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216-74011 82-2017

SCANNED BY
PLANNING

PUBLIC IMPROVEMENT PLANS
FOR

SAN ANTONIO AVENUE WATERLINE
ALBUQUERQUE, NEW MEXICO

FEBRUARY 2009

PREPARED FOR:
DOUBLE EAGLE REAL ESTATE & INVESTMENTS
5600 EUBANK BLVD. NE, STE. 120
ALBUQUERQUE, NM 87111

PREPARED BY:
ISAACSON & ARFMAN, P.A.
128 MONROE ST. NE
ALBUQUERQUE, NM 87108

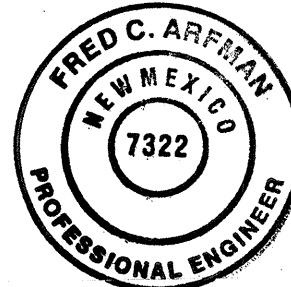
INDEX TO DRAWINGS

SHEET NO.	TITLE
1	COVER SHEET
2	SURVEY
3	FINAL PLAT
	UTILITY PLAN & PROFILE SHEETS
4	WATERLINE

CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Fred C. Arfman of the firm of Isaacson & Arfman, P.A., a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction and survey information provided by Anthony L. Harris, NMPS number 11463.

Fred C. Arfman 03-11-10
Fred C. Arfman NMPE No. 7322



SURVEYOR'S CERTIFICATION

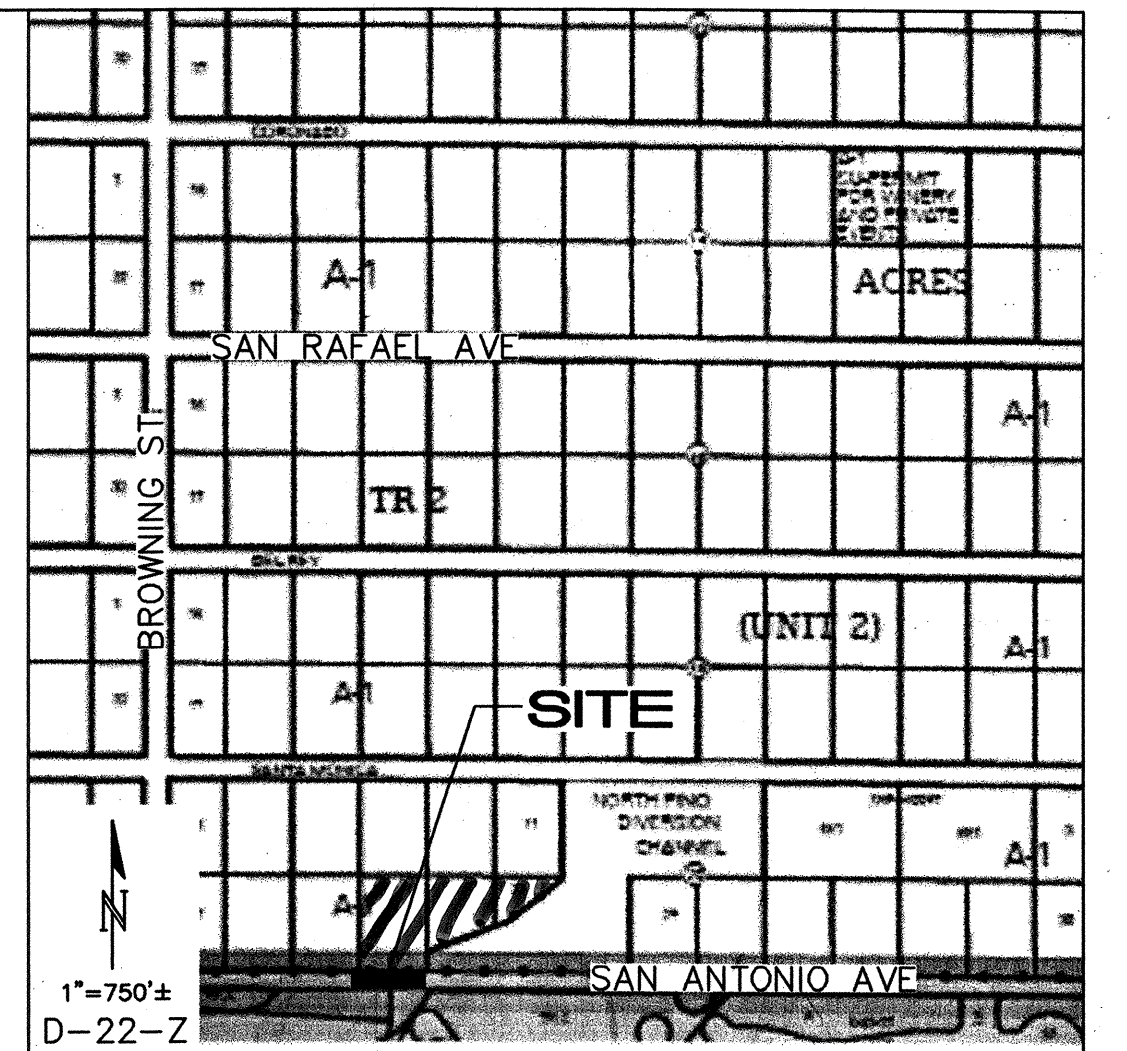
"I, ANTHONY L. HARRIS, A DULY QUALIFIED REGISTERED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE 'AS-BUILT' INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM FIELD CONSTRUCTION AND 'AS-BUILT' SURVEYS PERFORMED BY ME OR UNDER MY SUPERVISION, THAT THE 'AS-BUILT' INFORMATION SHOWN ON THESE DRAWINGS WAS ADDED BY ME OR MY SUPERVISION, AND THAT THIS 'AS-BUILT' INFORMATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF." SURVEYS SOUTHWEST LTD. IS NOT RESPONSIBLE FOR ANY OF THE DESIGN CONCEPTS, CALCULATIONS, ENGINEERING, OR INTENT OF THE RECORD DRAWINGS.

