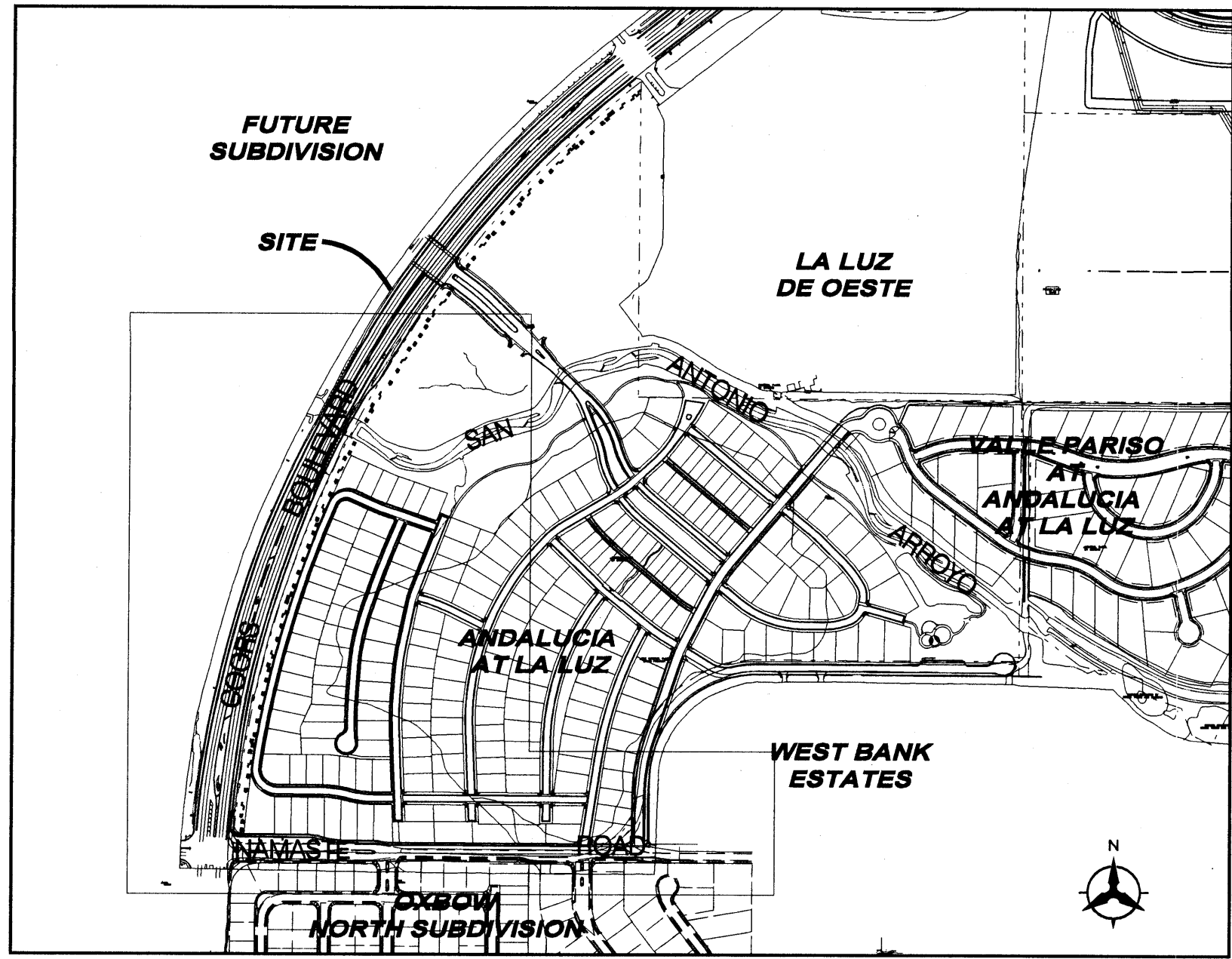




LOCATION MAP

ZONE ATLAS MAP NO. F-11-Z
NOT TO SCALE

PROPOSED
CURB & GUTTER

TYPE 'A' DW INLET

COORS BOULEVARD
FUTURE ENTRANCE

36" SD

CONCRETE BOX CULVERT

EX SEVILLA AVE

EX LA LUZ

DRAINAGE MANAGEMENT PLAN

I. PURPOSE

The purpose of this submittal is to present the drainage management plan for Coors Boulevard Improvements. The project will include widening the existing eastern half of Coors Boulevard along Andalusia at La Luz to 50' face-to-face and adding turn lanes to access Andalusia at La Luz and a future subdivision to the west.

II. SITE LOCATION AND CHARACTERISTICS

The portion of Coors Boulevard to be improved is located west of Andalusia at La Luz between Namaste Road and La Luz

III. EXISTING HYDRAULIC AND HYDROLOGIC CONDITIONS

In the existing conditions, Coors Boulevard is cross sloped to drain east to an asphalt swale and rundown into the San Antonio Arroyo.

