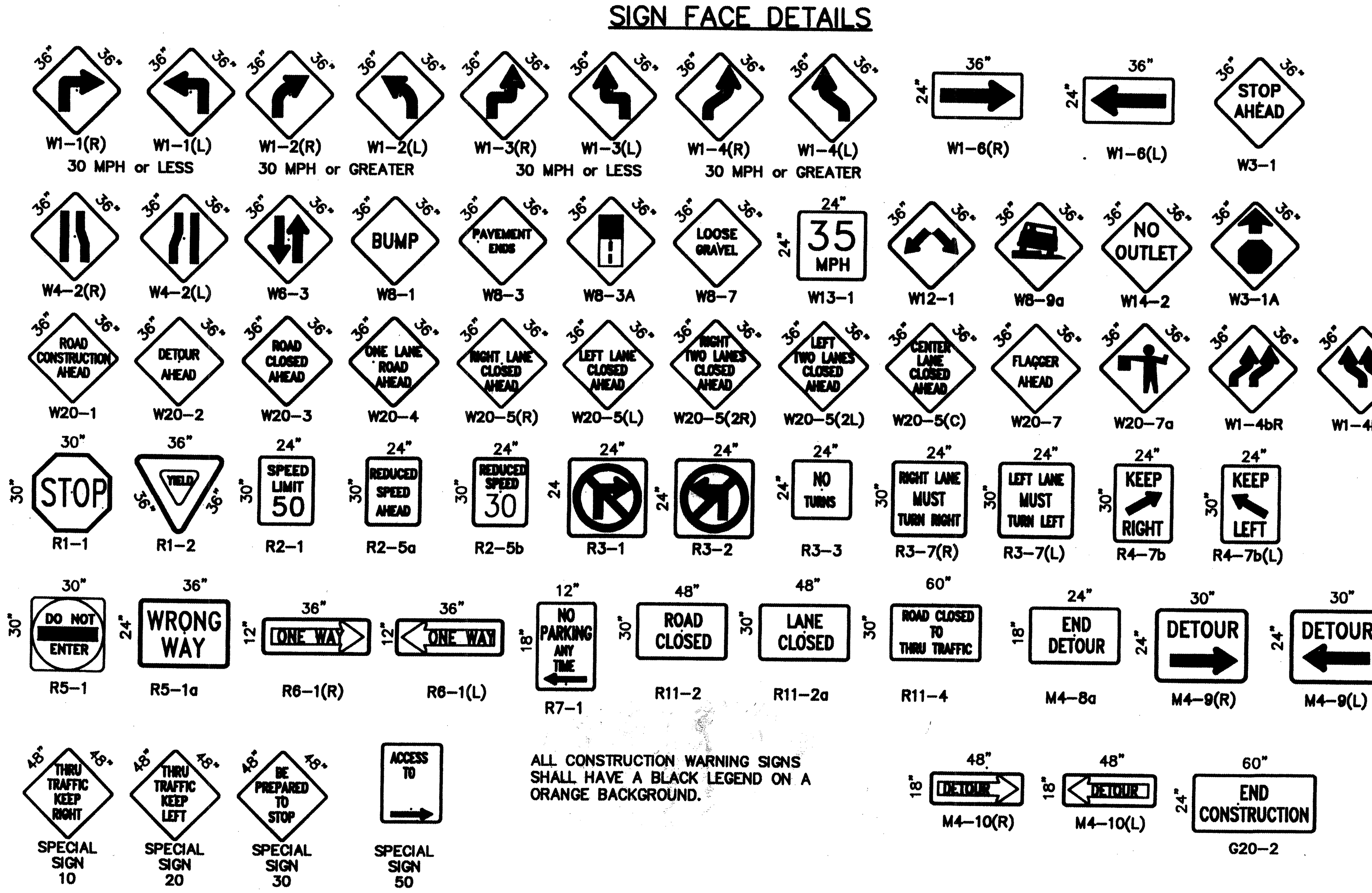
RECORD DRAWING

I, R. P. Bohannan, hereby certify that this drawing has been revised in accordance with the survey information furnished by Surv-Tek, Inc. to reflect the construction as actually accomplished.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P. Bohannan Date
N.M.P.E. No. 9814

SIGN FACE DETAILS



ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A ORANGE BACKGROUND.

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

ENGINEER'S SEAL

REVISIONS — NO. — DATE — REMARKS — BY

DESIGN — DATE; DESIGNED BY; DRAWN BY C.O.A. STANDARDS; CHECKED BY — DATE

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TRACTS G-1A-2A THRU G-1A-2E
SIGNING & CONSTRUCTION TRAFFIC CONTROL STANDARDS

DESIGN REVIEW COMMITEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
		LAST UPDATE	

PROJECT NO. 566181 MAP NO. A-14 SHEET 16 OF 16

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