Anthony L. Harris 3-1-10
ANTHONY L. HARRIS, NMPS 11463 DATE



GENERAL NOTES

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1986 EDITION, AS AMENDED WITH UPDATE NO. 7, INCLUDING AMENDMENT 1.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE & VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM DELAY.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, NM ONE CALL SYSTEMS, INC. @ 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER WHICH WILL MINIMIZE INTERFERENCE WITH LOCAL TRAFFIC. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY, AND TO PROTECT THEM FROM DAMAGE, INJURY, OR LOSS. CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS, THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADHERE TO SECTION 19 OF THE GENERAL CONDITIONS OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, AS AMENDED WITH UPDATE NO. 7.
- THE CONTRACTOR AGREES THAT HE SHALL ASSUME THE SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE OWNER & ENGINEER FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
- TRAFFIC CONTROL: SEVEN (7) 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 CONSTRUCTION COORDINATION ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE SPECIFICATIONS. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PLASTIC REFLECTORIZED PAVEMENT MARKINGS BY CONTRACTOR TO LOCATION AS EXISTING OR AS SHOWN IN THIS PLAN SET.
- SUPPLEMENTAL SPECIFICATION: ALL FINAL BACKFILL FOR TRENCHES SHALL BE COMPACTED TO A MINIMUM 95% MAXIMUM DENSITY PER ASTM D-1557.
- THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY OR PRIVATE ROADWAY EASEMENTS SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET OR INTO ANY PUBLIC DRAINAGE FACILITY.
- PROPOSED WATERLINE MATERIALS SHALL BE EITHER PVC PIPE MEETING AWWA C900 DR-18 REQUIREMENTS (6"-12") OR DUCTILE IRON PIPE, THICKNESS CLASS 50 (6"-16").
- ALL FITTINGS ON WATERLINES SHALL HAVE RESTRAINED JOINTS AS NOTED ON THE PLANS.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF THE PAVEMENT OF 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 THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS UPDATE #7.
- PNM WILL PROVIDE AT NO COST TO THE CITY OR THE CONTRACTOR THE REQUIRED PERSONNEL FOR INSPECTION OR OBSERVATION DEEMED NECESSARY BY PNM WHILE THE CONTRACTOR IS EXPOSING PNM'S CABLES. HOWEVER, THE CONTRACTOR SHALL BE CHARGED THE TOTAL COST ASSOCIATED WITH REPAIRS TO ANY DAMAGED CABLES OR FOR ANY COST ASSOCIATED WITH SUPPORTING OR RELOCATING THE POLES AND CABLES DURING CONSTRUCTION.
- WARNING--EXISTING UTILITY LINE LOCATIONS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. THE LOCATION OF ANY SUCH EXISTING LINES IS BASED UPON INFORMATION PROVIDED BY THE UTILITY COMPANY, THE OWNER, OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS UNDERTAKEN NO 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 THEREFOR. 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.
- ANY WORK OCCURRING WITHIN A FULLY DEVELOPED ARTERIAL ROADWAY REQUIRES 24 HR. CONSTRUCTION.
- ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE ACCOMPLISHED IN ACCORDANCE WITH OSHA 29CFR 1926.650 SUBPART P.
- CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR DISPOSING OF ALL DEBRIS, INCLUDING, BUT NOT LIMITED TO HAZARDOUS WASTE AT DISPOSAL SITES APPROVED BY GOVERNMENTAL AGENCIES REGULATING THE DISPOSAL OF SUCH MATERIALS.
- ELECTRONIC MARKER SPHERES (EMS) WILL BE PLACED ACCORDING TO SECTION 170 OF THE CITY OF ALBUQUERQUE SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #7.
- ALL WATER VALVE BOXES AND MANHOLES IN THE STREET CONSTRUCTION ARE TO BE ADJUSTED TO FINISH GRADE AND WILL BE MEASURED AND PAID PER EACH.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING THE EXECUTION OF THE WATER VALVE SHUT-OFF PLAN WITH ABCWUA. ALL WATER VALVES TO BE SHUT-OFF WILL BE OPERATED BY ABCWUA. CONTRACTOR SHALL NOTIFY ABCWUA AT 857-8200 TWENTY FOUR (24) HOURS PRIOR TO WATERLINE CONSTRUCTION AND SEVEN (7) WORKING DAYS IN ADVANCE OF ANY WORK WHICH MAY AFFECT EXISTING PUBLIC WATER FACILITIES IN COMPLIANCE WITH SECTION 18 OF THE STANDARD SPECIFICATIONS.
- CONTRACTOR SHALL SUPPORT ALL EXISTING UNDERGROUND UTILITY LINES WHICH BECOME EXPOSED DURING CONSTRUCTION. PAYMENT FOR SUPPORTING WORK SHALL BE INCIDENTAL TO WATERLINE AND/OR SEWER LINE COSTS.
- CONTRACTOR SHALL ASSIST THE ENGINEER/INSPECTOR IN THE RECORDING OF DATA ON ALL UTILITY LINES AND ACCESSORIES AS REQUIRED BY THE CITY OF ALBUQUERQUE FOR THE PREPARATION OF RECORD DRAWINGS. CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL CONSTRUCTION SIGNING UNTIL PROJECT HAS BEEN ACCEPTED BY THE CITY.
- THE CONTRACTOR SHALL NOTIFY THE ALBUQUERQUE TRAFFIC ENGINEERING DIVISION THREE (3) WORKING DAYS IN ADVANCE OF ANY WORK THAT REMOVES, RELOCATES, OR REINSTALLS ANY EXISTING REGULATORY SIGNS.