IV. PROPOSED HYDRAULIC AND HYDROLOGIC CONDITIONS

In the proposed improvements, the asphalt swale will be removed along the east side of Coors Blvd. and standard curb and gutter will be installed. In addition a storm drain system will be added just north of the San Antonio Arroyo to collect the flows as result of the roadway improvements. The roadway will be widened to a minimum 50' face-to-face width and an 8' trail will be added along the east side. The existing concrete box culvert will be extended to accommodate the proposed roadway widening and trail. Runoff generated by the site (11.64ac, $Q_{100}=48.1$ cfs) will still flow east across the road and then to a low point north of the San Antonio Arroyo, where it will be picked up by two Type 'A' double-gate, double-wing inlets in a sump condition. The inlets will tie to a 36" storm drain which will discharge into the San Antonio Arroyo, see Table C for Storm Drain Analysis. Street capacities have been analyzed in accordance to and are in compliance with the DPM requirements that the flow depths of the 10-yr storm may not exceed 0.5 feet and one twelve foot driving lane must remain free of flowing or standing water ($d=0.85$ ft.), see Table B for more information. This design is based on the assumption that the future subdivision to the west will not drain to Coors Boulevard.

V. CONCLUSION

This plan provides hydrologic and hydraulic considerations of the improvements of Coors Boulevard. These flows can be safely conveyed by the improvements proposed in this plan to the existing San Antonio Arroyo,

Table A - Proposed Basin Data

BASIN	AREA	UNITS	% LAND TREATMENT				DISCHARGE (CFS)	
I.D.	(AC)	#	A	B	C	D ²	10 YR	100YR
HYDROLOGICAL VOLUMETRIC & DISCHARGE DATA (DEVELOPED)								
ONSITE								
Coors-North	11.64	0	0.0%	10.0%	0.0%	90.0%	31.1	48.14
TOTAL	11.64	0.00					31.1	48.1

Table B - Street Capacities

Roadway Grade (%)	Roadway Cross- slope (%)	Q (100 YR) in roadway (cfs)	Q (10 YR) in roadway (cfs)	Curb Type	Depth of water in roadway-10yr (ft.)	Velocity of storm water in roadway (ft/s)	$V^{2/2*}$ g	EGL	Comments ¹
4.89	2.00	16.54	10.70	STD	0.37	5.32	0.44	0.81	OK
2.03	2.00	30.40	19.66	STD	0.50	4.41	0.30	0.81	OK
-1.43	2.00	17.70	11.45	STD	0.46	3.42	0.18	0.64	OK
-1.60	2.00	6.75	4.37	STD	0.34	2.84	0.13	0.47	OK

1). Designed in accordance to DPM Chpt. 22 Sec. 3-E

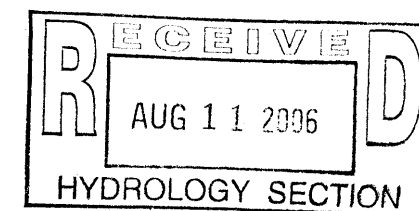
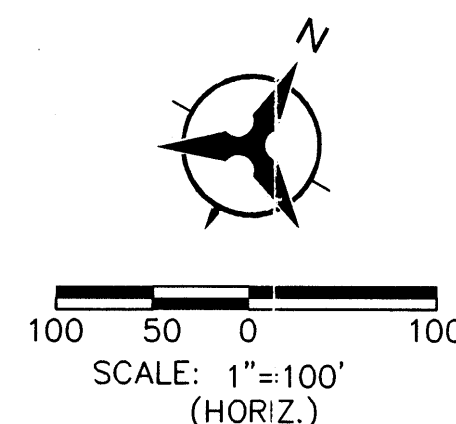
Table C - Storm Drain Analysis