Record Drawing

REV.	SHEETS	CITY ENGINEER	DATE	USER	DEPARTMENT	DATE	USER	DEPARTMENT	DATE
ENGINEERS STAMP & SIGNATURE				APPROVALS		ENGINEER		DATE	
				DRC Chairman		<i>[Signature]</i>		6-23-09	
				Transportation		<i>[Signature]</i>		06/23/09	
				Water/Wastewater		<i>[Signature]</i>		6-23-09	
				Hydrology		<i>[Signature]</i>		23-Jun-09	
				AMAFCA					
				Constr. Mngmt.					
				Constr. Coord.					
City Project No.				740182		Sheet		1 Of 4	
						APPROVED FOR CONSTRUCTION		<i>[Signature]</i> Date	

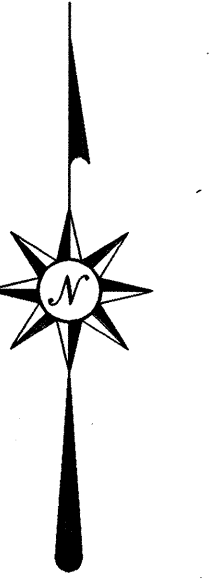
APPROVED AS RECORD DRAWINGS
DESIGN REVIEW SECTION
CITY CONSTRUCTION ENGINEER
[Signature]
DATE: 06/26/11

SRP - 80114

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 Fax. 505-268-2632
1701 C-001.dwg Jun 16, 2009

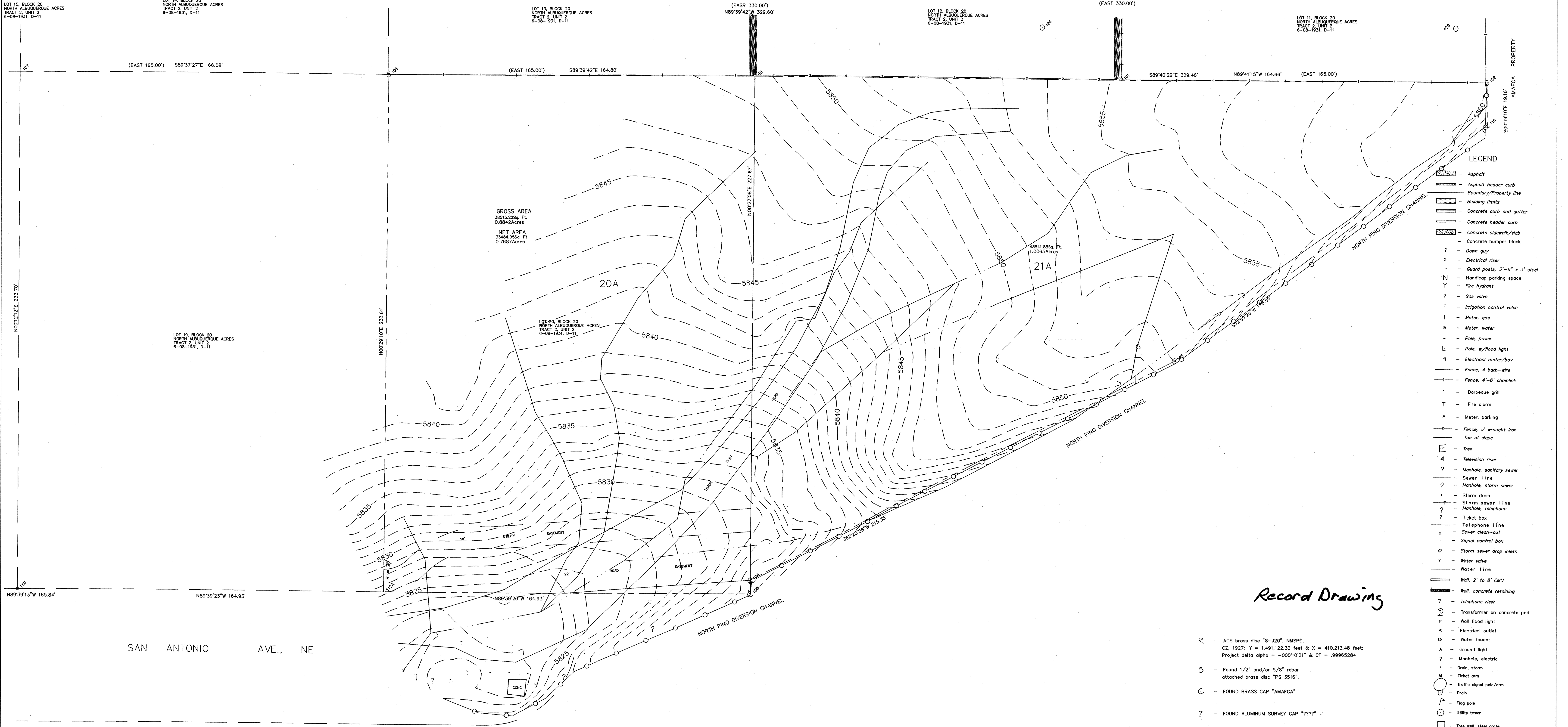
BOUNDARY/TOPOGRAPHIC SURVEY
LOTS 20A AND 21A
FORMERLY LOTS 20, 21 & 22,
BLOCK 20, TRACT 2, UNIT 1
NORTH ALBUQUERQUE ACRES
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

MARCH, 2007



VICINITY MAP NO SCALE D-22-Z

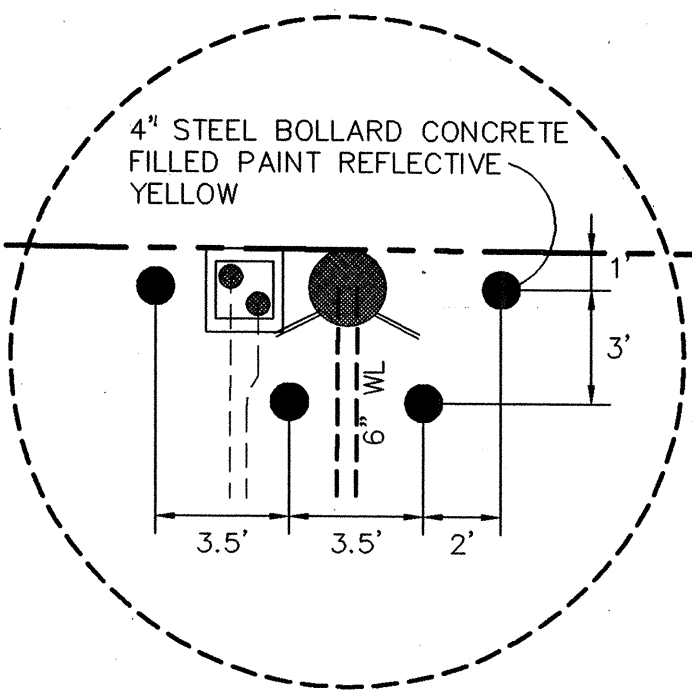
GRAPHIC SCALE 1"=20'



Record Drawing

- R - ACS brass disc "8-J20", NMSPC, C2, 1927: Y = 1,491,122.32 feet & X = 410,213.48 feet: Project delta alpha = -00010'21" & CF = .99955284
- S - Found 1/2" and/or 5/8" rebar attached brass disc "PS 3516".
- C - FOUND BRASS CAP "AMAFCA".
- ? - FOUND ALUMINUM SURVEY CAP "????".
- + - FOUND PLASTIC SURVEY CAP IN SOUTH FACE OF CMU.
- / - FOUND PK NAIL BRASS DISC "91?0".
- * - FOUND 1/2" REBAR W/SURVEY CAP "8686 OR 13982" attached brass disc "PS 3516".





Elevation Datum: NAVD 88



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A circular professional seal for Anthony L. Harris, a Registered Professional Land Surveyor in the State of New Mexico. The seal features the text "ANTHONY L. HARRIS" at the top, "STATE OF" at the top center, "NEW MEXICO" at the bottom center, and "REGISTERED PROFESSIONAL LAND SURVEYOR" around the bottom. The license number "11463" is prominently displayed in the center.