SIZE/TYPE	LENGTH (ft.)	SLOPE (%)	PROPOSED Q (100-YR, cfs)	PIPE CAPACITY (100-YR, CFS)
36" RCP	240.00	0.60	48.10	52.00

KEVIN G. PATTON
NEW MEXICO
12885
8-6-06

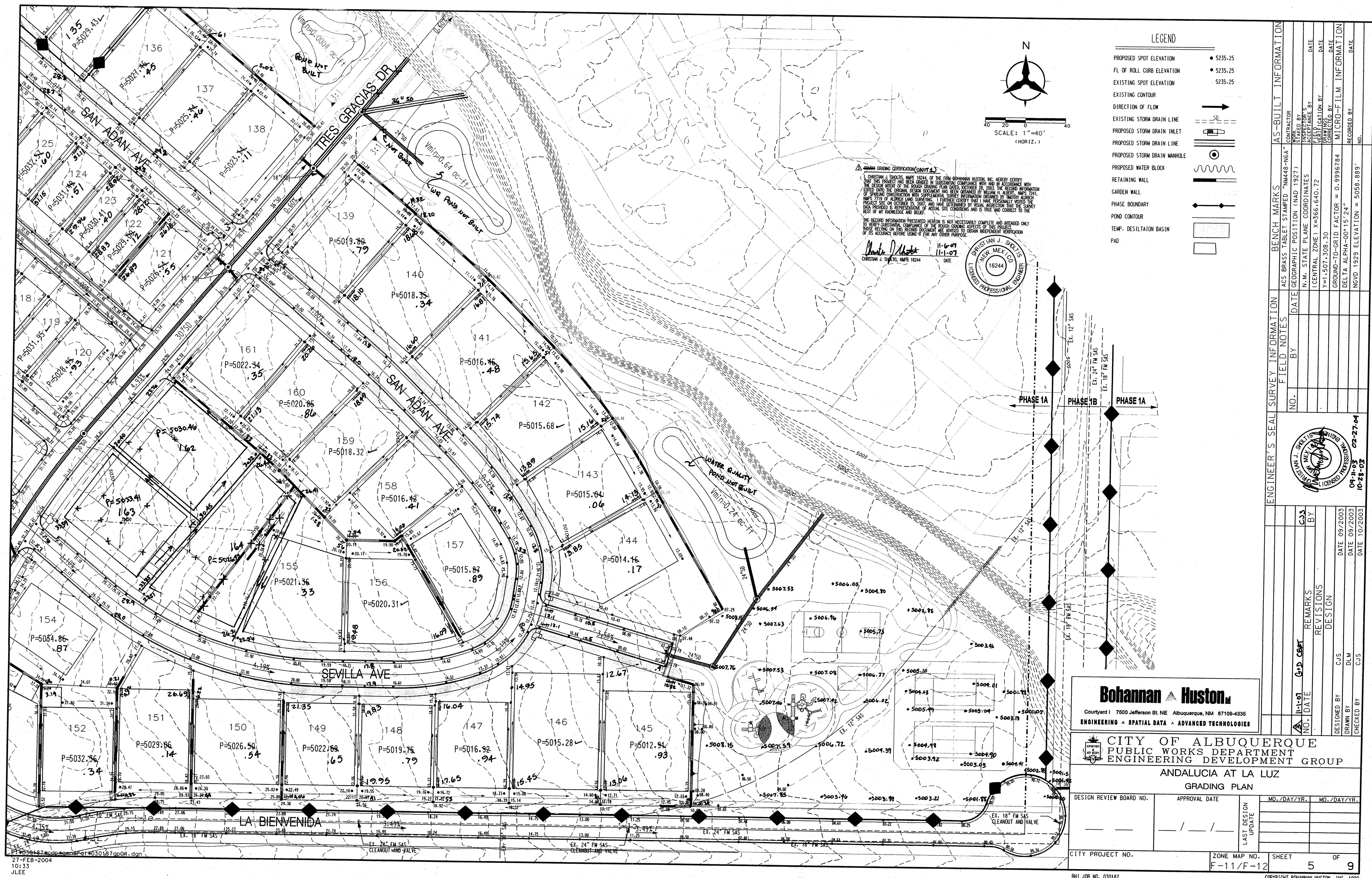
DRAINAGE MANAGMENT PLAN COORS BOULEVARD IMPROVEMENTS

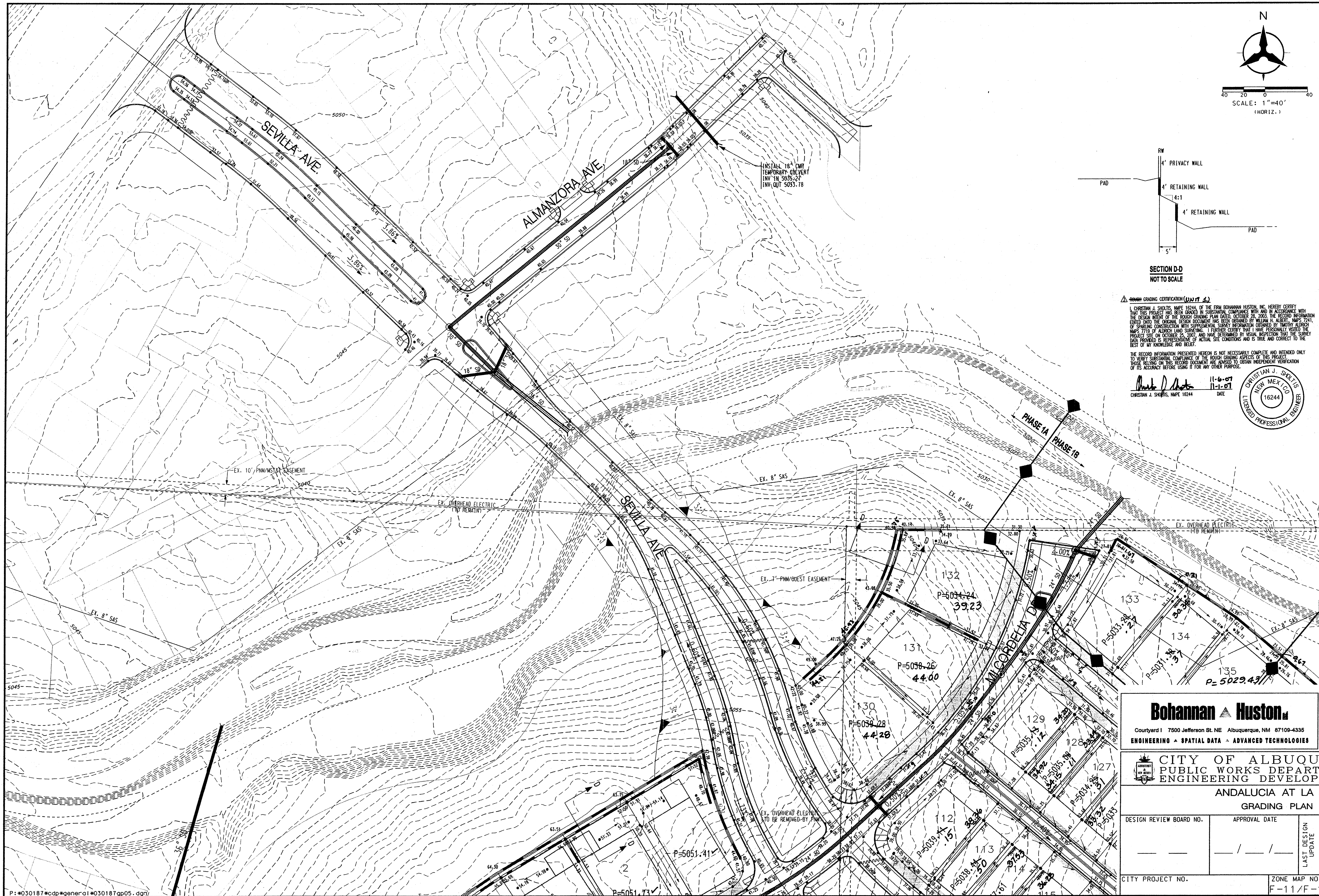
ALBUQUERQUE, NEW MEXICO
SEPTEMBER, 2005



Bohannon & Huston

Courtyard | 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING & SPATIAL DATA & ADVANCED TECHNOLOGIES





SECTION D-D
NOT TO SCALE

GRADING CERTIFICATION (11-01-01)
I, CHRISTIAN J. SPILLER, MAPS 16244, OF THE FIRM BOHANNAN HUSTON, INC. HEREBY CERTIFY THAT THE PROJECT HAS BEEN CONDUCTED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE ROUGH GRADING PLAN DATED OCTOBER 28, 2003. THE RECORD INFORMATION DATED ON THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY WILLIAM H. ALBERT, MAPS 7241, OF SPARKLING CONSTRUCTION WITH SUPPLEMENTAL SURVEY INFORMATION OBTAINED BY TIMOTHY ALDRICH, MAPS 7713 OF ALDRICH LAND SURVEYING. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON OCTOBER 25, 2007 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

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

Christian J. Spiller 11-0-01
CHRISTIAN J. SPILLER, MAPS 16244 DATE

CHRISTIAN J. SPILLER
NEW MEXICO
16244
LICENSED PROFESSIONAL ENGINEER

Bohannon & Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING & SPATIAL DATA & ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
ANDALUCIA AT LA LUZ GRADING PLAN	
DESIGN REVIEW BOARD NO.	APPROVAL DATE
LAST DESIGN UPDATE	
CITY PROJECT NO.	ZONE MAP NO.
SHEET 6 OF 9	

ENGINEER'S SEAL SURVEY INFORMATION		BENCH MARKS		AS-BUILT INFORMATION	
NO.	DATE	NO.	DATE	NO.	DATE
1	11-01-01	1	11-01-01	1	11-01-01
2	10-03	2	10-03	2	10-03
3	10-03	3	10-03	3	10-03
4	10-03	4	10-03	4	10-03
5	10-03	5	10-03	5	10-03
6	10-03	6	10-03	6	10-03
7	10-03	7	10-03	7	10-03
8	10-03	8	10-03	8	10-03
9	10-03	9	10-03	9	10-03
10	10-03	10	10-03	10	10-03
11	10-03	11	10-03	11	10-03
12	10-03	12	10-03	12	10-03
13	10-03	13	10-03	13	10-03
14	10-03	14	10-03	14	10-03
15	10-03	15	10-03	15	10-03
16	10-03	16	10-03	16	10-03
17	10-03	17	10-03	17	10-03
18	10-03	18	10-03	18	10-03
19	10-03	19	10-03	19	10-03
20	10-03	20	10-03	20	10-03
21	10-03	21	10-03	21	10-03
22	10-03	22	10-03	22	10-03
23	10-03	23	10-03	23	10-03
24	10-03	24	10-03	24	10-03
25	10-03	25	10-03	25	10-03
26	10-03	26	10-03	26	10-03
27	10-03	27	10-03	27	10-03
28	10-03	28	10-03	28	10-03
29	10-03	29	10-03	29	10-03
30	10-03	30	10-03	30	10-03
31	10-03	31	10-03	31	10-03
32	10-03	32	10-03	32	10-03
33	10-03	33	10-03	33	10-03
34	10-03	34	10-03	34	10-03
35	10-03	35	10-03	35	10-03
36	10-03	36	10-03	36	10-03
37	10-03	37	10-03	37	10-03
38	10-03	38	10-03	38	10-03
39	10-03	39	10-03	39	10-03
40	10-03	40	10-03	40	10-03
41	10-03	41	10-03	41	10-03
42	10-03	42	10-03	42	10-03
43	10-03	43	10-03	43	10-03
44	10-03	44	10-03	44	10-03
45	10-03	45	10-03	45	10-03
46	10-03	46	10-03	46	10-03
47	10-03	47	10-03	47	10-03
48	10-03	48	10-03	48	10-03
49	10-03	49	10-03	49	10-03
50	10-03	50	10-03	50	10-03
51	10-03	51	10-03	51	10-03
52	10-03	52	10-03	52	10-03
53	10-03	53	10-03	53	10-03
54	10-03	54	10-03	54	10-03
55	10-03	55	10-03	55	10-03
56	10-03	56	10-03	56	10-03
57	10-03	57	10-03	57	10-03
58	10-03	58	10-03	58	10-03
59	10-03	59	10-03	59	10-03
60	10-03	60	10-03	60	10-03
61	10-03	61	10-03	61	10-03
62	10-03	62	10-03	62	10-03
63	10-03	63	10-03	63	10-03
64	10-03	64	10-03	64	10-03
65	10-03	65	10-03	65	10-03
66	10-03	66	10-03	66	10-03
67	10-03	67	10-03	67	10-03
68	10-03	68	10-03	68	10-03
69	10-03	69	10-03	69	10-03
70	10-03	70	10-03	70	10-03
71	10-03	71	10-03	71	10-03
72	10-03	72	10-03	72	10-03
73	10-03	73	10-03	73	10-03
74	10-03	74	10-03	74	10-03
75	10-03	75	10-03	75	10-03
76	10-03	76	10-03	76	10-03
77	10-03	77	10-03	77	10-03
78	10-03	78	10-03	78	10-03
79	10-03	79	10-03	79	10-03
80	10-03	80	10-03	80	10-03
81	10-03	81	10-03	81	10-03
82	10-03	82	10-03	82	10-03
83	10-03	83	10-03	83	10-03
84	10-03	84	10-03	84	10-03
85	10-03	85	10-03	85	10-03
86	10-03	86	10-03	86	10-03
87	10-03	87	10-03	87	10-03
88	10-03	88	10-03	88	10-03
89	10-03	89	10-03	89	10-03
90	10-03	90	10-03	90	10-03
91	10-03	91	10-03	91	10-03
92	10-03	92	10-03	92	10-03
93	10-03	93	10-03	93	10-03
94	10-03	94	10-03	94	10-03
95	10-03	95	10-03	95	10-03
96	10-03	96	10-03	96	10-03
97	10-03	97	10-03	97	10-03
98	10-03	98	10-03	98	10-03
99	10-03	99	10-03	99	10-03
100	10-03	100	10-03	100	10-03