1. CONSTRUCT ALL SINGLE & DOUBLE WATER SERVICES PER COA STD DWG #2361, #2362, & #2363.
2. SEE BELOW FOR WATER SHUT-OFF PLAN.
3. SEE BELOW FOR RESTRAINED JOINT LENGTHS FOR WATER LINE FITTINGS.
4. CONSTRUCT FIRE HYDRANTS PER DESIGNATED DEPTHS & LENGTHS PER COA STD DWG #2340.
5. SEE COA STD DWG #2328 FOR VALVE RING & COVER DETAIL. SEE COA STD DWG #2326 FOR VALVE BOX DETAIL.

RESTRAINED JOINT LENGTHS, L_T, FOR TEES, (FT.) ALL JOINTS AT THE TEE MUST BE RESTRAINED.		
SIZE	RUN	BRANCH
10x10x10	12	18
10x10x8	8	15
10x10x6	4	16

THIS TABLE IS BASED UPON THE FOLLOWING CRITERIA:

DEPTH OF BURY:	4.0 FT. MINIMUM
FACTOR OF SAFETY:	1.25
MATERIAL:	PVC PIPE
SOIL TYPE:	GM/SM - SILTY GRAVELS AND SILTY SANDS, GRAVEL-SAND-SILT MIXTURES.
TEST PRESSURE:	150 PSI
TRENCH TYPE 4:	PIPE BEDDED IN SAND, GRAVEL, OR CRUSHED STONE TO DEPTH OF 1/8 PIPE DIAMETER, 4 INCH MINIMUM. BACKFILL COMPACTED TO TOP OF PIPE.

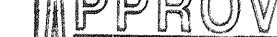
DIFFERENT CRITERIA, E.G., DUCTILE IRON PIPE, GREATER DEPTH OF BURY, ETC., WILL REQUIRE DIFFERENT RESTRAINED LENGTHS. THESE MUST BE CALCULATED BY A QUALIFIED PROFESSIONAL ENGINEER AND APPROVED BY THE ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY.

RESTRAINED JOINT LENGTHS, L _r , FOR HORIZONTAL BENDS, VALVES, AND DEAD ENDS, (FT.)					
SIZE	HORZ. BENDS				VALVES & DEAD ENDS
	90°	45°	22 1/2°	11 1/4°	
10	26	11	5	3	72
6	17	7	3	2	46

1. ALL MECHANICAL JOINTS SHALL BE RESTRAINED AT THE FITTING.
2. THE CONTRACTOR SHALL PROVIDE A MINIMUM PIPE LENGTH OF 20 LF FROM ALL MECHANICAL JOINTS, ALL PIPE JOINTS WITHIN 20 LF OF A MECHANICAL JOINT SHALL BE RESTRAINED AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL RESTRAIN ALL PIPE JOINTS IN THE SPECIFIED DISTANCE LISTED IN THE TABLE ON THIS SHEET.
4. THE CONTRACTOR SHALL RESTRAIN ALL FIRE HYDRANT JOINTS FROM THE TEE ON THE MAIN TO THE FIRE HYDRANT FLANGE.

SHUT-OFF VALVE AT STA 38+45.81, 12.50' LT SHOWN
ON THIS PLAN TO PROVIDE NON-PRESSURE
CONNECTION. THE CONTRACTOR SHALL CONTACT
ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY
AUTHORITY (857-8200) 7 WORKING DAYS PRIOR TO
SHUT-OFF OR TURN-ON AT VALVES. ONLY ABCWUA
PERSONNEL ARE ALLOWED TO OPERATE VALVES.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

Design Review Committee	City Engineer Approval	Fast Design Update	Mo./Day/Yr.	Mo./Day/Yr.
				

Zone Map No.	Sheet	Of
D-22-Z	4	4