NOTES:

- 1. PHASE 1B GRADING SHALL BE PERFORMED AT THE TIME OF INFRASTRUCTURE CONSTRUCTION WHEN THE EXISTING SANITARY SEWER AND SANITARY SEWER FORCE MAINS HAVE BEEN RELOCATED/REMOVED. THIS SHALL BE COORDINATED W/ INFRASTRUCTURE CONTRACTOR**
- 2. SEE SHEETS 8A AND 9A FOR MASS GRADING PLAN.**

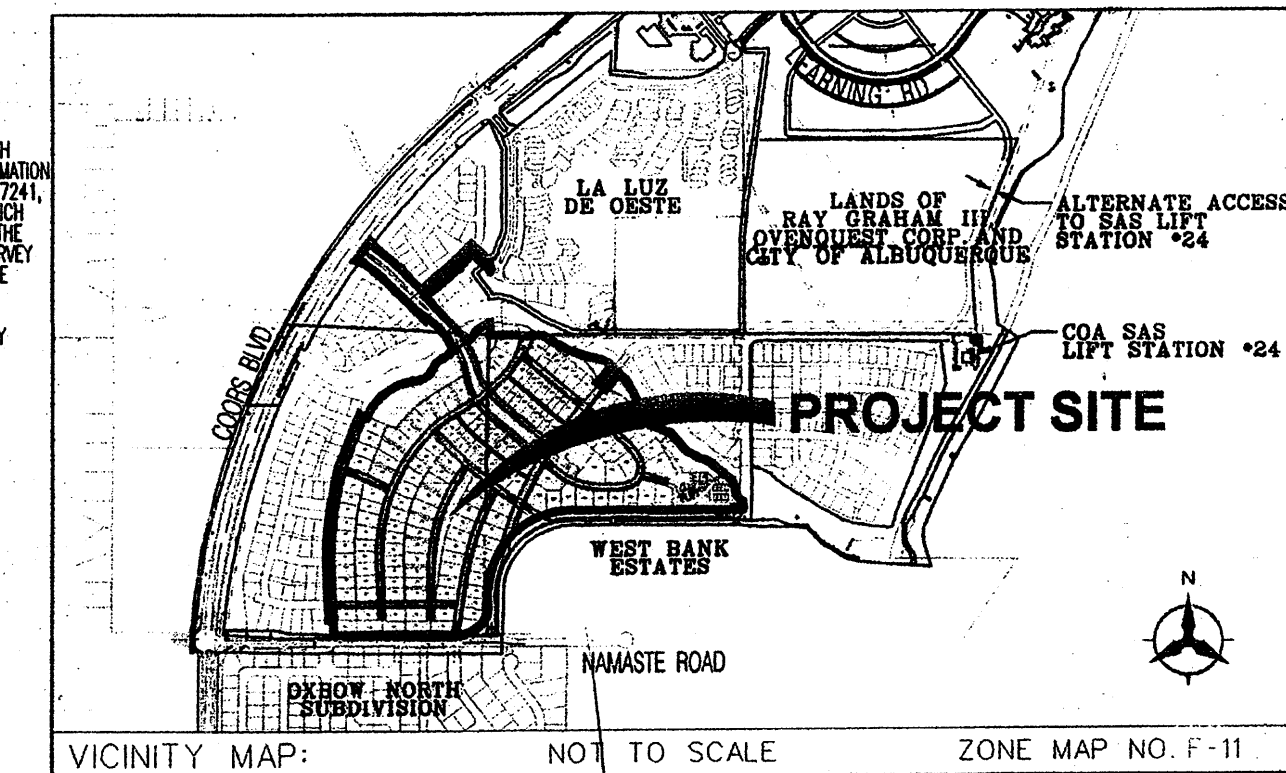
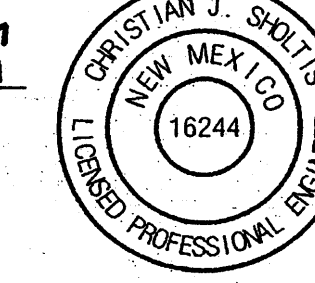
SHEET 6

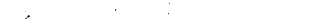
3. ~~ROUGH~~ GRADING CERTIFICATION (UNIT 1)

I, CHRISTIAN J. SHOLTS, MEIN 16244, of the FIRM ROHMANN HUSTON, INC. HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GROUND IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE ROUGH GRADING PLAN DATED, OCTOBER 28, 2003. THE RECORD INFORMATION CONTAINED ON THIS PROJECT WAS OBTAINED FROM THE RECORD PLANS, MEIN 7718 OF THE COUNTY OF ALABAMA, AND THE RECORD SURVEYING INFORMATION OBTAINED BY TIMOTHY ALDRICH MEIN 7718 OF ALDRICH LAND SURVEYING. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT AND CONDUCTED A VISUAL INSPECTION OF THE PROJECT. I CERTIFY THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE ROUGH GRADING AGAINST SUCH PROJECT. THEREFORE, ON THIS DATE, I HAVE CONDUCTED AN ON SITE VISUAL INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

CHRISTIAN J. SHORTIS, NWME 16244

[illegible]


8/3/04
 APPROVED FOR ROUGH GRADING DATE
 sheets 1-9

Bohannon  **Huston** 
 Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

 CITY OF ALBUQUERQUE	PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
ANDALUCIA AT LA LUZ OVERALL GRADING PLAN				
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
CITY PROJECT NO.		ZONE MAP NO. E-11/F-12	SHEET OF 1 9	

RECEIVED
NOV 08 2007
HYDROLOGY SECTION

1. EXCEPT AS PROVIDED HERIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.

2. CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DIVISION, PRIOR TO CONSTRUCTION. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST CONTROL MEASURES AND REQUIREMENTS AND SHALL BE RESPONSIBLE FOR PREPARING AND OBTAINING ALL NECESSARY APPLICATIONS AND APPROVALS.

3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SOILS REPORT PREPARED BY GEO-TEST INC., DATED 11/11/1987, AND ALL OTHER WORK, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS (FIRST PRIORITY), AND/OR THE CITY OF BIRMINGHAM'S STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).

4. TWO WORKING DAYS PRIOR TO EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (765-1264) FOR LOCATION OF EXISTING UTILITIES.

5. PRIOR TO GRADING, ALL VEGETATION DEBRIS AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE OR STOCK-PILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.

6. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.

7. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.

8. CONTRACTOR SHALL RESEED ALL DISTURBED AREAS PER COA STANDARD SPECIFICATION 1012.

9. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY. THIS SHOULD BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES PER DETAIL THIS SHEET 2 OF 2 AND WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.

10. A DISPOSAL SITE FOR ALL EXCESS EXCAVATION AND UNSUITABLE MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND HAUL THERE TO SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.

11. PAVING AND ROADWAY GRADES SHALL BE $\pm 0.1'$ FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE $\pm 0.05'$ FROM BUILDING PLAN ELEVATIONS.

12. ALL SPOT ELEVATIONS ARE TO FLOWLINE
UNLESS OTHERWISE NOTED. VALLEY GUTTER
ELEVATIONS ARE SHOWN AT FLOWLINE
ELEVATION.

13. ALL INTERIOR CURBS ARE ROLL CURB AND GUTTER UNLESS OTHERWISE NOTED.

14. THE CONTRACTOR IS TO REFER TO THE EARTHWORK SPECIFICATIONS AS NOTED IN THE GEOTECHNICAL ENGINEERING SERVICES REPORT FOR LANDS OF RAY A GRAHAM III, PREPARED BY GEO-TEST, INC., FEB. 26, 20

PROPOSED SPOT ELEVATION	• 5235.25
FL. OF ROLL CURB ELEVATION	• 5235.25
EXISTING SPOT ELEVATION	5235.25
EXISTING CONTOUR	
DIRECTION OF FLOW	
EXISTING STORM DRAIN LINE	
PROPOSED STORM DRAIN INLET	
PROPOSED STORM DRAIN LINE	
PROPOSED STORM DRAIN MANHOLE	
PROPOSED WATER BLOCK	
RETAINING WALL	
GARDEN WALL	
PHASE BOUNDARY	
POND CONTOUR	
TEMP. DETENTION BASIN	
PAD	

ROUGH GRADING CERTIFICATION (UNIT 2)

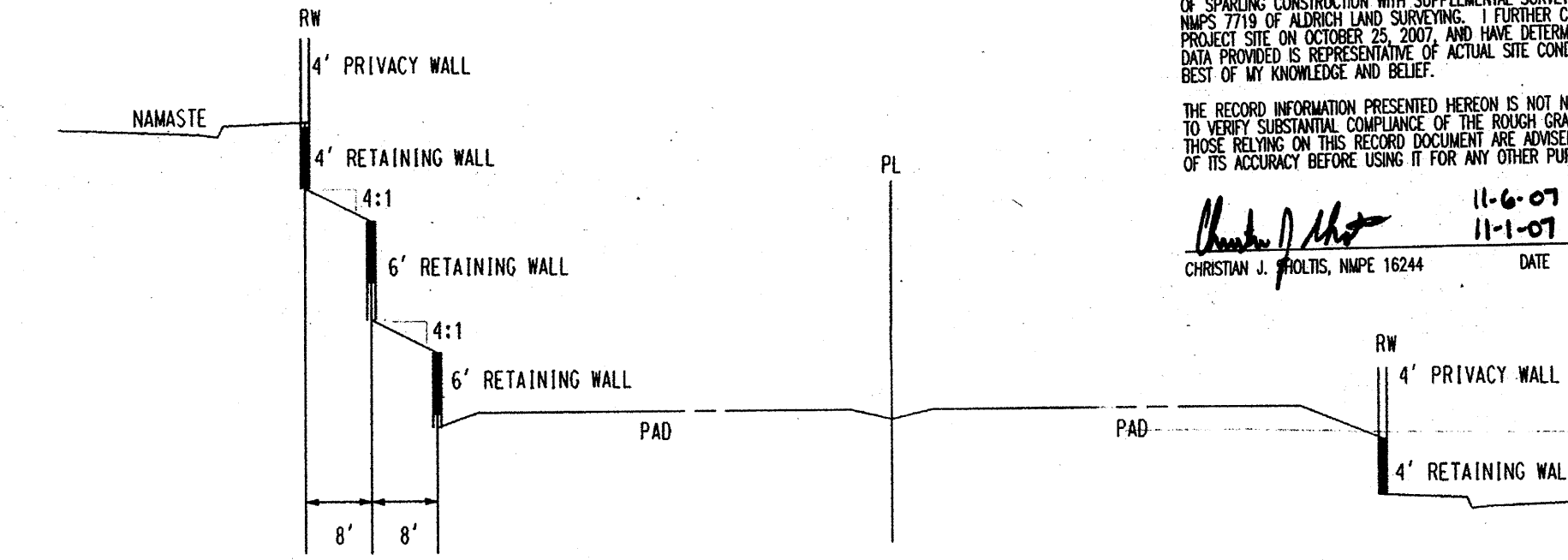
I, CHRISTIAN J. SLOVITS, NMP# 16244, OF THE FIRM BOHANNAN HUSTON, INC. HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE ROUGH GRADING PLAN DATED, OCTOBER 28, 2003. THE CORRESPONDING INFORMATION ON THE ORIGINAL GRADING DOCUMENT HAS BEEN OBTAINED BY WILLIAM J. ALDRICH, NMP# 7241, EDITED INTO THE ORIGINAL DESIGN DOCUMENT. I, FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE SPILLING CONSTRUCTION WITH SUPPLEMENTAL SURVEY INFORMATION OBTAINED BY WILLIAM J. ALDRICH, NMP# 7241 OF ALDRICH LAND SURVEYING. I, FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON OCTOBER 28, 2003 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

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

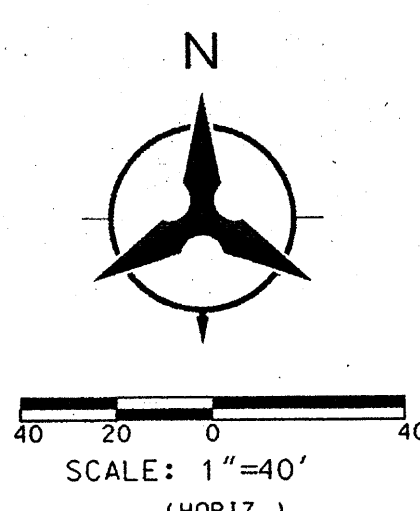
OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

Christian J. Sholtis 11-6-07
CHRISTIAN J. SHOLTIS, NMPE 16244 11-1-07
DATE

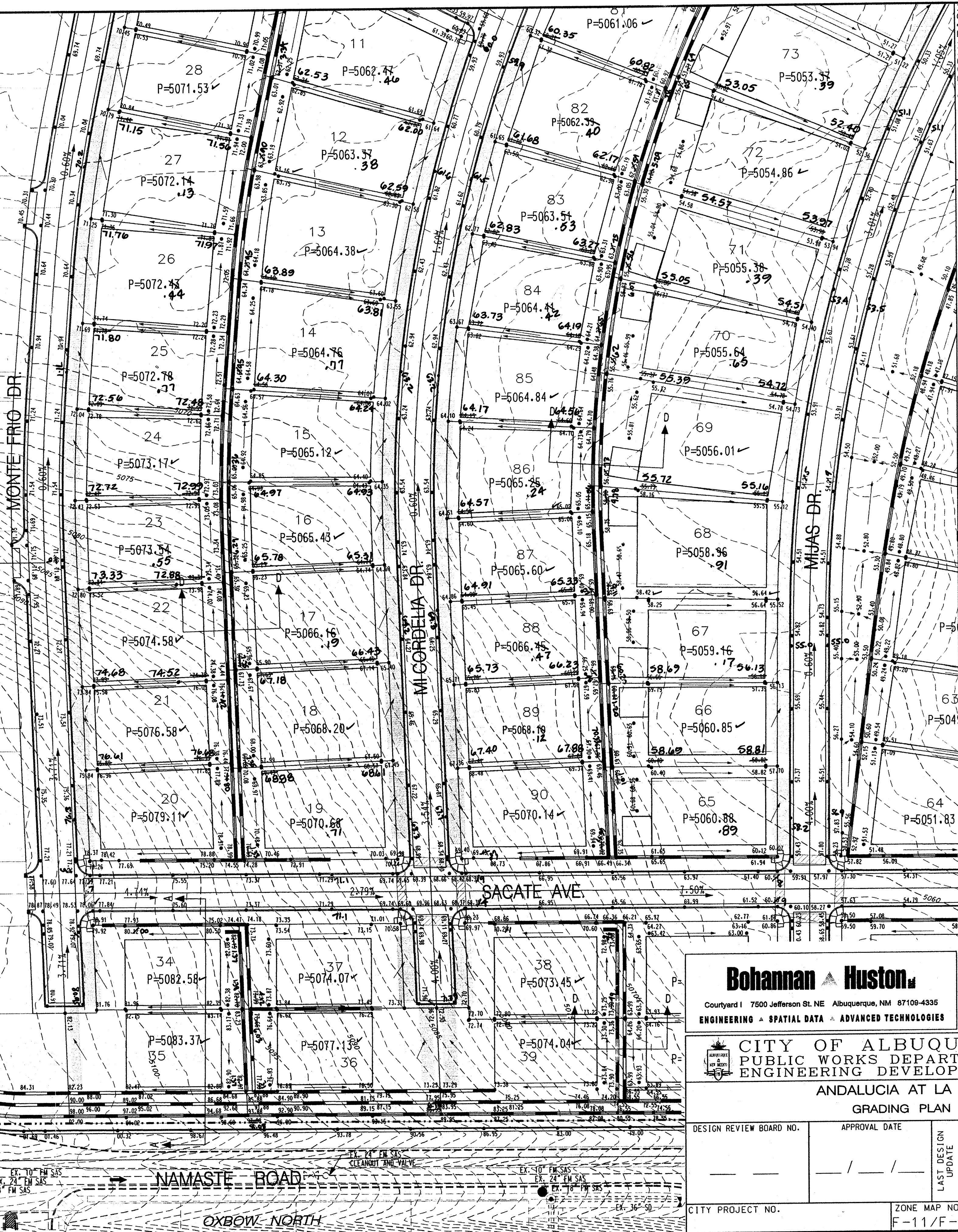
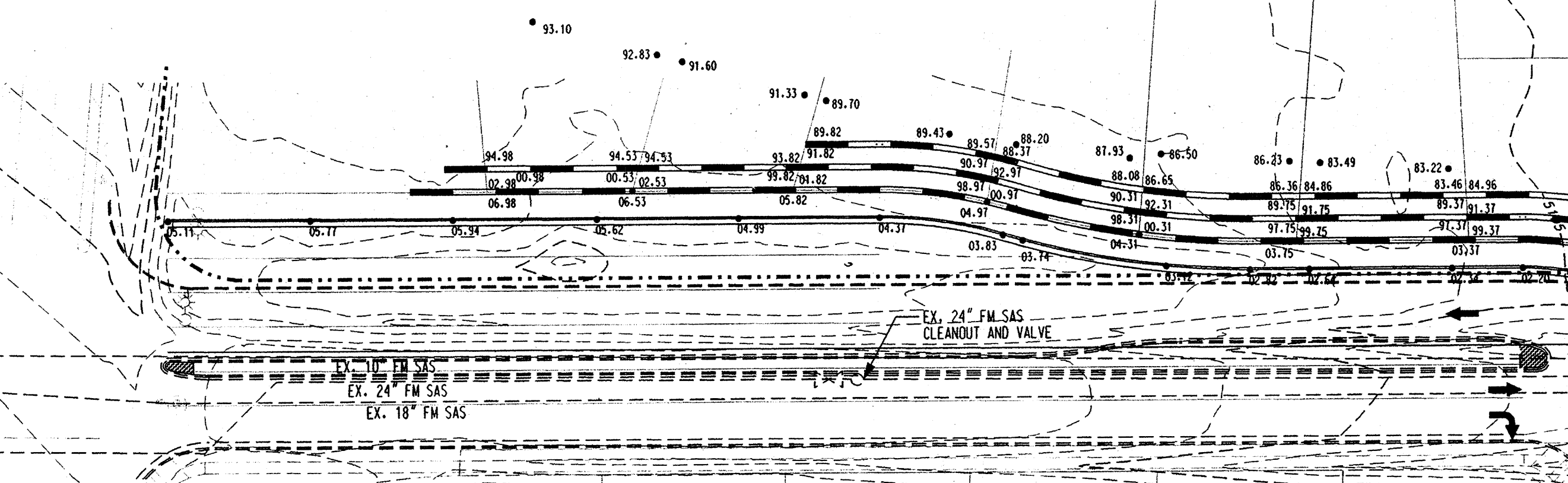
CHRISTIAN J. SHOLTIS
NEW MEXICO
16244



SECTION A-A
NOT TO SCALE



SECTION D-D
NOT TO SCALE



P:*030187*cdp*general*030187gp01.dgn

27-FEB-2004
10:47
JLEE

Bohannon  **Huston**

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335

ENGINEERING  **SPATIAL DATA**  **ADVANCED TECHNOLOGIES**

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP
ANDALUCIA AT LA LUZ
GRADING PLAN

DESIGN REVIEW BOARD NO.	APPROVAL DATE	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
____	____ / ____ / ____			
CITY PROJECT NO.	ZONE MAP NO.	SHEET OF		
	F-11/F-12	2 OF 9		

BHI JOB NO. 030187

COPYRIGHT BOHANNAN HUSTON, INC. 1999

